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This is Appendix D-9 for the report:

Control of Toxic Chemicals in Puget Sound: Assessment of Selected Toxic Chemicals in the Puget Sound Basin, 2007-2011. www.ecy.wa.gov/biblio/1103055.html

Appendix D-9. Hazard Evaluation Water Effects Summary Data

Table 1. Arsenic ECOTOX Data Summary
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The EPA ECOTOX Code List is included at the end of the Hazard Evaluation data tables. It contains brief descriptions of all ECOTOX codes and fields used in the data tables.

Appendix D-9, Table 1. ECOTOX values for arsenic in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc ug/L	Media Type	Author	Title	Source	Publication Year
1	Arsenic oxide	Daphnia magna	Water Flea	Crustaceans	EC50	POP	PCCP	21	d	D	3200	FW	Enserink, E.L., J.L. Maas-Diepeveen, and C.J. Van Leeuwen	Combined Effects of Metals: An Ecotoxicological Evaluation	Water Res. 25(6):679-687	1991

Appendix D-9, Table 2. ECOTOX effects values for cadmium in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measurement	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc ug/L	Media Type	Author	Title	Source	Publication Year
1	Cadmium chloride (CdCl2)	Uronema nigricans	Protozoa	Invertebrates	MOR	MORT	2	d	D	0.0054	FW	Gale, N.L., B.G. Wixson, and M. Erten	An Evaluation of the Acute Toxicity of Lead, Zinc, and Cadmium in Missouri Ozark Groundwater	Trace Subst.Environ.Health 25:169-183	1992
2	Sulfuric acid, Cadmium salt (1:1)	Spirostomum ambiguum	Protozoa	Invertebrates	MOR	MORT	62	d	D	0.15	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
3	Sulfuric acid, Cadmium salt (1:1)	Tresus capax	Horse Clam	Molluscs	DVP	GDVP	62	d	D	0.16	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
4	Sulfuric acid, Cadmium salt (1:1)	Tresus nuttalli	Horse Clam, Pacific Gaper	Molluscs	DVP	GDVP	62	d	D	0.16	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
5	Sulfuric acid, Cadmium salt (1:1)	Crassostrea gigas	Pacific Oyster	Molluscs	MOR	MORT	62	d	D	0.16	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
6	Sulfuric acid, Cadmium salt (1:1)	Protothaca staminea	Littleneck Clam	Molluscs	MOR	MORT	62	d	D	0.16	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
7	Sulfuric acid, Cadmium salt (1:1)	Cyprinus carpio	Common Carp	Fish	FDB	FDNG	53	d	D	0.6	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
8	Cadmium chloride (CdCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	4	d	D	0.62	FW	Davies, P.H., and S. Brinkman	Water Pollution Studies	Fed.Aid Proj.#F-33, Colorado Div.of Wildl., Fish Res.Sect., Fort Collins, CO :138 p.	1994
9	Sulfuric acid, Cadmium salt (1:1)	Cyprinus carpio	Common Carp	Fish	FDB	FDNG	53	d	D	0.82	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
10	Cadmium chloride (CdCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	7	d	D	0.95	FW	Davies, P.H., and S. Brinkman	Water Pollution Studies	Fed.Aid Proj.#F-33, Colorado Div.of Wildl., Fish Res.Sect., Fort Collins, CO :138 p.	1994
11	Cadmium chloride (CdCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	7	d	D	0.95	FW	Davies, P.H., and S. Brinkman	Water Pollution Studies	Fed.Aid Proj.#F-33, Colorado Div.of Wildl., Fish Res.Sect., Fort Collins, CO :138 p.	1994
12	Sulfuric acid, Cadmium salt (1:1)	Tresus capax	Horse Clam	Molluscs	MOR	MORT	62	d	D	1	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
13	Cadmium chloride (CdCl2)	Aplexa hypnorum	Snail	Molluscs	MOR	MORT	4	d	D	1.09	FW	Davies, P.H., and S. Brinkman	Water Pollution Studies	Fed.Aid Proj.#F-33, Colorado Div.of Wildl., Fish Res.Sect., Fort Collins, CO :138 p.	1994
14	Cadmium chloride (CdCl2)	Callinectes sapidus	Blue Crab	Crustaceans	MOR	MORT	4	d	D	1.1	FW	Finlayson, B.J., and K.M. Verrue	Toxicities of Copper, Zinc, and Cadmium Mixtures to Juvenile Chinook Salmon	Trans.Am.Fish.Soc. 111(5):645-650	1982
15	Sulfuric acid, Cadmium salt (1:1)	Cyprinus carpio	Common Carp	Fish	FDB	FDNG	53	d	D	1.2	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
16	Cadmium chloride (CdCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	7	d	D	1.22	FW	Davies, P.H., and S. Brinkman	Water Pollution Studies	Fed.Aid Proj.#F-33, Colorado Div.of Wildl., Fish Res.Sect., Fort Collins, CO :138 p.	1994
17	Sulfuric acid, Cadmium salt (1:1)	Cyprinus carpio	Common Carp	Fish	FDB	FDNG	53	d	D	1.3	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
18	Sulfuric acid, Cadmium salt (1:1)	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	69	d	D	1.3	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
19	Sulfuric acid, Cadmium salt (1:1)	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	69	d	D	1.3	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007

Appendix D-9, Table 2. ECOTOX effects values for cadmium in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measurement	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc ug/L	Media Type	Author	Title	Source	Publication Year
20	Sulfuric acid, Cadmium salt (1:1)	Crassostrea gigas	Pacific Oyster	Molluscs	DVP	GDVP	62	d	D	1.6	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
21	Cadmium chloride (CdCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	7	d	D	1.68	FW	Davies, P.H., and S. Brinkman	Water Pollution Studies	Fed.Aid Proj.#F-33, Colorado Div.of Wildl., Fish Res.Sect., Fort Collins, CO :138 p.	1994
22	Cadmium chloride (CdCl2)	Callinectes sapidus	Blue Crab	Crustaceans	MOR	MORT	4	d	D	1.75	FW	Davies, P.	Use of Dialysis Tubing in Defining the Toxic Fractions of Heavy Metals in Natural Waters	In: R.W.Andrew, P.V.Hodson, and D.E.Konasewich (Eds.) Toxicity to Biota of Metal Forms in Nat.Water, Int.Joint Comm., Windsor, Canada :110-117	1976
23	Cadmium chloride (CdCl2)	Callinectes sapidus	Blue Crab	Crustaceans	MOR	MORT	4	d	D	1.83	FW	Davies, P.H., and S. Brinkman	Water Pollution Studies	Fed.Aid Proj.#F-33, Colorado Div.of Wildl., Fish Res.Sect., Fort Collins, CO :138 p.	1994
24	Cadmium chloride (CdCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	7	d	D	2.18	FW	Davies, P.H., and S. Brinkman	Water Pollution Studies	Fed.Aid Proj.#F-33, Colorado Div.of Wildl., Fish Res.Sect., Fort Collins, CO :138 p.	1994
25	Cadmium chloride (CdCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	7	d	D	2.18	FW	Davies, P.H., and S. Brinkman	Water Pollution Studies	Fed.Aid Proj.#F-33, Colorado Div.of Wildl., Fish Res.Sect., Fort Collins, CO :138 p.	1994
26	Sulfuric acid, Cadmium salt (1:1)	Tresus capax	Horse Clam	Molluscs	DVP	GDVP	62	d	D	2.2	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
27	Sulfuric acid, Cadmium salt (1:1)	Cyprinus carpio	Common Carp	Fish	FDB	FDNG	53	d	D	2.5	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
28	Sulfuric acid, Cadmium salt (1:1)	Spirostomum ambiguum	Protozoa	Invertebrates	MOR	MORT	62	d	D	2.5	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
29	Sulfuric acid, Cadmium salt (1:1)	Crassostrea gigas	Pacific Oyster	Molluscs	DVP	GDVP	62	d	D	2.5	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
30	Sulfuric acid, Cadmium salt (1:1)	Protothaca staminea	Littleneck Clam	Molluscs	DVP	GDVP	62	d	D	2.5	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
31	Sulfuric acid, Cadmium salt (1:1)	Crassostrea gigas	Pacific Oyster	Molluscs	MOR	MORT	62	d	D	2.5	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
32	Cadmium chloride (CdCl2)	Lepomis cyanellus	Green Sunfish	Fish	ITX	IMBL	4	d	D	2.67	FW	Davies, P.H., and S. Brinkman	Water Pollution Studies	Fed.Aid Proj.#F-33, Colorado Div.of Wildl., Fish Res.Sect., Fort Collins, CO :138 p.	1994
33	Sulfuric acid, Cadmium salt (1:1)	Dugesia tigrina	Turbellarian, Flatworm	Worms	MOR	MORT	69	d	D	2.9	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
34	Sulfuric acid, Cadmium salt (1:1)	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	69	d	D	2.9	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
35	Cadmium chloride (CdCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	4	d	D	2.96	FW	Davies, P.H., and S. Brinkman	Water Pollution Studies	Fed.Aid Proj.#F-33, Colorado Div.of Wildl., Fish Res.Sect., Fort Collins, CO :138 p.	1994
36	Cadmium chloride (CdCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	7	d	D	3.34	FW	Davies, P.H., and S. Brinkman	Water Pollution Studies	Fed.Aid Proj.#F-33, Colorado Div.of Wildl., Fish Res.Sect., Fort Collins, CO :138 p.	1994
37	Cadmium chloride (CdCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	7	d	D	3.55	FW	Davies, P.H., and S. Brinkman	Water Pollution Studies	Fed.Aid Proj.#F-33, Colorado Div.of Wildl., Fish Res.Sect., Fort Collins, CO :138 p.	1994

Appendix D-9, Table 2. ECOTOX effects values for cadmium in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measurement	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc ug/L	Media Type	Author	Title	Source	Publication Year
38	Cadmium chloride (CdCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	7	d	D	4.18	FW	Davies, P.H., and S. Brinkman	Water Pollution Studies	Fed.Aid Proj.#F-33, Colorado Div.of Wildl., Fish Res.Sect., Fort Collins, CO :138 p.	1994
39	Cadmium chloride (CdCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	4	d	D	4.88	FW	Davies, P.H., and S. Brinkman	Water Pollution Studies	Fed.Aid Proj.#F-33, Colorado Div.of Wildl., Fish Res.Sect., Fort Collins, CO :138 p.	1994
40	Cadmium chloride (CdCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	7	d	D	5.3	FW	Davies, P.H., and S. Brinkman	Water Pollution Studies	Fed.Aid Proj.#F-33, Colorado Div.of Wildl., Fish Res.Sect., Fort Collins, CO :138 p.	1994
41	Cadmium chloride (CdCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	7	d	D	5.3	FW	Davies, P.H., and S. Brinkman	Water Pollution Studies	Fed.Aid Proj.#F-33, Colorado Div.of Wildl., Fish Res.Sect., Fort Collins, CO :138 p.	1994
42	Cadmium chloride (CdCl2)	Mysidopsis bigelowi	Shrimp	Crustaceans	MOR	MORT	4	d	D	5.54	FW	Davies, P.H., and S. Brinkman	Water Pollution Studies	Fed.Aid Proj.#F-33, Colorado Div.of Wildl., Fish Res.Sect., Fort Collins, CO :138 p.	1994
43	Cadmium chloride (CdCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	4	d	D	7.04	FW	Davies, P.H., and S. Brinkman	Water Pollution Studies	Fed.Aid Proj.#F-33, Colorado Div.of Wildl., Fish Res.Sect., Fort Collins, CO :138 p.	1994
44	Cadmium chloride (CdCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	7	d	D	7.68	FW	Davies, P.H., and S. Brinkman	Water Pollution Studies	Fed.Aid Proj.#F-33, Colorado Div.of Wildl., Fish Res.Sect., Fort Collins, CO :138 p.	1994
45	Cadmium chloride (CdCl2)	Paratelphusa hydrodromus	Crab	Crustaceans	MOR	MORT	2	d	D	8	FW	Erten-Unal, M., B.G. Wixson, N. Gale, and J.L. Pitt	Evaluation of Toxicity, Bioavailability and Speciation of Lead, Zinc and Cadmium in Mine/Mill Wastewaters	Chem.Spec.Bioavail. 10(2):37-46	1998
46	Cadmium chloride (CdCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	MOR	MORT	2	d	D	8	FW	Gale, N.L., B.G. Wixson, and M. Erten	An Evaluation of the Acute Toxicity of Lead, Zinc, and Cadmium in Missouri Ozark Groundwater	Trace Subst.Environ.Health 25:169-183	1992
47	Cadmium chloride (CdCl2)	Americamysis bahia	Opossum Shrimp	Crustaceans	MOR	MORT	4	d	D	8.3	FW	Davies, P.H., and S. Brinkman	Water Pollution Studies	Fed.Aid Proj.#F-33, Colorado Div.of Wildl., Fish Res.Sect., Fort Collins, CO :138 p.	1994
48	Cadmium chloride (CdCl2)	Vorticella sp.	Ciliate	Invertebrates	MOR	MORT	2	d	D	11	FW	Erten-Unal, M., B.G. Wixson, N. Gale, and J.L. Pitt	Evaluation of Toxicity, Bioavailability and Speciation of Lead, Zinc and Cadmium in Mine/Mill Wastewaters	Chem.Spec.Bioavail. 10(2):37-46	1998
49	Cadmium chloride (CdCl2)	Callinectes sapidus	Blue Crab	Crustaceans	MOR	MORT	4	d	D	13.1	FW	Davies, P.H., and S. Brinkman	Water Pollution Studies	Fed.Aid Proj.#F-33, Colorado Div.of Wildl., Fish Res.Sect., Fort Collins, CO :138 p.	1994
50	Cadmium chloride (CdCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	7	d	D	15.8	FW	Davies, P.H., and S. Brinkman	Water Pollution Studies	Fed.Aid Proj.#F-33, Colorado Div.of Wildl., Fish Res.Sect., Fort Collins, CO :138 p.	1994
51	Cadmium chloride (CdCl2)	Dorylaimus stagnalis	Nematode	Worms	MOR	MORT	2	d	D	27	FW	Erten-Unal, M., B.G. Wixson, N. Gale, and J.L. Pitt	Evaluation of Toxicity, Bioavailability and Speciation of Lead, Zinc and Cadmium in Mine/Mill Wastewaters	Chem.Spec.Bioavail. 10(2):37-46	1998
52	Cadmium chloride (CdCl2)	Panagrellus silusiae	Beet Nematode	Worms	MOR	MORT	2	d	D	27	FW	Gale, N.L., B.G. Wixson, and M. Erten	An Evaluation of the Acute Toxicity of Lead, Zinc, and Cadmium in Missouri Ozark Groundwater	Trace Subst.Environ.Health 25:169-183	1992
53	Cadmium chloride (CdCl2)	Caridina rajadhari	Freshwater Prawn	Crustaceans	MOR	MORT	2	d	D	39	FW	Schuytema, G.S., P.O. Nelson, K.W. Malueg, A.V. Nebeker, D.F. Krawczyk, and A.K. Ratcliff	Toxicity of Cadmium in Water and Sediment Slurries to Daphnia magna	Environ.Toxicol.Chem. 3(2):293-308	1984
54	Cadmium chloride (CdCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	MOR	MORT	2	d	D	44	FW	Schuytema, G.S., P.O. Nelson, K.W. Malueg, A.V. Nebeker, D.F. Krawczyk, and A.K. Ratcliff	Toxicity of Cadmium in Water and Sediment Slurries to Daphnia magna	Environ.Toxicol.Chem. 3(2):293-308	1984
55	Cadmium chloride (CdCl2)	Salvelinus confluentus	Bull Trout	Fish	MOR	MORT	4	d	D	67	FW	Erten-Unal, M., B.G. Wixson, N. Gale, and J.L. Pitt	Evaluation of Toxicity, Bioavailability and Speciation of Lead, Zinc and Cadmium in Mine/Mill Wastewaters	Chem.Spec.Bioavail. 10(2):37-46	1998
56	Cadmium chloride (CdCl2)	Callinectes sapidus	Blue Crab	Crustaceans	MOR	MORT	4	d	D	67	FW	Gale, N.L., B.G. Wixson, and M. Erten	An Evaluation of the Acute Toxicity of Lead, Zinc, and Cadmium in Missouri Ozark Groundwater	Trace Subst.Environ.Health 25:169-183	1992
57	Cadmium chloride (CdCl2)	Daphnia magna	Water Flea	Crustaceans	REP	GREP	4	d	D	72	FW	Erten-Unal, M., B.G. Wixson, N. Gale, and J.L. Pitt	Evaluation of Toxicity, Bioavailability and Speciation of Lead, Zinc and Cadmium in Mine/Mill Wastewaters	Chem.Spec.Bioavail. 10(2):37-46	1998
58	Cadmium chloride (CdCl2)	Corydoras paleatus	Peppered Corydoras	Fish	GEN	MNUC	4	d	D	72	FW	Gale, N.L., B.G. Wixson, and M. Erten	An Evaluation of the Acute Toxicity of Lead, Zinc, and Cadmium in Missouri Ozark Groundwater	Trace Subst.Environ.Health 25:169-183	1992
59	Cadmium chloride (CdCl2)	Artemia sp.	Brine Shrimp	Crustaceans	MOR	MORT	2	d	D	78	FW	Nebeker, A.V., S.T. Onjukka, M.A. Cairns, and D.F. Krawczyk	Survival of Daphnia magna and Hyalella azteca in Cadmium-Spiked Water and Sediment	Environ.Toxicol.Chem. 5(10):933-938	1986

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measurement	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc ug/L	Media Type	Author	Title	Source	Publication Year
60	Cadmium chloride (CdCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	MOR	MORT	2	d	D	97	FW	Schuytema, G.S., P.O. Nelson, K.W. Malueg, A.V. Nebeker, D.F. Krawczyk, and A.K. Ratcliff	Toxicity of Cadmium in Water and Sediment Slurries to Daphnia magna	Environ.Toxicol.Chem. 3(2):293-308	1984
61	Cadmium chloride (CdCl2)	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	2	d	D	106	FW	Schuytema, G.S., P.O. Nelson, K.W. Malueg, A.V. Nebeker, D.F. Krawczyk, and A.K. Ratcliff	Toxicity of Cadmium in Water and Sediment Slurries to Daphnia magna	Environ.Toxicol.Chem. 3(2):293-308	1984
62	Cadmium chloride (CdCl2)	Varuna litterata	Crab	Crustaceans	MOR	MORT	4	d	D	108	FW	Erten-Unal, M., B.G. Wixson, N. Gale, and J.L. Pitt	Evaluation of Toxicity, Bioavailability and Speciation of Lead, Zinc and Cadmium in Mine/Mill Wastewaters	Chem.Spec.Bioavail. 10(2):37-46	1998
63	Cadmium chloride (CdCl2)	Varuna litterata	Crab	Crustaceans	MOR	MORT	4	d	D	108	FW	Gale, N.L., B.G. Wixson, and M. Erten	An Evaluation of the Acute Toxicity of Lead, Zinc, and Cadmium in Missouri Ozark Groundwater	Trace Subst.Environ.Health 25:169-183	1992
64	Cadmium chloride (CdCl2)	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	2	d	D	117	FW	Schuytema, G.S., P.O. Nelson, K.W. Malueg, A.V. Nebeker, D.F. Krawczyk, and A.K. Ratcliff	Toxicity of Cadmium in Water and Sediment Slurries to Daphnia magna	Environ.Toxicol.Chem. 3(2):293-308	1984
65	Cadmium chloride (CdCl2)	Carcinus maenas	Green Or Europeon Shore Crab	Crustaceans	MOR	MORT	2	d	D	144	FW	Schuytema, G.S., P.O. Nelson, K.W. Malueg, A.V. Nebeker, D.F. Krawczyk, and A.K. Ratcliff	Toxicity of Cadmium in Water and Sediment Slurries to Daphnia magna	Environ.Toxicol.Chem. 3(2):293-308	1984
66	Sulfuric acid, Cadmium salt (1:1)	Scenedesmus quadricauda	Green Algae	Algae, Moss, Fungi	PHY	NO3U	0.17	d	D	146.1	FW	Awasthi, M., and L.C. Rai	Toxicity of Nickel, Zinc, and Cadmium to Nitrate Uptake in Free and Immobilized Cells of Scenedesmus quadricauda	Ecotoxicol. Environ. Saf.61(2): 268-272	2005
67	Sulfuric acid, Cadmium salt (1:1)	Scenedesmus quadricauda	Green Algae	Algae, Moss, Fungi	PHY	NO3U	0.17	d	D	146.1	FW	Awasthi, M., and L.C. Rai	Toxicity of Nickel, Zinc, and Cadmium to Nitrate Uptake in Free and Immobilized Cells of Scenedesmus quadricauda	Ecotoxicol. Environ. Saf.61(2): 268-272	2005
68	Cadmium chloride (CdCl2)	Tigriopus brevicornis	Harpacticoid Copepod	Crustaceans	MOR	MORT	4	d	D	177	FW	Gale, N.L., B.G. Wixson, and M. Erten	An Evaluation of the Acute Toxicity of Lead, Zinc, and Cadmium in Missouri Ozark Groundwater	Trace Subst.Environ.Health 25:169-183	1992
69	Cadmium chloride (CdCl2)	Varuna litterata	Crab	Crustaceans	MOR	MORT	4	d	D	222	FW	Gale, N.L., B.G. Wixson, and M. Erten	An Evaluation of the Acute Toxicity of Lead, Zinc, and Cadmium in Missouri Ozark Groundwater	Trace Subst.Environ.Health 25:169-183	1992
70	Cadmium chloride (CdCl2)	Paragrapsus quadridentatus	Crab	Crustaceans	ITX	IMBL	4	d	D	230	FW	Gale, N.L., B.G. Wixson, and M. Erten	An Evaluation of the Acute Toxicity of Lead, Zinc, and Cadmium in Missouri Ozark Groundwater	Trace Subst.Environ.Health 25:169-183	1992
71	Cadmium chloride (CdCl2)	Corydoras paleatus	Peppered Corydoras	Fish	GEN	MNUC	4	d	D	298	FW	Gale, N.L., B.G. Wixson, and M. Erten	An Evaluation of the Acute Toxicity of Lead, Zinc, and Cadmium in Missouri Ozark Groundwater	Trace Subst.Environ.Health 25:169-183	1992
72	Cadmium	Scenedesmus quadricauda	Green Algae	Algae, Moss, Fungi	BCM	GBCM	0.07	d	D	5621	FW	Peterson, H.G., F.P. Healey, and R. Wagemann	Metal Toxicity to Algae: A Highly pH Dependent Phenomenon	Can. J. Fish. Aquat. Sci.41(): 974-979	1984
73	Cadmium chloride (CdCl2)	Enallagma cyathigerum	Damselfly	Insects/Spiders	MOR	MORT	1	d	D	9380	FW	Bechard, K.M., P.L. Gillis, and C.M. Wood	Acute Toxicity of Waterborne Cd, Cu, Pb, Ni, and Zn to First-Instar Chironomus riparius Larvae	Arch.Environ.Contam.Toxicol. 54(3):454-459	2008
74	Cadmium chloride (CdCl2)	Tigriopus brevicornis	Harpacticoid Copepod	Crustaceans	MOR	MORT	4	d	D	9920	FW	Gale, N.L., B.G. Wixson, and M. Erten	An Evaluation of the Acute Toxicity of Lead, Zinc, and Cadmium in Missouri Ozark Groundwater	Trace Subst.Environ.Health 25:169-183	1992
75	Cadmium chloride (CdCl2)	Ctenodrilus serratus	Polychaete Worm	Worms	MOR	MORT	4	d	D	12600	FW	Busacker, G.P.	Osmoregulatory Effects of Acute Cadmium Toxicity in a Model Teleost	Ph.D.Thesis, Wayne State Univ., Detroit, MI :225 p. (Author Communication Used) (UMI #8022738)	1980
76	Cadmium chloride (CdCl2)	Dugesia sp.	Turbellarian, Flatworm	Worms	MOR	MORT	4	d	D	12600	FW	Busacker, G.P.	Osmoregulatory Effects of Acute Cadmium Toxicity in a Model Teleost	Ph.D.Thesis, Wayne State Univ., Detroit, MI :225 p. (Author Communication Used) (UMI #8022738)	1980
77	Cadmium	Scenedesmus quadricauda	Green Algae	Algae, Moss, Fungi	BCM	GBCM	0.07	d	D	16862	FW	Peterson, H.G., F.P. Healey, and R. Wagemann	Metal Toxicity to Algae: A Highly pH Dependent Phenomenon	Can. J. Fish. Aquat. Sci.41(): 974-979	1984
78	Cadmium	Anabaena doliolum	Blue-Green Algae	Algae, Moss, Fungi	MOR	MORT	12	d	D	75000	FW	Kaur, M., A.S. Ahluwalia, and S. Chaudhary	Effect of Bimetallic Combinations of Heavy Metals on Growth and Development of a Cyanobacterium Anabaena doliolum	Phykos41(1-2): 27-34	2002
79	Sulfuric acid, Cadmium salt (1:1)	Cyprinus carpio	Common Carp	Fish	FDB	FDNG	40	d	D	11	SW	Ahsanullah, M., and A.R. Williams	Sublethal Effects and Bioaccumulation of Cadmium, Chromium, Copper, and Zinc in the Marine Amphipod Allorchestes compressa	Mar.Biol.(Berlin) 108:59-65	1991
80	Sulfuric acid, Cadmium salt (1:1)	Cyprinus carpio	Common Carp	Fish	FDB	FDNG	40	d	D	25	SW	Ahsanullah, M., and A.R. Williams	Sublethal Effects and Bioaccumulation of Cadmium, Chromium, Copper, and Zinc in the Marine Amphipod Allorchestes compressa	Mar.Biol.(Berlin) 108:59-65	1991
81	Sulfuric acid, Cadmium salt (1:1)	Cyprinus carpio	Common Carp	Fish	FDB	FDNG	40	d	D	38	SW	Ahsanullah, M., and A.R. Williams	Sublethal Effects and Bioaccumulation of Cadmium, Chromium, Copper, and Zinc in the Marine Amphipod Allorchestes compressa	Mar.Biol.(Berlin) 108:59-65	1991

Appendix D-9, Table 2. ECOTOX effects values for cadmium in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measurement	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc ug/L	Media Type	Author	Title	Source	Publication Year
82	Acetic acid, Cadmium salt	Poecilia reticulata	Guppy	Fish	MOR	MORT	0.01	d	D	112.41	SW	Kefaloyianni, E., E. Gourgou, V. Ferle, E. Kotsakis, C. Gaitanaki, and I. Beis	Acute Thermal Stress and Various Heavy Metals Induce Tissue-Specific Pro- or Anti-Apoptotic Events via the p38-MAPK Signal Transduction Pathway in Mytilus galloprovincialis (Lam.)	J.Exp.Biol. 208(23):4427-4436	2005
83	Acetic acid, Cadmium salt	Poecilia reticulata	Guppy	Fish	MOR	MORT	0.01	d	D	112.41	SW	Kefaloyianni, E., E. Gourgou, V. Ferle, E. Kotsakis, C. Gaitanaki, and I. Beis	Acute Thermal Stress and Various Heavy Metals Induce Tissue-Specific Pro- or Anti-Apoptotic Events via the p38-MAPK Signal Transduction Pathway in Mytilus galloprovincialis (Lam.)	J.Exp.Biol. 208(23):4427-4436	2005
84	Cadmium	Litopenaeus vannamei	White Shrimp	Crustaceans	PHY	OSFG	0.02	d	D	112.41	SW	Kefaloyianni, E., E. Gourgou, V. Ferle, E. Kotsakis, C. Gaitanaki, and I. Beis	Acute Thermal Stress and Various Heavy Metals Induce Tissue-Specific Pro- or Anti-Apoptotic Events via the p38-MAPK Signal Transduction Pathway in Mytilus galloprovincialis (Lam.)	J.Exp.Biol. 208(23):4427-4436	2005
85	Cadmium	Cyprinidae	Minnow,Carp Family	Fish	MOR	MORT	0.021	d	D	112.41	SW	Kefaloyianni, E., E. Gourgou, V. Ferle, E. Kotsakis, C. Gaitanaki, and I. Beis	Acute Thermal Stress and Various Heavy Metals Induce Tissue-Specific Pro- or Anti-Apoptotic Events via the p38-MAPK Signal Transduction Pathway in Mytilus galloprovincialis (Lam.)	J.Exp.Biol. 208(23):4427-4436	2005
86	Cadmium	Chironomus plumosus	Midge	Insects/Spiders	MOR	MORT	0.042	d	D	112.41	SW	Kefaloyianni, E., E. Gourgou, V. Ferle, E. Kotsakis, C. Gaitanaki, and I. Beis	Acute Thermal Stress and Various Heavy Metals Induce Tissue-Specific Pro- or Anti-Apoptotic Events via the p38-MAPK Signal Transduction Pathway in Mytilus galloprovincialis (Lam.)	J.Exp.Biol. 208(23):4427-4436	2005
87	Cadmium	Chironomus plumosus	Midge	Insects/Spiders	MOR	MORT	0.042	d	D	112.41	SW	Kefaloyianni, E., E. Gourgou, V. Ferle, E. Kotsakis, C. Gaitanaki, and I. Beis	Acute Thermal Stress and Various Heavy Metals Induce Tissue-Specific Pro- or Anti-Apoptotic Events via the p38-MAPK Signal Transduction Pathway in Mytilus galloprovincialis (Lam.)	J.Exp.Biol. 208(23):4427-4436	2005
88	Cadmium	Salvelinus fontinalis	Brook Trout	Fish	MOR	MORT	0.083	d	D	112.41	SW	Kefaloyianni, E., E. Gourgou, V. Ferle, E. Kotsakis, C. Gaitanaki, and I. Beis	Acute Thermal Stress and Various Heavy Metals Induce Tissue-Specific Pro- or Anti-Apoptotic Events via the p38-MAPK Signal Transduction Pathway in Mytilus galloprovincialis (Lam.)	J.Exp.Biol. 208(23):4427-4436	2005
89	Cadmium	Tinca tinca	Tench	Fish	MOR	MORT	0.083	d	D	112.41	SW	Kefaloyianni, E., E. Gourgou, V. Ferle, E. Kotsakis, C. Gaitanaki, and I. Beis	Acute Thermal Stress and Various Heavy Metals Induce Tissue-Specific Pro- or Anti-Apoptotic Events via the p38-MAPK Signal Transduction Pathway in Mytilus galloprovincialis (Lam.)	J.Exp.Biol. 208(23):4427-4436	2005
90	Cadmium chloride (CdCl2)	Psetta maxima	Left-Eyed Flounder, Turbot	Fish	MOR	MORT	2	d	D	239	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
91	Cadmium chloride (CdCl2)	Villosa vibex	Southern Rainbow Mussel	Molluscs	MOR	MORT	4	d	D	250	SW	King, C.K., S.A. Gale, and J.L. Stauber	Acute Toxicity and Bioaccumulation of Aqueous and Sediment-Bound Metals in the Estuarine Amphipod Melita plumulosa	Environ.Toxicol. 21(5):489-504	2006
92	Cadmium chloride (CdCl2)	Utterbackia imbecillis	Paper Pondshell	Molluscs	MOR	MORT	4	d	D	400	SW	King, C.K., S.A. Gale, and J.L. Stauber	Acute Toxicity and Bioaccumulation of Aqueous and Sediment-Bound Metals in the Estuarine Amphipod Melita plumulosa	Environ.Toxicol. 21(5):489-504	2006
93	Cadmium chloride (CdCl2)	Utterbackia imbecillis	Paper Pondshell	Molluscs	MOR	MORT	4	d	D	400	SW	King, C.K., S.A. Gale, and J.L. Stauber	Acute Toxicity and Bioaccumulation of Aqueous and Sediment-Bound Metals in the Estuarine Amphipod Melita plumulosa	Environ.Toxicol. 21(5):489-504	2006
94	Cadmium chloride (CdCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	10	d	D	400	SW	King, C.K., S.A. Gale, and J.L. Stauber	Acute Toxicity and Bioaccumulation of Aqueous and Sediment-Bound Metals in the Estuarine Amphipod Melita plumulosa	Environ.Toxicol. 21(5):489-504	2006
95	Cadmium chloride (CdCl2)	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	10	d	D	400	SW	King, C.K., S.A. Gale, and J.L. Stauber	Acute Toxicity and Bioaccumulation of Aqueous and Sediment-Bound Metals in the Estuarine Amphipod Melita plumulosa	Environ.Toxicol. 21(5):489-504	2006
96	Cadmium chloride (CdCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	10	d	D	470	SW	King, C.K., S.A. Gale, and J.L. Stauber	Acute Toxicity and Bioaccumulation of Aqueous and Sediment-Bound Metals in the Estuarine Amphipod Melita plumulosa	Environ.Toxicol. 21(5):489-504	2006
97	Cadmium chloride (CdCl2)	Mytilus edulis	Common Bay Mussel,Blue Mussel	Molluscs	DVP	GDVP	2	d	D	502	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009

Appendix D-9, Table 2. ECOTOX effects values for cadmium in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measurement	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc ug/L	Media Type	Author	Title	Source	Publication Year
98	Cadmium chloride (CdCl2)	Utterbackia imbecillis	Paper Pondshell	Molluscs	MOR	MORT	4	d	D	510	SW	King, C.K., S.A. Gale, and J.L. Stauber	Acute Toxicity and Bioaccumulation of Aqueous and Sediment-Bound Metals in the Estuarine Amphipod Melita plumulosa	Environ.Toxicol. 21(5):489-504	2006
99	Cadmium chloride (CdCl2)	Asterias forbesii	Common Starfish	Invertebrates	MOR	MORT	4	d	D	520	SW	King, C.K., S.A. Gale, and J.L. Stauber	Acute Toxicity and Bioaccumulation of Aqueous and Sediment-Bound Metals in the Estuarine Amphipod Melita plumulosa	Environ.Toxicol. 21(5):489-504	2006
100	Cadmium chloride (CdCl2)	Asterias forbesii	Common Starfish	Invertebrates	MOR	MORT	4	d	D	2280	SW	King, C.K., S.A. Gale, and J.L. Stauber	Acute Toxicity and Bioaccumulation of Aqueous and Sediment-Bound Metals in the Estuarine Amphipod Melita plumulosa	Environ.Toxicol. 21(5):489-504	2006
101	Cadmium	Polycelis tenuis	Turbellarian	Worms	MOR	MORT	0.06	d	D	9000	SW	Brix, K.V., F.P. Sweeney, and R.D. Cardwell	Procedures for Conducting Acute Toxicity Tests Using the Echinoderm Sperm Cell Test to Determine the Acute Toxicity of bis(Tributyltin) Oxide	Lab.Proj.No.55-1807-05(02A), Elf Atochem North America Inc., Philadelphia, PA :20 p.	1994

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	End-point	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc ug/L	Media Type	Author	Title	Source	Publication Year
1	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	0.03	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
2	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	0.04	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
3	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	0.04	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
4	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	0.05	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
5	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	0.07	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
6	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	0.08	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
7	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	0.09	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
8	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	0.1	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
9	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	0.11	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft	Environ.Toxicol.Chem. 28(8):1663-1670	2009
10	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	0.13	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft	Environ.Toxicol.Chem. 28(8):1663-1670	2009
11	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	0.14	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft	Environ.Toxicol.Chem. 28(8):1663-1670	2009
12	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	0.15	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft	Environ.Toxicol.Chem. 28(8):1663-1670	2009

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	End-point	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc ug/L	Media Type	Author	Title	Source	Publication Year
13	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	0.17	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
14	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	0.17	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
15	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	0.17	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
16	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	0.18	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
17	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	0.19	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
18	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	0.23	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
19	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	0.23	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
20	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	0.29	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
21	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	0.31	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
22	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	0.37	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
23	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	0.4	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009

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24	Sulfuric acid copper(2+) salt (1:1)	Chlorella sp.	Green Algae	Algae, Moss, Fungi	LOEL	POP	PGRT	2	d	D	0.4	FW	Wilde, K.L., J.L. Stauber, S.J. Markich, N.M. Franklin, and P.L. Brown	The Effect of pH on the Uptake and Toxicity of Copper and Zinc in a Tropical Freshwater Alga (Chlorella sp.)	Arch. Environ. Contam. Toxicol.51(2): 174-185	2006
25	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	0.42	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
26	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	0.43	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
27	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	0.47	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
28	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	0.5	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
29	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	0.5	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
30	Sulfuric acid copper(2+) salt (1:1)	Chlorella sp.	Green Algae	Algae, Moss, Fungi	LOEL	POP	PGRT	2	d	D	0.5	FW	Wilde, K.L., J.L. Stauber, S.J. Markich, N.M. Franklin, and P.L. Brown	The Effect of pH on the Uptake and Toxicity of Copper and Zinc in a Tropical Freshwater Alga (Chlorella sp.)	Arch. Environ. Contam. Toxicol.51(2): 174-185	2006
31	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	0.6	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
32	Sulfuric acid copper(2+) salt (1:1)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	LOEC	POP	PGRT	3	d	D	0.6	FW	Levy, J.L., J.L. Stauber, S.A. Wakelin, and D.F. Jolley	The Effect of Bacteria on the Sensitivity of Microalgae to Copper in Laboratory Bioassays	Chemosphere74(9): 1266-1274	2009
33	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	0.61	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
34	Copper	Microcystis aeruginosa	Blue-Green Algae	Algae, Moss, Fungi	LOEL	BCM	MCYS	NR	d	D	0.6355	FW	Gouvea, S.P., G.L. Boyer, and M.R. Twiss	Influence of Ultraviolet Radiation, Copper, and Zinc on Microcystin Content in Microcystis aeruginosa (Cyanobacteria)	Harmful Algae7(2): 194-205	2008
35	Copper	Microcystis aeruginosa	Blue-Green Algae	Algae, Moss, Fungi	LOEL	BCM	MCYS	NR	d	D	0.6355	FW	Gouvea, S.P., G.L. Boyer, and M.R. Twiss	Influence of Ultraviolet Radiation, Copper, and Zinc on Microcystin Content in Microcystis aeruginosa (Cyanobacteria)	Harmful Algae7(2): 194-205	2008
36	Copper	Microcystis aeruginosa	Blue-Green Algae	Algae, Moss, Fungi	LOEL	BCM	MCYS	NR	d	D	0.6355	FW	Gouvea, S.P., G.L. Boyer, and M.R. Twiss	Influence of Ultraviolet Radiation, Copper, and Zinc on Microcystin Content in Microcystis aeruginosa (Cyanobacteria)	Harmful Algae7(2): 194-205	2008

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37	Copper	Microcystis aeruginosa	Blue-Green Algae	Algae, Moss, Fungi	LOEL	BCM	MCYS	NR	d	D	0.6355	FW	Gouvea, S.P., G.L. Boyer, and M.R. Twiss	Influence of Ultraviolet Radiation, Copper, and Zinc on Microcystin Content in Microcystis aeruginosa (Cyanobacteria)	Harmful Algae7(2): 194-205	2008
38	Copper	Microcystis aeruginosa	Blue-Green Algae	Algae, Moss, Fungi	LOEL	BCM	MCYS	NR	d	D	0.6355	FW	Gouvea, S.P., G.L. Boyer, and M.R. Twiss	Influence of Ultraviolet Radiation, Copper, and Zinc on Microcystin Content in Microcystis aeruginosa (Cyanobacteria)	Harmful Algae7(2): 194-205	2008
39	Copper	Microcystis aeruginosa	Blue-Green Algae	Algae, Moss, Fungi	LOEL	BCM	MCYS	NR	d	D	0.6355	FW	Gouvea, S.P., G.L. Boyer, and M.R. Twiss	Influence of Ultraviolet Radiation, Copper, and Zinc on Microcystin Content in Microcystis aeruginosa (Cyanobacteria)	Harmful Algae7(2): 194-205	2008
40	Copper	Microcystis aeruginosa	Blue-Green Algae	Algae, Moss, Fungi	LOEL	POP	CHLA	NR	d	D	0.6355	FW	Gouvea, S.P., G.L. Boyer, and M.R. Twiss	Influence of Ultraviolet Radiation, Copper, and Zinc on Microcystin Content in Microcystis aeruginosa (Cyanobacteria)	Harmful Algae7(2): 194-205	2008
41	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	0.77	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
42	Sulfuric acid copper(2+) salt (1:1)	Chlorella sp.	Green Algae	Algae, Moss, Fungi	LOEL	POP	PGRT	2	d	D	0.8	FW	Wilde, K.L., J.L. Stauber, S.J. Markich, N.M. Franklin, and P.L. Brown	The Effect of pH on the Uptake and Toxicity of Copper and Zinc in a Tropical Freshwater Alga (Chlorella sp.)	Arch. Environ. Contam. Toxicol.51(2): 174-185	2006
43	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	0.8478	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
44	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	1	d	D	0.9133	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
45	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	1	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
46	Copper chloride (CuCl2)	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LOEL	BEH	SMEL	0.02	d	D	1	FW	Baldwin, D.H., J.F. Sandahl, J.S. Labenia, and N.L. Scholz	Sublethal Effects of Copper on Coho Salmon: Impacts on Nonoverlapping Receptor Pathways in the Peripheral Olfactory Nervous System	Environ.Toxicol.Chem. 22(10):2266-2274	2003
47	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	1	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
48	Sulfuric acid copper(2+) salt (1:1)	Chlorella sp.	Green Algae	Algae, Moss, Fungi	LOEC	POP	PGRT	3	d	D	1	FW	Levy, J.L., J.L. Stauber, S.A. Wakelin, and D.F. Jolley	The Effect of Bacteria on the Sensitivity of Microalgae to Copper in Laboratory Bioassays	Chemosphere74(9): 1266-1274	2009
49	Sulfuric acid copper(2+) salt (1:1)	Chlorella sp.	Green Algae	Algae, Moss, Fungi	LOEC	POP	PGRT	3	d	D	1	FW	Levy, J.L., J.L. Stauber, S.A. Wakelin, and D.F. Jolley	The Effect of Bacteria on the Sensitivity of Microalgae to Copper in Laboratory Bioassays	Chemosphere74(9): 1266-1274	2009
50	Copper	Chlorella sp.	Green Algae	Algae, Moss, Fungi	EC50	POP	PGRT	2	d	D	1.1	FW	De Schamphelaere, K.A.C., J.L. Stauber, K.L. Wilde, S.J. Markich, P.L. Brown, N.M. Franklin, N.M. Creighton, and C.R. Ja	Toward a Biotic Ligand Model for Freshwater Green Algae: Surface-Bound and Internal Copper are Better Predictors of Toxicity than Free Cu2+-Ion Activity when pH is Varied	Environ. Sci. Technol.39(7): 2067-2072	2005
51	Sulfuric acid copper(2+) salt (1:1)	Chlorella sp.	Green Algae	Algae, Moss, Fungi	LOEL	POP	PGRT	2	d	D	1.2	FW	Wilde, K.L., J.L. Stauber, S.J. Markich, N.M. Franklin, and P.L. Brown	The Effect of pH on the Uptake and Toxicity of Copper and Zinc in a Tropical Freshwater Alga (Chlorella sp.)	Arch. Environ. Contam. Toxicol.51(2): 174-185	2006

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52	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	1.505	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
53	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	1.6	FW	Hyne, R.V., F. Pablo, M. Julli, and S.J. Markich	Influence of Water Chemistry on the Acute Toxicity of Copper and Zinc to the Cladoceran Ceriodaphnia cf dubia	Environ.Toxicol.Chem. 24(7):1667-1675	2005
54	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	1.6	FW	Hyne, R.V., F. Pablo, M. Julli, and S.J. Markich	Influence of Water Chemistry on the Acute Toxicity of Copper and Zinc to the Cladoceran Ceriodaphnia cf dubia	Environ.Toxicol.Chem. 24(7):1667-1675	2005
55	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	1.6	FW	Hyne, R.V., F. Pablo, M. Julli, and S.J. Markich	Influence of Water Chemistry on the Acute Toxicity of Copper and Zinc to the Cladoceran Ceriodaphnia cf dubia	Environ.Toxicol.Chem. 24(7):1667-1675	2005
56	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	1.6	FW	Hyne, R.V., F. Pablo, M. Julli, and S.J. Markich	Influence of Water Chemistry on the Acute Toxicity of Copper and Zinc to the Cladoceran Ceriodaphnia cf dubia	Environ.Toxicol.Chem. 24(7):1667-1675	2005
57	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	1.6	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
58	Copper	Ceriodaphnia pulchella	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	1.7	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
59	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	NR-LETH	MOR	MORT	2	d	D	1.8	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
60	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	7	d	D	1.8	FW	Cacela, D., R. Hudson, J. Lipton, J. Marr, T. Podrabsky, and P. Welsh	Preliminary Toxicological Evaulation U.S. v. Iron Mountain Mines, Inc. Vol. 1 Data Report	Report, Prepared for Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of the Attorney General by Hagler Bailly Consulting Inc., Boulder, CO :53 p.	1996
61	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	1.89	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
62	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	MOR	MORT	2	d	D	1.9	FW	Apte, S.C., G.E. Batley, K.C. Bowles, P.L. Brown, N. Creighton, L.T. Hales, R.V. Hyne, M. Julli, S.J. Markich, F. Pablo,	A Comparison of Copper Speciation Measurements with the Toxic Responses of Three Sensitive Freshwater Organisms	Environ.Chem. 2(1):320-330	2005
63	Copper chloride (CuCl2)	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LOEL	BEH	FRZG	0.125	d	D	1.9	FW	Sandahl, J.	Biochemical and Physiological Indicators of Behavioral Impairment in Salmonids Exposed to Chlorpyrifos and Copper	Ph.D.Thesis, Oregon State University,OR :140 p. (UMI#3116313)	2004
64	Copper chloride (CuCl2)	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LOEL	PHY	TEVG	0.125	d	D	1.9	FW	Sandahl, J.	Biochemical and Physiological Indicators of Behavioral Impairment in Salmonids Exposed to Chlorpyrifos and Copper	Ph.D.Thesis, Oregon State University,OR :140 p. (UMI#3116313)	2004
65	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	1	d	D	2.09	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
66	Copper	Daphnia longispina	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	2.1	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007

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67	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	2.14	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
68	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	2.2	FW	Hyne, R.V., F. Pablo, M. Julli, and S.J. Markich	Influence of Water Chemistry on the Acute Toxicity of Copper and Zinc to the Cladoceran Ceriodaphnia cf dubia	Environ.Toxicol.Chem. 24(7):1667-1675	2005
69	Sulfuric acid copper(2+) salt (1:1)	Chlorella sp.	Green Algae	Algae, Moss, Fungi	LOEL	POP	PGRT	2	d	D	2.2	FW	Wilde, K.L., J.L. Stauber, S.J. Markich, N.M. Franklin, and P.L. Brown	The Effect of pH on the Uptake and Toxicity of Copper and Zinc in a Tropical Freshwater Alga (Chlorella sp.)	Arch. Environ. Contam. Toxicol.51(2): 174-185	2006
70	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	2.21	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
71	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	1	d	D	2.22	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
72	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	1	d	D	2.25	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
73	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	NR-LETH	MOR	MORT	2	d	D	2.3	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
74	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	2.39	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
75	Copper	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	2.5	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
76	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	2.6	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
77	Sulfuric acid copper(2+) salt (1:1)	Chlorella sp.	Green Algae	Algae, Moss, Fungi	LOEL	POP	PGRT	2	d	D	2.6	FW	Wilde, K.L., J.L. Stauber, S.J. Markich, N.M. Franklin, and P.L. Brown	The Effect of pH on the Uptake and Toxicity of Copper and Zinc in a Tropical Freshwater Alga (Chlorella sp.)	Arch. Environ. Contam. Toxicol.51(2): 174-185	2006
78	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	1	d	D	2.64	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
79	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	2.8	FW	Hyne, R.V., F. Pablo, M. Julli, and S.J. Markich	Influence of Water Chemistry on the Acute Toxicity of Copper and Zinc to the Cladoceran Ceriodaphnia cf dubia	Environ.Toxicol.Chem. 24(7):1667-1675	2005
80	Sulfuric acid copper(2+) salt (1:1)	Chlorella sp.	Green Algae	Algae, Moss, Fungi	LOEC	POP	PGRT	3	d	D	2.8	FW	Levy, J.L., J.L. Stauber, S.A. Wakelin, and D.F. Jolley	The Effect of Bacteria on the Sensitivity of Microalgae to Copper in Laboratory Bioassays	Chemosphere74(9): 1266-1274	2009
81	Copper	Oncorhynchus keta	Chum Salmon	Fish	LOEC	HIS	TFLR	0.1666667	d	D	3	FW	Sandahl, J.F., G. Miyasaka, N. Koide, and H. Ueda	Olfactory Inhibition and Recovery in Chum Salmon (Oncorhynchus keta) Following Copper Exposure	Can.J.Fish.Aquat.Sci. 63(8):1840-1847	2006

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	End-point	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc ug/L	Media Type	Author	Title	Source	Publication Year
82	Sulfuric acid copper(2+) salt (1:1)	Chlorella sp.	Green Algae	Algae, Moss, Fungi	LOEC	POP	PGRT	3	d	D	3	FW	Levy, J.L., J.L. Stauber, S.A. Wakelin, and D.F. Jolley	The Effect of Bacteria on the Sensitivity of Microalgae to Copper in Laboratory Bioassays	Chemosphere74(9): 1266-1274	2009
83	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	3.087	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
84	Copper	Daphnia longispina	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	3.1	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
85	Copper	Daphnia galeata	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	3.2	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
86	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	3.2	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
87	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	1	d	D	3.27	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
88	Copper	Ceriodaphnia pulchella	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	3.5	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
89	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	NR-LETH	MOR	MORT	2	d	D	3.7	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
90	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC20	MOR	MORT	4	d	D	3.8	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
91	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC20	MOR	MORT	7	d	D	3.9	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
92	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC20	MOR	MORT	7	d	D	3.9	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
93	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	4	FW	Hyne, R.V., F. Pablo, M. Julli, and S.J. Markich	Influence of Water Chemistry on the Acute Toxicity of Copper and Zinc to the Cladoceran Ceriodaphnia cf dubia	Environ.Toxicol.Chem. 24(7):1667-1675	2005
94	Copper	Daphnia longispina	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	4	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
95	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	7	d	D	4	FW	Cacela, D., R. Hudson, J. Lipton, J. Marr, T. Podrabsky, and P. Welsh	Preliminary Toxicological Evaulation U.S. v. Iron Mountain Mines, Inc. Vol. 1 Data Report	Report, Prepared for Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of the Attorney General by Hagler Bailly Consulting Inc., Boulder, CO :53 p.	1996

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	End-point	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc ug/L	Media Type	Author	Title	Source	Publication Year
96	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	4	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
97	Copper	Simocephalus vetulus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	4.1	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
98	Copper	Simocephalus vetulus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	4.2	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
99	Copper	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	4.3	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
100	Copper	Daphnia longispina	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	4.4	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
101	Copper	Daphnia longispina	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	4.4	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
102	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	NR-LETH	MOR	MORT	2	d	D	4.4	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
103	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	NR-LETH	MOR	MORT	2	d	D	4.4	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
104	Copper	Simocephalus exspinosus	Cladoceran	Crustaceans	EC50	ITX	IMBL	2	d	D	4.6	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
105	Copper	Simocephalus vetulus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	4.6	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
106	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC20	MOR	MORT	7	d	D	4.6	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
107	Sulfuric acid copper(2+) salt (1:1)	Villosa fabalis	Rayed Bean	Molluscs	EC50	MOR	MORT	2	d	D	4.6	FW	Gillis, P.L., R.J. Mitchell, A.N. Schwalb, K.A. McNichols, G.L. Mackie, C.M. Wood, and J.D. Ackerman	Sensitivity of the Glochidia (Larvae) of Freshwater Mussels to Copper: Assessing the Effect of Water Hardness and Dissolved Organic Carbon on the Sensitivity of Endangered Species	Aquat.Toxicol. 88:137-145	2008
108	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC20	MOR	MORT	4	d	D	4.8	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
109	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	7	d	D	4.8	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998

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110	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	4.9	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
111	Sulfuric acid copper(2+) salt (1:1)	Prosopium williamsoni	Mountain Whitefish	Fish	LC50	MOR	MORT	4	d	D	5	FW	Brinkman, S., and N. Vieira	Water Pollution Studies	Federal Aid Project F-243-R15, Job Progress Report, Colorado Div.of Wildlife, Fort Collins, Co :38 p.	2008
112	Sulfuric acid copper(2+) salt (1:1)	Chlorella sp.	Green Algae	Algae, Moss, Fungi	LOEC	POP	PGRT	3	d	D	5	FW	Levy, J.L., J.L. Stauber, S.A. Wakelin, and D.F. Jolley	The Effect of Bacteria on the Sensitivity of Microalgae to Copper in Laboratory Bioassays	Chemosphere74(9): 1266-1274	2009
113	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	5.02	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
114	Copper	Algae	Algae	Algae, Moss, Fungi	LOEL	POP	CHLA	2	d	D	5.08	FW	Mansilla-Rivera, I., and J.O. Nriagu	Copper Complexation and Toxicity to Phytoplankton in the Huron River, a Lake Erie Tributary	J. Gt. Lakes Res.29(1): 105-115	2003
115	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	7	d	D	5.1	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
116	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	5.2	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
117	Sulfuric acid copper(2+) salt (1:1)	Epioblasma triquetra	Snuffbox	Molluscs	EC50	MOR	MORT	2	d	D	5.2	FW	Gillis, P.L., R.J. Mitchell, A.N. Schwalb, K.A. McNichols, G.L. Mackie, C.M. Wood, and J.D. Ackerman	Sensitivity of the Glochidia (Larvae) of Freshwater Mussels to Copper: Assessing the Effect of Water Hardness and Dissolved Organic Carbon on the Sensitivity of Endangered Species	Aquat.Toxicol. 88:137-145	2008
118	Copper	Scapholeberis mucronata	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	5.3	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
119	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	5.38	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
120	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	NR-LETH	MOR	MORT	2	d	D	5.4	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
121	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	NR-LETH	MOR	MORT	2	d	D	5.4	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
122	Copper	Ceriodaphnia reticulata	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	5.5	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
123	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	5.6	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998

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124	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	5.7	FW	Cacela, D., R. Hudson, J. Lipton, J. Marr, T. Podrabsky, and P. Welsh	Preliminary Toxicological Evaulation U.S. v. Iron Mountain Mines, Inc. Vol. 1 Data Report	Report, Prepared for Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of the Attorney General by Hagler Bailly Consulting Inc., Boulder, CO :53 p.	1996
125	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC20	MOR	MORT	7	d	D	5.9	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
126	Sulfuric acid copper(2+) salt (1:1)	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	2	d	D	5.9	FW	Van Genderen, E.J., J.R. Tomasso, and S.J. Klaine	Influence of Copper Exposure on Whole-Body Sodium Levels in Larval Fathead Minnows (Pimephales promelas)	Environ.Toxicol.Chem. 27(6):1442-1449	2008
127	Sulfuric acid copper(2+) salt (1:1)	Prosopium williamsoni	Mountain Whitefish	Fish	LC50	MOR	MORT	4	d	D	6	FW	Brinkman, S., and N. Vieira	Water Pollution Studies	Federal Aid Project F-243-R15, Job Progress Report, Colorado Div.of Wildlife, Fort Collins, Co :38 p.	2008
128	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	NR-LETH	MOR	MORT	2	d	D	6.4	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
129	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	NR-LETH	MOR	MORT	2	d	D	6.4	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
130	Sulfuric acid copper(2+) salt (1:1)	Villosa iris	Rainbow	Molluscs	LOEC	GRO	LGTH	28	d	D	6.4	FW	Wang, N., C.G. Ingersoll, I.E. Greer, D.K. Hardesty, C.D. Ivey, J.L. Kunz, W.G. Brumbaugh, F.J. Dwyer, A.D. Roberts, T.	Chronic Toxicity of Copper and Ammonia to Juvenile Freshwater Mussels (Unionidae)	Environ.Toxicol.Chem. 26(10):2048-2056	2007
131	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	6.5	FW	Hyne, R.V., F. Pablo, M. Julli, and S.J. Markich	Influence of Water Chemistry on the Acute Toxicity of Copper and Zinc to the Cladoceran Ceriodaphnia cf dubia	Environ.Toxicol.Chem. 24(7):1667-1675	2005
132	Copper chloride (CuCl2)	Daphnia pulex	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	6.68	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
133	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	6.7	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
134	Sulfuric acid copper(2+) salt (1:1)	Epioblasma capsaeformis	Oyster Mussel	Molluscs	LOEC	GRO	LGTH	28	d	D	6.7	FW	Wang, N., C.G. Ingersoll, I.E. Greer, D.K. Hardesty, C.D. Ivey, J.L. Kunz, W.G. Brumbaugh, F.J. Dwyer, A.D. Roberts, T.	Chronic Toxicity of Copper and Ammonia to Juvenile Freshwater Mussels (Unionidae)	Environ.Toxicol.Chem. 26(10):2048-2056	2007
135	Copper	Daphnia longispina	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	6.8	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
136	Copper	Daphnia galeata	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	6.9	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
137	Sulfuric acid copper(2+) salt (1:1)	Villosa fabalis	Rayed Bean	Molluscs	EC50	MOR	MORT	1	d	D	6.9	FW	Gillis, P.L., R.J. Mitchell, A.N. Schwalb, K.A. McNichols, G.L. Mackie, C.M. Wood, and J.D. Ackerman	Sensitivity of the Glochidia (Larvae) of Freshwater Mussels to Copper: Assessing the Effect of Water Hardness and Dissolved Organic Carbon on the Sensitivity of Endangered Species	Aquat.Toxicol. 88:137-145	2008

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	End-point	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc ug/L	Media Type	Author	Title	Source	Publication Year
138	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	7	d	D	7	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
139	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	7	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
140	Copper	Simocephalus vetulus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	7.2	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
141	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC20	MOR	MORT	7	d	D	7.2	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
142	Sulfuric acid copper(2+) salt (1:1)	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	2	d	D	7.2	FW	Van Genderen, E.J., J.R. Tomasso, and S.J. Klaine	Influence of Copper Exposure on Whole-Body Sodium Levels in Larval Fathead Minnows (Pimephales promelas)	Environ.Toxicol.Chem. 27(6):1442-1449	2008
143	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC20	MOR	MORT	4	d	D	7.3	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
144	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC20	MOR	MORT	4	d	D	7.3	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
145	Copper	Ceriodaphnia reticulata	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	7.4	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
146	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	4	d	D	7.4	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
147	Sulfuric acid copper(2+) salt (1:1)	Epioblasma triquetra	Snuffbox	Molluscs	EC50	MOR	MORT	1	d	D	7.4	FW	Gillis, P.L., R.J. Mitchell, A.N. Schwalb, K.A. McNichols, G.L. Mackie, C.M. Wood, and J.D. Ackerman	Sensitivity of the Glochidia (Larvae) of Freshwater Mussels to Copper: Assessing the Effect of Water Hardness and Dissolved Organic Carbon on the Sensitivity of Endangered Species	Aquat.Toxicol. 88:137-145	2008
148	Sulfuric acid copper(2+) salt (1:1)	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	2	d	D	7.5	FW	Van Genderen, E.J., J.R. Tomasso, and S.J. Klaine	Influence of Copper Exposure on Whole-Body Sodium Levels in Larval Fathead Minnows (Pimephales promelas)	Environ.Toxicol.Chem. 27(6):1442-1449	2008
149	Copper	Ceriodaphnia pulchella	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	7.7	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
150	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC20	MOR	MORT	4	d	D	7.7	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	End-point	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc ug/L	Media Type	Author	Title	Source	Publication Year
151	Sulfuric acid copper(2+) salt (1:1)	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	2	d	D	7.8	FW	Van Genderen, E.J., J.R. Tomasso, and S.J. Klaine	Influence of Copper Exposure on Whole-Body Sodium Levels in Larval Fathead Minnows (Pimephales promelas)	Environ.Toxicol.Chem. 27(6):1442-1449	2008
152	Copper	Oncorhynchus keta	Chum Salmon	Fish	LOEC	PHY	EPYR	0.1666667	d	D	8	FW	Sandahl, J.F., G. Miyasaka, N. Koide, and H. Ueda	Olfactory Inhibition and Recovery in Chum Salmon (Oncorhynchus keta) Following Copper Exposure	Can.J.Fish.Aquat.Sci. 63(8):1840-1847	2006
153	Sulfuric acid copper(2+) salt (1:1)	Danio rerio	Zebra Danio	Fish	LOEC	ACC	RSDE	21	d	D	8	FW	Craig, P.M., M. Galus, C.M. Wood, and G.B. McClelland	Dietary Iron Alters Waterborne Copper-Induced Gene Expression in Soft Water Acclimated Zebrafish (Danio rerio)	Am.J.Physiol.Regul.Integr.Comp.Physiol. 296(2):R362-R373	2009
154	Sulfuric acid copper(2+) salt (1:1)	Danio rerio	Zebra Danio	Fish	LOEC	ACC	RSDE	21	d	D	8	FW	Craig, P.M., M. Galus, C.M. Wood, and G.B. McClelland	Dietary Iron Alters Waterborne Copper-Induced Gene Expression in Soft Water Acclimated Zebrafish (Danio rerio)	Am.J.Physiol.Regul.Integr.Comp.Physiol. 296(2):R362-R373	2009
155	Sulfuric acid copper(2+) salt (1:1)	Danio rerio	Zebra Danio	Fish	LOEC	ACC	RSDE	21	d	D	8	FW	Craig, P.M., M. Galus, C.M. Wood, and G.B. McClelland	Dietary Iron Alters Waterborne Copper-Induced Gene Expression in Soft Water Acclimated Zebrafish (Danio rerio)	Am.J.Physiol.Regul.Integr.Comp.Physiol. 296(2):R362-R373	2009
156	Sulfuric acid copper(2+) salt (1:1)	Danio rerio	Zebra Danio	Fish	LOEC	BCM	CTR1	21	d	D	8	FW	Craig, P.M., M. Galus, C.M. Wood, and G.B. McClelland	Dietary Iron Alters Waterborne Copper-Induced Gene Expression in Soft Water Acclimated Zebrafish (Danio rerio)	Am.J.Physiol.Regul.Integr.Comp.Physiol. 296(2):R362-R373	2009
157	Sulfuric acid copper(2+) salt (1:1)	Danio rerio	Zebra Danio	Fish	LOEC	GEN	GEXP	21	d	D	8	FW	Craig, P.M., M. Galus, C.M. Wood, and G.B. McClelland	Dietary Iron Alters Waterborne Copper-Induced Gene Expression in Soft Water Acclimated Zebrafish (Danio rerio)	Am.J.Physiol.Regul.Integr.Comp.Physiol. 296(2):R362-R373	2009
158	Sulfuric acid copper(2+) salt (1:1)	Danio rerio	Zebra Danio	Fish	LOEC	GEN	GEXP	21	d	D	8	FW	Craig, P.M., M. Galus, C.M. Wood, and G.B. McClelland	Dietary Iron Alters Waterborne Copper-Induced Gene Expression in Soft Water Acclimated Zebrafish (Danio rerio)	Am.J.Physiol.Regul.Integr.Comp.Physiol. 296(2):R362-R373	2009
159	Sulfuric acid copper(2+) salt (1:1)	Danio rerio	Zebra Danio	Fish	LOEC	GEN	GEXP	21	d	D	8	FW	Craig, P.M., M. Galus, C.M. Wood, and G.B. McClelland	Dietary Iron Alters Waterborne Copper-Induced Gene Expression in Soft Water Acclimated Zebrafish (Danio rerio)	Am.J.Physiol.Regul.Integr.Comp.Physiol. 296(2):R362-R373	2009
160	Sulfuric acid copper(2+) salt (1:1)	Danio rerio	Zebra Danio	Fish	LOEC	GEN	GEXP	21	d	D	8	FW	Craig, P.M., M. Galus, C.M. Wood, and G.B. McClelland	Dietary Iron Alters Waterborne Copper-Induced Gene Expression in Soft Water Acclimated Zebrafish (Danio rerio)	Am.J.Physiol.Regul.Integr.Comp.Physiol. 296(2):R362-R373	2009
161	Sulfuric acid copper(2+) salt (1:1)	Danio rerio	Zebra Danio	Fish	LOEC	GEN	GEXP	21	d	D	8	FW	Craig, P.M., M. Galus, C.M. Wood, and G.B. McClelland	Dietary Iron Alters Waterborne Copper-Induced Gene Expression in Soft Water Acclimated Zebrafish (Danio rerio)	Am.J.Physiol.Regul.Integr.Comp.Physiol. 296(2):R362-R373	2009
162	Sulfuric acid copper(2+) salt (1:1)	Danio rerio	Zebra Danio	Fish	LOEC	GEN	GEXP	21	d	D	8	FW	Craig, P.M., M. Galus, C.M. Wood, and G.B. McClelland	Dietary Iron Alters Waterborne Copper-Induced Gene Expression in Soft Water Acclimated Zebrafish (Danio rerio)	Am.J.Physiol.Regul.Integr.Comp.Physiol. 296(2):R362-R373	2009
163	Sulfuric acid copper(2+) salt (1:1)	Danio rerio	Zebra Danio	Fish	LOEC	GEN	GEXP	21	d	D	8	FW	Craig, P.M., M. Galus, C.M. Wood, and G.B. McClelland	Dietary Iron Alters Waterborne Copper-Induced Gene Expression in Soft Water Acclimated Zebrafish (Danio rerio)	Am.J.Physiol.Regul.Integr.Comp.Physiol. 296(2):R362-R373	2009
164	Copper	Daphnia longispina	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	8.2	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
165	Copper	Ceriodaphnia reticulata	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	8.3	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
166	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	8.3	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
167	Sulfuric acid copper(2+) salt (1:1)	Prosopium williamsoni	Mountain Whitefish	Fish	LOEL	GRO	WGHT	90	d	D	8.3	FW	Brinkman, S., and N. Vieira	Water Pollution Studies	Federal Aid Project F-243-R15, Job Progress Report, Colorado Div.of Wildlife, Fort Collins, Co :38 p.	2008

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	End-point	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc ug/L	Media Type	Author	Title	Source	Publication Year
168	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC20	MOR	MORT	7	d	D	8.4	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
169	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	8.6	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
170	Copper	Ceriodaphnia pulchella	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	8.7	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
171	Sulfuric acid copper(2+) salt (1:1)	Epioblasma torulosa ssp. rangiana	Northern Riffleshell	Molluscs	EC50	MOR	MORT	2	d	D	8.7	FW	Gillis, P.L., R.J. Mitchell, A.N. Schwalb, K.A. McNichols, G.L. Mackie, C.M. Wood, and J.D. Ackerman	Sensitivity of the Glochidia (Larvae) of Freshwater Mussels to Copper: Assessing the Effect of Water Hardness and Dissolved Organic Carbon on the Sensitivity of Endangered Species	Aquat.Toxicol. 88:137-145	2008
172	Sulfuric acid copper(2+) salt (1:1)	Prosopium williamsoni	Mountain Whitefish	Fish	LOEL	MOR	SURV	4	d	D	8.7	FW	Brinkman, S., and N. Vieira	Water Pollution Studies	Federal Aid Project F-243-R15, Job Progress Report, Colorado Div.of Wildlife, Fort Collins, Co :38 p.	2008
173	Sulfuric acid copper(2+) salt (1:1)	Prosopium williamsoni	Mountain Whitefish	Fish	LOEL	MOR	SURV	30	d	D	8.7	FW	Brinkman, S., and N. Vieira	Water Pollution Studies	Federal Aid Project F-243-R15, Job Progress Report, Colorado Div.of Wildlife, Fort Collins, Co :38 p.	2008
174	Sulfuric acid copper(2+) salt (1:1)	Prosopium williamsoni	Mountain Whitefish	Fish	LOEL	GRO	WGHT	60	d	D	8.7	FW	Brinkman, S., and N. Vieira	Water Pollution Studies	Federal Aid Project F-243-R15, Job Progress Report, Colorado Div.of Wildlife, Fort Collins, Co :38 p.	2008
175	Sulfuric acid copper(2+) salt (1:1)	Prosopium williamsoni	Mountain Whitefish	Fish	LOEL	POP	BMAS	60	d	D	8.7	FW	Brinkman, S., and N. Vieira	Water Pollution Studies	Federal Aid Project F-243-R15, Job Progress Report, Colorado Div.of Wildlife, Fort Collins, Co :38 p.	2008
176	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC20	MOR	MORT	7	d	D	8.8	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
177	Sulfuric acid copper(2+) salt (1:1)	Epioblasma triquetra	Snuffbox	Molluscs	EC50	MOR	MORT	2	d	D	8.8	FW	Gillis, P.L., R.J. Mitchell, A.N. Schwalb, K.A. McNichols, G.L. Mackie, C.M. Wood, and J.D. Ackerman	Sensitivity of the Glochidia (Larvae) of Freshwater Mussels to Copper: Assessing the Effect of Water Hardness and Dissolved Organic Carbon on the Sensitivity of Endangered Species	Aquat.Toxicol. 88:137-145	2008
178	Copper	Simocephalus vetulus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	8.9	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
179	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	9	FW	Apte, S.C., G.E. Batley, K.C. Bowles, P.L. Brown, N. Creighton, L.T. Hales, R.V. Hyne, M. Julli, S.J. Markich, F. Pablo,	A Comparison of Copper Speciation Measurements with the Toxic Responses of Three Sensitive Freshwater Organisms	Environ.Chem. 2(1):320-330	2005
180	Copper chloride (CuCl)	Daphnia pulex	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	9	FW	Griffitt, R.J., J. Luo, J. Gao, J.C. Bonzongo, and D.S. Barber	Effects of Particle Composition and Species on Toxicity of Metallic Nanomaterials in Aquatic Organisms	Environ.Toxicol.Chem. 27(9):1972-1978	2008
181	Copper	Simocephalus vetulus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	9.1	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007

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182	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	7	d	D	9.1	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
183	Copper	Bosmina longirostris	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	9.2	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
184	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	9.3	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
185	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC20	MOR	MORT	7	d	D	9.4	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
186	Copper chloride (CuCl2)	Daphnia pulex	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	9.56	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
187	Copper	Chydorus ovalis	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	9.6	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
188	Copper	Simocephalus vetulus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	9.6	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
189	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC20	MOR	MORT	4	d	D	9.6	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
190	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	9.7	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
191	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC20	MOR	MORT	4	d	D	9.7	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
192	Copper	Ceriodaphnia pulchella	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	9.8	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
193	Copper	Simocephalus vetulus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	9.8	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
194	Copper	Daphnia longispina	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	9.89	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
195	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	7	d	D	9.9	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998

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196	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	10	FW	Hyne, R.V., F. Pablo, M. Julli, and S.J. Markich	Influence of Water Chemistry on the Acute Toxicity of Copper and Zinc to the Cladoceran Ceriodaphnia cf dubia	Environ.Toxicol.Chem. 24(7):1667-1675	2005
197	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	10	FW	Hyne, R.V., F. Pablo, M. Julli, and S.J. Markich	Influence of Water Chemistry on the Acute Toxicity of Copper and Zinc to the Cladoceran Ceriodaphnia cf dubia	Environ.Toxicol.Chem. 24(7):1667-1675	2005
198	Copper	Daphnia longispina	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	10	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
199	Copper	Simocephalus vetulus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	10	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
200	Sulfuric acid copper(2+) salt (1:1)	Pimephales promelas	Fathead Minnow	Fish	LOEC	BCM	NACO	0.25	d	D	10	FW	Van Genderen, E.J., J.R. Tomasso, and S.J. Klaine	Influence of Copper Exposure on Whole-Body Sodium Levels in Larval Fathead Minnows (Pimephales promelas)	Environ.Toxicol.Chem. 27(6):1442-1449	2008
201	Sulfuric acid copper(2+) salt (1:1)	Epioblasma capsaeformis	Oyster Mussel	Molluscs	EC50	MOR	SURV	28	d	D	10	FW	Wang, N., C.G. Ingersoll, I.E. Greer, D.K. Hardesty, C.D. Ivey, J.L. Kunz, W.G. Brumbaugh, F.J. Dwyer, A.D. Roberts, T.	Chronic Toxicity of Copper and Ammonia to Juvenile Freshwater Mussels (Unionidae)	Environ.Toxicol.Chem. 26(10):2048-2056	2007
202	Copper	Daphnia galeata	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	10.1	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
203	Copper	Simocephalus exspinosus	Cladoceran	Crustaceans	EC50	ITX	IMBL	2	d	D	10.1	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
204	Copper	Simocephalus vetulus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	10.1	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
205	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	7	d	D	10.1	FW	Welsh, P.G., J. Lipton, C.A. Mebane, and J.C.A. Marr	Influence of Flow-Through and Renewal Exposures on the Toxicity of Copper to Rainbow Trout	Ecotoxicol.Environ.Saf. 69(2):199-208	2008
206	Copper	Ceriodaphnia reticulata	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	10.2	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
207	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC20	MOR	MORT	7	d	D	10.2	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
208	Sulfuric acid copper(2+) salt (1:1)	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	2	d	D	10.2	FW	Van Genderen, E.J., J.R. Tomasso, and S.J. Klaine	Influence of Copper Exposure on Whole-Body Sodium Levels in Larval Fathead Minnows (Pimephales promelas)	Environ.Toxicol.Chem. 27(6):1442-1449	2008
209	Copper	Daphnia galeata	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	10.3	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
210	Copper	Simocephalus vetulus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	10.3	FW	Bossuyt, B.T.A., and C.R. Janssen	Copper Toxicity to Different Field-Collected Cladoceran Species: Intra- and Inter-Species Sensitivity	Environ.Pollut. 136(1):145-154	2005
211	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	10.4	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
212	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	10.4	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007

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213	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	7	d	D	10.4	FW	Cacela, D., R. Hudson, J. Lipton, J. Marr, T. Podrabsky, and P. Welsh	Preliminary Toxicological Evaulation U.S. v. Iron Mountain Mines, Inc. Vol. 1 Data Report	Report, Prepared for Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of the Attorney General by Hagler Bailly Consulting Inc., Boulder, CO :53 p.	1996
214	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	NR-LETH	MOR	MORT	2	d	D	10.4	FW	Long, K.E.	The Effect of Low Hardness and pH on Copper Toxicity to Daphnia magna	M.S.Thesis, Clemson Univ., Clemson, SC :75 p. (Publ in part as 73402)	2000
215	Copper	Simocephalus vetulus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	10.5	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
216	Sulfuric acid copper(2+) salt (1:1)	Gammarus pulex	Scud	Crustaceans	LOEC	PHY	OXYG	10	d	D	10.8	FW	Kedwards, T.J., S.J. Blockwell, E.J. Taylor, and D. Pascoe	Design of an Electronically Operated Flow-Through Respirometer and Its Use to Investigate the Effects of Copper on the Respiration Rate of the Amphipod Gammarus pulex (L.)	Bull.Environ.Contam.Toxicol. 57(4):610-616	1996
217	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	11	FW	Hyne, R.V., F. Pablo, M. Julli, and S.J. Markich	Influence of Water Chemistry on the Acute Toxicity of Copper and Zinc to the Cladoceran Ceriodaphnia cf dubia	Environ.Toxicol.Chem. 24(7):1667-1675	2005
218	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	11	FW	Hyne, R.V., F. Pablo, M. Julli, and S.J. Markich	Influence of Water Chemistry on the Acute Toxicity of Copper and Zinc to the Cladoceran Ceriodaphnia cf dubia	Environ.Toxicol.Chem. 24(7):1667-1675	2005
219	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	11	FW	Apte, S.C., G.E. Batley, K.C. Bowles, P.L. Brown, N. Creighton, L.T. Hales, R.V. Hyne, M. Julli, S.J. Markich, F. Pablo,	A Comparison of Copper Speciation Measurements with the Toxic Responses of Three Sensitive Freshwater Organisms	Environ.Chem. 2(1):320-330	2005
220	Copper	Daphnia longispina	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	11	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
221	Sulfuric acid copper(2+) salt (1:1)	Lampsilis siliquoidea	Lamp-Mussel	Molluscs	LOEC	MOR	SURV	28	d	D	11	FW	Wang, N., C.G. Ingersoll, I.E. Greer, D.K. Hardesty, C.D. Ivey, J.L. Kunz, W.G. Brumbaugh, F.J. Dwyer, A.D. Roberts, T.	Chronic Toxicity of Copper and Ammonia to Juvenile Freshwater Mussels (Unionidae)	Environ.Toxicol.Chem. 26(10):2048-2056	2007
222	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC20	MOR	MORT	4	d	D	11.1	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
223	Copper	Chydorus sphaericus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	11.2	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
224	Copper	Scapholeberis microcephala	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	11.2	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
225	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	11.3	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
226	Copper	Daphnia longispina	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	11.3	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
227	Sulfuric acid copper(2+) salt (1:1)	Obovaria subrotunda	Round Hickorynut	Molluscs	EC50	MOR	MORT	2	d	D	11.3	FW	Gillis, P.L., R.J. Mitchell, A.N. Schwalb, K.A. McNichols, G.L. Mackie, C.M. Wood, and J.D. Ackerman	Sensitivity of the Glochidia (Larvae) of Freshwater Mussels to Copper: Assessing the Effect of Water Hardness and Dissolved Organic Carbon on the Sensitivity of Endangered Species	Aquat.Toxicol. 88:137-145	2008

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228	Copper	Acroperus harpae	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	11.5	FW	Bossuyt, B.T.A., and C.R. Janssen	Copper Toxicity to Different Field-Collected Cladoceran Species: Intra- and Inter-Species Sensitivity	Environ.Pollut. 136(1):145-154	2005
229	Copper	Simocephalus exspinosus	Cladoceran	Crustaceans	EC50	ITX	IMBL	2	d	D	11.5	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
230	Copper	Simocephalus vetulus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	11.7	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
231	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	11.8	FW	Bossuyt, B.T.A., and C.R. Janssen	Copper Toxicity to Different Field-Collected Cladoceran Species: Intra- and Inter-Species Sensitivity	Environ.Pollut. 136(1):145-154	2005
232	Copper	Acantholeberis curvirostris	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	11.9	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
233	Copper	Daphnia longispina	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	11.9	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
234	Copper	Simocephalus exspinosus	Cladoceran	Crustaceans	EC50	ITX	IMBL	2	d	D	11.9	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
235	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC20	MOR	MORT	7	d	D	11.9	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
236	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	7	d	D	11.9	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
237	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	12	FW	Apte, S.C., G.E. Batley, K.C. Bowles, P.L. Brown, N. Creighton, L.T. Hales, R.V. Hyne, M. Julli, S.J. Markich, F. Pablo,	A Comparison of Copper Speciation Measurements with the Toxic Responses of Three Sensitive Freshwater Organisms	Environ.Chem. 2(1):320-330	2005
238	Copper	Ceriodaphnia pulchella	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	12	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
239	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	12	FW	Cacela, D., R. Hudson, J. Lipton, J. Marr, T. Podrabsky, and P. Welsh	Preliminary Toxicological Evaulation U.S. v. Iron Mountain Mines, Inc. Vol. 1 Data Report	Report, Prepared for Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of the Attorney General by Hagler Bailly Consulting Inc., Boulder, CO :53 p.	1996
240	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC20	MOR	MORT	7	d	D	12.1	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
241	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC20	MOR	MORT	4	d	D	12.2	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	End-point	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc ug/L	Media Type	Author	Title	Source	Publication Year
242	Copper	Simocephalus vetulus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	12.3	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
243	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	4	d	D	12.5	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
244	Sulfuric acid copper(2+) salt (1:1)	Lampsilis fasciola	Wavy-Rayed Lampmussel	Molluscs	EC50	MOR	MORT	2	d	D	12.5	FW	Gillis, P.L., R.J. Mitchell, A.N. Schwalb, K.A. McNichols, G.L. Mackie, C.M. Wood, and J.D. Ackerman	Sensitivity of the Glochidia (Larvae) of Freshwater Mussels to Copper: Assessing the Effect of Water Hardness and Dissolved Organic Carbon on the Sensitivity of Endangered Species	Aquat.Toxicol. 88:137-145	2008
245	Sulfuric acid copper(2+) salt (1:1)	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	2	d	D	12.8	FW	Van Genderen, E.J., J.R. Tomasso, and S.J. Klaine	Influence of Copper Exposure on Whole-Body Sodium Levels in Larval Fathead Minnows (Pimephales promelas)	Environ.Toxicol.Chem. 27(6):1442-1449	2008
246	Copper	Eurycercus lamellatus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	12.9	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
247	Sulfuric acid copper(2+) salt (1:1)	Obovaria subrotunda	Round Hickorynut	Molluscs	EC50	MOR	MORT	1	d	D	13	FW	Gillis, P.L., R.J. Mitchell, A.N. Schwalb, K.A. McNichols, G.L. Mackie, C.M. Wood, and J.D. Ackerman	Sensitivity of the Glochidia (Larvae) of Freshwater Mussels to Copper: Assessing the Effect of Water Hardness and Dissolved Organic Carbon on the Sensitivity of Endangered Species	Aquat.Toxicol. 88:137-145	2008
248	Sulfuric acid copper(2+) salt (1:1)	Epioblasma capsaeformis	Oyster Mussel	Molluscs	LOEC	MOR	SURV	28	d	D	13	FW	Wang, N., C.G. Ingersoll, I.E. Greer, D.K. Hardesty, C.D. Ivey, J.L. Kunz, W.G. Brumbaugh, F.J. Dwyer, A.D. Roberts, T.	Chronic Toxicity of Copper and Ammonia to Juvenile Freshwater Mussels (Unionidae)	Environ.Toxicol.Chem. 26(10):2048-2056	2007
249	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	13.1	FW	Welsh, P.G., J. Lipton, C.A. Mebane, and J.C.A. Marr	Influence of Flow-Through and Renewal Exposures on the Toxicity of Copper to Rainbow Trout	Ecotoxicol.Environ.Saf. 69(2):199-208	2008
250	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	7	d	D	13.2	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
251	Sulfuric acid copper(2+) salt (1:1)	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	2	d	D	13.2	FW	Van Genderen, E.J., J.R. Tomasso, and S.J. Klaine	Influence of Copper Exposure on Whole-Body Sodium Levels in Larval Fathead Minnows (Pimephales promelas)	Environ.Toxicol.Chem. 27(6):1442-1449	2008
252	Copper	Ceriodaphnia reticulata	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	13.3	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
253	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	13.3	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
254	Sulfuric acid copper(2+) salt (1:1)	Epioblasma torulosa ssp. rangiana	Northern Riffleshell	Molluscs	EC50	MOR	MORT	1	d	D	13.3	FW	Gillis, P.L., R.J. Mitchell, A.N. Schwalb, K.A. McNichols, G.L. Mackie, C.M. Wood, and J.D. Ackerman	Sensitivity of the Glochidia (Larvae) of Freshwater Mussels to Copper: Assessing the Effect of Water Hardness and Dissolved Organic Carbon on the Sensitivity of Endangered Species	Aquat.Toxicol. 88:137-145	2008
255	Copper chloride (CuCl2)	Daphnia pulex	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	13.5	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007

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256	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	7	d	D	13.6	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
257	Copper	Simocephalus exspinosus	Cladoceran	Crustaceans	EC50	ITX	IMBL	2	d	D	13.7	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
258	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	7	d	D	13.7	FW	Cacela, D., R. Hudson, J. Lipton, J. Marr, T. Podrabsky, and P. Welsh	Preliminary Toxicological Evaulation U.S. v. Iron Mountain Mines, Inc. Vol. 1 Data Report	Report, Prepared for Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of the Attorney General by Hagler Bailly Consulting Inc., Boulder, CO :53 p.	1996
259	Copper	Chydorus sphaericus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	14.1	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
260	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC20	MOR	MORT	4	d	D	14.2	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
261	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	14.2	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
262	Copper	Ceriodaphnia pulchella	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	14.3	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
263	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	4	d	D	14.3	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
264	Copper	Acroperus harpae	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	14.4	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
265	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	14.5	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
266	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	7	d	D	14.5	FW	Welsh, P.G., J. Lipton, C.A. Mebane, and J.C.A. Marr	Influence of Flow-Through and Renewal Exposures on the Toxicity of Copper to Rainbow Trout	Ecotoxicol.Environ.Saf. 69(2):199-208	2008
267	Sulfuric acid copper(2+) salt (1:1)	Gammarus pulex	Scud	Crustaceans	LOEC	POP	GPOP	100	d	D	14.6	FW	Maund, S.J., E.J. Taylor, and D. Pascoe	Population Responses of the Freshwater Amphipod Crustacean Gammarus pulex (L.) to Copper	Freshw.Biol. 28(1):29-36	1992
268	Copper	Brachionus calyciflorus	Rotifer	Invertebrates	LOEC	POP	IRIN	2	d	D	14.8	FW	De Schamphelaere, K.A.C., D.G. Heijerick, and C.R. Janssen	Cross-Phylum Comparison of a Chronic Biotic Ligand Model to Predict Chronic Toxicity of Copper to a Freshwater Rotifer, Brachionus calyciflorus (Pallas)	Ecotoxicol.Environ.Saf. 63(2):189-195	2006
269	Copper chloride (CuCl2)	Daphnia pulex	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	14.9	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007

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270	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	7	d	D	14.9	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
271	Sulfuric acid copper(2+) salt (1:1)	Villosa iris	Rainbow	Molluscs	LOEC	MOR	SURV	28	d	D	15	FW	Wang, N., C.G. Ingersoll, I.E. Greer, D.K. Hardesty, C.D. Ivey, J.L. Kunz, W.G. Brumbaugh, F.J. Dwyer, A.D. Roberts, T.	Chronic Toxicity of Copper and Ammonia to Juvenile Freshwater Mussels (Unionidae)	Environ.Toxicol.Chem. 26(10):2048-2056	2007
272	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	7	d	D	15.1	FW	Cacela, D., R. Hudson, J. Lipton, J. Marr, T. Podrabsky, and P. Welsh	Preliminary Toxicological Evaulation U.S. v. Iron Mountain Mines, Inc. Vol. 1 Data Report	Report, Prepared for Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of the Attorney General by Hagler Bailly Consulting Inc., Boulder, CO :53 p.	1996
273	Copper	Acroperus elongatus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	15.2	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
274	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	15.3	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
275	Sulfuric acid copper(2+) salt (1:1)	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	2	d	D	15.3	FW	Van Genderen, E.J., J.R. Tomasso, and S.J. Klaine	Influence of Copper Exposure on Whole-Body Sodium Levels in Larval Fathead Minnows (Pimephales promelas)	Environ.Toxicol.Chem. 27(6):1442-1449	2008
276	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	15.4	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
277	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	7	d	D	15.6	FW	Cacela, D., R. Hudson, J. Lipton, J. Marr, T. Podrabsky, and P. Welsh	Preliminary Toxicological Evaulation U.S. v. Iron Mountain Mines, Inc. Vol. 1 Data Report	Report, Prepared for Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of the Attorney General by Hagler Bailly Consulting Inc., Boulder, CO :53 p.	1996
278	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	7	d	D	15.9	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
279	Sulfuric acid copper(2+) salt (1:1)	Actinonaias ligamentina	Mucket	Molluscs	EC50	MOR	MORT	2	d	D	15.9	FW	Gillis, P.L., R.J. Mitchell, A.N. Schwalb, K.A. McNichols, G.L. Mackie, C.M. Wood, and J.D. Ackerman	Sensitivity of the Glochidia (Larvae) of Freshwater Mussels to Copper: Assessing the Effect of Water Hardness and Dissolved Organic Carbon on the Sensitivity of Endangered Species	Aquat.Toxicol. 88:137-145	2008
280	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	16	FW	Hyne, R.V., F. Pablo, M. Julli, and S.J. Markich	Influence of Water Chemistry on the Acute Toxicity of Copper and Zinc to the Cladoceran Ceriodaphnia cf dubia	Environ.Toxicol.Chem. 24(7):1667-1675	2005
281	Copper	Simocephalus vetulus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	16.1	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005

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282	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC20	MOR	MORT	4	d	D	16.1	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
283	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	16.1	FW	Welsh, P.G., J. Lipton, C.A. Mebane, and J.C.A. Marr	Influence of Flow-Through and Renewal Exposures on the Toxicity of Copper to Rainbow Trout	Ecotoxicol.Environ.Saf. 69(2):199-208	2008
284	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	16.3	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
285	Sulfuric acid copper(2+) salt (1:1)	Ptychobranchus fasciolaris	Kidneyshell	Molluscs	EC50	MOR	MORT	1	d	D	16.3	FW	Gillis, P.L., R.J. Mitchell, A.N. Schwalb, K.A. McNichols, G.L. Mackie, C.M. Wood, and J.D. Ackerman	Sensitivity of the Glochidia (Larvae) of Freshwater Mussels to Copper: Assessing the Effect of Water Hardness and Dissolved Organic Carbon on the Sensitivity of Endangered Species	Aquat.Toxicol. 88:137-145	2008
286	Copper	Ceriodaphnia pulchella	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	16.4	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
287	Copper	Simocephalus exspinosus	Cladoceran	Crustaceans	EC50	ITX	IMBL	2	d	D	16.6	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
288	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	7	d	D	16.6	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
289	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	16.6	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
290	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	16.7	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
291	Copper	Ceriodaphnia pulchella	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	16.8	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
292	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	17	FW	Cacela, D., R. Hudson, J. Lipton, J. Marr, T. Podrabsky, and P. Welsh	Preliminary Toxicological Evaulation U.S. v. Iron Mountain Mines, Inc. Vol. 1 Data Report	Report, Prepared for Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of the Attorney General by Hagler Bailly Consulting Inc., Boulder, CO :53 p.	1996
293	Copper	Acroperus elongatus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	17.1	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
294	Copper	Simocephalus vetulus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	17.6	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	End-point	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc ug/L	Media Type	Author	Title	Source	Publication Year
295	Sulfuric acid copper(2+) salt (1:1)	Epioblasma triquetra	Snuffbox	Molluscs	EC50	MOR	MORT	1	d	D	17.6	FW	Gillis, P.L., R.J. Mitchell, A.N. Schwalb, K.A. McNichols, G.L. Mackie, C.M. Wood, and J.D. Ackerman	Sensitivity of the Glochidia (Larvae) of Freshwater Mussels to Copper: Assessing the Effect of Water Hardness and Dissolved Organic Carbon on the Sensitivity of Endangered Species	Aquat.Toxicol. 88:137-145	2008
296	Sulfuric acid copper(2+) salt (1:1)	Lampsilis fasciola	Wavy-Rayed Lampmussel	Molluscs	EC50	MOR	MORT	1	d	D	17.6	FW	Gillis, P.L., R.J. Mitchell, A.N. Schwalb, K.A. McNichols, G.L. Mackie, C.M. Wood, and J.D. Ackerman	Sensitivity of the Glochidia (Larvae) of Freshwater Mussels to Copper: Assessing the Effect of Water Hardness and Dissolved Organic Carbon on the Sensitivity of Endangered Species	Aquat.Toxicol. 88:137-145	2008
297	Copper	Ceriodaphnia reticulata	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	17.7	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
298	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	17.7	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
299	Copper	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	17.8	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
300	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	18	FW	Cacela, D., R. Hudson, J. Lipton, J. Marr, T. Podrabsky, and P. Welsh	Preliminary Toxicological Evaulation U.S. v. Iron Mountain Mines, Inc. Vol. 1 Data Report	Report, Prepared for Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of the Attorney General by Hagler Bailly Consulting Inc., Boulder, CO :53 p.	1996
301	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	18	FW	Cacela, D., R. Hudson, J. Lipton, J. Marr, T. Podrabsky, and P. Welsh	Preliminary Toxicological Evaulation U.S. v. Iron Mountain Mines, Inc. Vol. 1 Data Report	Report, Prepared for Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of the Attorney General by Hagler Bailly Consulting Inc., Boulder, CO :53 p.	1996
302	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	18	FW	Long, K.E.	The Effect of Low Hardness and pH on Copper Toxicity to Daphnia magna	M.S.Thesis, Clemson Univ., Clemson, SC :75 p. (Publ in part as 73402)	2000
303	Copper	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	PGRT	3	d	D	18	FW	De Schamphelaere, K.A.C., J.L. Stauber, K.L. Wilde, S.J. Markich, P.L. Brown, N.M. Franklin, N.M. Creighton, and C.R. Ja	Toward a Biotic Ligand Model for Freshwater Green Algae: Surface-Bound and Internal Copper are Better Predictors of Toxicity than Free Cu2+-Ion Activity when pH is Varied	Environ. Sci. Technol.39(7): 2067-2072	2005
304	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	7	d	D	18.2	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
305	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	4	d	D	18.3	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
306	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	4	d	D	18.3	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
307	Copper	Acroperus harpae	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	18.4	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	End-point	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc ug/L	Media Type	Author	Title	Source	Publication Year
308	Copper	Simocephalus vetulus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	18.4	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
309	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	18.4	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
310	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	4	d	D	18.5	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
311	Copper	Simocephalus vetulus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	18.8	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
312	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	18.8	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
313	Sulfuric acid copper(2+) salt (1:1)	Epioblasma triquetra	Snuffbox	Molluscs	EC50	MOR	MORT	2	d	D	19	FW	Gillis, P.L., R.J. Mitchell, A.N. Schwalb, K.A. McNichols, G.L. Mackie, C.M. Wood, and J.D. Ackerman	Sensitivity of the Glochidia (Larvae) of Freshwater Mussels to Copper: Assessing the Effect of Water Hardness and Dissolved Organic Carbon on the Sensitivity of Endangered Species	Aquat.Toxicol. 88:137-145	2008
314	Copper	Simocephalus exspinosus	Cladoceran	Crustaceans	EC50	ITX	IMBL	2	d	D	19.1	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
315	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	19.2	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
316	Copper	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	19.3	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
317	Copper	Simocephalus exspinosus	Cladoceran	Crustaceans	EC50	ITX	IMBL	2	d	D	19.4	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
318	Copper chloride (CuCl2)	Danio rerio	Zebra Danio	Fish	EC20	CEL	NCEL	0.2083333	d	D	19.4	FW	Linbo, T.L., C.M. Stehr, J.P. Incardona, and N.L. Scholz	Dissolved Copper Triggers Cell Death in the Peripheral Mechanosensory System of Larval Fish	Environ.Toxicol.Chem. 25(2):597-603	2006
319	Copper	Simocephalus exspinosus	Cladoceran	Crustaceans	EC50	ITX	IMBL	2	d	D	19.6	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
320	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC20	MOR	MORT	7	d	D	19.9	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
321	Sulfuric acid copper(2+) salt (1:1)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	19.9	FW	Howarth, R.S., and J.B. Sprague	Copper Lethality to Rainbow Trout in Waters of Various Hardness and pH	Water Res. 12(7):455-462	1978

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	End-point	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc ug/L	Media Type	Author	Title	Source	Publication Year
322	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	1	d	D	20	FW	Cacela, D., R. Hudson, J. Lipton, J. Marr, T. Podrabsky, and P. Welsh	Preliminary Toxicological Evaulation U.S. v. Iron Mountain Mines, Inc. Vol. 1 Data Report	Report, Prepared for Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of the Attorney General by Hagler Bailly Consulting Inc., Boulder, CO :53 p.	1996
323	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	2.5	d	D	20	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
324	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	3	d	D	20	FW	Cacela, D., R. Hudson, J. Lipton, J. Marr, T. Podrabsky, and P. Welsh	Preliminary Toxicological Evaulation U.S. v. Iron Mountain Mines, Inc. Vol. 1 Data Report	Report, Prepared for Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of the Attorney General by Hagler Bailly Consulting Inc., Boulder, CO :53 p.	1996
325	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	3	d	D	20	FW	Cacela, D., R. Hudson, J. Lipton, J. Marr, T. Podrabsky, and P. Welsh	Preliminary Toxicological Evaulation U.S. v. Iron Mountain Mines, Inc. Vol. 1 Data Report	Report, Prepared for Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of the Attorney General by Hagler Bailly Consulting Inc., Boulder, CO :53 p.	1996
326	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	3	d	D	20	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
327	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	3.5	d	D	20	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
328	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	3.5	d	D	20	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
329	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	8.33	d	D	20	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
330	Copper	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	PGRT	3	d	D	20	FW	De Schamphelaere, K.A.C., J.L. Stauber, K.L. Wilde, S.J. Markich, P.L. Brown, N.M. Franklin, N.M. Creighton, and C.R. Ja	Toward a Biotic Ligand Model for Freshwater Green Algae: Surface-Bound and Internal Copper are Better Predictors of Toxicity than Free Cu2+-Ion Activity when pH is Varied	Environ. Sci. Technol.39(7): 2067-2072	2005
331	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	LOEL	ACC	RSDE	NR	d	D	20	FW	De Schamphelaere, K.A.C., and C.R. Janssen	Effects of Chronic Dietary Copper Exposure on Growth and Reproduction of Daphnia magna	Environ. Toxicol. Chem.23(8): 2038-2047	2004
332	Copper	Chydorus sphaericus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	20.2	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
333	Copper	Scapholeberis microcephala	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	20.3	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005

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334	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	20.3	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
335	Copper	Simocephalus exspinosus	Cladoceran	Crustaceans	EC50	ITX	IMBL	2	d	D	20.4	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
336	Copper chloride (CuCl2)	Danio rerio	Zebra Danio	Fish	EC20	CEL	NCEL	0.2083333	d	D	20.4	FW	Linbo, T.L., C.M. Stehr, J.P. Incardona, and N.L. Scholz	Dissolved Copper Triggers Cell Death in the Peripheral Mechanosensory System of Larval Fish	Environ.Toxicol.Chem. 25(2):597-603	2006
337	Copper	Simocephalus exspinosus	Cladoceran	Crustaceans	EC50	ITX	IMBL	2	d	D	20.7	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
338	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	21.1	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
339	Sulfuric acid copper(2+) salt (1:1)	Prosopium williamsoni	Mountain Whitefish	Fish	LOEL	MOR	SURV	90	d	D	21.1	FW	Brinkman, S., and N. Vieira	Water Pollution Studies	Federal Aid Project F-243-R15, Job Progress Report, Colorado Div.of Wildlife, Fort Collins, Co :38 p.	2008
340	Sulfuric acid copper(2+) salt (1:1)	Prosopium williamsoni	Mountain Whitefish	Fish	LOEL	POP	BMAS	90	d	D	21.1	FW	Brinkman, S., and N. Vieira	Water Pollution Studies	Federal Aid Project F-243-R15, Job Progress Report, Colorado Div.of Wildlife, Fort Collins, Co :38 p.	2008
341	Sulfuric acid copper(2+) salt (1:1)	Prosopium williamsoni	Mountain Whitefish	Fish	NR-LETH	MOR	MORT	90	d	D	21.1	FW	Brinkman, S., and N. Vieira	Water Pollution Studies	Federal Aid Project F-243-R15, Job Progress Report, Colorado Div.of Wildlife, Fort Collins, Co :38 p.	2008
342	Copper	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	21.3	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
343	Sulfuric acid copper(2+) salt (1:1)	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	2	d	D	21.4	FW	Van Genderen, E.J., J.R. Tomasso, and S.J. Klaine	Influence of Copper Exposure on Whole-Body Sodium Levels in Larval Fathead Minnows (Pimephales promelas)	Environ.Toxicol.Chem. 27(6):1442-1449	2008
344	Sulfuric acid copper(2+) salt (1:1)	Lampsilis siliquoidea	Lamp-Mussel	Molluscs	EC50	MOR	MORT	2	d	D	21.6	FW	Gillis, P.L., R.J. Mitchell, A.N. Schwalb, K.A. McNichols, G.L. Mackie, C.M. Wood, and J.D. Ackerman	Sensitivity of the Glochidia (Larvae) of Freshwater Mussels to Copper: Assessing the Effect of Water Hardness and Dissolved Organic Carbon on the Sensitivity of Endangered Species	Aquat.Toxicol. 88:137-145	2008
345	Copper chloride (CuCl2)	Danio rerio	Zebra Danio	Fish	EC20	CEL	NCEL	0.21	d	D	21.7	FW	Linbo, T.L., C.M. Stehr, J.P. Incardona, and N.L. Scholz	Dissolved Copper Triggers Cell Death in the Peripheral Mechanosensory System of Larval Fish	Environ.Toxicol.Chem. 25(2):597-603	2006
346	Copper chloride (CuCl2)	Danio rerio	Zebra Danio	Fish	EC20	CEL	NCEL	0.21	d	D	21.8	FW	Linbo, T.L., C.M. Stehr, J.P. Incardona, and N.L. Scholz	Dissolved Copper Triggers Cell Death in the Peripheral Mechanosensory System of Larval Fish	Environ.Toxicol.Chem. 25(2):597-603	2006
347	Sulfuric acid copper(2+) salt (1:1)	Lampsilis fasciola	Wavy-Rayed Lampmussel	Molluscs	EC50	MOR	MORT	2	d	D	22	FW	Gillis, P.L., R.J. Mitchell, A.N. Schwalb, K.A. McNichols, G.L. Mackie, C.M. Wood, and J.D. Ackerman	Sensitivity of the Glochidia (Larvae) of Freshwater Mussels to Copper: Assessing the Effect of Water Hardness and Dissolved Organic Carbon on the Sensitivity of Endangered Species	Aquat.Toxicol. 88:137-145	2008
348	Sulfuric acid copper(2+) salt (1:1)	Prosopium williamsoni	Mountain Whitefish	Fish	NR-LETH	MOR	MORT	4	d	D	22.3	FW	Brinkman, S., and N. Vieira	Water Pollution Studies	Federal Aid Project F-243-R15, Job Progress Report, Colorado Div.of Wildlife, Fort Collins, Co :38 p.	2008
349	Sulfuric acid copper(2+) salt (1:1)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	22.4	FW	Howarth, R.S., and J.B. Sprague	Copper Lethality to Rainbow Trout in Waters of Various Hardness and pH	Water Res. 12(7):455-462	1978
350	Copper	Acroperus elongatus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	22.6	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	End-point	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc ug/L	Media Type	Author	Title	Source	Publication Year
351	Copper	Daphnia galeata	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	22.6	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
352	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC20	MOR	MORT	4	d	D	22.6	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
353	Copper	Alona sp.	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	22.7	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
354	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	22.8	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
355	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	23	FW	Hyne, R.V., F. Pablo, M. Julli, and S.J. Markich	Influence of Water Chemistry on the Acute Toxicity of Copper and Zinc to the Cladoceran Ceriodaphnia cf dubia	Environ.Toxicol.Chem. 24(7):1667-1675	2005
356	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	23	FW	Apte, S.C., G.E. Batley, K.C. Bowles, P.L. Brown, N. Creighton, L.T. Hales, R.V. Hyne, M. Julli, S.J. Markich, F. Pablo,	A Comparison of Copper Speciation Measurements with the Toxic Responses of Three Sensitive Freshwater Organisms	Environ.Chem. 2(1):320-330	2005
357	Sulfuric acid copper(2+) salt (1:1)	Epioblasma capsaeformis	Oyster Mussel	Molluscs	NR-LETH	MOR	MORT	28	d	D	23	FW	Wang, N., C.G. Ingersoll, I.E. Greer, D.K. Hardesty, C.D. Ivey, J.L. Kunz, W.G. Brumbaugh, F.J. Dwyer, A.D. Roberts, T.	Chronic Toxicity of Copper and Ammonia to Juvenile Freshwater Mussels (Unionidae)	Environ.Toxicol.Chem. 26(10):2048-2056	2007
358	Copper	Chydorus sphaericus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	23.1	FW	Bossuyt, B.T.A., and C.R. Janssen	Copper Toxicity to Different Field-Collected Cladoceran Species: Intra- and Inter-Species Sensitivity	Environ.Pollut. 136(1):145-154	2005
359	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	23.1	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
360	Sulfuric acid copper(2+) salt (1:1)	Gammarus pulex	Scud	Crustaceans	LOEC	POP	GPOP	100	d	D	23.1	FW	Maund, S.J., E.J. Taylor, and D. Pascoe	Population Responses of the Freshwater Amphipod Crustacean Gammarus pulex (L.) to Copper	Freshw.Biol. 28(1):29-36	1992
361	Copper	Oncorhynchus keta	Chum Salmon	Fish	LOEC	PHY	EPYR	0.17	d	D	24	FW	Sandahl, J.F., G. Miyasaka, N. Koide, and H. Ueda	Olfactory Inhibition and Recovery in Chum Salmon (Oncorhynchus keta) Following Copper Exposure	Can.J.Fish.Aquat.Sci. 63(8):1840-1847	2006
362	Copper	Eurycercus lamellatus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	24.3	FW	Bossuyt, B.T.A., and C.R. Janssen	Copper Toxicity to Different Field-Collected Cladoceran Species: Intra- and Inter-Species Sensitivity	Environ.Pollut. 136(1):145-154	2005
363	Sulfuric acid copper(2+) salt (1:1)	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	2	d	D	24.4	FW	Van Genderen, E.J., J.R. Tomasso, and S.J. Klaine	Influence of Copper Exposure on Whole-Body Sodium Levels in Larval Fathead Minnows (Pimephales promelas)	Environ.Toxicol.Chem. 27(6):1442-1449	2008
364	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	NR-LETH	MOR	MORT	7	d	D	24.7	FW	Cacela, D., R. Hudson, J. Lipton, J. Marr, T. Podrabsky, and P. Welsh	Preliminary Toxicological Evaulation U.S. v. Iron Mountain Mines, Inc. Vol. 1 Data Report	Report, Prepared for Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of the Attorney General by Hagler Bailly Consulting Inc., Boulder, CO :53 p.	1996
365	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	24.8	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	End-point	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc ug/L	Media Type	Author	Title	Source	Publication Year
366	Copper	Simocephalus vetulus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	25	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
367	Copper chloride (CuCl2)	Danio rerio	Zebra Danio	Fish	LOEC	CEL	NCEL	0.08	d	D	25	FW	Linbo, T.L., C.M. Stehr, J.P. Incardona, and N.L. Scholz	Dissolved Copper Triggers Cell Death in the Peripheral Mechanosensory System of Larval Fish	Environ.Toxicol.Chem. 25(2):597-603	2006
368	Copper chloride (CuCl2)	Danio rerio	Zebra Danio	Fish	LOEC	CEL	NCEL	0.17	d	D	25	FW	Linbo, T.L., C.M. Stehr, J.P. Incardona, and N.L. Scholz	Dissolved Copper Triggers Cell Death in the Peripheral Mechanosensory System of Larval Fish	Environ.Toxicol.Chem. 25(2):597-603	2006
369	Copper chloride (CuCl2)	Danio rerio	Zebra Danio	Fish	LOEC	CEL	NCEL	0.25	d	D	25	FW	Linbo, T.L., C.M. Stehr, J.P. Incardona, and N.L. Scholz	Dissolved Copper Triggers Cell Death in the Peripheral Mechanosensory System of Larval Fish	Environ.Toxicol.Chem. 25(2):597-603	2006
370	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	25	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
371	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	25.2	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
372	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	25.4	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
373	Copper	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	25.9	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
374	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	25.9	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
375	Copper	Ceriodaphnia pulchella	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	26	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
376	Sulfuric acid copper(2+) salt (1:1)	Epioblasma capsaeformis	Oyster Mussel	Molluscs	EC50	MOR	SURV	4	d	D	26	FW	Wang, N., C.G. Ingersoll, I.E. Greer, D.K. Hardesty, C.D. Ivey, J.L. Kunz, W.G. Brumbaugh, F.J. Dwyer, A.D. Roberts, T.	Chronic Toxicity of Copper and Ammonia to Juvenile Freshwater Mussels (Unionidae)	Environ.Toxicol.Chem. 26(10):2048-2056	2007
377	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	26.2	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
378	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	26.6	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
379	Copper	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	26.8	FW	Bossuyt, B.T.A., and C.R. Janssen	Copper Toxicity to Different Field-Collected Cladoceran Species: Intra- and Inter-Species Sensitivity	Environ.Pollut. 136(1):145-154	2005

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380	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	26.9	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
381	Sulfuric acid copper(2+) salt (1:1)	Villosa iris	Rainbow	Molluscs	EC50	MOR	SURV	4	d	D	27	FW	Wang, N., C.G. Ingersoll, I.E. Greer, D.K. Hardesty, C.D. Ivey, J.L. Kunz, W.G. Brumbaugh, F.J. Dwyer, A.D. Roberts, T.	Chronic Toxicity of Copper and Ammonia to Juvenile Freshwater Mussels (Unionidae)	Environ.Toxicol.Chem. 26(10):2048-2056	2007
382	Copper chloride (CuCl2)	Danio rerio	Zebra Danio	Fish	EC50	CEL	NCEL	0.21	d	D	27.4	FW	Linbo, T.L., C.M. Stehr, J.P. Incardona, and N.L. Scholz	Dissolved Copper Triggers Cell Death in the Peripheral Mechanosensory System of Larval Fish	Environ.Toxicol.Chem. 25(2):597-603	2006
383	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	7	d	D	27.6	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
384	Copper	Acroperus elongatus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	27.7	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
385	Copper chloride (CuCl2)	Danio rerio	Zebra Danio	Fish	EC50	CEL	NCEL	0.21	d	D	27.7	FW	Linbo, T.L., C.M. Stehr, J.P. Incardona, and N.L. Scholz	Dissolved Copper Triggers Cell Death in the Peripheral Mechanosensory System of Larval Fish	Environ.Toxicol.Chem. 25(2):597-603	2006
386	Copper	Alona quadrangularis	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	28.2	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
387	Copper	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	28.9	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
388	Sulfuric acid copper(2+) salt (1:1)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	28.9	FW	Howarth, R.S., and J.B. Sprague	Copper Lethality to Rainbow Trout in Waters of Various Hardness and pH	Water Res. 12(7):455-462	1978
389	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	NR-LETH	MOR	MORT	NR	d	D	29	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
390	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	29.1	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
391	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	29.3	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
392	Copper	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	29.4	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
393	Copper chloride (CuCl2)	Danio rerio	Zebra Danio	Fish	EC50	CEL	NCEL	0.21	d	D	29.7	FW	Linbo, T.L., C.M. Stehr, J.P. Incardona, and N.L. Scholz	Dissolved Copper Triggers Cell Death in the Peripheral Mechanosensory System of Larval Fish	Environ.Toxicol.Chem. 25(2):597-603	2006
394	Copper	Simocephalus vetulus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	29.8	FW	Bossuyt, B.T.A., and C.R. Janssen	Copper Toxicity to Different Field-Collected Cladoceran Species: Intra- and Inter-Species Sensitivity	Environ.Pollut. 136(1):145-154	2005

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	End-point	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc ug/L	Media Type	Author	Title	Source	Publication Year
395	Copper chloride (CuCl2)	Danio rerio	Zebra Danio	Fish	EC50	CEL	NCEL	0.21	d	D	29.8	FW	Linbo, T.L., C.M. Stehr, J.P. Incardona, and N.L. Scholz	Dissolved Copper Triggers Cell Death in the Peripheral Mechanosensory System of Larval Fish	Environ.Toxicol.Chem. 25(2):597-603	2006
396	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	29.8	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
397	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	30	FW	Hyne, R.V., F. Pablo, M. Julli, and S.J. Markich	Influence of Water Chemistry on the Acute Toxicity of Copper and Zinc to the Cladoceran Ceriodaphnia cf dubia	Environ.Toxicol.Chem. 24(7):1667-1675	2005
398	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	30	FW	Apte, S.C., G.E. Batley, K.C. Bowles, P.L. Brown, N. Creighton, L.T. Hales, R.V. Hyne, M. Julli, S.J. Markich, F. Pablo,	A Comparison of Copper Speciation Measurements with the Toxic Responses of Three Sensitive Freshwater Organisms	Environ.Chem. 2(1):320-330	2005
399	Copper	Chydorus sphaericus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	30	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
400	Copper	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	30	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
401	Copper chloride (CuCl2)	Daphnia pulex	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	30	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
402	Sulfuric acid copper(2+) salt (1:1)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	30	FW	Howarth, R.S., and J.B. Sprague	Copper Lethality to Rainbow Trout in Waters of Various Hardness and pH	Water Res. 12(7):455-462	1978
403	Sulfuric acid copper(2+) salt (1:1)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	30	FW	Howarth, R.S., and J.B. Sprague	Copper Lethality to Rainbow Trout in Waters of Various Hardness and pH	Water Res. 12(7):455-462	1978
404	Sulfuric acid copper(2+) salt (1:1)	Villosa iris	Rainbow	Molluscs	EC50	MOR	SURV	10	d	D	30	FW	Wang, N., C.G. Ingersoll, I.E. Greer, D.K. Hardesty, C.D. Ivey, J.L. Kunz, W.G. Brumbaugh, F.J. Dwyer, A.D. Roberts, T.	Chronic Toxicity of Copper and Ammonia to Juvenile Freshwater Mussels (Unionidae)	Environ.Toxicol.Chem. 26(10):2048-2056	2007
405	Copper	Chlorella sp.	Green Algae	Algae, Moss, Fungi	EC50	POP	PGRT	2	d	D	30	FW	De Schamphelaere, K.A.C., J.L. Stauber, K.L. Wilde, S.J. Markich, P.L. Brown, N.M. Franklin, N.M. Creighton, and C.R. Ja	Toward a Biotic Ligand Model for Freshwater Green Algae: Surface-Bound and Internal Copper are Better Predictors of Toxicity than Free Cu2+-Ion Activity when pH is Varied	Environ. Sci. Technol.39(7): 2067-2072	2005
406	Sulfuric acid copper(2+) salt (1:1)	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	2	d	D	30.2	FW	Van Genderen, E.J., J.R. Tomasso, and S.J. Klaine	Influence of Copper Exposure on Whole-Body Sodium Levels in Larval Fathead Minnows (Pimephales promelas)	Environ.Toxicol.Chem. 27(6):1442-1449	2008
407	Copper	Acroperus elongatus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	30.5	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
408	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	30.5	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
409	Sulfuric acid copper(2+) salt (1:1)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	30.7	FW	Howarth, R.S., and J.B. Sprague	Copper Lethality to Rainbow Trout in Waters of Various Hardness and pH	Water Res. 12(7):455-462	1978

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410	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	30.8	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
411	Sulfuric acid copper(2+) salt (1:1)	Epioblasma triquetra	Snuffbox	Molluscs	EC50	MOR	MORT	1	d	D	30.9	FW	Gillis, P.L., R.J. Mitchell, A.N. Schwalb, K.A. McNichols, G.L. Mackie, C.M. Wood, and J.D. Ackerman	Sensitivity of the Glochidia (Larvae) of Freshwater Mussels to Copper: Assessing the Effect of Water Hardness and Dissolved Organic Carbon on the Sensitivity of Endangered Species	Aquat.Toxicol. 88:137-145	2008
412	Sulfuric acid copper(2+) salt (1:1)	Actinonaias ligamentina	Mucket	Molluscs	EC50	MOR	MORT	1	d	D	31	FW	Gillis, P.L., R.J. Mitchell, A.N. Schwalb, K.A. McNichols, G.L. Mackie, C.M. Wood, and J.D. Ackerman	Sensitivity of the Glochidia (Larvae) of Freshwater Mussels to Copper: Assessing the Effect of Water Hardness and Dissolved Organic Carbon on the Sensitivity of Endangered Species	Aquat.Toxicol. 88:137-145	2008
413	Copper	Simocephalus vetulus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	31.4	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
414	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	0.04	d	D	31.775	FW	Kim, S.D.	Effect of Complexation Kinetics on Bioavailability of Copper to Ceriodaphnia dubia	Ph.D.Thesis, Univ.of Delaware, Newark, DE :202 p.	1999
415	Copper	Scenedesmus quadricauda	Green Algae	Algae, Moss, Fungi	EC50	BCM	GBCM	0.07	d	D	31.775	FW	Peterson, H.G., F.P. Healey, and R. Wagemann	Metal Toxicity to Algae: A Highly pH Dependent Phenomenon	Can. J. Fish. Aquat. Sci.41(): 974-979	1984
416	Copper	Scenedesmus quadricauda	Green Algae	Algae, Moss, Fungi	EC50	BCM	GBCM	0.07	d	D	31.775	FW	Peterson, H.G., F.P. Healey, and R. Wagemann	Metal Toxicity to Algae: A Highly pH Dependent Phenomenon	Can. J. Fish. Aquat. Sci.41(): 974-979	1984
417	Copper	Scenedesmus quadricauda	Green Algae	Algae, Moss, Fungi	EC50	BCM	GBCM	0.07	d	D	31.775	FW	Peterson, H.G., F.P. Healey, and R. Wagemann	Metal Toxicity to Algae: A Highly pH Dependent Phenomenon	Can. J. Fish. Aquat. Sci.41(): 974-979	1984
418	Copper	Scenedesmus quadricauda	Green Algae	Algae, Moss, Fungi	EC50	BCM	GBCM	0.07	d	D	31.775	FW	Peterson, H.G., F.P. Healey, and R. Wagemann	Metal Toxicity to Algae: A Highly pH Dependent Phenomenon	Can. J. Fish. Aquat. Sci.41(): 974-979	1984
419	Copper	Scenedesmus quadricauda	Green Algae	Algae, Moss, Fungi	EC50	BCM	GBCM	0.07	d	D	31.775	FW	Peterson, H.G., F.P. Healey, and R. Wagemann	Metal Toxicity to Algae: A Highly pH Dependent Phenomenon	Can. J. Fish. Aquat. Sci.41(): 974-979	1984
420	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	7	d	D	31.9	FW	Welsh, P.G., J. Lipton, C.A. Mebane, and J.C.A. Marr	Influence of Flow-Through and Renewal Exposures on the Toxicity of Copper to Rainbow Trout	Ecotoxicol.Environ.Saf. 69(2):199-208	2008
421	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	32	FW	Hyne, R.V., F. Pablo, M. Julli, and S.J. Markich	Influence of Water Chemistry on the Acute Toxicity of Copper and Zinc to the Cladoceran Ceriodaphnia cf dubia	Environ.Toxicol.Chem. 24(7):1667-1675	2005
422	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	32	FW	Apte, S.C., G.E. Batley, K.C. Bowles, P.L. Brown, N. Creighton, L.T. Hales, R.V. Hyne, M. Julli, S.J. Markich, F. Pablo,	A Comparison of Copper Speciation Measurements with the Toxic Responses of Three Sensitive Freshwater Organisms	Environ.Chem. 2(1):320-330	2005
423	Copper	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	32	FW	Bossuyt, B.T.A., and C.R. Janssen	Copper Toxicity to Different Field-Collected Cladoceran Species: Intra- and Inter-Species Sensitivity	Environ.Pollut. 136(1):145-154	2005
424	Sulfuric acid copper(2+) salt (1:1)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	4	d	D	32	FW	Finlayson, B.J., and K.M. Verrue	Toxicities of Copper, Zinc, and Cadmium Mixtures to Juvenile Chinook Salmon	Trans.Am.Fish.Soc. 111(5):645-650	1982
425	Copper	Acroperus elongatus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	32.3	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
426	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	32.8	FW	Welsh, P.G., J. Lipton, C.A. Mebane, and J.C.A. Marr	Influence of Flow-Through and Renewal Exposures on the Toxicity of Copper to Rainbow Trout	Ecotoxicol.Environ.Saf. 69(2):199-208	2008

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427	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	7	d	D	32.9	FW	Cacela, D., R. Hudson, J. Lipton, J. Marr, T. Podrabsky, and P. Welsh	Preliminary Toxicological Evaulation U.S. v. Iron Mountain Mines, Inc. Vol. 1 Data Report	Report, Prepared for Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of the Attorney General by Hagler Bailly Consulting Inc., Boulder, CO :53 p.	1996
428	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	33	FW	Natale, O.E., C.E. Gomez, and M.V. Leis	Application of the Biotic Ligand Model for Regulatory Purposes to Selected Rivers in Argentina with Extreme Water-Quality Characteristics	Integr.Environ.Assess.Manag. 3(4):517-528	2007
429	Sulfuric acid copper(2+) salt (1:1)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	33.1	FW	Howarth, R.S., and J.B. Sprague	Copper Lethality to Rainbow Trout in Waters of Various Hardness and pH	Water Res. 12(7):455-462	1978
430	Copper	Chydorus sphaericus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	33.3	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
431	Copper	Chydorus ovalis	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	33.4	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
432	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	33.6	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
433	Sulfuric acid copper(2+) salt (1:1)	Lampsilis siliquoidea	Lamp-Mussel	Molluscs	EC50	MOR	SURV	4	d	D	34	FW	Wang, N., C.G. Ingersoll, I.E. Greer, D.K. Hardesty, C.D. Ivey, J.L. Kunz, W.G. Brumbaugh, F.J. Dwyer, A.D. Roberts, T.	Chronic Toxicity of Copper and Ammonia to Juvenile Freshwater Mussels (Unionidae)	Environ.Toxicol.Chem. 26(10):2048-2056	2007
434	Copper	Ceriodaphnia quadrangula	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	34.6	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
435	Sulfuric acid copper(2+) salt (1:1)	Ligumia recta	Black Sandshell	Molluscs	EC50	MOR	MORT	1	d	D	34.8	FW	Gillis, P.L., R.J. Mitchell, A.N. Schwalb, K.A. McNichols, G.L. Mackie, C.M. Wood, and J.D. Ackerman	Sensitivity of the Glochidia (Larvae) of Freshwater Mussels to Copper: Assessing the Effect of Water Hardness and Dissolved Organic Carbon on the Sensitivity of Endangered Species	Aquat.Toxicol. 88:137-145	2008
436	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	35	FW	Cacela, D., R. Hudson, J. Lipton, J. Marr, T. Podrabsky, and P. Welsh	Preliminary Toxicological Evaulation U.S. v. Iron Mountain Mines, Inc. Vol. 1 Data Report	Report, Prepared for Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of the Attorney General by Hagler Bailly Consulting Inc., Boulder, CO :53 p.	1996
437	Copper	Chydorus sphaericus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	35.2	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
438	Sulfuric acid copper(2+) salt (1:1)	Lampsilis siliquoidea	Lamp-Mussel	Molluscs	EC50	MOR	MORT	1	d	D	36.1	FW	Gillis, P.L., R.J. Mitchell, A.N. Schwalb, K.A. McNichols, G.L. Mackie, C.M. Wood, and J.D. Ackerman	Sensitivity of the Glochidia (Larvae) of Freshwater Mussels to Copper: Assessing the Effect of Water Hardness and Dissolved Organic Carbon on the Sensitivity of Endangered Species	Aquat.Toxicol. 88:137-145	2008
439	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	36.3	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
440	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	7	d	D	36.4	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998

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441	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC20	MOR	MORT	7	d	D	36.5	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
442	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC20	MOR	MORT	4	d	D	36.7	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
443	Copper	Acroperus harpae	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	36.9	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
444	Copper	Daphnia pulex	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	37	FW	Dobbs, M.G., J.L. Farris, R.J. Reash, D.S. Cherry, and J. Cairns Jr.	Evaluation of the Resident-Species Procedure for Developing Site-Specific Water Quality Criteria for Copper in Blaine Creek, Kentucky	Environ.Toxicol.Chem. 13(6):963-971	1994
445	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	37	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
446	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	37	FW	Bossuyt, B.T.A., and C.R. Janssen	Long-Term Acclimation of Pseudokirchneriella subcapitata (Korshikov) Hindak to Different Copper Concentrations: Changes in Tolerance and Physiology	Aquat. Toxicol.68(1): 61-74	2004
447	Copper	Chydorus sphaericus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	37.2	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
448	Copper chloride (CuCl2)	Hyalella azteca	Scud	Crustaceans	EC25	GRO	BMAS	28	d	D	37.49	FW	Borgmann, U., and W.P. Norwood	Toxicity and Accumulation of Zinc and Copper in Hyalella azteca Exposed to Metal-Spiked Sediments	Can.J Fish.Aquat.Sci. 54:1046-1054	1997
449	Copper chloride (CuCl2)	Daphnia pulex	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	37.9	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
450	Copper	Chydorus sphaericus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	38	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
451	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	38	FW	Natale, O.E., C.E. Gomez, and M.V. Leis	Application of the Biotic Ligand Model for Regulatory Purposes to Selected Rivers in Argentina with Extreme Water-Quality Characteristics	Integr.Environ.Assess.Manag. 3(4):517-528	2007
452	Sulfuric acid copper(2+) salt (1:1)	Cyprinus carpio	Common Carp	Fish	LOEC	ENZ	CTLS	4	d	D	38	FW	Dautremepuits, C., S. Betoulle, and G. Vernet	Antioxidant Response Modulated by Copper in Healthy or Parasitized Carp (Cyprinus carpio L.) by Ptychobothrium sp. (Cestoda)	Biochim.Biophys.Acta 1573(1):4-8	2002
453	Sulfuric acid copper(2+) salt (1:1)	Cyprinus carpio	Common Carp	Fish	LOEC	ENZ	GSTR	4	d	D	38	FW	Dautremepuits, C., S. Betoulle, and G. Vernet	Antioxidant Response Modulated by Copper in Healthy or Parasitized Carp (Cyprinus carpio L.) by Ptychobothrium sp. (Cestoda)	Biochim.Biophys.Acta 1573(1):4-8	2002
454	Sulfuric acid copper(2+) salt (1:1)	Cyprinus carpio	Common Carp	Fish	LOEC	ENZ	GSTR	4	d	D	38	FW	Dautremepuits, C., S. Betoulle, and G. Vernet	Antioxidant Response Modulated by Copper in Healthy or Parasitized Carp (Cyprinus carpio L.) by Ptychobothrium sp. (Cestoda)	Biochim.Biophys.Acta 1573(1):4-8	2002
455	Sulfuric acid copper(2+) salt (1:1)	Cyprinus carpio	Common Carp	Fish	LOEC	ENZ	LYZM	4	d	D	38	FW	Dautremepuits, C., S. Betoulle, and G. Vernet	Antioxidant Response Modulated by Copper in Healthy or Parasitized Carp (Cyprinus carpio L.) by Ptychobothrium sp. (Cestoda)	Biochim.Biophys.Acta 1573(1):4-8	2002
456	Sulfuric acid copper(2+) salt (1:1)	Cyprinus carpio	Common Carp	Fish	LOEC	ENZ	LYZM	4	d	D	38	FW	Dautremepuits, C., S. Betoulle, and G. Vernet	Antioxidant Response Modulated by Copper in Healthy or Parasitized Carp (Cyprinus carpio L.) by Ptychobothrium sp. (Cestoda)	Biochim.Biophys.Acta 1573(1):4-8	2002

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457	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	38.2	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
458	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	39	FW	Apte, S.C., G.E. Batley, K.C. Bowles, P.L. Brown, N. Creighton, L.T. Hales, R.V. Hyne, M. Julli, S.J. Markich, F. Pablo,	A Comparison of Copper Speciation Measurements with the Toxic Responses of Three Sensitive Freshwater Organisms	Environ.Chem. 2(1):320-330	2005
459	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	39	FW	Natale, O.E., C.E. Gomez, and M.V. Leis	Application of the Biotic Ligand Model for Regulatory Purposes to Selected Rivers in Argentina with Extreme Water-Quality Characteristics	Integr.Environ.Assess.Manag. 3(4):517-528	2007
460	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	39.5	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
461	Sulfuric acid copper(2+) salt (1:1)	Scenedesmus incrassatulus	Green Algae	Algae, Moss, Fungi	LOEC	BCM	CARC	6	d	D	39.97	FW	Perales-Vela, H.V., S. Gonzalez-Moreno, C. Montes-Horcasitas, and R.O. Canizares-Villanueva	Growth, Photosynthetic and Respiratory Responses to Sub-lethal Copper Concentrations in Scenedesmus incrassatulus (Chlorophyceae)	Chemosphere67(11): 2274-2281	2007
462	Sulfuric acid copper(2+) salt (1:1)	Scenedesmus incrassatulus	Green Algae	Algae, Moss, Fungi	LOEC	BCM	CHLO	6	d	D	39.97	FW	Perales-Vela, H.V., S. Gonzalez-Moreno, C. Montes-Horcasitas, and R.O. Canizares-Villanueva	Growth, Photosynthetic and Respiratory Responses to Sub-lethal Copper Concentrations in Scenedesmus incrassatulus (Chlorophyceae)	Chemosphere67(11): 2274-2281	2007
463	Sulfuric acid copper(2+) salt (1:1)	Scenedesmus incrassatulus	Green Algae	Algae, Moss, Fungi	LOEC	GRO	DWGT	6	d	D	39.97	FW	Perales-Vela, H.V., S. Gonzalez-Moreno, C. Montes-Horcasitas, and R.O. Canizares-Villanueva	Growth, Photosynthetic and Respiratory Responses to Sub-lethal Copper Concentrations in Scenedesmus incrassatulus (Chlorophyceae)	Chemosphere67(11): 2274-2281	2007
464	Sulfuric acid copper(2+) salt (1:1)	Scenedesmus incrassatulus	Green Algae	Algae, Moss, Fungi	LOEC	PHY	PSII	6	d	D	39.97	FW	Perales-Vela, H.V., S. Gonzalez-Moreno, C. Montes-Horcasitas, and R.O. Canizares-Villanueva	Growth, Photosynthetic and Respiratory Responses to Sub-lethal Copper Concentrations in Scenedesmus incrassatulus (Chlorophyceae)	Chemosphere67(11): 2274-2281	2007
465	Sulfuric acid copper(2+) salt (1:1)	Scenedesmus incrassatulus	Green Algae	Algae, Moss, Fungi	LOEC	PHY	PSII	6	d	D	39.97	FW	Perales-Vela, H.V., S. Gonzalez-Moreno, C. Montes-Horcasitas, and R.O. Canizares-Villanueva	Growth, Photosynthetic and Respiratory Responses to Sub-lethal Copper Concentrations in Scenedesmus incrassatulus (Chlorophyceae)	Chemosphere67(11): 2274-2281	2007
466	Sulfuric acid copper(2+) salt (1:1)	Scenedesmus incrassatulus	Green Algae	Algae, Moss, Fungi	LOEC	PHY	PSII	6	d	D	39.97	FW	Perales-Vela, H.V., S. Gonzalez-Moreno, C. Montes-Horcasitas, and R.O. Canizares-Villanueva	Growth, Photosynthetic and Respiratory Responses to Sub-lethal Copper Concentrations in Scenedesmus incrassatulus (Chlorophyceae)	Chemosphere67(11): 2274-2281	2007
467	Sulfuric acid copper(2+) salt (1:1)	Scenedesmus incrassatulus	Green Algae	Algae, Moss, Fungi	LOEC	PHY	PSII	6	d	D	39.97	FW	Perales-Vela, H.V., S. Gonzalez-Moreno, C. Montes-Horcasitas, and R.O. Canizares-Villanueva	Growth, Photosynthetic and Respiratory Responses to Sub-lethal Copper Concentrations in Scenedesmus incrassatulus (Chlorophyceae)	Chemosphere67(11): 2274-2281	2007
468	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	40	FW	Hyne, R.V., F. Pablo, M. Julli, and S.J. Markich	Influence of Water Chemistry on the Acute Toxicity of Copper and Zinc to the Cladoceran Ceriodaphnia cf dubia	Environ.Toxicol.Chem. 24(7):1667-1675	2005
469	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	40	FW	Hyne, R.V., F. Pablo, M. Julli, and S.J. Markich	Influence of Water Chemistry on the Acute Toxicity of Copper and Zinc to the Cladoceran Ceriodaphnia cf dubia	Environ.Toxicol.Chem. 24(7):1667-1675	2005

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	End-point	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc ug/L	Media Type	Author	Title	Source	Publication Year
470	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	5	d	D	40	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
471	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	NR-LETH	MOR	MORT	2	d	D	40	FW	Long, K.E.	The Effect of Low Hardness and pH on Copper Toxicity to Daphnia magna	M.S.Thesis, Clemson Univ., Clemson, SC :75 p. (Publ in part as 73402)	2000
472	Sulfuric acid copper(2+) salt (1:1)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	40	FW	Howarth, R.S., and J.B. Sprague	Copper Lethality to Rainbow Trout in Waters of Various Hardness and pH	Water Res. 12(7):455-462	1978
473	Copper	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	40.6	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
474	Sulfuric acid copper(2+) salt (1:1)	Lampsilis fasciola	Wavy-Rayed Lampmussel	Molluscs	EC50	MOR	MORT	2	d	D	40.8	FW	Gillis, P.L., R.J. Mitchell, A.N. Schwalb, K.A. McNichols, G.L. Mackie, C.M. Wood, and J.D. Ackerman	Sensitivity of the Glochidia (Larvae) of Freshwater Mussels to Copper: Assessing the Effect of Water Hardness and Dissolved Organic Carbon on the Sensitivity of Endangered Species	Aquat.Toxicol. 88:137-145	2008
475	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	4	d	D	41.1	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
476	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	NR-LETH	MOR	MORT	2.08	d	D	41.2	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
477	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	42	FW	Hyne, R.V., F. Pablo, M. Julli, and S.J. Markich	Influence of Water Chemistry on the Acute Toxicity of Copper and Zinc to the Cladoceran Ceriodaphnia cf dubia	Environ.Toxicol.Chem. 24(7):1667-1675	2005
478	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	42	FW	Apte, S.C., G.E. Batley, K.C. Bowles, P.L. Brown, N. Creighton, L.T. Hales, R.V. Hyne, M. Julli, S.J. Markich, F. Pablo,	A Comparison of Copper Speciation Measurements with the Toxic Responses of Three Sensitive Freshwater Organisms	Environ.Chem. 2(1):320-330	2005
479	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	NR-LETH	MOR	MORT	0.83	d	D	42	FW	Cacela, D., R. Hudson, J. Lipton, J. Marr, T. Podrabsky, and P. Welsh	Preliminary Toxicological Evaulation U.S. v. Iron Mountain Mines, Inc. Vol. 1 Data Report	Report, Prepared for Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of the Attorney General by Hagler Bailly Consulting Inc., Boulder, CO :53 p.	1996
480	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	42	FW	Natale, O.E., C.E. Gomez, and M.V. Leis	Application of the Biotic Ligand Model for Regulatory Purposes to Selected Rivers in Argentina with Extreme Water-Quality Characteristics	Integr.Environ.Assess.Manag. 3(4):517-528	2007
481	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	42.5	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
482	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	42.5	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003

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483	Copper	Disparalona rostrata	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	43.3	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
484	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	43.3	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
485	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	43.9	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
486	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	44	FW	Apte, S.C., G.E. Batley, K.C. Bowles, P.L. Brown, N. Creighton, L.T. Hales, R.V. Hyne, M. Julli, S.J. Markich, F. Pablo,	A Comparison of Copper Speciation Measurements with the Toxic Responses of Three Sensitive Freshwater Organisms	Environ.Chem. 2(1):320-330	2005
487	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	44	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
488	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	44.1	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
489	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	NR-LETH	MOR	MORT	NR	d	D	44.2	FW	Cacela, D., R. Hudson, J. Lipton, J. Marr, T. Podrabsky, and P. Welsh	Preliminary Toxicological Evaulation U.S. v. Iron Mountain Mines, Inc. Vol. 1 Data Report	Report, Prepared for Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of the Attorney General by Hagler Bailly Consulting Inc., Boulder, CO :53 p.	1996
490	Sulfuric acid copper(2+) salt (1:1)	Lampsilis fasciola	Wavy-Rayed Lampmussel	Molluscs	EC50	MOR	MORT	1	d	D	44.5	FW	Gillis, P.L., R.J. Mitchell, A.N. Schwalb, K.A. McNichols, G.L. Mackie, C.M. Wood, and J.D. Ackerman	Sensitivity of the Glochidia (Larvae) of Freshwater Mussels to Copper: Assessing the Effect of Water Hardness and Dissolved Organic Carbon on the Sensitivity of Endangered Species	Aquat.Toxicol. 88:137-145	2008
491	Sulfuric acid copper(2+) salt (1:1)	Lampsilis siliquoidea	Lamp-Mussel	Molluscs	NR-LETH	MOR	MORT	28	d	D	45	FW	Wang, N., C.G. Ingersoll, I.E. Greer, D.K. Hardesty, C.D. Ivey, J.L. Kunz, W.G. Brumbaugh, F.J. Dwyer, A.D. Roberts, T.	Chronic Toxicity of Copper and Ammonia to Juvenile Freshwater Mussels (Unionidae)	Environ.Toxicol.Chem. 26(10):2048-2056	2007
492	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	45.1	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
493	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	7	d	D	45.7	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
494	Copper	Acroperus elongatus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	46	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007

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495	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	4	d	D	46	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
496	Copper	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	PGRT	3	d	D	46	FW	De Schamphelaere, K.A.C., J.L. Stauber, K.L. Wilde, S.J. Markich, P.L. Brown, N.M. Franklin, N.M. Creighton, and C.R. Ja	Toward a Biotic Ligand Model for Freshwater Green Algae: Surface-Bound and Internal Copper are Better Predictors of Toxicity than Free Cu2+-Ion Activity when pH is Varied	Environ. Sci. Technol.39(7): 2067-2072	2005
497	Sulfuric acid copper(2+) salt (1:1)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	46.3	FW	Howarth, R.S., and J.B. Sprague	Copper Lethality to Rainbow Trout in Waters of Various Hardness and pH	Water Res. 12(7):455-462	1978
498	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	46.3	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
499	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	47.3	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
500	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	47.4	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
501	Copper	Brachionus calyciflorus	Rotifer	Invertebrates	LOEC	POP	IRIN	2	d	D	47.8	FW	De Schamphelaere, K.A.C., D.G. Heijerick, and C.R. Janssen	Cross-Phylum Comparison of a Chronic Biotic Ligand Model to Predict Chronic Toxicity of Copper to a Freshwater Rotifer, Brachionus calyciflorus (Pallas)	Ecotoxicol.Environ.Saf. 63(2):189-195	2006
502	Sulfuric acid copper(2+) salt (1:1)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	47.9	FW	Howarth, R.S., and J.B. Sprague	Copper Lethality to Rainbow Trout in Waters of Various Hardness and pH	Water Res. 12(7):455-462	1978
503	Sulfuric acid copper(2+) salt (1:1)	Zizania palustris	Northern Wildrice	Flowers, Trees, Shrubs, Ferns	MATC	GRO	WGHT	14	d	D	48	FW	Nimmo, D.W.R., M.A. Preul, C.J. Castle, J.R. Self, R.W. Pillsbury, and E.A. Bergey	Effects of Excess Copper on Growth of Wild Rice (Zizania palustris) Seedlings Tested in Reconstituted and Natural Waters	Environ. Manag.32(4): 466-475	2003
504	Sulfuric acid copper(2+) salt (1:1)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	48.1	FW	Howarth, R.S., and J.B. Sprague	Copper Lethality to Rainbow Trout in Waters of Various Hardness and pH	Water Res. 12(7):455-462	1978
505	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	49.59	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
506	Sulfuric acid copper(2+) salt (1:1)	Lampsilis fasciola	Wavy-Rayed Lampmussel	Molluscs	EC50	MOR	MORT	1	d	D	50.4	FW	Gillis, P.L., R.J. Mitchell, A.N. Schwalb, K.A. McNichols, G.L. Mackie, C.M. Wood, and J.D. Ackerman	Sensitivity of the Glochidia (Larvae) of Freshwater Mussels to Copper: Assessing the Effect of Water Hardness and Dissolved Organic Carbon on the Sensitivity of Endangered Species	Aquat.Toxicol. 88:137-145	2008
507	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	1	d	D	50.46	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002

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508	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	50.6	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, F.M.G. Tack, H.E. Allen, and C.R. Janssen	Effect of Dissolved Organic Matter Source on Acute Copper Toxicity to Daphnia magna	Environ.Toxicol.Chem. 23(5):1248-1255	2004
509	Sulfuric acid copper(2+) salt (1:1)	Villosa iris	Rainbow	Molluscs	NR-LETH	MOR	MORT	28	d	D	51	FW	Wang, N., C.G. Ingersoll, I.E. Greer, D.K. Hardesty, C.D. Ivey, J.L. Kunz, W.G. Brumbaugh, F.J. Dwyer, A.D. Roberts, T.	Chronic Toxicity of Copper and Ammonia to Juvenile Freshwater Mussels (Unionidae)	Environ.Toxicol.Chem. 26(10):2048-2056	2007
510	Copper	Pleuroxus truncatus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	51.6	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
511	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	52	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
512	Copper	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	53.2	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
513	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	53.4	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
514	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	53.4	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
515	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	53.8	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, F.M.G. Tack, H.E. Allen, and C.R. Janssen	Effect of Dissolved Organic Matter Source on Acute Copper Toxicity to Daphnia magna	Environ.Toxicol.Chem. 23(5):1248-1255	2004
516	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	NR-LETH	MOR	MORT	2.08	d	D	53.8	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
517	Sulfuric acid copper(2+) salt (1:1)	Ptychobranchus fasciolaris	Kidneyshell	Molluscs	EC50	MOR	MORT	2	d	D	54.4	FW	Gillis, P.L., R.J. Mitchell, A.N. Schwalb, K.A. McNichols, G.L. Mackie, C.M. Wood, and J.D. Ackerman	Sensitivity of the Glochidia (Larvae) of Freshwater Mussels to Copper: Assessing the Effect of Water Hardness and Dissolved Organic Carbon on the Sensitivity of Endangered Species	Aquat.Toxicol. 88:137-145	2008
518	Sulfuric acid copper(2+) salt (1:1)	Chlorella sp.	Green Algae	Algae, Moss, Fungi	LOEC	POP	PGRT	3	d	D	55	FW	Levy, J.L., J.L. Stauber, S.A. Wakelin, and D.F. Jolley	The Effect of Bacteria on the Sensitivity of Microalgae to Copper in Laboratory Bioassays	Chemosphere74(9): 1266-1274	2009
519	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	55.1	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
520	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	55.8	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	End-point	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc ug/L	Media Type	Author	Title	Source	Publication Year
521	Sulfuric acid copper(2+) salt (1:1)	Lampsilis abrupta	Pink Mucket	Molluscs	EC50	MOR	SURV	4	d	D	56	FW	Wang, N., C.G. Ingersoll, I.E. Greer, D.K. Hardesty, C.D. Ivey, J.L. Kunz, W.G. Brumbaugh, F.J. Dwyer, A.D. Roberts, T.	Chronic Toxicity of Copper and Ammonia to Juvenile Freshwater Mussels (Unionidae)	Environ.Toxicol.Chem. 26(10):2048-2056	2007
522	Sulfuric acid copper(2+) salt (1:1)	Lampsilis siliquoidea	Lamp-Mussel	Molluscs	EC50	MOR	SURV	4	d	D	56	FW	Wang, N., C.G. Ingersoll, I.E. Greer, D.K. Hardesty, C.D. Ivey, J.L. Kunz, W.G. Brumbaugh, F.J. Dwyer, A.D. Roberts, T.	Chronic Toxicity of Copper and Ammonia to Juvenile Freshwater Mussels (Unionidae)	Environ.Toxicol.Chem. 26(10):2048-2056	2007
523	Copper chloride (CuCl2)	Daphnia pulex	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	56.3	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
524	Copper chloride (CuCl2)	Daphnia pulex	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	56.6	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
525	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	56.9	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
526	Copper	Chydorus sphaericus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	58.5	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
527	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	58.5	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
528	Sulfuric acid copper(2+) salt (1:1)	Zizania palustris	Northern Wildrice	Flowers, Trees, Shrubs, Ferns	LOEC	GRO	WGHT	14	d	D	59	FW	Nimmo, D.W.R., M.A. Preul, C.J. Castle, J.R. Self, R.W. Pillsbury, and E.A. Bergey	Effects of Excess Copper on Growth of Wild Rice (Zizania palustris) Seedlings Tested in Reconstituted and Natural Waters	Environ. Manag.32(4): 466-475	2003
529	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	59.8	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
530	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	59.9	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
531	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	60	FW	Hyne, R.V., F. Pablo, M. Julli, and S.J. Markich	Influence of Water Chemistry on the Acute Toxicity of Copper and Zinc to the Cladoceran Ceriodaphnia cf dubia	Environ.Toxicol.Chem. 24(7):1667-1675	2005
532	Copper chloride (CuCl)	Daphnia pulex	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	60	FW	Griffitt, R.J., J. Luo, J. Gao, J.C. Bonzongo, and D.S. Barber	Effects of Particle Composition and Species on Toxicity of Metallic Nanomaterials in Aquatic Organisms	Environ.Toxicol.Chem. 27(9):1972-1978	2008
533	Copper chloride (CuCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	1	d	D	60	FW	Cacela, D., R. Hudson, J. Lipton, J. Marr, T. Podrabsky, and P. Welsh	Preliminary Toxicological Evaulation U.S. v. Iron Mountain Mines, Inc. Vol. 1 Data Report	Report, Prepared for Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of the Attorney General by Hagler Bailly Consulting Inc., Boulder, CO :53 p.	1996

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534	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	NR	d	D	60	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
535	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	LOEC	POP	BMAS	NR	d	D	60	FW	Bossuyt, B.T.A., and C.R. Janssen	Long-Term Acclimation of Pseudokirchneriella subcapitata (Korshikov) Hindak to Different Copper Concentrations: Changes in Tolerance and Physiology	Aquat. Toxicol.68(1): 61-74	2004
536	Copper	Chydorus ovalis	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	60.6	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
537	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	60.6	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, F.M.G. Tack, H.E. Allen, and C.R. Janssen	Effect of Dissolved Organic Matter Source on Acute Copper Toxicity to Daphnia magna	Environ.Toxicol.Chem. 23(5):1248-1255	2004
538	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	60.7	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
539	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	1	d	D	60.92	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
540	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	61.18	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
541	Sulfuric acid copper(2+) salt (1:1)	Scenedesmus incrassatulus	Green Algae	Algae, Moss, Fungi	EC50	GRO	DWGT	6	d	D	61.20	FW	Perales-Vela, H.V., S. Gonzalez-Moreno, C. Montes-Horcasitas, and R.O. Canizares-Villanueva	Growth, Photosynthetic and Respiratory Responses to Sub-lethal Copper Concentrations in Scenedesmus incrassatulus (Chlorophyceae)	Chemosphere67(11): 2274-2281	2007
542	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	61.8	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
543	Sulfuric acid copper(2+) salt (1:1)	Achnanthes sp.	Diatom	Algae, Moss, Fungi	LOEL	POP	PBMS	27	d	D	63.4	FW	Le Jeune, A.H., M. Charpin, V. Deluchat, J.F. Briand, J.F. Lenain, M. Baudu, and C. Amblard	Effect of Copper Sulphate Treatment on Natural Phytoplanktonic Communities	Aquat. Toxicol.80(3): 267-280	2006
544	Sulfuric acid copper(2+) salt (1:1)	Bacillariophyceae	Diatom Class	Algae, Moss, Fungi	LOEL	POP	PBMS	27	d	D	63.4	FW	Le Jeune, A.H., M. Charpin, V. Deluchat, J.F. Briand, J.F. Lenain, M. Baudu, and C. Amblard	Effect of Copper Sulphate Treatment on Natural Phytoplanktonic Communities	Aquat. Toxicol.80(3): 267-280	2006
545	Sulfuric acid copper(2+) salt (1:1)	Chrysophyceae	Golden-Brown Algae Class	Algae, Moss, Fungi	LOEL	POP	PBMS	27	d	D	63.4	FW	Le Jeune, A.H., M. Charpin, V. Deluchat, J.F. Briand, J.F. Lenain, M. Baudu, and C. Amblard	Effect of Copper Sulphate Treatment on Natural Phytoplanktonic Communities	Aquat. Toxicol.80(3): 267-280	2006
546	Sulfuric acid copper(2+) salt (1:1)	Cyanophycota	Blue-Green Algae Phylum	Algae, Moss, Fungi	LOEL	POP	PBMS	27	d	D	63.4	FW	Le Jeune, A.H., M. Charpin, V. Deluchat, J.F. Briand, J.F. Lenain, M. Baudu, and C. Amblard	Effect of Copper Sulphate Treatment on Natural Phytoplanktonic Communities	Aquat. Toxicol.80(3): 267-280	2006

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547	Sulfuric acid copper(2+) salt (1:1)	Fragilaria crotonensis	Diatom	Algae, Moss, Fungi	LOEL	POP	PBMS	27	d	D	63.4	FW	Le Jeune, A.H., M. Charpin, V. Deluchat, J.F. Briand, J.F. Lenain, M. Baudu, and C. Amblard	Effect of Copper Sulphate Treatment on Natural Phytoplanktonic Communities	Aquat. Toxicol.80(3): 267-280	2006
548	Sulfuric acid copper(2+) salt (1:1)	Oscillatoria redekei	Blue-Green Algae	Algae, Moss, Fungi	LOEL	POP	PBMS	27	d	D	63.4	FW	Le Jeune, A.H., M. Charpin, V. Deluchat, J.F. Briand, J.F. Lenain, M. Baudu, and C. Amblard	Effect of Copper Sulphate Treatment on Natural Phytoplanktonic Communities	Aquat. Toxicol.80(3): 267-280	2006
549	Sulfuric acid copper(2+) salt (1:1)	Pseudanabaena catenata	Blue-Green Algae	Algae, Moss, Fungi	LOEL	POP	PBMS	27	d	D	63.4	FW	Le Jeune, A.H., M. Charpin, V. Deluchat, J.F. Briand, J.F. Lenain, M. Baudu, and C. Amblard	Effect of Copper Sulphate Treatment on Natural Phytoplanktonic Communities	Aquat. Toxicol.80(3): 267-280	2006
550	Sulfuric acid copper(2+) salt (1:1)	Plantae	Plant Kingdom	Miscellaneous	LOEL	POP	BMAS	5	d	D	63.4	FW	Le Jeune, A.H., M. Charpin, V. Deluchat, J.F. Briand, J.F. Lenain, M. Baudu, and C. Amblard	Effect of Copper Sulphate Treatment on Natural Phytoplanktonic Communities	Aquat. Toxicol.80(3): 267-280	2006
551	Sulfuric acid copper(2+) salt (1:1)	Plantae	Plant Kingdom	Miscellaneous	LOEL	POP	DVRS	27	d	D	63.4	FW	Le Jeune, A.H., M. Charpin, V. Deluchat, J.F. Briand, J.F. Lenain, M. Baudu, and C. Amblard	Effect of Copper Sulphate Treatment on Natural Phytoplanktonic Communities	Aquat. Toxicol.80(3): 267-280	2006
552	Sulfuric acid copper(2+) salt (1:1)	Plantae	Plant Kingdom	Miscellaneous	LOEL	POP	PBMS	2	d	D	63.4	FW	Le Jeune, A.H., M. Charpin, V. Deluchat, J.F. Briand, J.F. Lenain, M. Baudu, and C. Amblard	Effect of Copper Sulphate Treatment on Natural Phytoplanktonic Communities	Aquat. Toxicol.80(3): 267-280	2006
553	Copper	Microcystis aeruginosa	Blue-Green Algae	Algae, Moss, Fungi	LOEL	POP	CHLA	NR	d	D	63.55	FW	Gouvea, S.P., G.L. Boyer, and M.R. Twiss	Influence of Ultraviolet Radiation, Copper, and Zinc on Microcystin Content in Microcystis aeruginosa (Cyanobacteria)	Harmful Algae7(2): 194-205	2008
554	Copper	Microcystis aeruginosa	Blue-Green Algae	Algae, Moss, Fungi	LOEL	POP	CHLA	NR	d	D	63.55	FW	Gouvea, S.P., G.L. Boyer, and M.R. Twiss	Influence of Ultraviolet Radiation, Copper, and Zinc on Microcystin Content in Microcystis aeruginosa (Cyanobacteria)	Harmful Algae7(2): 194-205	2008
555	Copper	Microcystis aeruginosa	Blue-Green Algae	Algae, Moss, Fungi	LOEL	POP	CHLA	NR	d	D	63.55	FW	Gouvea, S.P., G.L. Boyer, and M.R. Twiss	Influence of Ultraviolet Radiation, Copper, and Zinc on Microcystin Content in Microcystis aeruginosa (Cyanobacteria)	Harmful Algae7(2): 194-205	2008
556	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	NR-LETH	MOR	MORT	2.08	d	D	63.9	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
557	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	64	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, F.M.G. Tack, H.E. Allen, and C.R. Janssen	Effect of Dissolved Organic Matter Source on Acute Copper Toxicity to Daphnia magna	Environ.Toxicol.Chem. 23(5):1248-1255	2004
558	Copper	Brachionus calyciflorus	Rotifer	Invertebrates	LOEC	POP	IRIN	2	d	D	64.5	FW	De Schamphelaere, K.A.C., D.G. Heijerick, and C.R. Janssen	Cross-Phylum Comparison of a Chronic Biotic Ligand Model to Predict Chronic Toxicity of Copper to a Freshwater Rotifer, Brachionus calyciflorus (Pallas)	Ecotoxicol.Environ.Saf. 63(2):189-195	2006
559	Sulfuric acid copper(2+) salt (1:1)	Asterionella formosa	Diatom	Algae, Moss, Fungi	LOEL	POP	PBMS	27	d	D	65.3	FW	Le Jeune, A.H., M. Charpin, V. Deluchat, J.F. Briand, J.F. Lenain, M. Baudu, and C. Amblard	Effect of Copper Sulphate Treatment on Natural Phytoplanktonic Communities	Aquat. Toxicol.80(3): 267-280	2006
560	Sulfuric acid copper(2+) salt (1:1)	Bacillariophyceae	Diatom Class	Algae, Moss, Fungi	LOEL	POP	PBMS	27	d	D	65.3	FW	Le Jeune, A.H., M. Charpin, V. Deluchat, J.F. Briand, J.F. Lenain, M. Baudu, and C. Amblard	Effect of Copper Sulphate Treatment on Natural Phytoplanktonic Communities	Aquat. Toxicol.80(3): 267-280	2006

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561	Sulfuric acid copper(2+) salt (1:1)	Chrysophyceae	Golden-Brown Algae Class	Algae, Moss, Fungi	LOEL	POP	PBMS	27	d	D	65.3	FW	Le Jeune, A.H., M. Charpin, V. Deluchat, J.F. Briand, J.F. Lenain, M. Baudu, and C. Amblard	Effect of Copper Sulphate Treatment on Natural Phytoplanktonic Communities	Aquat. Toxicol.80(3): 267-280	2006
562	Sulfuric acid copper(2+) salt (1:1)	Cryptophyceae	Cryptomonad Class	Algae, Moss, Fungi	LOEL	POP	PBMS	27	d	D	65.3	FW	Le Jeune, A.H., M. Charpin, V. Deluchat, J.F. Briand, J.F. Lenain, M. Baudu, and C. Amblard	Effect of Copper Sulphate Treatment on Natural Phytoplanktonic Communities	Aquat. Toxicol.80(3): 267-280	2006
563	Sulfuric acid copper(2+) salt (1:1)	Cyanophycota	Blue-Green Algae Phylum	Algae, Moss, Fungi	LOEL	POP	PBMS	27	d	D	65.3	FW	Le Jeune, A.H., M. Charpin, V. Deluchat, J.F. Briand, J.F. Lenain, M. Baudu, and C. Amblard	Effect of Copper Sulphate Treatment on Natural Phytoplanktonic Communities	Aquat. Toxicol.80(3): 267-280	2006
564	Sulfuric acid copper(2+) salt (1:1)	Fragilaria crotonensis	Diatom	Algae, Moss, Fungi	LOEL	POP	PBMS	27	d	D	65.3	FW	Le Jeune, A.H., M. Charpin, V. Deluchat, J.F. Briand, J.F. Lenain, M. Baudu, and C. Amblard	Effect of Copper Sulphate Treatment on Natural Phytoplanktonic Communities	Aquat. Toxicol.80(3): 267-280	2006
565	Sulfuric acid copper(2+) salt (1:1)	Oscillatoria redekei	Blue-Green Algae	Algae, Moss, Fungi	LOEL	POP	PBMS	27	d	D	65.3	FW	Le Jeune, A.H., M. Charpin, V. Deluchat, J.F. Briand, J.F. Lenain, M. Baudu, and C. Amblard	Effect of Copper Sulphate Treatment on Natural Phytoplanktonic Communities	Aquat. Toxicol.80(3): 267-280	2006
566	Sulfuric acid copper(2+) salt (1:1)	Pseudanabaena catenata	Blue-Green Algae	Algae, Moss, Fungi	LOEL	POP	PBMS	27	d	D	65.3	FW	Le Jeune, A.H., M. Charpin, V. Deluchat, J.F. Briand, J.F. Lenain, M. Baudu, and C. Amblard	Effect of Copper Sulphate Treatment on Natural Phytoplanktonic Communities	Aquat. Toxicol.80(3): 267-280	2006
567	Sulfuric acid copper(2+) salt (1:1)	Plantae	Plant Kingdom	Miscellaneous	LOEL	POP	BMAS	3	d	D	65.3	FW	Le Jeune, A.H., M. Charpin, V. Deluchat, J.F. Briand, J.F. Lenain, M. Baudu, and C. Amblard	Effect of Copper Sulphate Treatment on Natural Phytoplanktonic Communities	Aquat. Toxicol.80(3): 267-280	2006
568	Sulfuric acid copper(2+) salt (1:1)	Plantae	Plant Kingdom	Miscellaneous	LOEL	POP	DVRS	27	d	D	65.3	FW	Le Jeune, A.H., M. Charpin, V. Deluchat, J.F. Briand, J.F. Lenain, M. Baudu, and C. Amblard	Effect of Copper Sulphate Treatment on Natural Phytoplanktonic Communities	Aquat. Toxicol.80(3): 267-280	2006
569	Sulfuric acid copper(2+) salt (1:1)	Plantae	Plant Kingdom	Miscellaneous	LOEL	POP	PBMS	8	d	D	65.3	FW	Le Jeune, A.H., M. Charpin, V. Deluchat, J.F. Briand, J.F. Lenain, M. Baudu, and C. Amblard	Effect of Copper Sulphate Treatment on Natural Phytoplanktonic Communities	Aquat. Toxicol.80(3): 267-280	2006
570	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	65.6	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
571	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	66.1	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
572	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	66.2	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
573	Copper	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	66.8	FW	De Schamphelaere, K.A.C., V.I.R. Unamuno, F.M.G. Tack, J. Vanderdeelen, and C.R. Janssen	Reverse Osmosis Sampling does not Affect the Protective Effect of Dissolved Organic Matter on Copper and Zinc Toxicity to Freshwater Organisms	Chemosphere 58(5):653-658	2005

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574	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	68.4	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
575	Copper	Acroperus elongatus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	69.4	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
576	Sulfuric acid copper(2+) salt (1:1)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	70	FW	Howarth, R.S., and J.B. Sprague	Copper Lethality to Rainbow Trout in Waters of Various Hardness and pH	Water Res. 12(7):455-462	1978
577	Copper	Disparalona rostrata	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	70.6	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
578	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	70.8	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, F.M.G. Tack, H.E. Allen, and C.R. Janssen	Effect of Dissolved Organic Matter Source on Acute Copper Toxicity to Daphnia magna	Environ.Toxicol.Chem. 23(5):1248-1255	2004
579	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	71.34	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
580	Sulfuric acid copper(2+) salt (1:1)	Ptychobranchus fasciolaris	Kidneyshell	Molluscs	EC50	MOR	MORT	1	d	D	72.6	FW	Gillis, P.L., R.J. Mitchell, A.N. Schwalb, K.A. McNichols, G.L. Mackie, C.M. Wood, and J.D. Ackerman	Sensitivity of the Glochidia (Larvae) of Freshwater Mussels to Copper: Assessing the Effect of Water Hardness and Dissolved Organic Carbon on the Sensitivity of Endangered Species	Aquat.Toxicol. 88:137-145	2008
581	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	73	FW	Hyne, R.V., F. Pablo, M. Julli, and S.J. Markich	Influence of Water Chemistry on the Acute Toxicity of Copper and Zinc to the Cladoceran Ceriodaphnia cf dubia	Environ.Toxicol.Chem. 24(7):1667-1675	2005
582	Sulfuric acid copper(2+) salt (1:1)	Zizania palustris	Northern Wildrice	Flowers, Trees, Shrubs, Ferns	MATC	GRO	WGHT	14	d	D	73.3	FW	Nimmo, D.W.R., M.A. Preul, C.J. Castle, J.R. Self, R.W. Pillsbury, and E.A. Bergey	Effects of Excess Copper on Growth of Wild Rice (Zizania palustris) Seedlings Tested in Reconstituted and Natural Waters	Environ. Manag.32(4): 466-475	2003
583	Copper chloride (CuCl2)	Hyalella azteca	Scud	Crustaceans	LOEC	MOR	MORT	28	d	D	73.72	FW	Borgmann, U., and W.P. Norwood	Toxicity and Accumulation of Zinc and Copper in Hyalella azteca Exposed to Metal-Spiked Sediments	Can.J Fish.Aquat.Sci. 54:1046-1054	1997
584	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	75.2	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
585	Copper	Ceriodaphnia pulchella	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	75.8	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
586	Copper	Daphnia longispina	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	76.1	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
587	Copper chloride (CuCl2)	Daphnia pulex	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	76.7	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
588	Copper	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	77.3	FW	De Schamphelaere, K.A.C., V.I.R. Unamuno, F.M.G. Tack, J. Vanderdeelen, and C.R. Janssen	Reverse Osmosis Sampling does not Affect the Protective Effect of Dissolved Organic Matter on Copper and Zinc Toxicity to Freshwater Organisms	Chemosphere 58(5):653-658	2005

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589	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	77.4	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
590	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	NR-LETH	MOR	MORT	NR	d	D	77.4	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
591	Copper chloride (CuCl2)	Daphnia pulex	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	78.2	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
592	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	78.5	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
593	Copper	Chydorus ovalis	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	78.6	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
594	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	1	d	D	78.7	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
595	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	79.2	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
596	Sulfuric acid copper(2+) salt (1:1)	Epioblasma triquetra	Snuffbox	Molluscs	EC50	MOR	MORT	1	d	D	79.7	FW	Gillis, P.L., R.J. Mitchell, A.N. Schwalb, K.A. McNichols, G.L. Mackie, C.M. Wood, and J.D. Ackerman	Sensitivity of the Glochidia (Larvae) of Freshwater Mussels to Copper: Assessing the Effect of Water Hardness and Dissolved Organic Carbon on the Sensitivity of Endangered Species	Aquat.Toxicol. 88:137-145	2008
597	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	80	FW	Hyne, R.V., F. Pablo, M. Julli, and S.J. Markich	Influence of Water Chemistry on the Acute Toxicity of Copper and Zinc to the Cladoceran Ceriodaphnia cf dubia	Environ.Toxicol.Chem. 24(7):1667-1675	2005
598	Copper	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	81	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
599	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	NR-LETH	MOR	MORT	2	d	D	81.1	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
600	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	NR-LETH	MOR	MORT	2	d	D	81.1	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
601	Sulfuric acid copper(2+) salt (1:1)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	81.1	FW	Howarth, R.S., and J.B. Sprague	Copper Lethality to Rainbow Trout in Waters of Various Hardness and pH	Water Res. 12(7):455-462	1978
602	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	81.8	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, F.M.G. Tack, H.E. Allen, and C.R. Janssen	Effect of Dissolved Organic Matter Source on Acute Copper Toxicity to Daphnia magna	Environ.Toxicol.Chem. 23(5):1248-1255	2004
603	Sulfuric acid copper(2+) salt (1:1)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	82.2	FW	Howarth, R.S., and J.B. Sprague	Copper Lethality to Rainbow Trout in Waters of Various Hardness and pH	Water Res. 12(7):455-462	1978
604	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	83	FW	Natale, O.E., C.E. Gomez, and M.V. Leis	Application of the Biotic Ligand Model for Regulatory Purposes to Selected Rivers in Argentina with Extreme Water-Quality Characteristics	Integr.Environ.Assess.Manag. 3(4):517-528	2007

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605	Sulfuric acid copper(2+) salt (1:1)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	85.9	FW	Howarth, R.S., and J.B. Sprague	Copper Lethality to Rainbow Trout in Waters of Various Hardness and pH	Water Res. 12(7):455-462	1978
606	Copper	Chydorus sphaericus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	86.4	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
607	Copper chloride (CuCl2)	Hyalella azteca	Scud	Crustaceans	LC25	MOR	MORT	28	d	D	86.43	FW	Borgmann, U., and W.P. Norwood	Toxicity and Accumulation of Zinc and Copper in Hyalella azteca Exposed to Metal-Spiked Sediments	Can.J Fish.Aquat.Sci. 54:1046-1054	1997
608	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	86.6	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, F.M.G. Tack, H.E. Allen, and C.R. Janssen	Effect of Dissolved Organic Matter Source on Acute Copper Toxicity to Daphnia magna	Environ.Toxicol.Chem. 23(5):1248-1255	2004
609	Copper	Simocephalus exspinosus	Cladoceran	Crustaceans	EC50	ITX	IMBL	2	d	D	87.3	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
610	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	88.2	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
611	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	89.7	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
612	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	90	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
613	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	90.44	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
614	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	91	FW	Natale, O.E., C.E. Gomez, and M.V. Leis	Application of the Biotic Ligand Model for Regulatory Purposes to Selected Rivers in Argentina with Extreme Water-Quality Characteristics	Integr.Environ.Assess.Manag. 3(4):517-528	2007
615	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	91.6	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
616	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	92.7	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
617	Copper	Chydorus ovalis	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	93	FW	De Schamphelaere, K.A.C., B.T.A. Bossuyt, and C.R. Janssen	Variability of the Protective Effect of Sodium on the Acute Toxicity of Copper to Freshwater Cladocerans	Environ.Toxicol.Chem. 26(3):535-542	2007
618	Sulfuric acid copper(2+) salt (1:1)	Zizania palustris	Northern Wildrice	Flowers, Trees, Shrubs, Ferns	LOEC	GRO	WGHT	14	d	D	93	FW	Nimmo, D.W.R., M.A. Preul, C.J. Castle, J.R. Self, R.W. Pillsbury, and E.A. Bergey	Effects of Excess Copper on Growth of Wild Rice (Zizania palustris) Seedlings Tested in Reconstituted and Natural Waters	Environ. Manag.32(4): 466-475	2003

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	End-point	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc ug/L	Media Type	Author	Title	Source	Publication Year
619	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	93.7	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
620	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	94	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
621	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	1	d	D	95.55	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
622	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	96.5	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
623	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	97.9	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, F.M.G. Tack, H.E. Allen, and C.R. Janssen	Effect of Dissolved Organic Matter Source on Acute Copper Toxicity to Daphnia magna	Environ.Toxicol.Chem. 23(5):1248-1255	2004
624	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	100	FW	Hyne, R.V., F. Pablo, M. Julli, and S.J. Markich	Influence of Water Chemistry on the Acute Toxicity of Copper and Zinc to the Cladoceran Ceriodaphnia cf dubia	Environ.Toxicol.Chem. 24(7):1667-1675	2005
625	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	LOEC	PHY	PIGM	NR	d	D	100	FW	Bossuyt, B.T.A., and C.R. Janssen	Long-Term Acclimation of Pseudokirchneriella subcapitata (Korshikov) Hindak to Different Copper Concentrations: Changes in Tolerance and Physiology	Aquat. Toxicol.68(1): 61-74	2004
626	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	100.9	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
627	Copper chloride (CuCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	4	d	D	101	FW	Welsh, P., J. Lipton, R. Hudson, T. Podrabsky, and D. Cacela	Data Report: Acute Copper Toxicity to Salmonids in Surface Waters in the Vicinity of the Iron Moutain Mine, California. Volume I: Study Objectives, Methods Summary, Water Chemistry Characterization and Toxicity Test Re	Report Prepared by Hagler Baily Services, Inc.for: Breidenbach, Buckley, Huchting, Halm & Hamblet, California Office of Attorney General :142 p.	1998
628	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	1	d	D	102.5	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
629	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	102.5	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
630	Copper	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	103	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
631	Copper	Alona quadrangularis	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	104	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004

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632	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	104.5	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
633	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	105	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
634	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	105	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
635	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	106.4	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
636	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	NR-LETH	MOR	MORT	2	d	D	107	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
637	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	NR-LETH	MOR	MORT	2	d	D	107	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
638	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	NR-LETH	MOR	MORT	2	d	D	107	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
639	Copper	Scapholeberis microcephala	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	108	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
640	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	108.8	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
641	Copper	Physella sp.	Gastropod	Molluscs	LC50	MOR	MORT	2	d	D	109	FW	Dobbs, M.G., J.L. Farris, R.J. Reash, D.S. Cherry, and J. Cairns Jr.	Evaluation of the Resident-Species Procedure for Developing Site-Specific Water Quality Criteria for Copper in Blaine Creek, Kentucky	Environ.Toxicol.Chem. 13(6):963-971	1994
642	Copper	Scapholeberis microcephala	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	110	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
643	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	1	d	D	110.3	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
644	Sulfuric acid copper(2+) salt (1:1)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	111	FW	Howarth, R.S., and J.B. Sprague	Copper Lethality to Rainbow Trout in Waters of Various Hardness and pH	Water Res. 12(7):455-462	1978

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645	Copper	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	115	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
646	Sulfuric acid copper(2+) salt (1:1)	Euglenophyceae	Euglenoid Class	Algae, Moss, Fungi	LOEL	POP	PBMS	27	d	D	115	FW	Le Jeune, A.H., M. Charpin, V. Deluchat, J.F. Briand, J.F. Lenain, M. Baudu, and C. Amblard	Effect of Copper Sulphate Treatment on Natural Phytoplanktonic Communities	Aquat. Toxicol.80(3): 267-280	2006
647	Sulfuric acid copper(2+) salt (1:1)	Urosolenia eriensis	Diatom	Algae, Moss, Fungi	LOEL	POP	PBMS	27	d	D	115	FW	Le Jeune, A.H., M. Charpin, V. Deluchat, J.F. Briand, J.F. Lenain, M. Baudu, and C. Amblard	Effect of Copper Sulphate Treatment on Natural Phytoplanktonic Communities	Aquat. Toxicol.80(3): 267-280	2006
648	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	NR-LETH	MOR	MORT	2	d	D	116	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
649	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	NR-LETH	MOR	MORT	2	d	D	116	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
650	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	118.5	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
651	Sulfuric acid copper(2+) salt (1:1)	Scenedesmus incrassatulus	Green Algae	Algae, Moss, Fungi	LOEC	PHY	PSII	6	d	D	119.92	FW	Perales-Vela, H.V., S. Gonzalez-Moreno, C. Montes-Horcasitas, and R.O. Canizares-Villanueva	Growth, Photosynthetic and Respiratory Responses to Sub-lethal Copper Concentrations in Scenedesmus incrassatulus (Chlorophyceae)	Chemosphere67(11): 2274-2281	2007
652	Copper	Simocephalus exspinosus	Cladoceran	Crustaceans	EC50	ITX	IMBL	2	d	D	121	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
653	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	121.2	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
654	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	122.5	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
655	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	NR-LETH	MOR	MORT	2	d	D	123	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
656	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	NR-LETH	MOR	MORT	2	d	D	123	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
657	Sulfuric acid copper(2+) salt (1:1)	Scenedesmus quadricauda	Green Algae	Algae, Moss, Fungi	LOEL	POP	PBMS	27	d	D	123.4	FW	Le Jeune, A.H., M. Charpin, V. Deluchat, J.F. Briand, J.F. Lenain, M. Baudu, and C. Amblard	Effect of Copper Sulphate Treatment on Natural Phytoplanktonic Communities	Aquat. Toxicol.80(3): 267-280	2006

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658	Copper	Daphnia galeata	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	124	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
659	Sulfuric acid copper(2+) salt (1:1)	Lampsilis fasciola	Wavy-Rayed Lampmussel	Molluscs	EC50	MOR	MORT	2	d	D	127.2	FW	Gillis, P.L., R.J. Mitchell, A.N. Schwalb, K.A. McNichols, G.L. Mackie, C.M. Wood, and J.D. Ackerman	Sensitivity of the Glochidia (Larvae) of Freshwater Mussels to Copper: Assessing the Effect of Water Hardness and Dissolved Organic Carbon on the Sensitivity of Endangered Species	Aquat.Toxicol. 88:137-145	2008
660	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	127.6	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
661	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	127.7	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
662	Copper	Simocephalus exspinosus	Cladoceran	Crustaceans	EC50	ITX	IMBL	2	d	D	128	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
663	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	128	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, F.M.G. Tack, H.E. Allen, and C.R. Janssen	Effect of Dissolved Organic Matter Source on Acute Copper Toxicity to Daphnia magna	Environ.Toxicol.Chem. 23(5):1248-1255	2004
664	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	129	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, F.M.G. Tack, H.E. Allen, and C.R. Janssen	Effect of Dissolved Organic Matter Source on Acute Copper Toxicity to Daphnia magna	Environ.Toxicol.Chem. 23(5):1248-1255	2004
665	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	130.3	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
666	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	130.5	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
667	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	131	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
668	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	131	FW	Natale, O.E., C.E. Gomez, and M.V. Leis	Application of the Biotic Ligand Model for Regulatory Purposes to Selected Rivers in Argentina with Extreme Water-Quality Characteristics	Integr.Environ.Assess.Manag. 3(4):517-528	2007
669	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	131	FW	Natale, O.E., C.E. Gomez, and M.V. Leis	Application of the Biotic Ligand Model for Regulatory Purposes to Selected Rivers in Argentina with Extreme Water-Quality Characteristics	Integr.Environ.Assess.Manag. 3(4):517-528	2007
670	Copper	Scapholeberis mucronata	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	133	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
671	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	134.6	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	End-point	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc ug/L	Media Type	Author	Title	Source	Publication Year
672	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	134.7	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
673	Copper	Bosmina longirostris	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	135	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
674	Copper	Disparalona rostrata	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	137	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
675	Copper	Disparalona rostrata	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	138	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
676	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	138.3	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
677	Copper	Ceriodaphnia pulchella	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	139	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
678	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	142.4	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
679	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	146.3	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
680	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	148	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
681	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	148.5	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
682	Copper chloride (CuCl2)	Daphnia pulex	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	149	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
683	Copper	Brachionus calyciflorus	Rotifer	Invertebrates	LOEC	POP	IRIN	2	d	D	149.3	FW	De Schamphelaere, K.A.C., D.G. Heijerick, and C.R. Janssen	Cross-Phylum Comparison of a Chronic Biotic Ligand Model to Predict Chronic Toxicity of Copper to a Freshwater Rotifer, Brachionus calyciflorus (Pallas)	Ecotoxicol.Environ.Saf. 63(2):189-195	2006
684	Copper	Chydorus sphaericus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	150	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
685	Copper	Simocephalus vetulus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	152	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004

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686	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	154.5	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
687	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	156.6	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
688	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	159	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
689	Sulfuric acid copper(2+) salt (1:1)	Scenedesmus incrassatulus	Green Algae	Algae, Moss, Fungi	LOEC	PHY	PSII	6	d	D	159.89	FW	Perales-Vela, H.V., S. Gonzalez-Moreno, C. Montes-Horcasitas, and R.O. Canizares-Villanueva	Growth, Photosynthetic and Respiratory Responses to Sub-lethal Copper Concentrations in Scenedesmus incrassatulus (Chlorophyceae)	Chemosphere67(11): 2274-2281	2007
690	Copper	Chydorus ovalis	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	162	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
691	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	168.1	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
692	Copper	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	170	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
693	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	171.9	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
694	Copper	Alona sp.	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	173	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
695	Sulfuric acid copper(2+) salt (1:1)	Cyprinus carpio	Common Carp	Fish	LOEC	BCM	PRTL	4	d	D	174	FW	Dautremepuits, C., S. Betoulle, and G. Vernet	Antioxidant Response Modulated by Copper in Healthy or Parasitized Carp (Cyprinus carpio L.) by Ptychobothrium sp. (Cestoda)	Biochim.Biophys.Acta 1573(1):4-8	2002
696	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	ABND	3	d	D	175.9	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
697	Sulfuric acid copper(2+) salt (1:1)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	176	FW	Howarth, R.S., and J.B. Sprague	Copper Lethality to Rainbow Trout in Waters of Various Hardness and pH	Water Res. 12(7):455-462	1978
698	Copper	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	178	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004

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699	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	178.4	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
700	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	179.2	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
701	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	187.6	FW	Ryan, A.C., J.R. Tomasso, and S.J. Klaine	Influence of pH, Hardness, Dissolved Organic Carbon Concentration, and Dissolved Organic Matter Source on the Acute Toxicity of Copper to Daphnia magna in Soft Waters: Implications for the Biotic Ligand Model	Environ.Toxicol.Chem. 28(8):1663-1670	2009
702	Copper	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	188	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
703	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	192	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, F.M.G. Tack, H.E. Allen, and C.R. Janssen	Effect of Dissolved Organic Matter Source on Acute Copper Toxicity to Daphnia magna	Environ.Toxicol.Chem. 23(5):1248-1255	2004
704	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	193	FW	Bossuyt, B.T.A., Y.R. Escobar, and C.R. Janssen	Multigeneration Acclimation of Daphnia magna Straus to Different Bioavailable Copper Concentrations	Ecotoxicol.Environ.Saf. 61(3):327-336	2005
705	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	NR-LETH	MOR	MORT	2	d	D	196	FW	ENSR International	Application of the Biotic Ligand Model (BLM): Copper at Selected Locations in the Taunton River Basin in Massachusetts	ENSR Int.Doc.No.8734-324-100, Mass.Dep.of Environ.Prot.Bur.of Resour.Prot.and U.S.EPA, Region 1, ENSR Int., Westford, MA :943 p.	2002
706	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	198	FW	Bossuyt, B.T.A., Y.R. Escobar, and C.R. Janssen	Multigeneration Acclimation of Daphnia magna Straus to Different Bioavailable Copper Concentrations	Ecotoxicol.Environ.Saf. 61(3):327-336	2005
707	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	198.3	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
708	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	200	FW	Bossuyt, B.T.A., Y.R. Escobar, and C.R. Janssen	Multigeneration Acclimation of Daphnia magna Straus to Different Bioavailable Copper Concentrations	Ecotoxicol.Environ.Saf. 61(3):327-336	2005
709	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	200	FW	Bossuyt, B.T.A., Y.R. Escobar, and C.R. Janssen	Multigeneration Acclimation of Daphnia magna Straus to Different Bioavailable Copper Concentrations	Ecotoxicol.Environ.Saf. 61(3):327-336	2005
710	Copper chloride (CuCl2)	Daphnia pulex	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	200	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
711	Sulfuric acid copper(2+) salt (1:1)	Drunella grandis	Mayfly	Insects/Spiders	LC50	MOR	MORT	4	d	D	201	FW	Brinkman, S., and N. Vieira	Water Pollution Studies	Federal Aid Project F-243-R15, Job Progress Report, Colorado Div.of Wildlife, Fort Collins, Co :38 p.	2008
712	Copper	Daphnia longispina	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	203	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
713	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	204	FW	Bossuyt, B.T.A., and C.R. Janssen	Influence of Multigeneration Acclimation to Copper on Tolerance, Energy Reserves, and Homeostasis of Daphnia magna Straus	Environ.Toxicol.Chem. 23(8):2029-2037	2004

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714	Copper	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	205	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
715	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	206	FW	Natale, O.E., C.E. Gomez, and M.V. Leis	Application of the Biotic Ligand Model for Regulatory Purposes to Selected Rivers in Argentina with Extreme Water-Quality Characteristics	Integr.Environ.Assess.Manag. 3(4):517-528	2007
716	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	207	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
717	Copper	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	208	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
718	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	210	FW	Bossuyt, B.T.A., Y.R. Escobar, and C.R. Janssen	Multigeneration Acclimation of Daphnia magna Straus to Different Bioavailable Copper Concentrations	Ecotoxicol.Environ.Saf. 61(3):327-336	2005
719	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	211	FW	Bossuyt, B.T.A., Y.R. Escobar, and C.R. Janssen	Multigeneration Acclimation of Daphnia magna Straus to Different Bioavailable Copper Concentrations	Ecotoxicol.Environ.Saf. 61(3):327-336	2005
720	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	212	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, F.M.G. Tack, H.E. Allen, and C.R. Janssen	Effect of Dissolved Organic Matter Source on Acute Copper Toxicity to Daphnia magna	Environ.Toxicol.Chem. 23(5):1248-1255	2004
721	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	220	FW	Bossuyt, B.T.A., and C.R. Janssen	Influence of Multigeneration Acclimation to Copper on Tolerance, Energy Reserves, and Homeostasis of Daphnia magna Straus	Environ.Toxicol.Chem. 23(8):2029-2037	2004
722	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	220	FW	Natale, O.E., C.E. Gomez, and M.V. Leis	Application of the Biotic Ligand Model for Regulatory Purposes to Selected Rivers in Argentina with Extreme Water-Quality Characteristics	Integr.Environ.Assess.Manag. 3(4):517-528	2007
723	Copper	Isonychia bicolor	Mayfly	Insects/Spiders	LC50	MOR	MORT	2	d	D	223	FW	Dobbs, M.G., J.L. Farris, R.J. Reash, D.S. Cherry, and J. Cairns Jr.	Evaluation of the Resident-Species Procedure for Developing Site-Specific Water Quality Criteria for Copper in Blaine Creek, Kentucky	Environ.Toxicol.Chem. 13(6):963-971	1994
724	Sulfuric acid copper(2+) salt (1:1)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	232	FW	Howarth, R.S., and J.B. Sprague	Copper Lethality to Rainbow Trout in Waters of Various Hardness and pH	Water Res. 12(7):455-462	1978
725	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	234	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
726	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	236	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, F.M.G. Tack, H.E. Allen, and C.R. Janssen	Effect of Dissolved Organic Matter Source on Acute Copper Toxicity to Daphnia magna	Environ.Toxicol.Chem. 23(5):1248-1255	2004
727	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	245	FW	Bossuyt, B.T.A., and C.R. Janssen	Influence of Multigeneration Acclimation to Copper on Tolerance, Energy Reserves, and Homeostasis of Daphnia magna Straus	Environ.Toxicol.Chem. 23(8):2029-2037	2004
728	Sulfuric acid copper(2+) salt (1:1)	Danio rerio	Zebra Danio	Fish	LC50	MOR	MORT	2	d	D	250	FW	Griffitt, R.J., R. Weil, K.A. Hyndman, N.D. Denslow, K. Powers, D. Taylor, and D.S. Barber	Exposure to Copper Nanoparticles Causes Gill Injury and Acute Lethality in Zebrafish (Danio rerio)	Environ.Sci.Technol. 41(23):8178-8186	2007
729	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	251	FW	Bossuyt, B.T.A., and C.R. Janssen	Influence of Multigeneration Acclimation to Copper on Tolerance, Energy Reserves, and Homeostasis of Daphnia magna Straus	Environ.Toxicol.Chem. 23(8):2029-2037	2004

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730	Copper	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	257	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
731	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	257	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, F.M.G. Tack, H.E. Allen, and C.R. Janssen	Effect of Dissolved Organic Matter Source on Acute Copper Toxicity to Daphnia magna	Environ.Toxicol.Chem. 23(5):1248-1255	2004
732	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	257	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
733	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	261	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, F.M.G. Tack, H.E. Allen, and C.R. Janssen	Effect of Dissolved Organic Matter Source on Acute Copper Toxicity to Daphnia magna	Environ.Toxicol.Chem. 23(5):1248-1255	2004
734	Copper chloride (CuCl2)	Daphnia pulex	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	267	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
735	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	274	FW	Natale, O.E., C.E. Gomez, and M.V. Leis	Application of the Biotic Ligand Model for Regulatory Purposes to Selected Rivers in Argentina with Extreme Water-Quality Characteristics	Integr.Environ.Assess.Manag. 3(4):517-528	2007
736	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	275	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, F.M.G. Tack, H.E. Allen, and C.R. Janssen	Effect of Dissolved Organic Matter Source on Acute Copper Toxicity to Daphnia magna	Environ.Toxicol.Chem. 23(5):1248-1255	2004
737	Copper	Ceriodaphnia reticulata	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	277	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
738	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	279	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
739	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	281	FW	Bossuyt, B.T.A., and C.R. Janssen	Influence of Multigeneration Acclimation to Copper on Tolerance, Energy Reserves, and Homeostasis of Daphnia magna Straus	Environ.Toxicol.Chem. 23(8):2029-2037	2004
740	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	282	FW	Natale, O.E., C.E. Gomez, and M.V. Leis	Application of the Biotic Ligand Model for Regulatory Purposes to Selected Rivers in Argentina with Extreme Water-Quality Characteristics	Integr.Environ.Assess.Manag. 3(4):517-528	2007
741	Sulfuric acid copper(2+) salt (1:1)	Zizania palustris	Northern Wildrice	Flowers, Trees, Shrubs, Ferns	LOEC	GRO	WGHT	10	d	D	283	FW	Nimmo, D.W.R., M.A. Preul, C.J. Castle, J.R. Self, R.W. Pillsbury, and E.A. Bergey	Effects of Excess Copper on Growth of Wild Rice (Zizania palustris) Seedlings Tested in Reconstituted and Natural Waters	Environ. Manag.32(4): 466-475	2003
742	Copper	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	2	d	D	284	FW	Dobbs, M.G., J.L. Farris, R.J. Reash, D.S. Cherry, and J. Cairns Jr.	Evaluation of the Resident-Species Procedure for Developing Site-Specific Water Quality Criteria for Copper in Blaine Creek, Kentucky	Environ.Toxicol.Chem. 13(6):963-971	1994
743	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	284	FW	Natale, O.E., C.E. Gomez, and M.V. Leis	Application of the Biotic Ligand Model for Regulatory Purposes to Selected Rivers in Argentina with Extreme Water-Quality Characteristics	Integr.Environ.Assess.Manag. 3(4):517-528	2007
744	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	285.1	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
745	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	290	FW	Bossuyt, B.T.A., and C.R. Janssen	Influence of Multigeneration Acclimation to Copper on Tolerance, Energy Reserves, and Homeostasis of Daphnia magna Straus	Environ.Toxicol.Chem. 23(8):2029-2037	2004

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746	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	295	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, F.M.G. Tack, H.E. Allen, and C.R. Janssen	Effect of Dissolved Organic Matter Source on Acute Copper Toxicity to Daphnia magna	Environ.Toxicol.Chem. 23(5):1248-1255	2004
747	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	296	FW	Bossuyt, B.T.A., Y.R. Escobar, and C.R. Janssen	Multigeneration Acclimation of Daphnia magna Straus to Different Bioavailable Copper Concentrations	Ecotoxicol.Environ.Saf. 61(3):327-336	2005
748	Sulfuric acid copper(2+) salt (1:1)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	298	FW	Howarth, R.S., and J.B. Sprague	Copper Lethality to Rainbow Trout in Waters of Various Hardness and pH	Water Res. 12(7):455-462	1978
749	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	301	FW	Bossuyt, B.T.A., and C.R. Janssen	Influence of Multigeneration Acclimation to Copper on Tolerance, Energy Reserves, and Homeostasis of Daphnia magna Straus	Environ.Toxicol.Chem. 23(8):2029-2037	2004
750	Copper chloride (CuCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	302	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
751	Sulfuric acid copper(2+) salt (1:1)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	309	FW	Howarth, R.S., and J.B. Sprague	Copper Lethality to Rainbow Trout in Waters of Various Hardness and pH	Water Res. 12(7):455-462	1978
752	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	310	FW	Bossuyt, B.T.A., and C.R. Janssen	Influence of Multigeneration Acclimation to Copper on Tolerance, Energy Reserves, and Homeostasis of Daphnia magna Straus	Environ.Toxicol.Chem. 23(8):2029-2037	2004
753	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	311	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, F.M.G. Tack, H.E. Allen, and C.R. Janssen	Effect of Dissolved Organic Matter Source on Acute Copper Toxicity to Daphnia magna	Environ.Toxicol.Chem. 23(5):1248-1255	2004
754	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	311.3	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
755	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	315	FW	Bossuyt, B.T.A., Y.R. Escobar, and C.R. Janssen	Multigeneration Acclimation of Daphnia magna Straus to Different Bioavailable Copper Concentrations	Ecotoxicol.Environ.Saf. 61(3):327-336	2005
756	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	316.7	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
757	Copper	Daphnia longispina	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	320	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
758	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	320	FW	Bossuyt, B.T.A., and C.R. Janssen	Influence of Multigeneration Acclimation to Copper on Tolerance, Energy Reserves, and Homeostasis of Daphnia magna Straus	Environ.Toxicol.Chem. 23(8):2029-2037	2004
759	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	322	FW	Natale, O.E., C.E. Gomez, and M.V. Leis	Application of the Biotic Ligand Model for Regulatory Purposes to Selected Rivers in Argentina with Extreme Water-Quality Characteristics	Integr.Environ.Assess.Manag. 3(4):517-528	2007
760	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	332	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, F.M.G. Tack, H.E. Allen, and C.R. Janssen	Effect of Dissolved Organic Matter Source on Acute Copper Toxicity to Daphnia magna	Environ.Toxicol.Chem. 23(5):1248-1255	2004
761	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	341	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003

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762	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	342	FW	Natale, O.E., C.E. Gomez, and M.V. Leis	Application of the Biotic Ligand Model for Regulatory Purposes to Selected Rivers in Argentina with Extreme Water-Quality Characteristics	Integr.Environ.Assess.Manag. 3(4):517-528	2007
763	Copper	Simocephalus exspinosus	Cladoceran	Crustaceans	EC50	ITX	IMBL	2	d	D	344	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
764	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	354	FW	Bossuyt, B.T.A., Y.R. Escobar, and C.R. Janssen	Multigeneration Acclimation of Daphnia magna Straus to Different Bioavailable Copper Concentrations	Ecotoxicol.Environ.Saf. 61(3):327-336	2005
765	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	354	FW	Bossuyt, B.T.A., and C.R. Janssen	Influence of Multigeneration Acclimation to Copper on Tolerance, Energy Reserves, and Homeostasis of Daphnia magna Straus	Environ.Toxicol.Chem. 23(8):2029-2037	2004
766	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	356	FW	Bossuyt, B.T.A., Y.R. Escobar, and C.R. Janssen	Multigeneration Acclimation of Daphnia magna Straus to Different Bioavailable Copper Concentrations	Ecotoxicol.Environ.Saf. 61(3):327-336	2005
767	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	356	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
768	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	372	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, F.M.G. Tack, H.E. Allen, and C.R. Janssen	Effect of Dissolved Organic Matter Source on Acute Copper Toxicity to Daphnia magna	Environ.Toxicol.Chem. 23(5):1248-1255	2004
769	Copper chloride (CuCl2)	Daphnia pulex	Water Flea	Crustaceans	LC50	ITX	IMBL	2	d	D	376	FW	Van Genderen, E., R. Gensemer, C. Smith, R. Santore, and A. Ryan	Evaluation of the Biotic Ligand Model Relative to Other Site-Specific Criteria Derivation Methods for Copper in Surface Waters with Elevated	Aquat.Toxicol. 84(2):279-291	2007
770	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	376	FW	Natale, O.E., C.E. Gomez, and M.V. Leis	Application of the Biotic Ligand Model for Regulatory Purposes to Selected Rivers in Argentina with Extreme Water-Quality Characteristics	Integr.Environ.Assess.Manag. 3(4):517-528	2007
771	Sulfuric acid copper(2+) salt (1:1)	Zizania palustris	Northern Wildrice	Flowers, Trees, Shrubs, Ferns	LOEC	GRO	WGHT	14	d	D	397	FW	Nimmo, D.W.R., M.A. Preul, C.J. Castle, J.R. Self, R.W. Pillsbury, and E.A. Bergey	Effects of Excess Copper on Growth of Wild Rice (Zizania palustris) Seedlings Tested in Reconstituted and Natural Waters	Environ. Manag.32(4): 466-475	2003
772	Copper	Stenonema sp.	Mayfly	Insects/Spiders	LC50	MOR	MORT	2	d	D	453	FW	Dobbs, M.G., J.L. Farris, R.J. Reash, D.S. Cherry, and J. Cairns Jr.	Evaluation of the Resident-Species Procedure for Developing Site-Specific Water Quality Criteria for Copper in Blaine Creek, Kentucky	Environ.Toxicol.Chem. 13(6):963-971	1994
773	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	453.6	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
774	Copper	Simocephalus exspinosus	Cladoceran	Crustaceans	EC50	ITX	IMBL	2	d	D	464	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
775	Copper	Ceriodaphnia reticulata	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	473	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
776	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	490.3	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003

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777	Copper	Pleuroxus truncatus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	492	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
778	Copper chloride (CuCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	D	506.8	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, D.G. Heijerick, F.M.G. Tack, K. Delbeke, H.E. Allen, and C.R. Janssen	Development and Field Validation of a Predictive Copper Toxicity Model for the Green Alga Pseudokirchneriella subcapitata	Environ. Toxicol. Chem.22(10): 2454-2465	2003
779	Sulfuric acid copper(2+) salt (1:1)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	516	FW	Howarth, R.S., and J.B. Sprague	Copper Lethality to Rainbow Trout in Waters of Various Hardness and pH	Water Res. 12(7):455-462	1978
780	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	542	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, F.M.G. Tack, H.E. Allen, and C.R. Janssen	Effect of Dissolved Organic Matter Source on Acute Copper Toxicity to Daphnia magna	Environ.Toxicol.Chem. 23(5):1248-1255	2004
781	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	607	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, F.M.G. Tack, H.E. Allen, and C.R. Janssen	Effect of Dissolved Organic Matter Source on Acute Copper Toxicity to Daphnia magna	Environ.Toxicol.Chem. 23(5):1248-1255	2004
782	Nitric acid, Copper(2+) salt	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	4	d	D	620	FW	Felts, P.A., and A.G. Heath	Interactions of Temperature and Sublethal Environmental Copper Exposure on the Energy Metabolism of Bluegill, Lepomis macrochirus Rafinesque	J.Fish Biol. 25(4):445-453	1984
783	Sulfuric acid copper(2+) salt (1:1)	Scenedesmus acuminatus	Green Algae	Algae, Moss, Fungi	LOEC	POP	CHLA	4	d	D	635.5	FW	Lombardi, A.T., T.M. Dos Reis Hidalgo, A.A. Henriques Vieira, and A.L. Sartori	Toxicity of Ionic Copper to the Freshwater Microalga Scenedesmus acuminatus (Chlorophyceae, Chlorococcales)	Phycologia46(1): 74-78	2007
784	Copper chloride (CuCl)	Anabaena doliolum	Blue-Green Algae	Algae, Moss, Fungi	LC50	MOR	MORT	15	d	D	635.5	FW	Bhargava, P., A. Kumar, Y. Mishra, and L.C. Rai	Copper Pretreatment Augments Ultraviolet B Toxicity in the Cyanobacterium Anabaena doliolum: a Proteomic Analysis of Cell Death	Funct. Plant Biol.35(5): 360-372	2008
785	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	638	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, F.M.G. Tack, H.E. Allen, and C.R. Janssen	Effect of Dissolved Organic Matter Source on Acute Copper Toxicity to Daphnia magna	Environ.Toxicol.Chem. 23(5):1248-1255	2004
786	Copper	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	755	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
787	Sulfuric acid copper(2+) salt (1:1)	Lampsilis fasciola	Wavy-Rayed Lampmussel	Molluscs	EC50	MOR	MORT	1	d	D	800	FW	Gillis, P.L., R.J. Mitchell, A.N. Schwalb, K.A. McNichols, G.L. Mackie, C.M. Wood, and J.D. Ackerman	Sensitivity of the Glochidia (Larvae) of Freshwater Mussels to Copper: Assessing the Effect of Water Hardness and Dissolved Organic Carbon on the Sensitivity of Endangered Species	Aquat.Toxicol. 88:137-145	2008
788	Copper	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	PGRT	3	d	D	831	FW	De Schamphelaere, K.A.C., V.I.R. Unamuno, F.M.G. Tack, J. Vanderdeelen, and C.R. Janssen	Reverse Osmosis Sampling does not Affect the Protective Effect of Dissolved Organic Matter on Copper and Zinc Toxicity to Freshwater Organisms	Chemosphere58(5): 653-658	2005
789	Copper	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	PGRT	3	d	D	848	FW	De Schamphelaere, K.A.C., V.I.R. Unamuno, F.M.G. Tack, J. Vanderdeelen, and C.R. Janssen	Reverse Osmosis Sampling does not Affect the Protective Effect of Dissolved Organic Matter on Copper and Zinc Toxicity to Freshwater Organisms	Chemosphere58(5): 653-658	2005
790	Copper	Acantholeberis curvirostris	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	853	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
791	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	932	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, F.M.G. Tack, H.E. Allen, and C.R. Janssen	Effect of Dissolved Organic Matter Source on Acute Copper Toxicity to Daphnia magna	Environ.Toxicol.Chem. 23(5):1248-1255	2004
792	Sulfuric acid copper(2+) salt (1:1)	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	14	d	D	1030	FW	Richey, D., and D. Roseboom	Acute Toxicity of Copper to Some Fishes in high Alkalinity Water	Circular 131, Dep.Registration & Education, State of IL :24 p. (NTIS/PB-294923)	1978

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793	Copper	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	1090	FW	Bossuyt, B.T.A., K.A.C De Schamphelaere, and C.R. Janssen	Using the Biotic Ligand Model for Predicting the Acute Sensitivity of Cladoceran Dominated Communities to Copper in Natural Surface Waters	Envion.Sci.Technol. 38(19):5030-5037	2004
794	Copper chloride (CuCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	1090	FW	De Schamphelaere, K.A.C., F.M. Vasconcelos, F.M.G. Tack, H.E. Allen, and C.R. Janssen	Effect of Dissolved Organic Matter Source on Acute Copper Toxicity to Daphnia magna	Environ.Toxicol.Chem. 23(5):1248-1255	2004
795	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	EC50	ENZ	GENZ	0.04	d	D	1100	FW	Kubitz, J.A., E.C. Lewek, J.M. Besser, J.B. Drake III, and J.P. Giesy	Effects of Copper-Contaminated Sediments on Hyalella azteca, Daphnia magna, and Ceriodaphnia dubia: Survival, Growth, and Enzyme Inhibition	Arch.Environ.Contam.Toxicol. 29(1):97-103	1995
796	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	1110	FW	Natale, O.E., C.E. Gomez, and M.V. Leis	Application of the Biotic Ligand Model for Regulatory Purposes to Selected Rivers in Argentina with Extreme Water-Quality Characteristics	Integr.Environ.Assess.Manag. 3(4):517-528	2007
797	Copper	Eurycea bislineata	Northern Two-Lined Salamander	Amphibians	LC50	MOR	MORT	2	d	D	1120	FW	Dobbs, M.G., J.L. Farris, R.J. Reash, D.S. Cherry, and J. Cairns Jr.	Evaluation of the Resident-Species Procedure for Developing Site-Specific Water Quality Criteria for Copper in Blaine Creek, Kentucky	Environ.Toxicol.Chem. 13(6):963-971	1994
798	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	1120	FW	Natale, O.E., C.E. Gomez, and M.V. Leis	Application of the Biotic Ligand Model for Regulatory Purposes to Selected Rivers in Argentina with Extreme Water-Quality Characteristics	Integr.Environ.Assess.Manag. 3(4):517-528	2007
799	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	1120	FW	Natale, O.E., C.E. Gomez, and M.V. Leis	Application of the Biotic Ligand Model for Regulatory Purposes to Selected Rivers in Argentina with Extreme Water-Quality Characteristics	Integr.Environ.Assess.Manag. 3(4):517-528	2007
800	Copper	Chironomus riparius	Midge	Insects/Spiders	LC50	MOR	MORT	2	d	D	1170	FW	Dobbs, M.G., J.L. Farris, R.J. Reash, D.S. Cherry, and J. Cairns Jr.	Evaluation of the Resident-Species Procedure for Developing Site-Specific Water Quality Criteria for Copper in Blaine Creek, Kentucky	Environ.Toxicol.Chem. 13(6):963-971	1994
801	Sulfuric acid copper(2+) salt (1:1)	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	14	d	D	1180	FW	Richey, D., and D. Roseboom	Acute Toxicity of Copper to Some Fishes in high Alkalinity Water	Circular 131, Dep.Registration & Education, State of IL :24 p. (NTIS/PB-294923)	1978
802	Sulfuric acid copper(2+) salt (1:1)	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	14	d	D	1200	FW	Richey, D., and D. Roseboom	Acute Toxicity of Copper to Some Fishes in high Alkalinity Water	Circular 131, Dep.Registration & Education, State of IL :24 p. (NTIS/PB-294923)	1978
803	Copper chloride (CuCl)	Anabaena doliolum	Blue-Green Algae	Algae, Moss, Fungi	LC75	MOR	MORT	15	d	D	1271	FW	Bhargava, P., A. Kumar, Y. Mishra, and L.C. Rai	Copper Pretreatment Augments Ultraviolet B Toxicity in the Cyanobacterium Anabaena doliolum: a Proteomic Analysis of Cell Death	Funct. Plant Biol.35(5): 360-372	2008
804	Copper chloride (CuCl)	Anabaena doliolum	Blue-Green Algae	Algae, Moss, Fungi	LOEC	BCM	ATPT	1	d	D	1271	FW	Bhargava, P., A. Kumar, Y. Mishra, and L.C. Rai	Copper Pretreatment Augments Ultraviolet B Toxicity in the Cyanobacterium Anabaena doliolum: a Proteomic Analysis of Cell Death	Funct. Plant Biol.35(5): 360-372	2008
805	Copper chloride (CuCl)	Anabaena doliolum	Blue-Green Algae	Algae, Moss, Fungi	LOEC	BCM	ATPT	1.03	d	D	1271	FW	Bhargava, P., A. Kumar, Y. Mishra, and L.C. Rai	Copper Pretreatment Augments Ultraviolet B Toxicity in the Cyanobacterium Anabaena doliolum: a Proteomic Analysis of Cell Death	Funct. Plant Biol.35(5): 360-372	2008
806	Copper chloride (CuCl)	Anabaena doliolum	Blue-Green Algae	Algae, Moss, Fungi	LOEC	BCM	NADP	1	d	D	1271	FW	Bhargava, P., A. Kumar, Y. Mishra, and L.C. Rai	Copper Pretreatment Augments Ultraviolet B Toxicity in the Cyanobacterium Anabaena doliolum: a Proteomic Analysis of Cell Death	Funct. Plant Biol.35(5): 360-372	2008
807	Copper chloride (CuCl)	Anabaena doliolum	Blue-Green Algae	Algae, Moss, Fungi	LOEC	BCM	NADP	1.01	d	D	1271	FW	Bhargava, P., A. Kumar, Y. Mishra, and L.C. Rai	Copper Pretreatment Augments Ultraviolet B Toxicity in the Cyanobacterium Anabaena doliolum: a Proteomic Analysis of Cell Death	Funct. Plant Biol.35(5): 360-372	2008
808	Copper chloride (CuCl)	Anabaena doliolum	Blue-Green Algae	Algae, Moss, Fungi	LOEC	BCM	NADP	1.03	d	D	1271	FW	Bhargava, P., A. Kumar, Y. Mishra, and L.C. Rai	Copper Pretreatment Augments Ultraviolet B Toxicity in the Cyanobacterium Anabaena doliolum: a Proteomic Analysis of Cell Death	Funct. Plant Biol.35(5): 360-372	2008
809	Copper chloride (CuCl)	Anabaena doliolum	Blue-Green Algae	Algae, Moss, Fungi	LOEC	ENZ	NITG	1	d	D	1271	FW	Bhargava, P., A. Kumar, Y. Mishra, and L.C. Rai	Copper Pretreatment Augments Ultraviolet B Toxicity in the Cyanobacterium Anabaena doliolum: a Proteomic Analysis of Cell Death	Funct. Plant Biol.35(5): 360-372	2008

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810	Copper chloride (CuCl)	Anabaena doliolum	Blue-Green Algae	Algae, Moss, Fungi	LOEC	ENZ	NITG	1.01	d	D	1271	FW	Bhargava, P., A. Kumar, Y. Mishra, and L.C. Rai	Copper Pretreatment Augments Ultraviolet B Toxicity in the Cyanobacterium Anabaena doliolum: a Proteomic Analysis of Cell Death	Funct. Plant Biol.35(5): 360-372	2008
811	Copper chloride (CuCl)	Anabaena doliolum	Blue-Green Algae	Algae, Moss, Fungi	LOEC	ENZ	NITG	1.03	d	D	1271	FW	Bhargava, P., A. Kumar, Y. Mishra, and L.C. Rai	Copper Pretreatment Augments Ultraviolet B Toxicity in the Cyanobacterium Anabaena doliolum: a Proteomic Analysis of Cell Death	Funct. Plant Biol.35(5): 360-372	2008
812	Copper chloride (CuCl)	Anabaena doliolum	Blue-Green Algae	Algae, Moss, Fungi	LOEC	PHY	PSYN	1	d	D	1271	FW	Bhargava, P., A. Kumar, Y. Mishra, and L.C. Rai	Copper Pretreatment Augments Ultraviolet B Toxicity in the Cyanobacterium Anabaena doliolum: a Proteomic Analysis of Cell Death	Funct. Plant Biol.35(5): 360-372	2008
813	Copper chloride (CuCl)	Anabaena doliolum	Blue-Green Algae	Algae, Moss, Fungi	LOEC	PHY	PSYN	1.03	d	D	1271	FW	Bhargava, P., A. Kumar, Y. Mishra, and L.C. Rai	Copper Pretreatment Augments Ultraviolet B Toxicity in the Cyanobacterium Anabaena doliolum: a Proteomic Analysis of Cell Death	Funct. Plant Biol.35(5): 360-372	2008
814	Copper chloride (CuCl)	Anabaena doliolum	Blue-Green Algae	Algae, Moss, Fungi	LOEC	PHY	PSYN	1.08	d	D	1271	FW	Bhargava, P., A. Kumar, Y. Mishra, and L.C. Rai	Copper Pretreatment Augments Ultraviolet B Toxicity in the Cyanobacterium Anabaena doliolum: a Proteomic Analysis of Cell Death	Funct. Plant Biol.35(5): 360-372	2008
815	Copper chloride (CuCl)	Anabaena doliolum	Blue-Green Algae	Algae, Moss, Fungi	LOEC	PHY	PSYN	1.10	d	D	1271	FW	Bhargava, P., A. Kumar, Y. Mishra, and L.C. Rai	Copper Pretreatment Augments Ultraviolet B Toxicity in the Cyanobacterium Anabaena doliolum: a Proteomic Analysis of Cell Death	Funct. Plant Biol.35(5): 360-372	2008
816	Copper chloride (CuCl)	Anabaena doliolum	Blue-Green Algae	Algae, Moss, Fungi	LOEC	PHY	PSYN	1.12	d	D	1271	FW	Bhargava, P., A. Kumar, Y. Mishra, and L.C. Rai	Copper Pretreatment Augments Ultraviolet B Toxicity in the Cyanobacterium Anabaena doliolum: a Proteomic Analysis of Cell Death	Funct. Plant Biol.35(5): 360-372	2008
817	Copper chloride (CuCl)	Anabaena doliolum	Blue-Green Algae	Algae, Moss, Fungi	LOEC	PHY	RESP	1	d	D	1271	FW	Bhargava, P., A. Kumar, Y. Mishra, and L.C. Rai	Copper Pretreatment Augments Ultraviolet B Toxicity in the Cyanobacterium Anabaena doliolum: a Proteomic Analysis of Cell Death	Funct. Plant Biol.35(5): 360-372	2008
818	Copper chloride (CuCl)	Anabaena doliolum	Blue-Green Algae	Algae, Moss, Fungi	LOEC	PHY	RESP	1.01	d	D	1271	FW	Bhargava, P., A. Kumar, Y. Mishra, and L.C. Rai	Copper Pretreatment Augments Ultraviolet B Toxicity in the Cyanobacterium Anabaena doliolum: a Proteomic Analysis of Cell Death	Funct. Plant Biol.35(5): 360-372	2008
819	Copper chloride (CuCl)	Anabaena doliolum	Blue-Green Algae	Algae, Moss, Fungi	LOEC	PHY	RESP	1.03	d	D	1271	FW	Bhargava, P., A. Kumar, Y. Mishra, and L.C. Rai	Copper Pretreatment Augments Ultraviolet B Toxicity in the Cyanobacterium Anabaena doliolum: a Proteomic Analysis of Cell Death	Funct. Plant Biol.35(5): 360-372	2008
820	Copper chloride (CuCl)	Anabaena doliolum	Blue-Green Algae	Algae, Moss, Fungi	LOEC	POP	PGRT	1	d	D	1271	FW	Bhargava, P., A. Kumar, Y. Mishra, and L.C. Rai	Copper Pretreatment Augments Ultraviolet B Toxicity in the Cyanobacterium Anabaena doliolum: a Proteomic Analysis of Cell Death	Funct. Plant Biol.35(5): 360-372	2008
821	Copper chloride (CuCl)	Anabaena doliolum	Blue-Green Algae	Algae, Moss, Fungi	LOEC	POP	PGRT	1.01	d	D	1271	FW	Bhargava, P., A. Kumar, Y. Mishra, and L.C. Rai	Copper Pretreatment Augments Ultraviolet B Toxicity in the Cyanobacterium Anabaena doliolum: a Proteomic Analysis of Cell Death	Funct. Plant Biol.35(5): 360-372	2008
822	Copper chloride (CuCl)	Anabaena doliolum	Blue-Green Algae	Algae, Moss, Fungi	LOEC	POP	PGRT	1.03	d	D	1271	FW	Bhargava, P., A. Kumar, Y. Mishra, and L.C. Rai	Copper Pretreatment Augments Ultraviolet B Toxicity in the Cyanobacterium Anabaena doliolum: a Proteomic Analysis of Cell Death	Funct. Plant Biol.35(5): 360-372	2008
823	Copper chloride (CuCl2)	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	4	d	D	1300	FW	Blaylock, B.G., M.L. Frank, and J.F. McCarthy	Comparative Toxicity of Copper and Acridine to Fish, Daphnia and Algae	Environ.Toxicol.Chem. 4(1):63-71	1985
824	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	1390	FW	Natale, O.E., C.E. Gomez, and M.V. Leis	Application of the Biotic Ligand Model for Regulatory Purposes to Selected Rivers in Argentina with Extreme Water-Quality Characteristics	Integr.Environ.Assess.Manag. 3(4):517-528	2007
825	Copper	Danio rerio	Zebra Danio	Fish	LC50	MOR	MORT	2	d	D	1560	FW	Griffitt, R.J., R. Weil, K.A. Hyndman, N.D. Denslow, K. Powers, D. Taylor, and D.S. Barber	Exposure to Copper Nanoparticles Causes Gill Injury and Acute Lethality in Zebrafish (Danio rerio)	Environ.Sci.Technol. 41(23):8178-8186	2007
826	Copper chloride (CuCl2)	Scenedesmus acutus var. acutus	Green Algae	Algae, Moss, Fungi	LOEL	PHY	PSII	0.04	d	D	1589	FW	Mallick, N., and F.H. Mohn	Use of Chlorophyll Fluorescence in Metal-Stress Research: A Case Study with the Green Microalga Scenedesmus	Ecotoxicol. Environ. Saf.55(1): 64-69	2003

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827	Copper	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	3	d	D	1907	FW	Meyer, J.S., C.J. Boese, and J.M. Morris	Use of the Biotic Ligand Model to Predict Pulse-Exposure Toxicity of Copper to Fathead Minnows (Pimephales promelas)	Aquat.Toxicol. 84(2):268-278	2007
828	Sulfuric acid copper(2+) salt (1:1)	Chironomus riparius	Midge	Insects/Spiders	LC50	MOR	MORT	1	d	D	2090	FW	Bechard, K.M., P.L. Gillis, and C.M. Wood	Acute Toxicity of Waterborne Cd, Cu, Pb, Ni, and Zn to First-Instar Chironomus riparius Larvae	Arch.Environ.Contam.Toxicol. 54(3):454-459	2008
829	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	EC50	ENZ	GENZ	0.04	d	D	2200	FW	Kubitz, J.A., E.C. Lewek, J.M. Besser, J.B. Drake III, and J.P. Giesy	Effects of Copper-Contaminated Sediments on Hyalella azteca, Daphnia magna, and Ceriodaphnia dubia: Survival, Growth, and Enzyme Inhibition	Arch.Environ.Contam.Toxicol. 29(1):97-103	1995
830	Copper	Orconectes sp.	Crayfish	Crustaceans	LC50	MOR	MORT	2	d	D	2370	FW	Dobbs, M.G., J.L. Farris, R.J. Reash, D.S. Cherry, and J. Cairns Jr.	Evaluation of the Resident-Species Procedure for Developing Site-Specific Water Quality Criteria for Copper in Blaine Creek, Kentucky	Environ.Toxicol.Chem. 13(6):963-971	1994
831	Sulfuric acid copper(2+) salt (1:1)	Lepomis macrochirus	Bluegill	Fish	LC50*	MOR	MORT	14	d	D	2500	FW	Richey, D., and D. Roseboom	Acute Toxicity of Copper to Some Fishes in high Alkalinity Water	Circular 131, Dep.Registration & Education, State of IL :24 p. (NTIS/PB-294923)	1978
832	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	EC50	ENZ	GENZ	0.04	d	D	2600	FW	Kubitz, J.A., E.C. Lewek, J.M. Besser, J.B. Drake III, and J.P. Giesy	Effects of Copper-Contaminated Sediments on Hyalella azteca, Daphnia magna, and Ceriodaphnia dubia: Survival, Growth, and Enzyme Inhibition	Arch.Environ.Contam.Toxicol. 29(1):97-103	1995
833	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	EC50	ENZ	GENZ	0.04	d	D	3000	FW	Kubitz, J.A., E.C. Lewek, J.M. Besser, J.B. Drake III, and J.P. Giesy	Effects of Copper-Contaminated Sediments on Hyalella azteca, Daphnia magna, and Ceriodaphnia dubia: Survival, Growth, and Enzyme Inhibition	Arch.Environ.Contam.Toxicol. 29(1):97-103	1995
834	Copper chloride (CuCl2)	Varicosporium elodeae	Fungi	Algae, Moss, Fungi	EC50	POP	BMAS	8	d	D	3432	FW	Azevedo, M.M., A. Carvalho, C. Pascoal, F. Rodrigues, and F. Cassio	Responses of Antioxidant Defenses to Cu and Zn Stress in Two Aquatic Fungi	Sci. Total Environ.377(2-3): 233-243	2007
835	Copper chloride (CuCl2)	Varicosporium elodeae	Fungi	Algae, Moss, Fungi	LOEL	ENZ	CTLS	0.58	d	D	3432	FW	Azevedo, M.M., A. Carvalho, C. Pascoal, F. Rodrigues, and F. Cassio	Responses of Antioxidant Defenses to Cu and Zn Stress in Two Aquatic Fungi	Sci. Total Environ.377(2-3): 233-243	2007
836	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	EC50	ENZ	GENZ	0.04	d	D	3500	FW	Kubitz, J.A., E.C. Lewek, J.M. Besser, J.B. Drake III, and J.P. Giesy	Effects of Copper-Contaminated Sediments on Hyalella azteca, Daphnia magna, and Ceriodaphnia dubia: Survival, Growth, and Enzyme Inhibition	Arch.Environ.Contam.Toxicol. 29(1):97-103	1995
837	Sulfuric acid copper(2+) salt (1:1)	Lepomis macrochirus	Bluegill	Fish	LC50*	MOR	MORT	14	d	D	3700	FW	Richey, D., and D. Roseboom	Acute Toxicity of Copper to Some Fishes in high Alkalinity Water	Circular 131, Dep.Registration & Education, State of IL :24 p. (NTIS/PB-294923)	1978
838	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	EC50	ENZ	GENZ	0.04	d	D	3800	FW	Kubitz, J.A., E.C. Lewek, J.M. Besser, J.B. Drake III, and J.P. Giesy	Effects of Copper-Contaminated Sediments on Hyalella azteca, Daphnia magna, and Ceriodaphnia dubia: Survival, Growth, and Enzyme Inhibition	Arch.Environ.Contam.Toxicol. 29(1):97-103	1995
839	Copper	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	2	d	D	4300	FW	Dobbs, M.G., J.L. Farris, R.J. Reash, D.S. Cherry, and J. Cairns Jr.	Evaluation of the Resident-Species Procedure for Developing Site-Specific Water Quality Criteria for Copper in Blaine Creek, Kentucky	Environ.Toxicol.Chem. 13(6):963-971	1994
840	Copper chloride (CuCl2)	Tilapia sparrmanii	Banded Bream	Fish	LC50	MOR	MORT	4	d	D	4328	FW	Van Aardt, W.J., and M. Hough	Acute Effects of Cu on Oxygen Consumption and 96 Hr-LC50 Values in the Freshwater Fish Tilapia sparrmani (Teleostei: Cichlidae) in Mooi River Hard Water, South Africa	Afr.J.Aquat.Sci. 31(2):305-311	2006
841	Copper chloride (CuCl2)	Varicosporium elodeae	Fungi	Algae, Moss, Fungi	EC80	POP	BMAS	8	d	D	5402	FW	Azevedo, M.M., A. Carvalho, C. Pascoal, F. Rodrigues, and F. Cassio	Responses of Antioxidant Defenses to Cu and Zn Stress in Two Aquatic Fungi	Sci. Total Environ.377(2-3): 233-243	2007
842	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	EC50	ENZ	GENZ	0.04	d	D	6000	FW	Kubitz, J.A., E.C. Lewek, J.M. Besser, J.B. Drake III, and J.P. Giesy	Effects of Copper-Contaminated Sediments on Hyalella azteca, Daphnia magna, and Ceriodaphnia dubia: Survival, Growth, and Enzyme Inhibition	Arch.Environ.Contam.Toxicol. 29(1):97-103	1995
843	Copper chloride (CuCl2)	Heliscus submersus	Fungus	Algae, Moss, Fungi	EC50	POP	BMAS	8	d	D	6482	FW	Azevedo, M.M., A. Carvalho, C. Pascoal, F. Rodrigues, and F. Cassio	Responses of Antioxidant Defenses to Cu and Zn Stress in Two Aquatic Fungi	Sci. Total Environ.377(2-3): 233-243	2007
844	Copper chloride (CuCl2)	Heliscus submersus	Fungus	Algae, Moss, Fungi	LOEL	ENZ	CTLS	0.58	d	D	6482	FW	Azevedo, M.M., A. Carvalho, C. Pascoal, F. Rodrigues, and F. Cassio	Responses of Antioxidant Defenses to Cu and Zn Stress in Two Aquatic Fungi	Sci. Total Environ.377(2-3): 233-243	2007

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845	Copper chloride (CuCl2)	Heliscus submersus	Fungus	Algae, Moss, Fungi	EC80	POP	BMAS	8	d	D	11058	FW	Azevedo, M.M., A. Carvalho, C. Pascoal, F. Rodrigues, and F. Cassio	Responses of Antioxidant Defenses to Cu and Zn Stress in Two Aquatic Fungi	Sci. Total Environ.377(2-3): 233-243	2007
846	Copper chloride (CuCl2)	Heliscus submersus	Fungus	Algae, Moss, Fungi	LOEL	ENZ	CTLS	8	d	D	11058	FW	Azevedo, M.M., A. Carvalho, C. Pascoal, F. Rodrigues, and F. Cassio	Responses of Antioxidant Defenses to Cu and Zn Stress in Two Aquatic Fungi	Sci. Total Environ.377(2-3): 233-243	2007
847	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	EC50	ENZ	GENZ	0.04	d	D	13000	FW	Kubitz, J.A., E.C. Lewek, J.M. Besser, J.B. Drake III, and J.P. Giesy	Effects of Copper-Contaminated Sediments on Hyalella azteca, Daphnia magna, and Ceriodaphnia dubia: Survival, Growth, and Enzyme Inhibition	Arch.Environ.Contam.Toxicol. 29(1):97-103	1995
848	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	EC50	ENZ	GENZ	0.04	d	D	15200	FW	Kubitz, J.A., E.C. Lewek, J.M. Besser, J.B. Drake III, and J.P. Giesy	Effects of Copper-Contaminated Sediments on Hyalella azteca, Daphnia magna, and Ceriodaphnia dubia: Survival, Growth, and Enzyme Inhibition	Arch.Environ.Contam.Toxicol. 29(1):97-103	1995
849	Sulfuric acid copper(2+) salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	22000	FW	Kubitz, J.A., E.C. Lewek, J.M. Besser, J.B. Drake III, and J.P. Giesy	Effects of Copper-Contaminated Sediments on Hyalella azteca, Daphnia magna, and Ceriodaphnia dubia: Survival, Growth, and Enzyme Inhibition	Arch.Environ.Contam.Toxicol. 29(1):97-103	1995
850	Sulfuric acid copper(2+) salt (1:1)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	24000	FW	Kubitz, J.A., E.C. Lewek, J.M. Besser, J.B. Drake III, and J.P. Giesy	Effects of Copper-Contaminated Sediments on Hyalella azteca, Daphnia magna, and Ceriodaphnia dubia: Survival, Growth, and Enzyme Inhibition	Arch.Environ.Contam.Toxicol. 29(1):97-103	1995
851	Sulfuric acid copper(2+) salt (1:1)	Hyalella azteca	Scud	Crustaceans	LC50	MOR	MORT	14	d	D	43000	FW	Kubitz, J.A., E.C. Lewek, J.M. Besser, J.B. Drake III, and J.P. Giesy	Effects of Copper-Contaminated Sediments on Hyalella azteca, Daphnia magna, and Ceriodaphnia dubia: Survival, Growth, and Enzyme Inhibition	Arch.Environ.Contam.Toxicol. 29(1):97-103	1995
852	Copper chloride (CuCl2)	Anabaena doliolum	Blue-Green Algae	Algae, Moss, Fungi	LOEL	BCM	ATPT	0.08	d	D	300000	FW	Mallick, N., and L.C. Rai	Metal Induced Inhibition of Photosynthesis, Photosynthetic Electron Transport Chain and ATP Content of Anabaena doliolum and Chlorella vulgaris: Interaction with Exogenous ATP	Biomed. Environ. Sci.5(3): 241-250	1992
853	Copper chloride (CuCl2)	Anabaena doliolum	Blue-Green Algae	Algae, Moss, Fungi	LOEL	PHY	CFIX	0.08	d	D	300000	FW	Mallick, N., and L.C. Rai	Metal Induced Inhibition of Photosynthesis, Photosynthetic Electron Transport Chain and ATP Content of Anabaena doliolum and Chlorella vulgaris: Interaction with Exogenous ATP	Biomed. Environ. Sci.5(3): 241-250	1992
854	Copper chloride (CuCl2)	Chlorella vulgaris	Green Algae	Algae, Moss, Fungi	LOEL	BCM	ATPT	0.08	d	D	300000	FW	Mallick, N., and L.C. Rai	Metal Induced Inhibition of Photosynthesis, Photosynthetic Electron Transport Chain and ATP Content of Anabaena doliolum and Chlorella vulgaris: Interaction with Exogenous ATP	Biomed. Environ. Sci.5(3): 241-250	1992
855	Copper chloride (CuCl2)	Chlorella vulgaris	Green Algae	Algae, Moss, Fungi	LOEL	PHY	CFIX	0.08	d	D	300000	FW	Mallick, N., and L.C. Rai	Metal Induced Inhibition of Photosynthesis, Photosynthetic Electron Transport Chain and ATP Content of Anabaena doliolum and Chlorella vulgaris: Interaction with Exogenous ATP	Biomed. Environ. Sci.5(3): 241-250	1992
856	Sulfuric acid copper(2+) salt (1:1)	Bellerochea polymorpha	Diatom	Algae, Moss, Fungi	LOEC	POP	PGRT	3	d	D	0.2	SW	Levy, J.L., J.L. Stauber, and D.F. Jolley	Sensitivity of Marine Microalgae to Copper: The Effect of Biotic Factors on Copper Adsorption and Toxicity	Sci. Total Environ.387(1-3): 141-154	2007
857	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC20	DVP	ABNM	2	d	D	0.3	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
858	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC20	DVP	ABNM	2	d	D	0.4	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
859	Sulfuric acid copper(2+) salt (1:1)	Micromonas pusilla	Algae	Algae, Moss, Fungi	LOEC	POP	PGRT	3	d	D	0.6	SW	Levy, J.L., J.L. Stauber, and D.F. Jolley	Sensitivity of Marine Microalgae to Copper: The Effect of Biotic Factors on Copper Adsorption and Toxicity	Sci. Total Environ.387(1-3): 141-154	2007
860	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC50	DVP	ABNM	2	d	D	0.87	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009

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861	Sulfuric acid copper(2+) salt (1:1)	Gephyrocapsa oceanica	Coccolithophore	Algae, Moss, Fungi	LOEC	POP	PGRT	3	d	D	1	SW	Levy, J.L., J.L. Stauber, and D.F. Jolley	Sensitivity of Marine Microalgae to Copper: The Effect of Biotic Factors on Copper Adsorption and Toxicity	Sci. Total Environ.387(1-3): 141-154	2007
862	Sulfuric acid copper(2+) salt (1:1)	Nitzschia closterium	Diatom	Algae, Moss, Fungi	LOEC	POP	PGRT	3	d	D	1	SW	Levy, J.L., J.L. Stauber, S.A. Wakelin, and D.F. Jolley	The Effect of Bacteria on the Sensitivity of Microalgae to Copper in Laboratory Bioassays	Chemosphere74(9): 1266-1274	2009
863	Sulfuric acid copper(2+) salt (1:1)	Isochrysis sp.	Haptophyte	Algae, Moss, Fungi	LOEC	POP	PGRT	3	d	D	1.1	SW	Levy, J.L., J.L. Stauber, and D.F. Jolley	Sensitivity of Marine Microalgae to Copper: The Effect of Biotic Factors on Copper Adsorption and Toxicity	Sci. Total Environ.387(1-3): 141-154	2007
864	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC20	DVP	ABNM	2	d	D	1.25	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
865	Copper chloride (CuCl2)	Corbicula manilensis	Asiatic Clam	Molluscs	EC20	BEH	VACL	0.21	d	D	1.4	SW	Tran, D., E. Fournier, G. Durrieu, and J.C. Massabuau	Copper Detection in the Asiatic Clam Corbicula fluminea: Optimum Valve Closure Response	Aquat.Toxicol. 65(3):317-327	2003
866	Sulfuric acid copper(2+) salt (1:1)	Nitzschia closterium	Diatom	Algae, Moss, Fungi	LOEC	POP	PGRT	3	d	D	1.5	SW	Levy, J.L., J.L. Stauber, S.A. Wakelin, and D.F. Jolley	The Effect of Bacteria on the Sensitivity of Microalgae to Copper in Laboratory Bioassays	Chemosphere74(9): 1266-1274	2009
867	Sulfuric acid copper(2+) salt (1:1)	Phaeodactylum tricornutum	Diatom	Algae, Moss, Fungi	LOEC	POP	PGRT	3	d	D	1.5	SW	Levy, J.L., B.M. Angel, J.L. Stauber, W.L. Poon, S.L. Simpson, S.H. Cheng, and D.F. Jolley	Uptake and Internalisation of Copper by Three Marine Microalgae: Comparison of Copper-Sensitive and Copper-Tolerant Species	Aquat. Toxicol.89(2): 82-93	2008
868	Sulfuric acid copper(2+) salt (1:1)	Phaeodactylum tricornutum	Diatom	Algae, Moss, Fungi	LOEC	POP	PGRT	3	d	D	1.5	SW	Levy, J.L., J.L. Stauber, and D.F. Jolley	Sensitivity of Marine Microalgae to Copper: The Effect of Biotic Factors on Copper Adsorption and Toxicity	Sci. Total Environ.387(1-3): 141-154	2007
869	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC50	DVP	ABNM	2	d	D	1.8	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
870	Sulfuric acid copper(2+) salt (1:1)	Gephyrocapsa oceanica	Coccolithophore	Algae, Moss, Fungi	LOEC	POP	PGRT	3	d	D	2.6	SW	Levy, J.L., J.L. Stauber, and D.F. Jolley	Sensitivity of Marine Microalgae to Copper: The Effect of Biotic Factors on Copper Adsorption and Toxicity	Sci. Total Environ.387(1-3): 141-154	2007
871	Copper chloride (CuCl2)	Corbicula manilensis	Asiatic Clam	Molluscs	EC20	BEH	VACL	0.08	d	D	2.7	SW	Tran, D., E. Fournier, G. Durrieu, and J.C. Massabuau	Copper Detection in the Asiatic Clam Corbicula fluminea: Optimum Valve Closure Response	Aquat.Toxicol. 65(3):317-327	2003
872	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC20	DVP	ABNM	2	d	D	2.7	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
873	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC20	DVP	ABNM	2	d	D	2.9	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
874	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC20	DVP	ABNM	2	d	D	2.9	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
875	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC50	DVP	ABNM	2	d	D	3.1	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
876	Sulfuric acid copper(2+) salt (1:1)	Allorchestes compressa	Scud, Amphipod	Crustaceans	LOEC	POP	BMAS	40	d	D	3.7	SW	Ahsanullah, M., and A.R. Williams	Sublethal Effects and Bioaccumulation of Cadmium, Chromium, Copper, and Zinc in the Marine Amphipod Allorchestes compressa	Mar.Biol.(Berlin) 108:59-65	1991

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877	Copper chloride (CuCl2)	Corbicula manilensis	Asiatic Clam	Molluscs	EC20	BEH	VACL	0.04	d	D	3.8	SW	Tran, D., E. Fournier, G. Durrieu, and J.C. Massabuau	Copper Detection in the Asiatic Clam Corbicula fluminea: Optimum Valve Closure Response	Aquat.Toxicol. 65(3):317-327	2003
878	Copper chloride (CuCl2)	Corbicula manilensis	Asiatic Clam	Molluscs	EC50	BEH	VACL	0.21	d	D	4.2	SW	Tran, D., E. Fournier, G. Durrieu, and J.C. Massabuau	Copper Detection in the Asiatic Clam Corbicula fluminea: Optimum Valve Closure Response	Aquat.Toxicol. 65(3):317-327	2003
879	Sulfuric acid copper(2+) salt (1:1)	Proteomonas sulcata	Cryptophyte	Algae, Moss, Fungi	LOEC	POP	PGRT	3	d	D	4.2	SW	Levy, J.L., J.L. Stauber, and D.F. Jolley	Sensitivity of Marine Microalgae to Copper: The Effect of Biotic Factors on Copper Adsorption and Toxicity	Sci. Total Environ.387(1-3): 141-154	2007
880	Sulfuric acid copper(2+) salt (1:1)	Mytilus edulis	Common Bay Mussel,Blue Mussel	Molluscs	EC50	DVP	NORM	2	d	D	4.679	SW	Tucker, D.W.	Development of a Site-Specific Water Quality Criterion for Copper in South San Francisco Bay	Copper Site-Specific WQC Report, San Jose/Santa Clara Water Pollution Control Plant, Environmental Services Department, San Jose, CA :171 p.	1998
881	Copper	Mytilus sp.	Mussel	Molluscs	EC50	NOC	MULT	2	d	D	4.7	SW	Arnold, W.R., R.C. Santore, and J.S. Cotsifas	Predicting Copper Toxicity in Estuarine and Marine Waters Using the Biotic Ligand Model	Mar.Pollut.Bull. 50(12):1634-1640	2005
882	Sulfuric acid copper(2+) salt (1:1)	Allorchestes compressa	Scud, Amphipod	Crustaceans	LOEC	GRO	WGHT	40	d	D	5.2	SW	Ahsanullah, M., and A.R. Williams	Sublethal Effects and Bioaccumulation of Cadmium, Chromium, Copper, and Zinc in the Marine Amphipod Allorchestes compressa	Mar.Biol.(Berlin) 108:59-65	1991
883	Sulfuric acid copper(2+) salt (1:1)	Mytilus edulis	Common Bay Mussel,Blue Mussel	Molluscs	EC50	DVP	NORM	2	d	D	5.393	SW	Tucker, D.W.	Development of a Site-Specific Water Quality Criterion for Copper in South San Francisco Bay	Copper Site-Specific WQC Report, San Jose/Santa Clara Water Pollution Control Plant, Environmental Services Department, San Jose, CA :171 p.	1998
884	Sulfuric acid copper(2+) salt (1:1)	Nitzschia closterium	Diatom	Algae, Moss, Fungi	LOEC	POP	PGRT	3	d	D	5.8	SW	Levy, J.L., J.L. Stauber, and D.F. Jolley	Sensitivity of Marine Microalgae to Copper: The Effect of Biotic Factors on Copper Adsorption and Toxicity	Sci. Total Environ.387(1-3): 141-154	2007
885	Sulfuric acid copper(2+) salt (1:1)	Nannochloropsis oculata	Yellow Green Algae	Algae, Moss, Fungi	LOEL	POP	CHLA	9	d	D	6.355	SW	Khairy, H.M.	Toxicity and Accumulation of Copper in Nannochloropsis oculata (Eustigmatophyceae, Heterokonta)	World Appl. Sci. J.6(3): 378-384	2009
886	Sulfuric acid copper(2+) salt (1:1)	Mytilus galloprovincialis	Mediterranean Mussel	Molluscs	EC50	DVP	NORM	2	d	D	6.36	SW	Rosen, G., I. Rivera-Duarte, D.B. Chadwick, A. Ryan, R.C. Santore, and P.R. Paquin	Critical Tissue Copper Residues for Marine Bivalve (Mytilus galloprovincialis) and Echinoderm (Strongylocentrotus purpuratus) Embryonic Development: Conceptual, Regulatory and Environmental Implications	Mar.Environ.Res. 66(3):327-336	2008
887	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC20	DVP	ABNM	2	d	D	6.4	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
888	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC20	DVP	ABNM	2	d	D	6.6	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
889	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC20	DVP	ABNM	2	d	D	6.9	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
890	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC50	DVP	ABNM	2	d	D	6.9	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
891	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC50	DVP	ABNM	2	d	D	7.1	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009

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892	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC50	DVP	ABNM	2	d	D	7.1	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
893	Copper chloride (CuCl2)	Corbicula manilensis	Asiatic Clam	Molluscs	EC50	BEH	VACL	0.08	d	D	8.1	SW	Tran, D., E. Fournier, G. Durrieu, and J.C. Massabuau	Copper Detection in the Asiatic Clam Corbicula fluminea: Optimum Valve Closure Response	Aquat.Toxicol. 65(3):317-327	2003
894	Sulfuric acid copper(2+) salt (1:1)	Mytilus galloprovincialis	Mediterranean Mussel	Molluscs	EC50	DVP	NORM	2	d	D	8.68	SW	Rosen, G., I. Rivera-Duarte, D.B. Chadwick, A. Ryan, R.C. Santore, and P.R. Paquin	Critical Tissue Copper Residues for Marine Bivalve (Mytilus galloprovincialis) and Echinoderm (Strongylocentrotus purpuratus) Embryonic Development: Conceptual, Regulatory and Environmental Implications	Mar.Environ.Res. 66(3):327-336	2008
895	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC20	DVP	ABNM	2	d	D	8.7	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
896	Sulfuric acid copper(2+) salt (1:1)	Moina mongolica	Water Flea	Crustaceans	LOEC	REP	TFPG	21	d	D	8.99	SW	Wang, Z., H. Kong, and D. Wu	Acute and Chronic Copper Toxicity to a Saltwater Cladoceran Moina monogolica Daday	Arch.Environ.Contam.Toxicol. 53(1):50-56	2007
897	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC50	DVP	ABNM	2	d	D	9.4	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
898	Sulfuric acid copper(2+) salt (1:1)	Mytilus galloprovincialis	Mediterranean Mussel	Molluscs	EC50	GRO	WGHT	2	d	D	9.46	SW	Rosen, G., I. Rivera-Duarte, D.B. Chadwick, A. Ryan, R.C. Santore, and P.R. Paquin	Critical Tissue Copper Residues for Marine Bivalve (Mytilus galloprovincialis) and Echinoderm (Strongylocentrotus purpuratus) Embryonic Development: Conceptual, Regulatory and Environmental Implications	Mar.Environ.Res. 66(3):327-336	2008
899	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC50	DVP	ABNM	2	d	D	9.6	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
900	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC20	DVP	ABNM	2	d	D	10.3	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
901	Copper chloride (CuCl2)	Corbicula manilensis	Asiatic Clam	Molluscs	EC20	BEH	VACL	0.02	d	D	10.7	SW	Tran, D., E. Fournier, G. Durrieu, and J.C. Massabuau	Copper Detection in the Asiatic Clam Corbicula fluminea: Optimum Valve Closure Response	Aquat.Toxicol. 65(3):317-327	2003
902	Copper chloride (CuCl2)	Corbicula manilensis	Asiatic Clam	Molluscs	EC50	BEH	VACL	0.04	d	D	10.9	SW	Tran, D., E. Fournier, G. Durrieu, and J.C. Massabuau	Copper Detection in the Asiatic Clam Corbicula fluminea: Optimum Valve Closure Response	Aquat.Toxicol. 65(3):317-327	2003
903	Sulfuric acid copper(2+) salt (1:1)	Diadema antillarum	Long Spined Sea Urchin	Invertebrates	EC50	DVP	ABNM	1.67	d	D	11	SW	Bielmyer, G.K., K.V. Brix, T.R. Capo, and M. Grosell	The Effects of Metals on Embryo-Larval and Adult Life Stages of the Sea Urchin, Diadema antillarum	Aquat.Toxicol. 74(3):254-263	2005
904	Copper	Mytilus sp.	Mussel	Molluscs	EC50	NOC	MULT	2	d	D	11.6	SW	Arnold, W.R., R.C. Santore, and J.S. Cotsifas	Predicting Copper Toxicity in Estuarine and Marine Waters Using the Biotic Ligand Model	Mar.Pollut.Bull. 50(12):1634-1640	2005
905	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC20	DVP	ABNM	2	d	D	12	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
906	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC50	DVP	ABNM	2	d	D	12	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	End-point	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc ug/L	Media Type	Author	Title	Source	Publication Year
907	Copper chloride (CuCl2)	Corbicula manilensis	Asiatic Clam	Molluscs	EC80	BEH	VACL	0.21	d	D	12.4	SW	Tran, D., E. Fournier, G. Durrieu, and J.C. Massabuau	Copper Detection in the Asiatic Clam Corbicula fluminea: Optimum Valve Closure Response	Aquat.Toxicol. 65(3):317-327	2003
908	Copper	Mytilus sp.	Mussel	Molluscs	EC50	NOC	MULT	2	d	D	12.6	SW	Arnold, W.R., R.C. Santore, and J.S. Cotsifas	Predicting Copper Toxicity in Estuarine and Marine Waters Using the Biotic Ligand Model	Mar.Pollut.Bull. 50(12):1634-1640	2005
909	Sulfuric acid copper(2+) salt (1:1)	Mytilus galloprovincialis	Mediterranean Mussel	Molluscs	EC50	DVP	NORM	2	d	D	12.8	SW	Rosen, G., I. Rivera-Duarte, D.B. Chadwick, A. Ryan, R.C. Santore, and P.R. Paquin	Critical Tissue Copper Residues for Marine Bivalve (Mytilus galloprovincialis) and Echinoderm (Strongylocentrotus purpuratus) Embryonic Development: Conceptual, Regulatory and Environmental Implications	Mar.Environ.Res. 66(3):327-336	2008
910	Sulfuric acid copper(2+) salt (1:1)	Strongylocentrotus purpuratus	Purple Sea Urchin	Invertebrates	EC50	GRO	WGHT	2	d	D	14.2	SW	Rosen, G., I. Rivera-Duarte, D.B. Chadwick, A. Ryan, R.C. Santore, and P.R. Paquin	Critical Tissue Copper Residues for Marine Bivalve (Mytilus galloprovincialis) and Echinoderm (Strongylocentrotus purpuratus) Embryonic Development: Conceptual, Regulatory and Environmental Implications	Mar.Environ.Res. 66(3):327-336	2008
911	Sulfuric acid copper(2+) salt (1:1)	Strongylocentrotus purpuratus	Purple Sea Urchin	Invertebrates	EC50	DVP	NORM	4	d	D	14.3	SW	Rosen, G., I. Rivera-Duarte, D.B. Chadwick, A. Ryan, R.C. Santore, and P.R. Paquin	Critical Tissue Copper Residues for Marine Bivalve (Mytilus galloprovincialis) and Echinoderm (Strongylocentrotus purpuratus) Embryonic Development: Conceptual, Regulatory and Environmental Implications	Mar.Environ.Res. 66(3):327-336	2008
912	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC50	DVP	ABNM	2	d	D	14.4	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
913	Sulfuric acid copper(2+) salt (1:1)	Coccolithus huxleyi	Coccolithophorid	Algae, Moss, Fungi	LOEC	POP	PGRT	3	d	D	15	SW	Levy, J.L., J.L. Stauber, and D.F. Jolley	Sensitivity of Marine Microalgae to Copper: The Effect of Biotic Factors on Copper Adsorption and Toxicity	Sci. Total Environ.387(1-3): 141-154	2007
914	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC20	DVP	ABNM	2	d	D	15.2	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
915	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC50	DVP	ABNM	2	d	D	16.1	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
916	Sulfuric acid copper(2+) salt (1:1)	Mytilus edulis	Common Bay Mussel,Blue Mussel	Molluscs	EC50	DVP	NORM	2	d	D	16.849	SW	Tucker, D.W.	Development of a Site-Specific Water Quality Criterion for Copper in South San Francisco Bay	Copper Site-Specific WQC Report, San Jose/Santa Clara Water Pollution Control Plant, Environmental Services Department, San Jose, CA :171 p.	1998
917	Sulfuric acid copper(2+) salt (1:1)	Mytilus edulis	Common Bay Mussel,Blue Mussel	Molluscs	EC50	DVP	NORM	2	d	D	19.135	SW	Tucker, D.W.	Development of a Site-Specific Water Quality Criterion for Copper in South San Francisco Bay	Copper Site-Specific WQC Report, San Jose/Santa Clara Water Pollution Control Plant, Environmental Services Department, San Jose, CA :171 p.	1998
918	Copper	Mytilus sp.	Mussel	Molluscs	EC50	NOC	MULT	2	d	D	19.4	SW	Arnold, W.R., R.C. Santore, and J.S. Cotsifas	Predicting Copper Toxicity in Estuarine and Marine Waters Using the Biotic Ligand Model	Mar.Pollut.Bull. 50(12):1634-1640	2005
919	Sulfuric acid copper(2+) salt (1:1)	Crassostrea belcheri	Oyster	Molluscs	LOEL	FDB	FCNS	0.5	d	D	20	SW	Elfwing, T., and M. Tedengren	Effects of Copper on the Metabolism of Three Species of Tropical Oysters, Saccostrea cucullata, Crassostrea lugubris and C. belcheri	Aquaculture 204(1/2):157-166	2002
920	Sulfuric acid copper(2+) salt (1:1)	Crassostrea belcheri	Oyster	Molluscs	LOEL	PHY	SCGR	0.5	d	D	20	SW	Elfwing, T., and M. Tedengren	Effects of Copper on the Metabolism of Three Species of Tropical Oysters, Saccostrea cucullata, Crassostrea lugubris and C. belcheri	Aquaculture 204(1/2):157-166	2002

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921	Sulfuric acid copper(2+) salt (1:1)	Saccostrea cuccullata	Rock Oyster	Molluscs	LOEL	PHY	RESP	0.5	d	D	20	SW	Elfwing, T., and M. Tedengren	Effects of Copper on the Metabolism of Three Species of Tropical Oysters, Saccostrea cucullata, Crassostrea lugubris and C. belcheri	Aquaculture 204(1/2):157-166	2002
922	Sulfuric acid copper(2+) salt (1:1)	Coccolithus huxleyi	Coccolithophorid	Algae, Moss, Fungi	LOEC	POP	PGRT	3	d	D	20	SW	Levy, J.L., J.L. Stauber, and D.F. Jolley	Sensitivity of Marine Microalgae to Copper: The Effect of Biotic Factors on Copper Adsorption and Toxicity	Sci. Total Environ.387(1-3): 141-154	2007
923	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC50	DVP	ABNM	2	d	D	20.2	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
924	Sulfuric acid copper(2+) salt (1:1)	Strongylocentrotus purpuratus	Purple Sea Urchin	Invertebrates	EC50	DVP	NORM	4	d	D	20.6	SW	Rosen, G., I. Rivera-Duarte, D.B. Chadwick, A. Ryan, R.C. Santore, and P.R. Paquin	Critical Tissue Copper Residues for Marine Bivalve (Mytilus galloprovincialis) and Echinoderm (Strongylocentrotus purpuratus) Embryonic Development: Conceptual, Regulatory and Environmental Implications	Mar.Environ.Res. 66(3):327-336	2008
925	Sulfuric acid copper(2+) salt (1:1)	Mytilus edulis	Common Bay Mussel,Blue Mussel	Molluscs	EC50	DVP	NORM	2	d	D	20.75	SW	Tucker, D.W.	Development of a Site-Specific Water Quality Criterion for Copper in South San Francisco Bay	Copper Site-Specific WQC Report, San Jose/Santa Clara Water Pollution Control Plant, Environmental Services Department, San Jose, CA :171 p.	1998
926	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC20	DVP	ABNM	2	d	D	21.1	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
927	Copper chloride (CuCl2)	Corbicula manilensis	Asiatic Clam	Molluscs	EC50	BEH	VACL	0.02	d	D	21.4	SW	Tran, D., E. Fournier, G. Durrieu, and J.C. Massabuau	Copper Detection in the Asiatic Clam Corbicula fluminea: Optimum Valve Closure Response	Aquat.Toxicol. 65(3):317-327	2003
928	Copper chloride (CuCl2)	Corbicula manilensis	Asiatic Clam	Molluscs	EC20	BEH	VACL	0.01	d	D	21.8	SW	Tran, D., E. Fournier, G. Durrieu, and J.C. Massabuau	Copper Detection in the Asiatic Clam Corbicula fluminea: Optimum Valve Closure Response	Aquat.Toxicol. 65(3):317-327	2003
929	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC20	DVP	ABNM	2	d	D	21.8	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
930	Sulfuric acid copper(2+) salt (1:1)	Tetraselmis sp.	Green Flagellate	Algae, Moss, Fungi	LOEC	POP	PGRT	3	d	D	22	SW	Levy, J.L., B.M. Angel, J.L. Stauber, W.L. Poon, S.L. Simpson, S.H. Cheng, and D.F. Jolley	Uptake and Internalisation of Copper by Three Marine Microalgae: Comparison of Copper-Sensitive and Copper-Tolerant Species	Aquat. Toxicol.89(2): 82-93	2008
931	Sulfuric acid copper(2+) salt (1:1)	Tetraselmis sp.	Green Flagellate	Algae, Moss, Fungi	LOEC	POP	PGRT	3	d	D	22	SW	Levy, J.L., J.L. Stauber, and D.F. Jolley	Sensitivity of Marine Microalgae to Copper: The Effect of Biotic Factors on Copper Adsorption and Toxicity	Sci. Total Environ.387(1-3): 141-154	2007
932	Sulfuric acid copper(2+) salt (1:1)	Mytilus edulis	Common Bay Mussel,Blue Mussel	Molluscs	EC50	DVP	NORM	2	d	D	22.067	SW	Tucker, D.W.	Development of a Site-Specific Water Quality Criterion for Copper in South San Francisco Bay	Copper Site-Specific WQC Report, San Jose/Santa Clara Water Pollution Control Plant, Environmental Services Department, San Jose, CA :171 p.	1998
933	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC50	DVP	ABNM	2	d	D	24	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
934	Sulfuric acid copper(2+) salt (1:1)	Allorchestes compressa	Scud, Amphipod	Crustaceans	LOEC	MOR	SURV	40	d	D	24	SW	Ahsanullah, M., and A.R. Williams	Sublethal Effects and Bioaccumulation of Cadmium, Chromium, Copper, and Zinc in the Marine Amphipod Allorchestes compressa	Mar.Biol.(Berlin) 108:59-65	1991

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935	Copper chloride (CuCl2)	Corbicula manilensis	Asiatic Clam	Molluscs	EC80	BEH	VACL	0.08	d	D	24.1	SW	Tran, D., E. Fournier, G. Durrieu, and J.C. Massabuau	Copper Detection in the Asiatic Clam Corbicula fluminea: Optimum Valve Closure Response	Aquat.Toxicol. 65(3):317-327	2003
936	Copper chloride (CuCl2)	Corbicula manilensis	Asiatic Clam	Molluscs	EC20	BEH	VACL	0.01	d	D	24.7	SW	Tran, D., E. Fournier, G. Durrieu, and J.C. Massabuau	Copper Detection in the Asiatic Clam Corbicula fluminea: Optimum Valve Closure Response	Aquat.Toxicol. 65(3):317-327	2003
937	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC50	DVP	ABNM	2	d	D	25	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
938	Sulfuric acid copper(2+) salt (1:1)	Diadema antillarum	Long Spined Sea Urchin	Invertebrates	LC50	MOR	MORT	4	d	D	25	SW	Bielmyer, G.K., K.V. Brix, T.R. Capo, and M. Grosell	The Effects of Metals on Embryo-Larval and Adult Life Stages of the Sea Urchin, Diadema antillarum	Aquat.Toxicol. 74(3):254-263	2005
939	Sulfuric acid copper(2+) salt (1:1)	Diadema antillarum	Long Spined Sea Urchin	Invertebrates	LOEL	BCM	PHPH	4	d	D	25	SW	Bielmyer, G.K., K.V. Brix, T.R. Capo, and M. Grosell	The Effects of Metals on Embryo-Larval and Adult Life Stages of the Sea Urchin, Diadema antillarum	Aquat.Toxicol. 74(3):254-263	2005
940	Sulfuric acid copper(2+) salt (1:1)	Diadema antillarum	Long Spined Sea Urchin	Invertebrates	LOEL	MOR	MORT	4	d	D	25	SW	Bielmyer, G.K., K.V. Brix, T.R. Capo, and M. Grosell	The Effects of Metals on Embryo-Larval and Adult Life Stages of the Sea Urchin, Diadema antillarum	Aquat.Toxicol. 74(3):254-263	2005
941	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC20	DVP	ABNM	2	d	D	27.5	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
942	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC20	DVP	ABNM	2	d	D	27.7	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
943	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC50	DVP	ABNM	2	d	D	28	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
944	Copper chloride (CuCl2)	Corbicula manilensis	Asiatic Clam	Molluscs	EC80	BEH	VACL	0.04	d	D	31.1	SW	Tran, D., E. Fournier, G. Durrieu, and J.C. Massabuau	Copper Detection in the Asiatic Clam Corbicula fluminea: Optimum Valve Closure Response	Aquat.Toxicol. 65(3):317-327	2003
945	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC50	DVP	ABNM	2	d	D	37	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
946	Copper chloride (CuCl2)	Mytilus trossulus	Pacific Mussel	Molluscs	EC50	DVP	ABNM	2	d	D	39	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
947	Copper chloride (CuCl2)	Melita awa	Amphipod	Crustaceans	LOEC	MOR	MORT	4	d	D	40	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
948	Copper chloride (CuCl2)	Corbicula manilensis	Asiatic Clam	Molluscs	EC50	BEH	VACL	0.01	d	D	40.9	SW	Tran, D., E. Fournier, G. Durrieu, and J.C. Massabuau	Copper Detection in the Asiatic Clam Corbicula fluminea: Optimum Valve Closure Response	Aquat.Toxicol. 65(3):317-327	2003
949	Sulfuric acid copper(2+) salt (1:1)	Dunaliella tertiolecta	Green Algae	Algae, Moss, Fungi	LOEC	POP	PGRT	3	d	D	42	SW	Levy, J.L., B.M. Angel, J.L. Stauber, W.L. Poon, S.L. Simpson, S.H. Cheng, and D.F. Jolley	Uptake and Internalisation of Copper by Three Marine Microalgae: Comparison of Copper-Sensitive and Copper-Tolerant Species	Aquat. Toxicol.89(2): 82-93	2008
950	Sulfuric acid copper(2+) salt (1:1)	Dunaliella tertiolecta	Green Algae	Algae, Moss, Fungi	LOEC	POP	PGRT	3	d	D	42	SW	Levy, J.L., J.L. Stauber, and D.F. Jolley	Sensitivity of Marine Microalgae to Copper: The Effect of Biotic Factors on Copper Adsorption and Toxicity	Sci. Total Environ.387(1-3): 141-154	2007

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951	Copper chloride (CuCl2)	Corbicula manilensis	Asiatic Clam	Molluscs	EC80	BEH	VACL	0.02	d	D	42.6	SW	Tran, D., E. Fournier, G. Durrieu, and J.C. Massabuau	Copper Detection in the Asiatic Clam Corbicula fluminea: Optimum Valve Closure Response	Aquat.Toxicol. 65(3):317-327	2003
952	Copper	Rhodomonas salina	Marine Microalga	Algae, Moss, Fungi	EC50	POP	PGRT	3	d	D	48	SW	Debelius, B., J.M. Forja, A. DelValls, and L.M. Lubian	Toxicity and Bioaccumulation of Copper and Lead in Five Marine Microalgae	Ecotoxicol. Environ. Saf.72(5): 1503-1513	2009
953	Sulfuric acid copper(2+) salt (1:1)	Dunaliella tertiolecta	Green Algae	Algae, Moss, Fungi	LOEC	ACC	UPTK	3	d	D	50	SW	Levy, J.L., B.M. Angel, J.L. Stauber, W.L. Poon, S.L. Simpson, S.H. Cheng, and D.F. Jolley	Uptake and Internalisation of Copper by Three Marine Microalgae: Comparison of Copper-Sensitive and Copper-Tolerant Species	Aquat. Toxicol.89(2): 82-93	2008
954	Copper chloride (CuCl2)	Corbicula manilensis	Asiatic Clam	Molluscs	EC50	BEH	VACL	0.01	d	D	52.5	SW	Tran, D., E. Fournier, G. Durrieu, and J.C. Massabuau	Copper Detection in the Asiatic Clam Corbicula fluminea: Optimum Valve Closure Response	Aquat.Toxicol. 65(3):317-327	2003
955	Sulfuric acid copper(2+) salt (1:1)	Melita plumulosa	Amphipod	Crustaceans	LOEC	GRO	LGTH	4	d	D	57	SW	Spadaro, D., T. Micevska, and S.L. Simpson	Effect of Nutrition on Toxicity of Contaminants to the Epibenthic Amphipod Melita plumulosa	Arch.Environ.Contam.Toxicol. 55(4):593-602 (10.1007/s00244-008-9153-2)	2008
956	Copper chloride (CuCl2)	Macrocystis pyrifera	Giant Kelp	Algae, Moss, Fungi	EC50	GRO	LGTH	2	d	D	57	SW	Brix, K.V., F.P. Sweeney, and R.D. Cardwell	Procedures for Conducting Germination and Growth Tests to Determine the Acute Toxicity of bis(Tributyltin) Oxide to the Giant Kelp Macrocystis pyrifera	Lab.Proj.No.55-1807-05 (02A), Elf Atochem North America Inc., Philadelphia, PA(): -	1994
957	Copper	Isochrysis galbana	Haptophyte	Algae, Moss, Fungi	EC50	POP	PGRT	3	d	D	58	SW	Debelius, B., J.M. Forja, A. DelValls, and L.M. Lubian	Toxicity and Bioaccumulation of Copper and Lead in Five Marine Microalgae	Ecotoxicol. Environ. Saf.72(5): 1503-1513	2009
958	Copper chloride	Mytilus galloprovincialis	Mediterranean Mussel	Molluscs	LOEC	ENZ	MAPK	0.01	d	D	63.55	SW	Kefaloyianni, E., E. Gourgou, V. Ferle, E. Kotsakis, C. Gaitanaki, and I. Beis	Acute Thermal Stress and Various Heavy Metals Induce Tissue-Specific Pro- or Anti-Apoptotic Events via the p38-MAPK Signal Transduction Pathway in Mytilus galloprovincialis (Lam.)	J.Exp.Biol. 208(23):4427-4436	2005
959	Copper chloride	Mytilus galloprovincialis	Mediterranean Mussel	Molluscs	LOEC	ENZ	MAPK	0.01	d	D	63.55	SW	Kefaloyianni, E., E. Gourgou, V. Ferle, E. Kotsakis, C. Gaitanaki, and I. Beis	Acute Thermal Stress and Various Heavy Metals Induce Tissue-Specific Pro- or Anti-Apoptotic Events via the p38-MAPK Signal Transduction Pathway in Mytilus galloprovincialis (Lam.)	J.Exp.Biol. 208(23):4427-4436	2005
960	Copper chloride	Mytilus galloprovincialis	Mediterranean Mussel	Molluscs	LOEC	BCM	HP70	0.02	d	D	63.55	SW	Kefaloyianni, E., E. Gourgou, V. Ferle, E. Kotsakis, C. Gaitanaki, and I. Beis	Acute Thermal Stress and Various Heavy Metals Induce Tissue-Specific Pro- or Anti-Apoptotic Events via the p38-MAPK Signal Transduction Pathway in Mytilus galloprovincialis (Lam.)	J.Exp.Biol. 208(23):4427-4436	2005
961	Copper chloride	Mytilus galloprovincialis	Mediterranean Mussel	Molluscs	LOEC	BCM	HP70	0.02	d	D	63.55	SW	Kefaloyianni, E., E. Gourgou, V. Ferle, E. Kotsakis, C. Gaitanaki, and I. Beis	Acute Thermal Stress and Various Heavy Metals Induce Tissue-Specific Pro- or Anti-Apoptotic Events via the p38-MAPK Signal Transduction Pathway in Mytilus galloprovincialis (Lam.)	J.Exp.Biol. 208(23):4427-4436	2005
962	Copper chloride	Mytilus galloprovincialis	Mediterranean Mussel	Molluscs	LOEC	ENZ	MAPK	0.02	d	D	63.55	SW	Kefaloyianni, E., E. Gourgou, V. Ferle, E. Kotsakis, C. Gaitanaki, and I. Beis	Acute Thermal Stress and Various Heavy Metals Induce Tissue-Specific Pro- or Anti-Apoptotic Events via the p38-MAPK Signal Transduction Pathway in Mytilus galloprovincialis (Lam.)	J.Exp.Biol. 208(23):4427-4436	2005
963	Copper chloride	Mytilus galloprovincialis	Mediterranean Mussel	Molluscs	LOEC	ENZ	MAPK	0.02	d	D	63.55	SW	Kefaloyianni, E., E. Gourgou, V. Ferle, E. Kotsakis, C. Gaitanaki, and I. Beis	Acute Thermal Stress and Various Heavy Metals Induce Tissue-Specific Pro- or Anti-Apoptotic Events via the p38-MAPK Signal Transduction Pathway in Mytilus galloprovincialis (Lam.)	J.Exp.Biol. 208(23):4427-4436	2005
964	Copper chloride	Mytilus galloprovincialis	Mediterranean Mussel	Molluscs	LOEC	ENZ	MAPK	0.04	d	D	63.55	SW	Kefaloyianni, E., E. Gourgou, V. Ferle, E. Kotsakis, C. Gaitanaki, and I. Beis	Acute Thermal Stress and Various Heavy Metals Induce Tissue-Specific Pro- or Anti-Apoptotic Events via the p38-MAPK Signal Transduction Pathway in Mytilus galloprovincialis (Lam.)	J.Exp.Biol. 208(23):4427-4436	2005
965	Copper chloride	Mytilus galloprovincialis	Mediterranean Mussel	Molluscs	LOEC	ENZ	MAPK	0.04	d	D	63.55	SW	Kefaloyianni, E., E. Gourgou, V. Ferle, E. Kotsakis, C. Gaitanaki, and I. Beis	Acute Thermal Stress and Various Heavy Metals Induce Tissue-Specific Pro- or Anti-Apoptotic Events via the p38-MAPK Signal Transduction Pathway in Mytilus galloprovincialis (Lam.)	J.Exp.Biol. 208(23):4427-4436	2005

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966	Copper chloride	Mytilus galloprovincialis	Mediterranean Mussel	Molluscs	LOEC	ENZ	MAPK	0.08	d	D	63.55	SW	Kefaloyianni, E., E. Gourgou, V. Ferle, E. Kotsakis, C. Gaitanaki, and I. Beis	Acute Thermal Stress and Various Heavy Metals Induce Tissue-Specific Pro- or Anti-Apoptotic Events via the p38-MAPK Signal Transduction Pathway in Mytilus galloprovincialis (Lam.)	J.Exp.Biol. 208(23):4427-4436	2005
967	Copper chloride	Mytilus galloprovincialis	Mediterranean Mussel	Molluscs	LOEC	ENZ	MAPK	0.08	d	D	63.55	SW	Kefaloyianni, E., E. Gourgou, V. Ferle, E. Kotsakis, C. Gaitanaki, and I. Beis	Acute Thermal Stress and Various Heavy Metals Induce Tissue-Specific Pro- or Anti-Apoptotic Events via the p38-MAPK Signal Transduction Pathway in Mytilus galloprovincialis (Lam.)	J.Exp.Biol. 208(23):4427-4436	2005
968	Copper chloride	Mytilus galloprovincialis	Mediterranean Mussel	Molluscs	LOEC	ENZ	MAPK	0.08	d	D	63.55	SW	Kefaloyianni, E., E. Gourgou, V. Ferle, E. Kotsakis, C. Gaitanaki, and I. Beis	Acute Thermal Stress and Various Heavy Metals Induce Tissue-Specific Pro- or Anti-Apoptotic Events via the p38-MAPK Signal Transduction Pathway in Mytilus galloprovincialis (Lam.)	J.Exp.Biol. 208(23):4427-4436	2005
969	Copper chloride	Mytilus galloprovincialis	Mediterranean Mussel	Molluscs	LOEC	ENZ	MAPK	NR	d	D	63.55	SW	Kefaloyianni, E., E. Gourgou, V. Ferle, E. Kotsakis, C. Gaitanaki, and I. Beis	Acute Thermal Stress and Various Heavy Metals Induce Tissue-Specific Pro- or Anti-Apoptotic Events via the p38-MAPK Signal Transduction Pathway in Mytilus galloprovincialis (Lam.)	J.Exp.Biol. 208(23):4427-4436	2005
970	Copper chloride	Mytilus galloprovincialis	Mediterranean Mussel	Molluscs	LOEC	ENZ	MAPK	NR	d	D	63.55	SW	Kefaloyianni, E., E. Gourgou, V. Ferle, E. Kotsakis, C. Gaitanaki, and I. Beis	Acute Thermal Stress and Various Heavy Metals Induce Tissue-Specific Pro- or Anti-Apoptotic Events via the p38-MAPK Signal Transduction Pathway in Mytilus galloprovincialis (Lam.)	J.Exp.Biol. 208(23):4427-4436	2005
971	Sulfuric acid copper(2+) salt (1:1)	Melita plumulosa	Amphipod	Crustaceans	LOEC	GRO	LGTH	4	d	D	75	SW	Spadaro, D., T. Micevska, and S.L. Simpson	Effect of Nutrition on Toxicity of Contaminants to the Epibenthic Amphipod Melita plumulosa	Arch.Environ.Contam.Toxicol. 55(4):593-602 (10.1007/s00244-008-9153-2)	2008
972	Copper chloride (CuCl2)	Corbicula manilensis	Asiatic Clam	Molluscs	EC80	BEH	VACL	0.01	d	D	76.8	SW	Tran, D., E. Fournier, G. Durrieu, and J.C. Massabuau	Copper Detection in the Asiatic Clam Corbicula fluminea: Optimum Valve Closure Response	Aquat.Toxicol. 65(3):317-327	2003
973	Copper chloride (CuCl2)	Macrocystis pyrifera	Giant Kelp	Algae, Moss, Fungi	EC50	REP	GERM	2	d	D	78	SW	Brix, K.V., F.P. Sweeney, and R.D. Cardwell	Procedures for Conducting Germination and Growth Tests to Determine the Acute Toxicity of bis(Tributyltin) Oxide to the Giant Kelp Macrocystis pyrifera	Lab.Proj.No.55-1807-05 (02A), Elf Atochem North America Inc., Philadelphia, PA(): -	1994
974	Copper chloride (CuCl2)	Eurytemora affinis	Calanoid Copepod	Crustaceans	LC50	MOR	MORT	2	d	D	83	SW	Hall, L.W.Jr., R.D. Anderson, J.V. Kilian, B.L. Lewis, and K. Traexler	Acute and Chronic Toxicity of Copper to the Estuarine Copepod Eurytemora affinis: Influence of Organic Complexation and Speciation	Chemosphere 35(7):1567-1597	1997
975	Copper	Chaetoceros sp.	Diatom	Algae, Moss, Fungi	EC50	POP	PGRT	3	d	D	88	SW	Debelius, B., J.M. Forja, A. DelValls, and L.M. Lubian	Toxicity and Bioaccumulation of Copper and Lead in Five Marine Microalgae	Ecotoxicol. Environ. Saf.72(5): 1503-1513	2009
976	Copper chloride (CuCl2)	Melita plumulosa	Amphipod	Crustaceans	LOEC	MOR	MORT	4	d	D	90	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
977	Sulfuric acid copper(2+) salt (1:1)	Melita sp.	Amphipod	Crustaceans	LOEC	MOR	SURV	4	d	D	90	SW	King, C.K., S.A. Gale, and J.L. Stauber	Acute Toxicity and Bioaccumulation of Aqueous and Sediment-Bound Metals in the Estuarine Amphipod Melita plumulosa	Environ.Toxicol. 21(5):489-504	2006
978	Sulfuric acid copper(2+) salt (1:1)	Soletellina alba	Sunset Clam	Molluscs	LOEC	MOR	MORT	4	d	D	90	SW	King, C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley	An Assessment of Five Australian Polychaetes and Bivalves for Use in Whole-Sediment Toxicity Tests: Toxicity and Accumulation of Copper and Zinc from Water and Sediment	Arch.Environ.Contam.Toxicol. 47(3):314-323	2004
979	Copper chloride (CuCl2)	Amphora acutiuscula	Diatom	Algae, Moss, Fungi	LOEL	POP	ABND	5	d	D	95.325	SW	Nguyen-Deroche, T.L.N., T.T. Le, T.V. Bui, Y. Rince, G. Tremblin, and A. Morant-Manceau	Effects of Copper on Growth and Photosynthesis in Marine Diatoms: A Comparison Between Species from Two Different Geographical Areas	Cryptogam. Algol.30(2): 97-109	2009
980	Copper chloride (CuCl2)	Hyale crassicornis	Amphipod	Crustaceans	LC50	MOR	MORT	4	d	D	100	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
981	Copper chloride (CuCl2)	Hyale longicornis	Amphipod	Crustaceans	LC50	MOR	MORT	4	d	D	100	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006

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982	Copper chloride (CuCl2)	Hyale crassicornis	Amphipod	Crustaceans	LOEC	MOR	MORT	4	d	D	100	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
983	Copper chloride (CuCl2)	Hyale longicornis	Amphipod	Crustaceans	LOEC	MOR	MORT	4	d	D	100	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
984	Copper chloride (CuCl2)	Melita matilda	Amphipod	Crustaceans	LOEC	MOR	MORT	4	d	D	100	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
985	Copper chloride (CuCl2)	Carcinus maenas	Green Or Europeon Shore Crab	Crustaceans	LOEL	REP	RBEH	5	d	D	100	SW	Krang, A.S., and M. Ekerholm	Copper Reduced Mating Behaviour in Male Shore Crabs (Carcinus maenas (L.))	Aquat.Toxicol. 80(1):60-69	2006
986	Copper chloride (CuCl2)	Carcinus maenas	Green Or Europeon Shore Crab	Crustaceans	LOEL	REP	RBEH	5	d	D	100	SW	Krang, A.S., and M. Ekerholm	Copper Reduced Mating Behaviour in Male Shore Crabs (Carcinus maenas (L.))	Aquat.Toxicol. 80(1):60-69	2006
987	Sulfuric acid copper(2+) salt (1:1)	Tapes decussata	Clam	Molluscs	NR-LETH	MOR	MORT	50	d	D	100	SW	Stephenson, R.R., and D. Taylor	The Influence of EDTA on the Mortality and Burrowing Activity of the Clam (Venerupis decussata) Exposed to Sub-lethal Concentrations of Copper	Bull.Environ.Contam.Toxicol. 14(3):304-308	1975
988	Sulfuric acid copper(2+) salt (1:1)	Platymonas subcordiformis	Green Flagellate	Algae, Moss, Fungi	EC50	POP	ABND	5	d	D	100	SW	Cai, A.G., W.Q. Chen, and W.Q. Li	Copper Accumulation and Transport in a Marine Food Chain Composed of Platymonas subcordiformis, Brachionus plicatilis and Penaeus monodon	Chin. J. Oceanol. Limnol.15(3): 205-211	1997
989	Copper chloride (CuCl2)	Corbicula manilensis	Asiatic Clam	Molluscs	EC80	BEH	VACL	0.01	d	D	111.5	SW	Tran, D., E. Fournier, G. Durrieu, and J.C. Massabuau	Copper Detection in the Asiatic Clam Corbicula fluminea: Optimum Valve Closure Response	Aquat.Toxicol. 65(3):317-327	2003
990	Sulfuric acid copper(2+) salt (1:1)	Melita plumulosa	Amphipod	Crustaceans	LOEC	GRO	LGTH	4	d	D	118	SW	Spadaro, D., T. Micevska, and S.L. Simpson	Effect of Nutrition on Toxicity of Contaminants to the Epibenthic Amphipod Melita plumulosa	Arch.Environ.Contam.Toxicol. 55(4):593-602 (10.1007/s00244-008-9153-2)	2008
991	Copper chloride (CuCl2)	Melita awa	Amphipod	Crustaceans	LC50	MOR	MORT	4	d	D	120	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
992	Copper chloride (CuCl2)	Melita plumulosa	Amphipod	Crustaceans	LC50	MOR	MORT	4	d	D	120	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
993	Sulfuric acid copper(2+) salt (1:1)	Melita plumulosa	Amphipod	Crustaceans	LC50	MOR	MORT	4	d	D	120	SW	Spadaro, D., T. Micevska, and S.L. Simpson	Effect of Nutrition on Toxicity of Contaminants to the Epibenthic Amphipod Melita plumulosa	Arch.Environ.Contam.Toxicol. 55(4):593-602 (10.1007/s00244-008-9153-2)	2008
994	Sulfuric acid copper(2+) salt (1:1)	Melita sp.	Amphipod	Crustaceans	LC50	MOR	MORT	4	d	D	120	SW	King, C.K., S.A. Gale, and J.L. Stauber	Acute Toxicity and Bioaccumulation of Aqueous and Sediment-Bound Metals in the Estuarine Amphipod Melita plumulosa	Environ.Toxicol. 21(5):489-504	2006
995	Sulfuric acid copper(2+) salt (1:1)	Soletellina alba	Sunset Clam	Molluscs	LC50	MOR	MORT	4	d	D	120	SW	King, C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley	An Assessment of Five Australian Polychaetes and Bivalves for Use in Whole-Sediment Toxicity Tests: Toxicity and Accumulation of Copper and Zinc from Water and Sediment	Arch.Environ.Contam.Toxicol. 47(3):314-323	2004
996	Copper	Nannochloropsis gaditana	Microalgae	Algae, Moss, Fungi	EC50	POP	PGRT	3	d	D	137	SW	Debelius, B., J.M. Forja, A. DelValls, and L.M. Lubian	Toxicity and Bioaccumulation of Copper and Lead in Five Marine Microalgae	Ecotoxicol. Environ. Saf.72(5): 1503-1513	2009
997	Sulfuric acid copper(2+) salt (1:1)	Tellina deltoidalis	Bivalve	Molluscs	LOEC	MOR	MORT	4	d	D	140	SW	King, C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley	An Assessment of Five Australian Polychaetes and Bivalves for Use in Whole-Sediment Toxicity Tests: Toxicity and Accumulation of Copper and Zinc from Water and Sediment	Arch.Environ.Contam.Toxicol. 47(3):314-323	2004
998	Copper chloride (CuCl2)	Melita awa	Amphipod	Crustaceans	LC50	MOR	MORT	10	d	D	150	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006

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999	Sulfuric acid copper(2+) salt (1:1)	Tellina deltoidalis	Bivalve	Molluscs	LC50	MOR	MORT	4	d	D	150	SW	King, C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley	An Assessment of Five Australian Polychaetes and Bivalves for Use in Whole-Sediment Toxicity Tests: Toxicity and Accumulation of Copper and Zinc from Water and Sediment	Arch.Environ.Contam.Toxicol. 47(3):314-323	2004
1000	Sulfuric acid copper(2+) salt (1:1)	Soletellina alba	Sunset Clam	Molluscs	LOEC	MOR	MORT	4	d	D	150	SW	King, C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley	An Assessment of Five Australian Polychaetes and Bivalves for Use in Whole-Sediment Toxicity Tests: Toxicity and Accumulation of Copper and Zinc from Water and Sediment	Arch.Environ.Contam.Toxicol. 47(3):314-323	2004
1001	Sulfuric acid copper(2+) salt (1:1)	Melita plumulosa	Amphipod	Crustaceans	LOEC	GRO	LGTH	4	d	D	156	SW	Spadaro, D., T. Micevska, and S.L. Simpson	Effect of Nutrition on Toxicity of Contaminants to the Epibenthic Amphipod Melita plumulosa	Arch.Environ.Contam.Toxicol. 55(4):593-602 (10.1007/s00244-008-9153-2)	2008
1002	Copper chloride (CuCl2)	Melita plumulosa	Amphipod	Crustaceans	LOEC	MOR	MORT	10	d	D	170	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
1003	Sulfuric acid copper(2+) salt (1:1)	Melita sp.	Amphipod	Crustaceans	LOEC	MOR	SURV	10	d	D	170	SW	King, C.K., S.A. Gale, and J.L. Stauber	Acute Toxicity and Bioaccumulation of Aqueous and Sediment-Bound Metals in the Estuarine Amphipod Melita plumulosa	Environ.Toxicol. 21(5):489-504	2006
1004	Copper chloride (CuCl2)	Melita matilda	Amphipod	Crustaceans	LC50	MOR	MORT	4	d	D	180	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
1005	Copper chloride (CuCl2)	Melita plumulosa	Amphipod	Crustaceans	LC50	MOR	MORT	10	d	D	180	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
1006	Sulfuric acid copper(2+) salt (1:1)	Nephtys australiensis	Annelid	Worms	LOEC	MOR	MORT	4	d	D	180	SW	King, C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley	An Assessment of Five Australian Polychaetes and Bivalves for Use in Whole-Sediment Toxicity Tests: Toxicity and Accumulation of Copper and Zinc from Water and Sediment	Arch.Environ.Contam.Toxicol. 47(3):314-323	2004
1007	Sulfuric acid copper(2+) salt (1:1)	Melita sp.	Amphipod	Crustaceans	LC50	MOR	MORT	10	d	D	180	SW	King, C.K., S.A. Gale, and J.L. Stauber	Acute Toxicity and Bioaccumulation of Aqueous and Sediment-Bound Metals in the Estuarine Amphipod Melita plumulosa	Environ.Toxicol. 21(5):489-504	2006
1008	Sulfuric acid copper(2+) salt (1:1)	Melita plumulosa	Amphipod	Crustaceans	LC50	MOR	MORT	4	d	D	182	SW	Spadaro, D., T. Micevska, and S.L. Simpson	Effect of Nutrition on Toxicity of Contaminants to the Epibenthic Amphipod Melita plumulosa	Arch.Environ.Contam.Toxicol. 55(4):593-602 (10.1007/s00244-008-9153-2)	2008
1009	Sulfuric acid copper(2+) salt (1:1)	Melita plumulosa	Amphipod	Crustaceans	LOEC	GRO	LGTH	4	d	D	187	SW	Spadaro, D., T. Micevska, and S.L. Simpson	Effect of Nutrition on Toxicity of Contaminants to the Epibenthic Amphipod Melita plumulosa	Arch.Environ.Contam.Toxicol. 55(4):593-602 (10.1007/s00244-008-9153-2)	2008
1010	Copper chloride (CuCl2)	Grandidierella japonica	Scud	Crustaceans	LOEC	MOR	MORT	4	d	D	190	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
1011	Copper chloride (CuCl2)	Hyale longicornis	Amphipod	Crustaceans	LC50	MOR	MORT	10	d	D	190	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
1012	Copper chloride (CuCl2)	Hyale longicornis	Amphipod	Crustaceans	LOEC	MOR	MORT	10	d	D	190	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
1013	Sulfuric acid copper(2+) salt (1:1)	Melita plumulosa	Amphipod	Crustaceans	LC50	MOR	MORT	4	d	D	190	SW	Spadaro, D., T. Micevska, and S.L. Simpson	Effect of Nutrition on Toxicity of Contaminants to the Epibenthic Amphipod Melita plumulosa	Arch.Environ.Contam.Toxicol. 55(4):593-602 (10.1007/s00244-008-9153-2)	2008
1014	Sulfuric acid copper(2+) salt (1:1)	Tellina deltoidalis	Bivalve	Molluscs	LOEC	MOR	MORT	4	d	D	190	SW	King, C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley	An Assessment of Five Australian Polychaetes and Bivalves for Use in Whole-Sediment Toxicity Tests: Toxicity and Accumulation of Copper and Zinc from Water and Sediment	Arch.Environ.Contam.Toxicol. 47(3):314-323	2004

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	End-point	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc ug/L	Media Type	Author	Title	Source	Publication Year
1015	Copper chloride (CuCl2)	Entomoneis paludosa	Diatom	Algae, Moss, Fungi	LOEL	POP	ABND	5	d	D	190.65	SW	Nguyen-Deroche, T.L.N., T.T. Le, T.V. Bui, Y. Rince, G. Tremblin, and A. Morant-Manceau	Effects of Copper on Growth and Photosynthesis in Marine Diatoms: A Comparison Between Species from Two Different Geographical Areas	Cryptogam. Algol.30(2): 97-109	2009
1016	Copper chloride (CuCl2)	Nitzschia palea	Diatom	Algae, Moss, Fungi	LOEL	POP	ABND	5	d	D	190.65	SW	Nguyen-Deroche, T.L.N., T.T. Le, T.V. Bui, Y. Rince, G. Tremblin, and A. Morant-Manceau	Effects of Copper on Growth and Photosynthesis in Marine Diatoms: A Comparison Between Species from Two Different Geographical Areas	Cryptogam. Algol.30(2): 97-109	2009
1017	Sulfuric acid copper(2+) salt (1:1)	Soletellina alba	Sunset Clam	Molluscs	LC50	MOR	MORT	4	d	D	200	SW	King, C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley	An Assessment of Five Australian Polychaetes and Bivalves for Use in Whole-Sediment Toxicity Tests: Toxicity and Accumulation of Copper and Zinc from Water and Sediment	Arch.Environ.Contam.Toxicol. 47(3):314-323	2004
1018	Sulfuric acid copper(2+) salt (1:1)	Tellina deltoidalis	Bivalve	Molluscs	LC50	MOR	MORT	4	d	D	200	SW	King, C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley	An Assessment of Five Australian Polychaetes and Bivalves for Use in Whole-Sediment Toxicity Tests: Toxicity and Accumulation of Copper and Zinc from Water and Sediment	Arch.Environ.Contam.Toxicol. 47(3):314-323	2004
1019	Sulfuric acid copper(2+) salt (1:1)	Nephtys australiensis	Annelid	Worms	LC50	MOR	MORT	4	d	D	210	SW	King, C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley	An Assessment of Five Australian Polychaetes and Bivalves for Use in Whole-Sediment Toxicity Tests: Toxicity and Accumulation of Copper and Zinc from Water and Sediment	Arch.Environ.Contam.Toxicol. 47(3):314-323	2004
1020	Sulfuric acid copper(2+) salt (1:1)	Nephtys australiensis	Annelid	Worms	LOEC	MOR	MORT	4	d	D	210	SW	King, C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley	An Assessment of Five Australian Polychaetes and Bivalves for Use in Whole-Sediment Toxicity Tests: Toxicity and Accumulation of Copper and Zinc from Water and Sediment	Arch.Environ.Contam.Toxicol. 47(3):314-323	2004
1021	Copper chloride (CuCl2)	Melita matilda	Amphipod	Crustaceans	LC50	MOR	MORT	10	d	D	220	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
1022	Sulfuric acid copper(2+) salt (1:1)	Melita plumulosa	Amphipod	Crustaceans	LC50	MOR	MORT	4	d	D	220	SW	Spadaro, D., T. Micevska, and S.L. Simpson	Effect of Nutrition on Toxicity of Contaminants to the Epibenthic Amphipod Melita plumulosa	Arch.Environ.Contam.Toxicol. 55(4):593-602 (10.1007/s00244-008-9153-2)	2008
1023	Sulfuric acid copper(2+) salt (1:1)	Melita plumulosa	Amphipod	Crustaceans	LC50	MOR	MORT	4	d	D	230	SW	Spadaro, D., T. Micevska, and S.L. Simpson	Effect of Nutrition on Toxicity of Contaminants to the Epibenthic Amphipod Melita plumulosa	Arch.Environ.Contam.Toxicol. 55(4):593-602 (10.1007/s00244-008-9153-2)	2008
1024	Sulfuric acid copper(2+) salt (1:1)	Melita plumulosa	Amphipod	Crustaceans	LC50	MOR	MORT	4	d	D	230	SW	Spadaro, D., T. Micevska, and S.L. Simpson	Effect of Nutrition on Toxicity of Contaminants to the Epibenthic Amphipod Melita plumulosa	Arch.Environ.Contam.Toxicol. 55(4):593-602 (10.1007/s00244-008-9153-2)	2008
1025	Sulfuric acid copper(2+) salt (1:1)	Melita plumulosa	Amphipod	Crustaceans	LOEC	GRO	LGTH	4	d	D	240	SW	Spadaro, D., T. Micevska, and S.L. Simpson	Effect of Nutrition on Toxicity of Contaminants to the Epibenthic Amphipod Melita plumulosa	Arch.Environ.Contam.Toxicol. 55(4):593-602 (10.1007/s00244-008-9153-2)	2008
1026	Sulfuric acid copper(2+) salt (1:1)	Nephtys australiensis	Annelid	Worms	LC50	MOR	MORT	4	d	D	240	SW	King, C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley	An Assessment of Five Australian Polychaetes and Bivalves for Use in Whole-Sediment Toxicity Tests: Toxicity and Accumulation of Copper and Zinc from Water and Sediment	Arch.Environ.Contam.Toxicol. 47(3):314-323	2004
1027	Copper chloride (CuCl2)	Grandidierella japonica	Scud	Crustaceans	LC50	MOR	MORT	10	d	D	250	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
1028	Sulfuric acid copper(2+) salt (1:1)	Melita plumulosa	Amphipod	Crustaceans	LOEC	GRO	LGTH	4	d	D	290	SW	Spadaro, D., T. Micevska, and S.L. Simpson	Effect of Nutrition on Toxicity of Contaminants to the Epibenthic Amphipod Melita plumulosa	Arch.Environ.Contam.Toxicol. 55(4):593-602 (10.1007/s00244-008-9153-2)	2008
1029	Sulfuric acid copper(2+) salt (1:1)	Melita plumulosa	Amphipod	Crustaceans	LC50	MOR	MORT	4	d	D	308	SW	Spadaro, D., T. Micevska, and S.L. Simpson	Effect of Nutrition on Toxicity of Contaminants to the Epibenthic Amphipod Melita plumulosa	Arch.Environ.Contam.Toxicol. 55(4):593-602 (10.1007/s00244-008-9153-2)	2008
1030	Sulfuric acid copper(2+) salt (1:1)	Melita plumulosa	Amphipod	Crustaceans	LOEC	GRO	LGTH	4	d	D	313	SW	Spadaro, D., T. Micevska, and S.L. Simpson	Effect of Nutrition on Toxicity of Contaminants to the Epibenthic Amphipod Melita plumulosa	Arch.Environ.Contam.Toxicol. 55(4):593-602 (10.1007/s00244-008-9153-2)	2008

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	End-point	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc ug/L	Media Type	Author	Title	Source	Publication Year
1031	Copper	Tetraselmis chuii	Prasinophyte	Algae, Moss, Fungi	EC50	POP	PGRT	3	d	D	330	SW	Debelius, B., J.M. Forja, A. DelValls, and L.M. Lubian	Toxicity and Bioaccumulation of Copper and Lead in Five Marine Microalgae	Ecotoxicol. Environ. Saf.72(5): 1503-1513	2009
1032	Sulfuric acid copper(2+) salt (1:1)	Melita sp.	Amphipod	Crustaceans	LC50	MOR	MORT	4	d	D	340	SW	King, C.K., S.A. Gale, and J.L. Stauber	Acute Toxicity and Bioaccumulation of Aqueous and Sediment-Bound Metals in the Estuarine Amphipod Melita plumulosa	Environ.Toxicol. 21(5):489-504	2006
1033	Sulfuric acid copper(2+) salt (1:1)	Melita sp.	Amphipod	Crustaceans	LOEC	MOR	SURV	4	d	D	340	SW	King, C.K., S.A. Gale, and J.L. Stauber	Acute Toxicity and Bioaccumulation of Aqueous and Sediment-Bound Metals in the Estuarine Amphipod Melita plumulosa	Environ.Toxicol. 21(5):489-504	2006
1034	Sulfuric acid copper(2+) salt (1:1)	Melita plumulosa	Amphipod	Crustaceans	LC50	MOR	MORT	4	d	D	470	SW	Spadaro, D., T. Micevska, and S.L. Simpson	Effect of Nutrition on Toxicity of Contaminants to the Epibenthic Amphipod Melita plumulosa	Arch.Environ.Contam.Toxicol. 55(4):593-602 (10.1007/s00244-008-9153-2)	2008
1035	Sulfuric acid copper(2+) salt (1:1)	Mysella anomala	Bivalve	Molluscs	LOEC	MOR	MORT	4	d	D	900	SW	King, C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley	An Assessment of Five Australian Polychaetes and Bivalves for Use in Whole-Sediment Toxicity Tests: Toxicity and Accumulation of Copper and Zinc from Water and Sediment	Arch.Environ.Contam.Toxicol. 47(3):314-323	2004
1036	Copper chloride (CuCl2)	Corophium colo	Amphipod	Crustaceans	LOEC	MOR	MORT	4	d	D	950	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
1037	Copper chloride (CuCl2)	Corophium colo	Amphipod	Crustaceans	LC50	MOR	MORT	10	d	D	950	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
1038	Sulfuric acid copper(2+) salt (1:1)	Mysella anomala	Bivalve	Molluscs	LOEC	MOR	MORT	4	d	D	1000	SW	King, C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley	An Assessment of Five Australian Polychaetes and Bivalves for Use in Whole-Sediment Toxicity Tests: Toxicity and Accumulation of Copper and Zinc from Water and Sediment	Arch.Environ.Contam.Toxicol. 47(3):314-323	2004
1039	Copper chloride (CuCl2)	Emerita analoga	Pacific Sand Crab	Crustaceans	LC50	MOR	MORT	10	d	D	1200	SW	Valdovinos, C., and M. Zuniga	Copper Acute Toxicity Tests with the Sand Crab Emerita analoga (Decapoda: Hippidae): A Biomonitor of Heavy Metal Pollution in Chilean Coastal Seawater?	Bull.Environ.Contam.Toxicol. 69(3):393-400	2002
1040	Sulfuric acid copper(2+) salt (1:1)	Mysella anomala	Bivalve	Molluscs	LC50	MOR	MORT	4	d	D	1500	SW	King, C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley	An Assessment of Five Australian Polychaetes and Bivalves for Use in Whole-Sediment Toxicity Tests: Toxicity and Accumulation of Copper and Zinc from Water and Sediment	Arch.Environ.Contam.Toxicol. 47(3):314-323	2004
1041	Copper chloride (CuCl2)	Emerita analoga	Pacific Sand Crab	Crustaceans	LC50	MOR	MORT	4	d	D	2000	SW	Valdovinos, C., and M. Zuniga	Copper Acute Toxicity Tests with the Sand Crab Emerita analoga (Decapoda: Hippidae): A Biomonitor of Heavy Metal Pollution in Chilean Coastal Seawater?	Bull.Environ.Contam.Toxicol. 69(3):393-400	2002
1042	Sulfuric acid copper(2+) salt (1:1)	Mysella anomala	Bivalve	Molluscs	LC50	MOR	MORT	4	d	D	2060	SW	King, C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley	An Assessment of Five Australian Polychaetes and Bivalves for Use in Whole-Sediment Toxicity Tests: Toxicity and Accumulation of Copper and Zinc from Water and Sediment	Arch.Environ.Contam.Toxicol. 47(3):314-323	2004
1043	Copper chloride (CuCl2)	Emerita analoga	Pacific Sand Crab	Crustaceans	LC50	MOR	MORT	3	d	D	2400	SW	Valdovinos, C., and M. Zuniga	Copper Acute Toxicity Tests with the Sand Crab Emerita analoga (Decapoda: Hippidae): A Biomonitor of Heavy Metal Pollution in Chilean Coastal Seawater?	Bull.Environ.Contam.Toxicol. 69(3):393-400	2002
1044	Copper chloride (CuCl2)	Emerita analoga	Pacific Sand Crab	Crustaceans	LC50	MOR	MORT	1	d	D	8600	SW	Valdovinos, C., and M. Zuniga	Copper Acute Toxicity Tests with the Sand Crab Emerita analoga (Decapoda: Hippidae): A Biomonitor of Heavy Metal Pollution in Chilean Coastal Seawater?	Bull.Environ.Contam.Toxicol. 69(3):393-400	2002
1045	Copper chloride (CuCl2)	Emerita analoga	Pacific Sand Crab	Crustaceans	NR-LETH	MOR	MORT	2	d	D	10000	SW	Valdovinos, C., and M. Zuniga	Copper Acute Toxicity Tests with the Sand Crab Emerita analoga (Decapoda: Hippidae): A Biomonitor of Heavy Metal Pollution in Chilean Coastal Seawater?	Bull.Environ.Contam.Toxicol. 69(3):393-400	2002

Appendix D-9, Table 4. ECOTOX values for lead in fresh and marine waters

Reference	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc ug/L	Media Type	Author	Title	Source	Publication Year
1	Lead chloride	Oncorhynchus mykiss	Rainbow Trout	Fish	EC10	GRO	GAIN	62	d	D	7	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
2	Lead	Oncorhynchus mykiss	Rainbow Trout	Fish	LOEC	MOR	MORT	578	d	D	7.6	FW	Goettl, J.P.Jr., P.H. Davies, and J.R. Sinley	Water Pollution Studies	In: D.B.Cope (Ed.), Colorado Fish.Res.Rev.1972-1975, DOW-R-R-F72-75, Colorado Div.of Wildl., Boulder, CO :68-75	1976
3	Lead	Oncorhynchus mykiss	Rainbow Trout	Fish	LOEC	MOR	MORT	578	d	D	14.6	FW	Goettl, J.P.Jr., P.H. Davies, and J.R. Sinley	Water Pollution Studies	In: D.B.Cope (Ed.), Colorado Fish.Res.Rev.1972-1975, DOW-R-R-F72-75, Colorado Div.of Wildl., Boulder, CO :68-75	1976
4	Lead chloride	Oncorhynchus mykiss	Rainbow Trout	Fish	LOEC	GRO	LGTH	62	d	D	18	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
5	Lead chloride	Oncorhynchus mykiss	Rainbow Trout	Fish	EC10	MOR	SURV	69	d	D	26	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
6	Lead chloride	Oncorhynchus mykiss	Rainbow Trout	Fish	EC20	MOR	SURV	69	d	D	34	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
7	Lead chloride	Oncorhynchus mykiss	Rainbow Trout	Fish	EC10	GRO	WGHT	69	d	D	39	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
8	Lead chloride	Oncorhynchus mykiss	Rainbow Trout	Fish	LOEC	GRO	WGHT	69	d	D	54	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
9	Lead chloride	Oncorhynchus mykiss	Rainbow Trout	Fish	LOEC	MOR	SURV	69	d	D	54	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
10	Lead chloride	Oncorhynchus mykiss	Rainbow Trout	Fish	EC20	GRO	WGHT	69	d	D	55	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
11	Lead chloride	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	SURV	69	d	D	55	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
12	Lead chloride	Oncorhynchus mykiss	Rainbow Trout	Fish	EC10	GRO	LGTH	69	d	D	64	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
13	Lead chloride	Oncorhynchus mykiss	Rainbow Trout	Fish	EC10	GRO	LGTH	62	d	D	87	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
14	Lead chloride	Oncorhynchus mykiss	Rainbow Trout	Fish	EC20	GRO	GAIN	62	d	D	87	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
15	Lead chloride	Oncorhynchus mykiss	Rainbow Trout	Fish	EC20	GRO	LGTH	62	d	D	87	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
16	Lead chloride	Oncorhynchus mykiss	Rainbow Trout	Fish	LOEC	GRO	GAIN	62	d	D	87	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
17	Lead chloride	Oncorhynchus mykiss	Rainbow Trout	Fish	EC20	GRO	LGTH	69	d	D	98	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
18	Lead chloride	Oncorhynchus mykiss	Rainbow Trout	Fish	EC10	MOR	SURV	62	d	D	108	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
19	Lead chloride	Oncorhynchus mykiss	Rainbow Trout	Fish	EC20	MOR	SURV	62	d	D	113	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
20	Lead chloride	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	SURV	62	d	D	120	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
21	Lead chloride	Oncorhynchus mykiss	Rainbow Trout	Fish	LOEC	MOR	SURV	62	d	D	125	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
22	Lead oxide	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	132	FW	Gale, N.L., B.G. Wixson, and M. Erten	An Evaluation of the Acute Toxicity of Lead, Zinc, and Cadmium in Missouri Ozark Groundwater	Trace Subst.Environ.Health 25:169-183	1992
23	Lead sulfide	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	138	FW	Erten-Unal, M., B.G. Wixson, N. Gale, and J.L. Pitt	Evaluation of Toxicity, Bioavailability and Speciation of Lead, Zinc and Cadmium in Mine/Mill Wastewaters	Chem.Spec.Bioavail. 10(2):37-46	1998

Reference	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc ug/L	Media Type	Author	Title	Source	Publication Year
24	Lead sulfide	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	138	FW	Gale, N.L., B.G. Wixson, and M. Erten	An Evaluation of the Acute Toxicity of Lead, Zinc, and Cadmium in Missouri Ozark Groundwater	Trace Subst.Environ.Health 25:169-183	1992
25	Lead chloride	Oncorhynchus mykiss	Rainbow Trout	Fish	LOEC	GRO	LGTH	69	d	D	143	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
26	Lead chloride	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	168	FW	Erten-Unal, M., B.G. Wixson, N. Gale, and J.L. Pitt	Evaluation of Toxicity, Bioavailability and Speciation of Lead, Zinc and Cadmium in Mine/Mill Wastewaters	Chem.Spec.Bioavail. 10(2):37-46	1998
27	Lead chloride	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	168	FW	Gale, N.L., B.G. Wixson, and M. Erten	An Evaluation of the Acute Toxicity of Lead, Zinc, and Cadmium in Missouri Ozark Groundwater	Trace Subst.Environ.Health 25:169-183	1992
28	Nitric acid, Lead (2+) salt	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	14	d	D	200	FW	Davies, P.H., J.P. Goettl Jr., J.R. Sinley, and N.F. Smith	Acute and Chronic Toxicity of Lead to Rainbow Trout (Salmo gairdneri) in Hard and Soft Water	Water Res. 10(3):199-206	1976
29	Lead oxide	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	D	298	FW	Gale, N.L., B.G. Wixson, and M. Erten	An Evaluation of the Acute Toxicity of Lead, Zinc, and Cadmium in Missouri Ozark Groundwater	Trace Subst.Environ.Health 25:169-183	1992
30	Lead(II) sulfate	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	392	FW	Erten-Unal, M., B.G. Wixson, N. Gale, and J.L. Pitt	Evaluation of Toxicity, Bioavailability and Speciation of Lead, Zinc and Cadmium in Mine/Mill Wastewaters	Chem.Spec.Bioavail. 10(2):37-46	1998
31	Lead(II) sulfate	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	395	FW	Gale, N.L., B.G. Wixson, and M. Erten	An Evaluation of the Acute Toxicity of Lead, Zinc, and Cadmium in Missouri Ozark Groundwater	Trace Subst.Environ.Health 25:169-183	1992
32	Nitric acid, Lead (2+) salt	Austropotamobius pallipes	Crayfish	Crustaceans	LC50	MOR	MORT	4	d	D	420	FW	Vareille-Morel, C., and C. Chaisemartin	Natural Tolerance and Acclimation of Different Populations of Austropotamobius pallipes (Le.) to Heavy Metals (Chromium and Lead)	Acta Oecol., Oecol.Appl. 3(1):105-122 (FRE) (ENG ABS)	1982
33	Nitric acid, Lead (2+) salt	Austropotamobius pallipes	Crayfish	Crustaceans	LC50	MOR	MORT	4	d	D	530	FW	Vareille-Morel, C., and C. Chaisemartin	Natural Tolerance and Acclimation of Different Populations of Austropotamobius pallipes (Le.) to Heavy Metals (Chromium and Lead)	Acta Oecol., Oecol.Appl. 3(1):105-122 (FRE) (ENG ABS)	1982
34	Nitric acid, Lead (2+) salt	Chironomus riparius	Midge	Insects/Spiders	LC50	MOR	MORT	1	d	D	610	FW	Bechard, K.M., P.L. Gillis, and C.M. Wood	Acute Toxicity of Waterborne Cd, Cu, Pb, Ni, and Zn to First-Instar Chironomus riparius Larvae	Arch.Environ.Contam.Toxicol. 54(3):454-459	2008
35	Nitric acid, Lead (2+) salt	Austropotamobius pallipes	Crayfish	Crustaceans	LC50	MOR	MORT	4	d	D	740	FW	Vareille-Morel, C., and C. Chaisemartin	Natural Tolerance and Acclimation of Different Populations of Austropotamobius pallipes (Le.) to Heavy Metals (Chromium and Lead)	Acta Oecol., Oecol.Appl. 3(1):105-122 (FRE) (ENG ABS)	1982
36	Nitric acid, Lead (2+) salt	Austropotamobius pallipes	Crayfish	Crustaceans	LC50	MOR	MORT	2	d	D	770	FW	Vareille-Morel, C., and C. Chaisemartin	Natural Tolerance and Acclimation of Different Populations of Austropotamobius pallipes (Le.) to Heavy Metals (Chromium and Lead)	Acta Oecol., Oecol.Appl. 3(1):105-122 (FRE) (ENG ABS)	1982
37	Nitric acid, Lead (2+) salt	Austropotamobius pallipes	Crayfish	Crustaceans	LC50	MOR	MORT	1	d	D	780	FW	Vareille-Morel, C., and C. Chaisemartin	Natural Tolerance and Acclimation of Different Populations of Austropotamobius pallipes (Le.) to Heavy Metals (Chromium and Lead)	Acta Oecol., Oecol.Appl. 3(1):105-122 (FRE) (ENG ABS)	1982
38	Nitric acid, Lead (2+) salt	Austropotamobius pallipes	Crayfish	Crustaceans	LC50	MOR	MORT	4	d	D	800	FW	Vareille-Morel, C., and C. Chaisemartin	Natural Tolerance and Acclimation of Different Populations of Austropotamobius pallipes (Le.) to Heavy Metals (Chromium and Lead)	Acta Oecol., Oecol.Appl. 3(1):105-122 (FRE) (ENG ABS)	1982
39	Nitric acid, Lead (2+) salt	Austropotamobius pallipes	Crayfish	Crustaceans	LC50	MOR	MORT	2	d	D	840	FW	Vareille-Morel, C., and C. Chaisemartin	Natural Tolerance and Acclimation of Different Populations of Austropotamobius pallipes (Le.) to Heavy Metals (Chromium and Lead)	Acta Oecol., Oecol.Appl. 3(1):105-122 (FRE) (ENG ABS)	1982
40	Nitric acid, Lead (2+) salt	Austropotamobius pallipes	Crayfish	Crustaceans	LC50	MOR	MORT	1	d	D	910	FW	Vareille-Morel, C., and C. Chaisemartin	Natural Tolerance and Acclimation of Different Populations of Austropotamobius pallipes (Le.) to Heavy Metals (Chromium and Lead)	Acta Oecol., Oecol.Appl. 3(1):105-122 (FRE) (ENG ABS)	1982
41	Lead sulfide	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	D	915	FW	Erten-Unal, M., B.G. Wixson, N. Gale, and J.L. Pitt	Evaluation of Toxicity, Bioavailability and Speciation of Lead, Zinc and Cadmium in Mine/Mill Wastewaters	Chem.Spec.Bioavail. 10(2):37-46	1998
42	Lead sulfide	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	D	915	FW	Gale, N.L., B.G. Wixson, and M. Erten	An Evaluation of the Acute Toxicity of Lead, Zinc, and Cadmium in Missouri Ozark Groundwater	Trace Subst.Environ.Health 25:169-183	1992
43	Nitric acid, Lead (2+) salt	Austropotamobius pallipes	Crayfish	Crustaceans	LC50	MOR	MORT	2	d	D	1030	FW	Vareille-Morel, C., and C. Chaisemartin	Natural Tolerance and Acclimation of Different Populations of Austropotamobius pallipes (Le.) to Heavy Metals (Chromium and Lead)	Acta Oecol., Oecol.Appl. 3(1):105-122 (FRE) (ENG ABS)	1982
44	Nitric acid, Lead (2+) salt	Austropotamobius pallipes	Crayfish	Crustaceans	LC50	MOR	MORT	2	d	D	1160	FW	Vareille-Morel, C., and C. Chaisemartin	Natural Tolerance and Acclimation of Different Populations of Austropotamobius pallipes (Le.) to Heavy Metals (Chromium and Lead)	Acta Oecol., Oecol.Appl. 3(1):105-122 (FRE) (ENG ABS)	1982
45	Nitric acid, Lead (2+) salt	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	1170	FW	Davies, P.H., J.P. Goettl Jr., J.R. Sinley, and N.F. Smith	Acute and Chronic Toxicity of Lead to Rainbow Trout (Salmo gairdneri) in Hard and Soft Water	Water Res. 10(3):199-206	1976
46	Nitric acid, Lead (2+) salt	Austropotamobius pallipes	Crayfish	Crustaceans	LC50	MOR	MORT	1	d	D	1270	FW	Vareille-Morel, C., and C. Chaisemartin	Natural Tolerance and Acclimation of Different Populations of Austropotamobius pallipes (Le.) to Heavy Metals (Chromium and Lead)	Acta Oecol., Oecol.Appl. 3(1):105-122 (FRE) (ENG ABS)	1982
47	Nitric acid, Lead (2+) salt	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	1320	FW	Davies, P.H., J.P. Goettl Jr., J.R. Sinley, and N.F. Smith	Acute and Chronic Toxicity of Lead to Rainbow Trout (Salmo gairdneri) in Hard and Soft Water	Water Res. 10(3):199-206	1976
48	Nitric acid, Lead (2+) salt	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50*	MOR	MORT	4	d	D	1380	FW	Davies, P.H., and W.H. Everhart	Effects of Chemical Variations in Aquatic Environments: Vol. III Lead Toxicity to Rainbow Trout and Testing Application Factor Concept	EPA-R3-73-011C, U.S.EPA, Washington, D.C. :80 p.	1973
49	Nitric acid, Lead (2+) salt	Austropotamobius pallipes	Crayfish	Crustaceans	LC50	MOR	MORT	1	d	D	1400	FW	Vareille-Morel, C., and C. Chaisemartin	Natural Tolerance and Acclimation of Different Populations of Austropotamobius pallipes (Le.) to Heavy Metals (Chromium and Lead)	Acta Oecol., Oecol.Appl. 3(1):105-122 (FRE) (ENG ABS)	1982

Reference	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc ug/L	Media Type	Author	Title	Source	Publication Year
50	Nitric acid, Lead (2+) salt	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	1470	FW	Davies, P.H., J.P. Goettl Jr., J.R. Sinley, and N.F. Smith	Acute and Chronic Toxicity of Lead to Rainbow Trout (Salmo gairdneri) in Hard and Soft Water	Water Res. 10(3):199-206	1976
51	Nitric acid, Lead (2+) salt	Daphnia magna	Water Flea	Crustaceans	EC50	POP	PCCP	21	d	D	1700	FW	Enserink, E.L., J.L. Maas-Diepeveen, and C.J. Van Leeuwen	Combined Effects of Metals: An Ecotoxicological Evaluation	Water Res. 25(6):679-687	1991
52	Acetic acid, Lead(2+) salt	Phoxinus phoxinus	Minnow	Fish	NR-LETH	MOR	MORT	0.67	d	D	5000	FW	Carpenter, K.E.	On the Biological Factors Involved in the Destruction of River-Fisheries by Pollution due to Lead-Mining	Ann.Appl.Biol. 12(1):1-13	1925
53	Acetic acid, Lead(2+) salt	Phoxinus phoxinus	Minnow	Fish	NR-LETH	MOR	MORT	0.96	d	D	5000	FW	Carpenter, K.E.	On the Biological Factors Involved in the Destruction of River-Fisheries by Pollution due to Lead-Mining	Ann.Appl.Biol. 12(1):1-13	1925
54	Acetic acid, Lead(2+) salt	Phoxinus phoxinus	Minnow	Fish	NR-LETH	MOR	MORT	0.96	d	D	5000	FW	Carpenter, K.E.	On the Biological Factors Involved in the Destruction of River-Fisheries by Pollution due to Lead-Mining	Ann.Appl.Biol. 12(1):1-13	1925
55	Acetic acid, Lead(2+) salt	Phoxinus phoxinus	Minnow	Fish	NR-LETH	MOR	MORT	0.96	d	D	5000	FW	Carpenter, K.E.	On the Biological Factors Involved in the Destruction of River-Fisheries by Pollution due to Lead-Mining	Ann.Appl.Biol. 12(1):1-13	1925
56	Acetic acid, Lead(2+) salt	Phoxinus phoxinus	Minnow	Fish	NR-LETH	MOR	MORT	0.96	d	D	5000	FW	Carpenter, K.E.	On the Biological Factors Involved in the Destruction of River-Fisheries by Pollution due to Lead-Mining	Ann.Appl.Biol. 12(1):1-13	1925
57	Nitric acid, Lead (2+) salt	Phoxinus phoxinus	Minnow	Fish	NR-LETH	MOR	MORT	0.46	d	D	5000	FW	Carpenter, K.E.	On the Biological Factors Involved in the Destruction of River-Fisheries by Pollution due to Lead-Mining	Ann.Appl.Biol. 12(1):1-13	1925
58	Nitric acid, Lead (2+) salt	Phoxinus phoxinus	Minnow	Fish	NR-LETH	MOR	MORT	0.46	d	D	5000	FW	Carpenter, K.E.	On the Biological Factors Involved in the Destruction of River-Fisheries by Pollution due to Lead-Mining	Ann.Appl.Biol. 12(1):1-13	1925
59	Nitric acid, Lead (2+) salt	Salmo trutta ssp. trutta	Sea Trout	Fish	NR-LETH	MOR	MORT	2.5	d	D	5000	FW	Carpenter, K.E.	On the Biological Factors Involved in the Destruction of River-Fisheries by Pollution due to Lead-Mining	Ann.Appl.Biol. 12(1):1-13	1925
60	Nitric acid, Lead (2+) salt	Phoxinus phoxinus	Minnow	Fish	NR-LETH	MOR	MORT	0.46	d	D	10000	FW	Carpenter, K.E.	On the Biological Factors Involved in the Destruction of River-Fisheries by Pollution due to Lead-Mining	Ann.Appl.Biol. 12(1):1-13	1925
61	Nitric acid, Lead (2+) salt	Phoxinus phoxinus	Minnow	Fish	NR-LETH	MOR	MORT	0.46	d	D	10000	FW	Carpenter, K.E.	On the Biological Factors Involved in the Destruction of River-Fisheries by Pollution due to Lead-Mining	Ann.Appl.Biol. 12(1):1-13	1925
62	Lead chloride	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	D	12500	FW	Erten-Unal, M., B.G. Wixson, N. Gale, and J.L. Pitt	Evaluation of Toxicity, Bioavailability and Speciation of Lead, Zinc and Cadmium in Mine/Mill Wastewaters	Chem.Spec.Bioavail. 10(2):37-46	1998
63	Lead chloride	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	D	12500	FW	Gale, N.L., B.G. Wixson, and M. Erten	An Evaluation of the Acute Toxicity of Lead, Zinc, and Cadmium in Missouri Ozark Groundwater	Trace Subst.Environ.Health 25:169-183	1992
64	Nitric acid, Lead (2+) salt	Carassius auratus	Goldfish	Fish	LC50	MOR	MORT	1	d	D	37000	FW	Lautenbacher, H.W.	Development and Application of Analytical Methods for the Study of Biological Changes in Goldfish Exposed to Sub-lethal Concentrations of Nitrilotria	Ph.D.Thesis, Temple University:174 p., Diss.Abstr.Int.B Sci.Eng. 36(6):2693	1975
65	Lead	Carassius auratus	Goldfish	Fish	LC50	MOR	MORT	4	d	D	40000	FW	Bolognani Fantin, A.M., A. Franchini, P. Trevisan, and A. Pederzoli	Histomorphological and Cytochemical Changes Induced in the Liver of Goldfish Carassius carassius var. auratus by Short-Term Exposure to Lead	Acta Histochem. 92(2):228-235	1992
66	Nitric acid, Lead (2+) salt	Carassius auratus	Goldfish	Fish	LC50	MOR	MORT	1	d	D	59000	FW	Lautenbacher, H.W.	Development and Application of Analytical Methods for the Study of Biological Changes in Goldfish Exposed to Sub-lethal Concentrations of Nitrilotria	Ph.D.Thesis, Temple University:174 p., Diss.Abstr.Int.B Sci.Eng. 36(6):2693	1975
67	Lead(II) sulfate	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	D	60800	FW	Gale, N.L., B.G. Wixson, and M. Erten	An Evaluation of the Acute Toxicity of Lead, Zinc, and Cadmium in Missouri Ozark Groundwater	Trace Subst.Environ.Health 25:169-183	1992
68	Nitric acid, Lead (2+) salt	Heteropneustes fossilis	Indian Catfish	Fish	LC50	MOR	MORT	4	d	D	105000	FW	Shrivastava, S., and S.K. Jain	Zeolite Mediated Lead Accumulation in Fish Tissues	Him.J.Env.Zool. 14(1):65-68	2000
69	Lead(II) sulfate	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	D	148000	FW	Erten-Unal, M., B.G. Wixson, N. Gale, and J.L. Pitt	Evaluation of Toxicity, Bioavailability and Speciation of Lead, Zinc and Cadmium in Mine/Mill Wastewaters	Chem.Spec.Bioavail. 10(2):37-46	1998
70	Lead(II) sulfate	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	D	148000	FW	Gale, N.L., B.G. Wixson, and M. Erten	An Evaluation of the Acute Toxicity of Lead, Zinc, and Cadmium in Missouri Ozark Groundwater	Trace Subst.Environ.Health 25:169-183	1992
71	Acetic acid, Lead(2+) salt	Phoxinus phoxinus	Minnow	Fish	NR-LETH	MOR	MORT	0.10	d	D	250000	FW	Carpenter, K.E.	On the Biological Factors Involved in the Destruction of River-Fisheries by Pollution due to Lead-Mining	Ann.Appl.Biol. 12(1):1-13	1925
72	Nitric acid, Lead (2+) salt	Carassius auratus	Goldfish	Fish	NR-LETH	MOR	MORT	5	d	D	250000	FW	Carpenter, K.E.	On the Biological Factors Involved in the Destruction of River-Fisheries by Pollution due to Lead-Mining	Ann.Appl.Biol. 12(1):1-13	1925
73	Nitric acid, Lead (2+) salt	Phoxinus phoxinus	Minnow	Fish	NR-LETH	MOR	MORT	0.46	d	D	250000	FW	Carpenter, K.E.	On the Biological Factors Involved in the Destruction of River-Fisheries by Pollution due to Lead-Mining	Ann.Appl.Biol. 12(1):1-13	1925
74	Nitric acid, Lead (2+) salt	Phoxinus phoxinus	Minnow	Fish	NR-LETH	MOR	MORT	0.46	d	D	250000	FW	Carpenter, K.E.	On the Biological Factors Involved in the Destruction of River-Fisheries by Pollution due to Lead-Mining	Ann.Appl.Biol. 12(1):1-13	1925
75	Lead sulfide	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	D	564000	FW	Gale, N.L., B.G. Wixson, and M. Erten	An Evaluation of the Acute Toxicity of Lead, Zinc, and Cadmium in Missouri Ozark Groundwater	Trace Subst.Environ.Health 25:169-183	1992
76	Lead chloride	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	D	3333000	FW	Gale, N.L., B.G. Wixson, and M. Erten	An Evaluation of the Acute Toxicity of Lead, Zinc, and Cadmium in Missouri Ozark Groundwater	Trace Subst.Environ.Health 25:169-183	1992
77	Lead oxide	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	D	3841000	FW	Gale, N.L., B.G. Wixson, and M. Erten	An Evaluation of the Acute Toxicity of Lead, Zinc, and Cadmium in Missouri Ozark Groundwater	Trace Subst.Environ.Health 25:169-183	1992
78	Nitric acid, Lead (2+) salt	Skeletonema costatum	Diatom	Algae, Moss, Fungi	EC50	BCM	CHLA	NR	d	D	4.4	SW	Rivkin, R.B.	Effects of Lead on Growth of the Marine Diatom Skeletonema costatum	Mar. Biol. (Berl.)50(): 239-247	1979
79	Nitric acid, Lead (2+) salt	Skeletonema costatum	Diatom	Algae, Moss, Fungi	EC50	POP	ABND	NR	d	D	4.4	SW	Rivkin, R.B.	Effects of Lead on Growth of the Marine Diatom Skeletonema costatum	Mar. Biol. (Berl.)50(): 239-247	1979
80	Nitric acid, Lead (2+) salt	Skeletonema costatum	Diatom	Algae, Moss, Fungi	EC50	POP	ABND	NR	d	D	4.7	SW	Rivkin, R.B.	Effects of Lead on Growth of the Marine Diatom Skeletonema costatum	Mar. Biol. (Berl.)50(): 239-247	1979
81	Nitric acid, Lead (2+) salt	Skeletonema costatum	Diatom	Algae, Moss, Fungi	EC50	POP	ABND	NR	d	D	5.2	SW	Rivkin, R.B.	Effects of Lead on Growth of the Marine Diatom Skeletonema costatum	Mar. Biol. (Berl.)50(): 239-247	1979

Reference	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc ug/L	Media Type	Author	Title	Source	Publication Year
82	Nitric acid, Lead (2+) salt	Skeletonema costatum	Diatom	Algae, Moss, Fungi	EC50	BCM	CHLA	NR	d	D	5.3	SW	Rivkin, R.B.	Effects of Lead on Growth of the Marine Diatom Skeletonema costatum	Mar. Biol. (Berl.)50(): 239-247	1979
83	Nitric acid, Lead (2+) salt	Skeletonema costatum	Diatom	Algae, Moss, Fungi	EC50	POP	ABND	NR	d	D	5.5	SW	Rivkin, R.B.	Effects of Lead on Growth of the Marine Diatom Skeletonema costatum	Mar. Biol. (Berl.)50(): 239-247	1979
84	Nitric acid, Lead (2+) salt	Skeletonema costatum	Diatom	Algae, Moss, Fungi	EC50	POP	ABND	NR	d	D	5.7	SW	Rivkin, R.B.	Effects of Lead on Growth of the Marine Diatom Skeletonema costatum	Mar. Biol. (Berl.)50(): 239-247	1979
85	Nitric acid, Lead (2+) salt	Skeletonema costatum	Diatom	Algae, Moss, Fungi	EC50	BCM	CHLA	NR	d	D	6.2	SW	Rivkin, R.B.	Effects of Lead on Growth of the Marine Diatom Skeletonema costatum	Mar. Biol. (Berl.)50(): 239-247	1979
86	Nitric acid, Lead (2+) salt	Skeletonema costatum	Diatom	Algae, Moss, Fungi	EC50	BCM	CCON	NR	d	D	7.1	SW	Rivkin, R.B.	Effects of Lead on Growth of the Marine Diatom Skeletonema costatum	Mar. Biol. (Berl.)50(): 239-247	1979
87	Nitric acid, Lead (2+) salt	Skeletonema costatum	Diatom	Algae, Moss, Fungi	EC50	BCM	CCON	NR	d	D	7.6	SW	Rivkin, R.B.	Effects of Lead on Growth of the Marine Diatom Skeletonema costatum	Mar. Biol. (Berl.)50(): 239-247	1979
88	Nitric acid, Lead (2+) salt	Skeletonema costatum	Diatom	Algae, Moss, Fungi	EC50	BCM	CHLA	NR	d	D	7.8	SW	Rivkin, R.B.	Effects of Lead on Growth of the Marine Diatom Skeletonema costatum	Mar. Biol. (Berl.)50(): 239-247	1979
89	Nitric acid, Lead (2+) salt	Skeletonema costatum	Diatom	Algae, Moss, Fungi	EC50	BCM	CCON	NR	d	D	8.6	SW	Rivkin, R.B.	Effects of Lead on Growth of the Marine Diatom Skeletonema costatum	Mar. Biol. (Berl.)50(): 239-247	1979
90	Nitric acid, Lead (2+) salt	Skeletonema costatum	Diatom	Algae, Moss, Fungi	EC50	BCM	PRCO	NR	d	D	8.6	SW	Rivkin, R.B.	Effects of Lead on Growth of the Marine Diatom Skeletonema costatum	Mar. Biol. (Berl.)50(): 239-247	1979
91	Nitric acid, Lead (2+) salt	Skeletonema costatum	Diatom	Algae, Moss, Fungi	EC50	BCM	PRCO	NR	d	D	8.8	SW	Rivkin, R.B.	Effects of Lead on Growth of the Marine Diatom Skeletonema costatum	Mar. Biol. (Berl.)50(): 239-247	1979
92	Nitric acid, Lead (2+) salt	Skeletonema costatum	Diatom	Algae, Moss, Fungi	EC50	BCM	PRCO	NR	d	D	8.9	SW	Rivkin, R.B.	Effects of Lead on Growth of the Marine Diatom Skeletonema costatum	Mar. Biol. (Berl.)50(): 239-247	1979
93	Nitric acid, Lead (2+) salt	Skeletonema costatum	Diatom	Algae, Moss, Fungi	EC50	BCM	CCON	NR	d	D	10.3	SW	Rivkin, R.B.	Effects of Lead on Growth of the Marine Diatom Skeletonema costatum	Mar. Biol. (Berl.)50(): 239-247	1979
94	Nitric acid, Lead (2+) salt	Skeletonema costatum	Diatom	Algae, Moss, Fungi	EC50	BCM	PRCO	NR	d	D	10.6	SW	Rivkin, R.B.	Effects of Lead on Growth of the Marine Diatom Skeletonema costatum	Mar. Biol. (Berl.)50(): 239-247	1979
95	Lead	Chaetoceros sp.	Diatom	Algae, Moss, Fungi	EC50	POP	PGRT	3	d	D	105	SW	Debelius, B., J.M. Forja, A. DelValls, and L.M. Lubian	Toxicity and Bioaccumulation of Copper and Lead in Five Marine Microalgae	Ecotoxicol. Environ. Saf.72(5): 1503-1513	2009
96	Lead chloride	Melita sp.	Amphipod	Crustaceans	LOEC	MOR	SURV	10	d	D	390	SW	King, C.K., S.A. Gale, and J.L. Stauber	Acute Toxicity and Bioaccumulation of Aqueous and Sediment-Bound Metals in the Estuarine Amphipod Melita plumulosa	Environ.Toxicol. 21(5):489-504	2006
97	Lead chloride	Melita sp.	Amphipod	Crustaceans	LOEC	MOR	SURV	4	d	D	600	SW	King, C.K., S.A. Gale, and J.L. Stauber	Acute Toxicity and Bioaccumulation of Aqueous and Sediment-Bound Metals in the Estuarine Amphipod Melita plumulosa	Environ.Toxicol. 21(5):489-504	2006
98	Lead	Nannochloropsis gaditana	Microalgae	Algae, Moss, Fungi	EC50	POP	PGRT	3	d	D	740	SW	Debelius, B., J.M. Forja, A. DelValls, and L.M. Lubian	Toxicity and Bioaccumulation of Copper and Lead in Five Marine Microalgae	Ecotoxicol. Environ. Saf.72(5): 1503-1513	2009
99	Lead	Rhodomonas salina	Marine Microalga	Algae, Moss, Fungi	EC50	POP	PGRT	3	d	D	900	SW	Debelius, B., J.M. Forja, A. DelValls, and L.M. Lubian	Toxicity and Bioaccumulation of Copper and Lead in Five Marine Microalgae	Ecotoxicol. Environ. Saf.72(5): 1503-1513	2009
100	Lead chloride	Melita sp.	Amphipod	Crustaceans	LC50	MOR	MORT	10	d	D	1270	SW	King, C.K., S.A. Gale, and J.L. Stauber	Acute Toxicity and Bioaccumulation of Aqueous and Sediment-Bound Metals in the Estuarine Amphipod Melita plumulosa	Environ.Toxicol. 21(5):489-504	2006
101	Lead	Isochrysis galbana	Haptophyte	Algae, Moss, Fungi	EC50	POP	PGRT	3	d	D	1340	SW	Debelius, B., J.M. Forja, A. DelValls, and L.M. Lubian	Toxicity and Bioaccumulation of Copper and Lead in Five Marine Microalgae	Ecotoxicol. Environ. Saf.72(5): 1503-1513	2009
102	Lead chloride	Melita sp.	Amphipod	Crustaceans	LC50	MOR	MORT	4	d	D	1530	SW	King, C.K., S.A. Gale, and J.L. Stauber	Acute Toxicity and Bioaccumulation of Aqueous and Sediment-Bound Metals in the Estuarine Amphipod Melita plumulosa	Environ.Toxicol. 21(5):489-504	2006
103	Lead chloride	Melita sp.	Amphipod	Crustaceans	LOEC	MOR	SURV	4	d	D	1680	SW	King, C.K., S.A. Gale, and J.L. Stauber	Acute Toxicity and Bioaccumulation of Aqueous and Sediment-Bound Metals in the Estuarine Amphipod Melita plumulosa	Environ.Toxicol. 21(5):489-504	2006
104	Lead	Tetraselmis chuii	Prasinophyte	Algae, Moss, Fungi	EC50	POP	PGRT	3	d	D	2640	SW	Debelius, B., J.M. Forja, A. DelValls, and L.M. Lubian	Toxicity and Bioaccumulation of Copper and Lead in Five Marine Microalgae	Ecotoxicol. Environ. Saf.72(5): 1503-1513	2009
105	Lead chloride	Melita sp.	Amphipod	Crustaceans	LC50	MOR	MORT	4	d	D	3000	SW	King, C.K., S.A. Gale, and J.L. Stauber	Acute Toxicity and Bioaccumulation of Aqueous and Sediment-Bound Metals in the Estuarine Amphipod Melita plumulosa	Environ.Toxicol. 21(5):489-504	2006

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
1	Mercury chloride (HgCl2)	Villorita cyprinoides ssp. cochi	Bivalve	Molluscs	EC50	BEH	FLTR	0.125	d	T	0.003	FW	Abraham, T.J., K.Y.M. Salih, and J. Chacko	Effects of Heavy Metals on the Filtration Rate of Bivalve Villorita cyprinoides (Hanley) var. cochinensis	Indian J.Mar.Sci. 15(3):195-196	1986
2	Mercury chloride (HgCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	28	d	T	0.1	FW	Black, J.A., and W.J. Birge	An Avoidance Response Bioassay for Aquatic Pollutants	Res.Report No.123, Water Resour.Res.Inst., Univ.of Kentucky, Lexington, KY :34-180490	1980
3	Mercury chloride (HgCl2)	Pimephales promelas	Fathead Minnow	Fish	LOEC	GRO	LGTH	30	dph	T	0.23	FW	Call, D.J., L.T. Brooke, N. Ahmad, and J.E. Richter	Toxicity and Metabolism Studies with EPA (Environmental Protection Agency) Priority Pollutants and Related Chemicals in Freshwater Organisms	EPA 600/3-83-095, U.S.EPA, Duluth, MN :120 p. (NTIS/PB83-263665)	1983
4	Mercury chloride (HgCl2)	Pimephales promelas	Fathead Minnow	Fish	LOEC	GRO	WWGT	30	dph	T	0.23	FW	Call, D.J., L.T. Brooke, N. Ahmad, and J.E. Richter	Toxicity and Metabolism Studies with EPA (Environmental Protection Agency) Priority Pollutants and Related Chemicals in Freshwater Organisms	EPA 600/3-83-095, U.S.EPA, Duluth, MN :120 p. (NTIS/PB83-263665)	1983
5	Mercuric nitrate	Pimephales promelas	Fathead Minnow	Fish	MATC	NOC	MULT	32	d	T	0.89	FW	Spehar, R.L., and J.T. Fiandt	Acute and Chronic Effects of Water Quality Criteria-Based Metal Mixtures on Three Aquatic Species	Environ.Toxicol.Chem. 5(10):917-931	1986
6	Mercuric nitrate	Moina macrocopa	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	T	1	FW	Pokethitiyook, P., E.S. Upatham, and O. Leelhaphunt	Acute Toxicity of Various Metals to Moina macrocopa	Nat.Hist.Bull.Siam.Soc. 35(1/2):47-56	1987
7	Mercury	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	GPOP	3	d	T	1	FW	Van der Heever, J.A., and J.U. Grobbelaar	The Use of Selenastrum capricornutum Growth Potential as a Measure of Toxicity of a Few Selected Compounds	Water SA22(2): 183-191	1996
8	Chloromethylmercury	Gasterosteus aculeatus	Threespine Stickleback	Fish	LC50	MOR	MORT	1	d	T	1.24	FW	Deakins, D.E.	The Effects of Methylmercury Chloride on the Survival and Behavior of the Three-Spined Stickleback (Gasterosteus aculeatus L.)	Ph.D.Thesis, University of Southern California, Los Angeles, CA :257 p. (Author Communication Used)	1973
9	Mercuric nitrate	Daphnia magna	Water Flea	Crustaceans	EC50	POP	PCCP	21	d	D	1.3	FW	Enserink, E.L., J.L. Maas-Diepeveen, and C.J. Van Leeuwen	Combined Effects of Metals: An Ecotoxicological Evaluation	Water Res. 25(6):679-687	1991
10	Mercury chloride (HgCl2)	Oreochromis mossambicus	Mozambique Tilapia	Fish	LC50	MOR	MORT	1	d	T	1.38	FW	Shaw, B.P., A. Sahu, and A.K. Panigrahi	Comparative Toxicity of an Effluent from a Chlor-Alkali Industry and HgCl2	Bull.Environ.Contam.Toxicol. 45(2):280-287	1990
11	Mercuric nitrate	Pimephales promelas	Fathead Minnow	Fish	EC50	NOC	MULT	32	d	T	1.4	FW	Spehar, R.L., and J.T. Fiandt	Acute and Chronic Effects of Water Quality Criteria-Based Metal Mixtures on Three Aquatic Species	Environ.Toxicol.Chem. 5(10):917-931	1986
12	Chloromethylmercury	Gasterosteus aculeatus	Threespine Stickleback	Fish	LC50	MOR	MORT	1	d	T	1.49	FW	Deakins, D.E.	The Effects of Methylmercury Chloride on the Survival and Behavior of the Three-Spined Stickleback (Gasterosteus aculeatus L.)	Ph.D.Thesis, University of Southern California, Los Angeles, CA :257 p. (Author Communication Used)	1973
13	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	T	1.5	FW	Guilhermino, L., T.C. Diamantino, R. Ribeiro, F. Goncalves, and A.M.V.M. Soares	Suitability of Test Media Containing EDTA for the Evaluation of Acute Metal Toxicity to Daphnia magna Straus	Ecotoxicol.Environ.Saf. 38(3):292-295	1997
14	Mercury chloride (HgCl2)	Villorita cyprinoides ssp. cochi	Bivalve	Molluscs	LC50	MOR	MORT	4	d	T	1.57	FW	Abraham, T.J., K.Y.M. Salih, and J. Chacko	Effects of Heavy Metals on the Filtration Rate of Bivalve Villorita cyprinoides (Hanley) var. cochinensis	Indian J.Mar.Sci. 15(3):195-196	1986
15	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	LOEC	ENZ	GENZ	2	d	T	1.8	FW	Decoen, W.M., and C.R. Janssen	The Use of Biomarkers in Daphnia magna Toxicity Testing. II. Digestive Enzyme Activity in Daphnia magna Exposed to Sublethal Concentrations of Cadmium, Chromium and Mercury.	Chemosphere 35(5):1053-1067	1997
16	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	LOEC	ENZ	GENZ	2	d	T	1.8	FW	Decoen, W.M., and C.R. Janssen	The Use of Biomarkers in Daphnia magna Toxicity Testing. II. Digestive Enzyme Activity in Daphnia magna Exposed to Sublethal Concentrations of Cadmium, Chromium and Mercury.	Chemosphere 35(5):1053-1067	1997
17	Chloromethylmercury	Gasterosteus aculeatus	Threespine Stickleback	Fish	LC50	MOR	MORT	1	d	T	1.82	FW	Deakins, D.E.	The Effects of Methylmercury Chloride on the Survival and Behavior of the Three-Spined Stickleback (Gasterosteus aculeatus L.)	Ph.D.Thesis, University of Southern California, Los Angeles, CA :257 p. (Author Communication Used)	1973
18	Mercury chloride (HgCl2)	Pimephales promelas	Fathead Minnow	Fish	LOEC	DVP	ABNM	NR	d	T	1.85	FW	Call, D.J., L.T. Brooke, N. Ahmad, and J.E. Richter	Toxicity and Metabolism Studies with EPA (Environmental Protection Agency) Priority Pollutants and Related Chemicals in Freshwater Organisms	EPA 600/3-83-095, U.S.EPA, Duluth, MN :120 p. (NTIS/PB83-263665)	1983
19	Mercury chloride (HgCl2)	Pimephales promelas	Fathead Minnow	Fish	LOEC	MOR	SURV	29	dph	T	1.85	FW	Call, D.J., L.T. Brooke, N. Ahmad, and J.E. Richter	Toxicity and Metabolism Studies with EPA (Environmental Protection Agency) Priority Pollutants and Related Chemicals in Freshwater Organisms	EPA 600/3-83-095, U.S.EPA, Duluth, MN :120 p. (NTIS/PB83-263665)	1983
20	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	1	d	T	2	FW	Guilhermino, L., T.C. Diamantino, R. Ribeiro, F. Goncalves, and A.M.V.M. Soares	Suitability of Test Media Containing EDTA for the Evaluation of Acute Metal Toxicity to Daphnia magna Straus	Ecotoxicol.Environ.Saf. 38(3):292-295	1997
21	Mercury chloride (HgCl2)	Austropotamobius pallipes ssp. pall	Crayfish	Crustaceans	LC50*	MOR	MORT	30	d	T	2	FW	Boutet, C., and C. Chaisemartin	Specific Toxic Properties of Metallic Salts in Austro-potamobius pallipes pallipes and Orconectes limosus (Proprietes Toxiques Specifiques des sels Metalliques chez Austropotamobius pallipes pallipes et Orconectes limosu	C.R.Seances Soc.Biol.Fil. 167(12):1933-1938 (FRE) (ENG TRANSL)	1973
22	Mercury chloride (HgCl2)	Austropotamobius pallipes ssp. pall	Crayfish	Crustaceans	LC50*	MOR	MORT	30	d	T	2	FW	Boutet, C., and C. Chaisemartin	Specific Toxic Properties of Metallic Salts in Austro-potamobius pallipes pallipes and Orconectes limosus (Proprietes Toxiques Specifiques des sels Metalliques chez Austropotamobius pallipes pallipes et Orconectes limosu	C.R.Seances Soc.Biol.Fil. 167(12):1933-1938 (FRE) (ENG TRANSL)	1973

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
23	Mercury chloride (HgCl2)	Orconectes limosus	Crayfish	Crustaceans	LC50*	MOR	MORT	30	d	T	2	FW	Boutet, C., and C. Chaisemartin	Specific Toxic Properties of Metallic Salts in Austro-potamobius pallipes pallipes and Orconectes limosus (Proprietes Toxiques Specifiques des sels Metalliques chez Austropotamobius pallipes pallipes et Orconectes limosu	C.R.Seances Soc.Biol.Fil. 167(12):1933-1938 (FRE) (ENG TRANSL)	1973
24	Mercury chloride (HgCl2)	Orconectes limosus	Crayfish	Crustaceans	LC50*	MOR	MORT	30	d	T	2	FW	Boutet, C., and C. Chaisemartin	Specific Toxic Properties of Metallic Salts in Austro-potamobius pallipes pallipes and Orconectes limosus (Proprietes Toxiques Specifiques des sels Metalliques chez Austropotamobius pallipes pallipes et Orconectes limosu	C.R.Seances Soc.Biol.Fil. 167(12):1933-1938 (FRE) (ENG TRANSL)	1973
25	Mercury	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	GPOP	2	d	T	2	FW	Van der Heever, J.A., and J.U. Grobbelaar	The Use of Selenastrum capricornutum Growth Potential as a Measure of Toxicity of a Few Selected Compounds	Water SA22(2): 183-191	1996
26	Mercury	Hyalella azteca	Scud	Crustaceans	LC50	MOR	MORT	7	d	T	2.1	FW	Borgmann, U., Y. Couillard, P. Doyle, and D.G. Dixon	Toxicity of Sixty-Three Metals and Metalloids to Hyalella azteca at Two Levels of Water Hardness	Environ.Toxicol.Chem. 24(3):641-652	2005
27	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	1	d	T	2.206	FW	Lilius, H., B. Isomaa, and T. Holmstrom	A Comparison of the Toxicity of 50 Reference Chemicals to Freshly Isolated Rainbow Trout Hepatocytes and Daphnia magna	Aquat.Toxicol. 30:47-60	1994
28	Mercury chloride (HgCl2)	Philodina acuticornis	Rotifer	Invertebrates	EC50	ITX	IMBL	1	d	T	2.3	FW	Buikema, A.L.Jr., J. Cairns Jr., and G.W. Sullivan	Evaluation of Philodina acuticornis (Rotifera) as Bioassay Organisms for Heavy Metals	Water Resour.Bull. 10(4):648-661	1974
29	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	NR-LETH	MOR	MORT	21	d	T	2.7	FW	Biesinger, K.E., L.E. Anderson, and J.G. Eaton	Chronic Effects of Inorganic and Organic Mercury on Daphnia magna: Toxicity, Accumulation, and Loss	Arch.Environ.Contam.Toxicol. 11:769-774 (Author Communication Used)	1982
30	Mercury chloride (HgCl2)	Daphnia obtusa	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	T	2.8	FW	Rossini, G.D.B., and A.E. Ronco	Acute Toxicity Bioassay Using Daphnia obtusa as a Test Organism	Environ.Toxicol.Water Qual. 11(3):255-258	1996
31	Mercury chloride (HgCl2)	Ceriodaphnia reticulata	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	T	2.9	FW	Elnabarawy, M.T., A.N. Welter, and R.R. Robideau	Relative Sensitivity of Three Daphnid Species to Selected Organic and Inorganic Chemicals	Environ.Toxicol.Chem. 5(4):393-398	1986
32	Chloromethylmercury	Salvelinus fontinalis	Brook Trout	Fish	NR-LETH	MOR	MORT	28	d	T	2.93	FW	McKim, J.M., G.F. Olson, G.W. Holcombe, and E.P. Hunt	Long-Term Effects of Methylmercuric Chloride on Three Generations of Brook Trout (Salvelinus fontinalis): Toxicity, Accumulation, Distribution and Elimination	J.Fish.Res.Board Can. 33(12):2726-2739	1976
33	Chloromethylmercury	Salvelinus fontinalis	Brook Trout	Fish	LOEC	PHY	COGH	8	d	T	3	FW	Drummond, R.A., G.F. Olson, and A.R. Batterman	Cough Response and Uptake of Mercury by Brook Trout, Salvelinus fontinalis, Exposed to Mercuric Compounds at Different Hydrogen-Ion Concentrations	Trans.Am.Fish.Soc. 103(2):244-249 (Author Communication Used)	1974
34	Mercuric nitrate	Moina macrocopa	Water Flea	Crustaceans	LC50	MOR	MORT	1	d	T	3	FW	Pokethitiyook, P., E.S. Upatham, and O. Leelhaphunt	Acute Toxicity of Various Metals to Moina macrocopa	Nat.Hist.Bull.Siam.Soc. 35(1/2):47-56	1987
35	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	LOEC	ENZ	GENZ	2	d	T	3.2	FW	Decoen, W.M., and C.R. Janssen	The Use of Biomarkers in Daphnia magna Toxicity Testing. II. Digestive Enzyme Activity in Daphnia magna Exposed to Sublethal Concentrations of Cadmium, Chromium and Mercury.	Chemosphere 35(5):1053-1067	1997
36	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	LOEC	ENZ	GENZ	2	d	T	3.2	FW	Decoen, W.M., and C.R. Janssen	The Use of Biomarkers in Daphnia magna Toxicity Testing. II. Digestive Enzyme Activity in Daphnia magna Exposed to Sublethal Concentrations of Cadmium, Chromium and Mercury.	Chemosphere 35(5):1053-1067	1997
37	Mercury chloride (HgCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	GPOP	3	d	T	3.28	FW	Chen, C.Y.	Theoretical Evaluation of the Inhibitory Effects of Mercury on Algal Growth at Various Orthophosphate Levels	Water Res.28(4)(): 931-937	1994
38	Mercury chloride (HgCl2)	Daphnia pulex	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	T	3.8	FW	Elnabarawy, M.T., A.N. Welter, and R.R. Robideau	Relative Sensitivity of Three Daphnid Species to Selected Organic and Inorganic Chemicals	Environ.Toxicol.Chem. 5(4):393-398	1986
39	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	T	3.8	FW	Khangarot, B.S., P.K. Ray, and H. Chandra	Daphnia magna as a Model to Assess Heavy Metal Toxicity: Comparative Assessment with Mouse System	Acta Hydrochim.Hydrobiol. 15(4):427-432	1987
40	Chloromethylmercury	Oncorhynchus mykiss	Rainbow Trout	Fish	NR-LETH	MOR	MORT	98	d	T	4	FW	Niimi, A.J., and G.P. Kissoon	Evaluation of the Critical Body Burden Concept Based on Inorganic and Organic Mercury Toxicity to Rainbow Trout (Oncorhynchus mykiss)	Arch.Environ.Contam.Toxicol. 26(2):169-178	1994
41	Mercury chloride (HgCl2)	Daphnia obtusa	Water Flea	Crustaceans	EC50	ITX	IMBL	1	d	T	4	FW	Rossini, G.D.B., and A.E. Ronco	Acute Toxicity Bioassay Using Daphnia obtusa as a Test Organism	Environ.Toxicol.Water Qual. 11(3):255-258	1996
42	Mercury chloride (HgCl2)	Daphnia pulex	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	T	4	FW	Lee, D.R.	Development of an Invertebrate Bioassay to Screen Petroleum Refinery Effluents Discharged into Freshwater	Ph.D.Thesis, Virginia Polytechnic Inst.and State Univ., Blacksburg, VA :108 p.	1976
43	Mercury chloride (HgCl2)	Spirostomum teres	Ciliated Protozoa	Invertebrates	LC50	MOR	MORT	1	d	T	4	FW	Twagilimana, L., J. Bohatier, C-A. Groliere, F. Bonnemoy, and D. Sargos	A New Low-Cost Microbiotest with the Protozoan Spirostomum teres: Culture Conditions and Assessment of Sensitivity of the Ciliate to 14 Pure Chemicals	Ecotoxicol.Environ.Saf. 41(3):231-244	1998
44	Chloromethylmercury	Gasterosteus aculeatus	Threespine Stickleback	Fish	EC50	BEH	EQUL	0.021	d	T	4.27	FW	Deakins, D.E.	The Effects of Methylmercury Chloride on the Survival and Behavior of the Three-Spined Stickleback (Gasterosteus aculeatus L.)	Ph.D.Thesis, University of Southern California, Los Angeles, CA :257 p. (Author Communication Used)	1973
45	Mercury chloride (HgCl2)	Uronema nigricans	Protozoa	Invertebrates	LC50	MOR	MORT	1	d	T	4.3	FW	Madoni, P., G. Esteban, and G. Gorbi	Acute Toxicity of Cadmium, Copper, Mercury, and Zinc to Ciliates from Activated Sludge Plants	Bull.Environ.Contam.Toxicol. 49(6):900-905	1992

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
46	Chloromethylmercury	Gasterosteus aculeatus	Threespine Stickleback	Fish	LC50	MOR	MORT	0.063	d	T	4.6	FW	Deakins, D.E.	The Effects of Methylmercury Chloride on the Survival and Behavior of the Three-Spined Stickleback (Gasterosteus aculeatus L.)	Ph.D.Thesis, University of Southern California, Los Angeles, CA :257 p. (Author Communication Used)	1973
47	Mercury	Caridina rajadhari	Freshwater Prawn	Crustaceans	LC50	MOR	MORT	4	d	T	4.786	FW	Sarojini, R., and B. Victor	Toxicity of Mercury on the Ovaries of the Caridean Prawn, Caridina rajadhari (Bouvier)	Curr.Sci. 54(8):398-400	1985
48	Chloromethylmercury	Gasterosteus aculeatus	Threespine Stickleback	Fish	EC50	BEH	EQUL	0.021	d	T	4.8	FW	Deakins, D.E.	The Effects of Methylmercury Chloride on the Survival and Behavior of the Three-Spined Stickleback (Gasterosteus aculeatus L.)	Ph.D.Thesis, University of Southern California, Los Angeles, CA :257 p. (Author Communication Used)	1973
49	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	EC50*	ITX	IMBL	2	d	T	5	FW	Biesinger, K.E., and G.M. Christensen	Effects of Various Metals on Survival, Growth, Reproduction and Metabolism of Daphnia magna	J.Fish Res.Board Can. 29(12):1691-1700	1972
50	Mercury chloride (HgCl2)	Microcystis aeruginosa	Blue-Green Algae	Algae, Moss, Fungi	LOEC	POP	PGRT	NR	NR	T	5	FW	Bringmann, G., and R. Kuhn	Limiting Values for the Noxious Effects of Water Pollutant Material to Blue Algae (Microcystis aeruginosa) and Green Algae (Scenedesmus quadricauda) in Cell Propagation Inhibition Tests (Grenzwerte der Schadwirkung Wasse	Vom Wasser50(): 45-60	1978
51	Mercury chloride (HgCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	GPOP	3	d	T	5.01	FW	Chen, C.Y.	Theoretical Evaluation of the Inhibitory Effects of Mercury on Algal Growth at Various Orthophosphate Levels	Water Res.28(4)(): 931-937	1994
52	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	T	5.2	FW	Khangarot, B.S., and P.K. Ray	Investigation of Correlation Between Physicochemical Properties of Metals and Their Toxicity to the Water Flea Daphnia magna Straus	Ecotoxicol.Environ.Saf. 18(2):109-120	1989
53	Mercury chloride (HgCl2)	Drepanomonas revoluta	Protozoan	Invertebrates	LC50	MOR	MORT	1	d	T	5.37	FW	Madoni, P., D. Davoli, and G. Gorbi	Acute Toxicity of Lead, Chromium, and Other Heavy Metals to Ciliates from Activated Sludge Plants	Bull.Environ.Contam.Toxicol. 53(3):420-425	1994
54	Mercury chloride (HgCl2)	Daphnia hyalina	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	T	5.5	FW	Baudouin, M.F., and P. Scoppa	Acute Toxicity of Various Metals to Freshwater Zooplankton	Bull.Environ.Contam.Toxicol. 12(6):745-751	1974
55	Mercury	Caridina rajadhari	Freshwater Prawn	Crustaceans	LC50	MOR	MORT	3	d	T	5.784	FW	Sarojini, R., and B. Victor	Toxicity of Mercury on the Ovaries of the Caridean Prawn, Caridina rajadhari (Bouvier)	Curr.Sci. 54(8):398-400	1985
56	Mercury chloride (HgCl2)	Spirostomum teres	Ciliated Protozoa	Invertebrates	LC50	MOR	MORT	1	d	T	5.94	FW	Madoni, P., D. Davoli, and G. Gorbi	Acute Toxicity of Lead, Chromium, and Other Heavy Metals to Ciliates from Activated Sludge Plants	Bull.Environ.Contam.Toxicol. 53(3):420-425	1994
57	Chloromethylmercury	Salvelinus fontinalis	Brook Trout	Fish	LOEC	PHY	COGH	3	d	T	6	FW	Drummond, R.A., G.F. Olson, and A.R. Batterman	Cough Response and Uptake of Mercury by Brook Trout, Salvelinus fontinalis, Exposed to Mercuric Compounds at Different Hydrogen-Ion Concentrations	Trans.Am.Fish.Soc. 103(2):244-249 (Author Communication Used)	1974
58	Chloromethylmercury	Salvelinus fontinalis	Brook Trout	Fish	LOEC	PHY	COGH	4	d	T	6	FW	Drummond, R.A., G.F. Olson, and A.R. Batterman	Cough Response and Uptake of Mercury by Brook Trout, Salvelinus fontinalis, Exposed to Mercuric Compounds at Different Hydrogen-Ion Concentrations	Trans.Am.Fish.Soc. 103(2):244-249 (Author Communication Used)	1974
59	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	T	6	FW	Barera, Y., and W.J. Adams	Resolving Some Practical Questions About Daphnia Acute Toxicity Tests	In: W.E.Bishop (Ed.), Aquatic Toxicology and Hazard Assessment, 6th Symposium, ASTM STP 802, Philadelphia, PA :509-518	1983
60	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	T	6	FW	Barera, Y., and W.J. Adams	Resolving Some Practical Questions About Daphnia Acute Toxicity Tests	In: W.E.Bishop (Ed.), Aquatic Toxicology and Hazard Assessment, 6th Symposium, ASTM STP 802, Philadelphia, PA :509-518	1983
61	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	T	6	FW	Adams, W.J., and B.B. Heidolph	Short-Cut Chronic Toxicity Estimates Using Daphnia magna	In: R.D.Cardwell, R.Purdy and R.C.Bahner (Eds.), Aquatic Toxicology and Hazard Assessment, Seventh Symposium, ASTM STP 854, Philadelphia, PA :87-103	1985
62	Chloromethylmercury	Gasterosteus aculeatus	Threespine Stickleback	Fish	LC50	MOR	MORT	0.063	d	T	6.46	FW	Deakins, D.E.	The Effects of Methylmercury Chloride on the Survival and Behavior of the Three-Spined Stickleback (Gasterosteus aculeatus L.)	Ph.D.Thesis, University of Southern California, Los Angeles, CA :257 p. (Author Communication Used)	1973
63	Chloromethylmercury	Gasterosteus aculeatus	Threespine Stickleback	Fish	EC50	BEH	EQUL	0.010	d	T	6.8	FW	Deakins, D.E.	The Effects of Methylmercury Chloride on the Survival and Behavior of the Three-Spined Stickleback (Gasterosteus aculeatus L.)	Ph.D.Thesis, University of Southern California, Los Angeles, CA :257 p. (Author Communication Used)	1973
64	Mercury	Caridina rajadhari	Freshwater Prawn	Crustaceans	LC50	MOR	MORT	2	d	T	6.918	FW	Sarojini, R., and B. Victor	Toxicity of Mercury on the Ovaries of the Caridean Prawn, Caridina rajadhari (Bouvier)	Curr.Sci. 54(8):398-400	1985
65	Mercury chloride (HgCl2)	Bufo melanostictus	Common Indian Toad	Amphibians	LC50	MOR	MORT	0.5	d	T	6.98	FW	Khangarot, B.S., and P.K. Ray	Sensitivity of Toad Tadpoles, Bufo melanostictus (Schneider), to Heavy Metals	Bull.Environ.Contam.Toxicol. 38(3):523-527	1987
66	Chloromethylmercury	Gasterosteus aculeatus	Threespine Stickleback	Fish	NR-LETH	MOR	MORT	0.022	d	T	7	FW	Deakins, D.E.	The Effects of Methylmercury Chloride on the Survival and Behavior of the Three-Spined Stickleback (Gasterosteus aculeatus L.)	Ph.D.Thesis, University of Southern California, Los Angeles, CA :257 p. (Author Communication Used)	1973
67	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	T	7	FW	Barera, Y., and W.J. Adams	Resolving Some Practical Questions About Daphnia Acute Toxicity Tests	In: W.E.Bishop (Ed.), Aquatic Toxicology and Hazard Assessment, 6th Symposium, ASTM STP 802, Philadelphia, PA :509-518	1983
68	Chloromethylmercury	Gasterosteus aculeatus	Threespine Stickleback	Fish	EC50	BEH	EQUL	0.042	d	T	7.59	FW	Deakins, D.E.	The Effects of Methylmercury Chloride on the Survival and Behavior of the Three-Spined Stickleback (Gasterosteus aculeatus L.)	Ph.D.Thesis, University of Southern California, Los Angeles, CA :257 p. (Author Communication Used)	1973
69	Chloromethylmercury	Gasterosteus aculeatus	Threespine Stickleback	Fish	EC50	BEH	EQUL	0.010	d	T	7.7	FW	Deakins, D.E.	The Effects of Methylmercury Chloride on the Survival and Behavior of the Three-Spined Stickleback (Gasterosteus aculeatus L.)	Ph.D.Thesis, University of Southern California, Los Angeles, CA :257 p. (Author Communication Used)	1973

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
70	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	T	8	FW	Oikari, A., J. Kukkonen, and V. Virtanen	Acute Toxicity of Chemicals to Daphnia magna in Humic Waters	Sci.Total Environ. 117/118:367-377 (Publ in Part As 12827, 16674)	1992
71	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	1	d	T	8.1	FW	Khangarot, B.S., and P.K. Ray	Investigation of Correlation Between Physicochemical Properties of Metals and Their Toxicity to the Water Flea Daphnia magna Straus	Ecotoxicol.Environ.Saf. 18(2):109-120	1989
72	Mercury	Hyalella azteca	Scud	Crustaceans	LC50	MOR	MORT	7	d	T	8.4	FW	Borgmann, U., Y. Couillard, P. Doyle, and D.G. Dixon	Toxicity of Sixty-Three Metals and Metalloids to Hyalella azteca at Two Levels of Water Hardness	Environ.Toxicol.Chem. 24(3):641-652	2005
73	Chloromethylmercury	Gasterosteus aculeatus	Threespine Stickleback	Fish	EC50	BEH	EQUL	0.021	d	T	8.64	FW	Deakins, D.E.	The Effects of Methylmercury Chloride on the Survival and Behavior of the Three-Spined Stickleback (Gasterosteus aculeatus L.)	Ph.D.Thesis, University of Southern California, Los Angeles, CA :257 p. (Author Communication Used)	1973
74	Chloromethylmercury	Oncorhynchus mykiss	Rainbow Trout	Fish	NR-LETH	MOR	MORT	33	d	T	9	FW	Niimi, A.J., and G.P. Kissoon	Evaluation of the Critical Body Burden Concept Based on Inorganic and Organic Mercury Toxicity to Rainbow Trout (Oncorhynchus mykiss)	Arch.Environ.Contam.Toxicol. 26(2):169-178	1994
75	Mercury chloride (HgCl2)	Daphnia pulex	Water Flea	Crustaceans	LC50	MOR	MORT	1	d	T	9	FW	Lee, D.R.	Development of an Invertebrate Bioassay to Screen Petroleum Refinery Effluents Discharged into Freshwater	Ph.D.Thesis, Virginia Polytechnic Inst.and State Univ., Blacksburg, VA :108 p.	1976
76	Mercury	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	GPOP	4	d	T	9	FW	Chen, C.Y., K.C. Lin, and D.T. Yang	Comparison of the Relative Toxicity Relationships Based on Batch and Continuous Algal Toxicity Tests	Chemosphere35(9): 1959-1965	1997
77	Mercury	Caridina rajadhari	Freshwater Prawn	Crustaceans	LC50	MOR	MORT	1	d	T	9.12	FW	Sarojini, R., and B. Victor	Toxicity of Mercury on the Ovaries of the Caridean Prawn, Caridina rajadhari (Bouvier)	Curr.Sci. 54(8):398-400	1985
78	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	1	d	T	9.4	FW	Khangarot, B.S., P.K. Ray, and H. Chandra	Daphnia magna as a Model to Assess Heavy Metal Toxicity: Comparative Assessment with Mouse System	Acta Hydrochim.Hydrobiol. 15(4):427-432	1987
79	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	T	9.6	FW	Elnabarawy, M.T., A.N. Welter, and R.R. Robideau	Relative Sensitivity of Three Daphnid Species to Selected Organic and Inorganic Chemicals	Environ.Toxicol.Chem. 5(4):393-398	1986
80	Chloromethylmercury	Oncorhynchus mykiss	Rainbow Trout	Fish	NR-LETH	MOR	MORT	32	d	T	10	FW	Niimi, A.J., and G.P. Kissoon	Evaluation of the Critical Body Burden Concept Based on Inorganic and Organic Mercury Toxicity to Rainbow Trout (Oncorhynchus mykiss)	Arch.Environ.Contam.Toxicol. 26(2):169-178	1994
81	Mercury	Gammarus sp.	Scud, Amphipod	Crustaceans	LC50*	MOR	MORT	4	d	T	10	FW	Rehwoldt, R., L. Lasko, C. Shaw, and E. Wirhowski	The Acute Toxicity of Some Heavy Metal Ions Toward Benthic Organisms	Bull.Environ.Contam.Toxicol. 10(5):291-294	1973
82	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	T	10	FW	Janssen, C.R., and G. Persoone	Rapid Toxicity Screening Tests for Aquatic Biota. 1. Methodology and Experiments with Daphnia magna	Environ.Toxicol.Chem. 12:711-717	1993
83	Chloromethylmercury	Gasterosteus aculeatus	Threespine Stickleback	Fish	LC50	MOR	MORT	0.042	d	T	10.02	FW	Deakins, D.E.	The Effects of Methylmercury Chloride on the Survival and Behavior of the Three-Spined Stickleback (Gasterosteus aculeatus L.)	Ph.D.Thesis, University of Southern California, Los Angeles, CA :257 p. (Author Communication Used)	1973
84	Mercury chloride (HgCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	T	10.03	FW	Hockett, J.R., and D.R. Mount	Use of Metal Chelating Agents to Differentiate Among Sources of Acute Aquatic Toxicity	Environ.Toxicol.Chem. 15(10):1687-1693	1996
85	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	T	10.1	FW	Guilhermino, L., T.C. Diamantino, R. Ribeiro, F. Goncalves, and A.M.V.M. Soares	Suitability of Test Media Containing EDTA for the Evaluation of Acute Metal Toxicity to Daphnia magna Straus	Ecotoxicol.Environ.Saf. 38(3):292-295	1997
86	Mercury	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	GPOP	3	d	T	11	FW	Van der Heever, J.A., and J.U. Grobbelaar	The Use of Selenastrum capricornutum Growth Potential as a Measure of Toxicity of a Few Selected Compounds	Water SA22(2): 183-191	1996
87	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	T	11.3	FW	Guilhermino, L., T.C. Diamantino, R. Ribeiro, F. Goncalves, and A.M.V.M. Soares	Suitability of Test Media Containing EDTA for the Evaluation of Acute Metal Toxicity to Daphnia magna Straus	Ecotoxicol.Environ.Saf. 38(3):292-295	1997
88	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	T	12	FW	Barera, Y., and W.J. Adams	Resolving Some Practical Questions About Daphnia Acute Toxicity Tests	In: W.E.Bishop (Ed.), Aquatic Toxicology and Hazard Assessment, 6th Symposium, ASTM STP 802, Philadelphia, PA :509-518	1983
89	Mercury chloride (HgCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	1	d	T	12.04	FW	Hockett, J.R., and D.R. Mount	Use of Metal Chelating Agents to Differentiate Among Sources of Acute Aquatic Toxicity	Environ.Toxicol.Chem. 15(10):1687-1693	1996
90	Mercury chloride (HgCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	T	12.04	FW	Hockett, J.R., and D.R. Mount	Use of Metal Chelating Agents to Differentiate Among Sources of Acute Aquatic Toxicity	Environ.Toxicol.Chem. 15(10):1687-1693	1996
91	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	1	d	T	12.2	FW	Guilhermino, L., T.C. Diamantino, R. Ribeiro, F. Goncalves, and A.M.V.M. Soares	Suitability of Test Media Containing EDTA for the Evaluation of Acute Metal Toxicity to Daphnia magna Straus	Ecotoxicol.Environ.Saf. 38(3):292-295	1997
92	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	1	d	T	12.4	FW	Guilhermino, L., T.C. Diamantino, R. Ribeiro, F. Goncalves, and A.M.V.M. Soares	Suitability of Test Media Containing EDTA for the Evaluation of Acute Metal Toxicity to Daphnia magna Straus	Ecotoxicol.Environ.Saf. 38(3):292-295	1997
93	Mercury chloride (HgCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	GPOP	3	d	T	12.9	FW	Chen, C.Y.	Theoretical Evaluation of the Inhibitory Effects of Mercury on Algal Growth at Various Orthophosphate Levels	Water Res.28(4)(): 931-937	1994
94	Chloromethylmercury	Oncorhynchus mykiss	Rainbow Trout	Fish	NR-LETH	MOR	MORT	23	d	T	13	FW	Niimi, A.J., and G.P. Kissoon	Evaluation of the Critical Body Burden Concept Based on Inorganic and Organic Mercury Toxicity to Rainbow Trout (Oncorhynchus mykiss)	Arch.Environ.Contam.Toxicol. 26(2):169-178	1994
95	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	LC50	ITX	IMBL	1	d	T	13	FW	Bringmann, G., and R. Kuhn	Results of the Damaging Effect of Water Pollutants on Daphnia magna (Befunde der Schadwirkung Wassergefahrdender Stoffe Gegen Daphnia magna)	Z.Wasser-Abwasser-Forsch. 10(5):161-166(ENG TRANSL)(OECDG Data File)(GER)(ENG ABS)	1977

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
96	Mercury chloride (HgCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	14	d	T	13	FW	Calamari, D., and R. Marchetti	The Toxicity of Mixtures of Metals and Surfactants to Rainbow Trout (Salmo gairdneri Rich.)	Water Res. 7(10):1453-1464	1973
97	Chloromethylmercury	Gasterosteus aculeatus	Threespine Stickleback	Fish	LC50	MOR	MORT	0.063	d	T	13.6	FW	Deakins, D.E.	The Effects of Methylmercury Chloride on the Survival and Behavior of the Three-Spined Stickleback (Gasterosteus aculeatus L.)	Ph.D.Thesis, University of Southern California, Los Angeles, CA :257 p. (Author Communication Used)	1973
98	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	1	d	T	14	FW	Adams, W.J., and B.B. Heidolph	Short-Cut Chronic Toxicity Estimates Using Daphnia magna	In: R.D.Cardwell, R.Purdy and R.C.Bahner (Eds.), Aquatic Toxicology and Hazard Assessment, Seventh Symposium, ASTM STP 854, Philadelphia, PA :87-103	1985
99	Mercury chloride (HgCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	14	d	T	14	FW	Calamari, D., and R. Marchetti	The Toxicity of Mixtures of Metals and Surfactants to Rainbow Trout (Salmo gairdneri Rich.)	Water Res. 7(10):1453-1464	1973
100	Mercury chloride (HgCl2)	Villosa iris	Rainbow	Molluscs	LC50	MOR	MORT	3	d	T	14	FW	Valenti, T.W., D.S. Cherry, R.J. Neves, and J. Schmerfeld	Acute and Chronic Toxicity of Mercury to Early Life Stages of the Rainbow Mussel, Villosa iris (Bivalvia: Unionidae)	Environ.Toxicol.Chem. 24(5):1242-1246	2005
101	Mercury chloride (HgCl2)	Tubifex tubifex	Tubificid Worm	Worms	EC50	MOR	MORT	3	d	T	14	FW	Rathore, R.S., and B.S. Khangarot	Effects of Temperature on the Sensitivity of Sludge Worm Tubifex tubifex Muller to Selected Heavy Metals	Ecotoxicol.Environ.Saf. 53(1):27-36	2002
102	Mercury chloride (HgCl2)	Tubifex tubifex	Tubificid Worm	Worms	EC50	MOR	MORT	4	d	T	14	FW	Rathore, R.S., and B.S. Khangarot	Effects of Temperature on the Sensitivity of Sludge Worm Tubifex tubifex Muller to Selected Heavy Metals	Ecotoxicol.Environ.Saf. 53(1):27-36	2002
103	Mercury chloride (HgCl2)	Tropocyclops prasinus ssp. mexicanus	Cyclopoid Copepod	Crustaceans	EC50	ITX	IMBL	2	d	T	15	FW	Lalande, M., and B. Pinel-Alloul	Acute Toxicity of Cadmium, Copper, Mercury and Zinc to Tropocyclops Prasinus mexicanus (Cyclopoida, Copepoda) from Three Quebec Lakes	Environ.Toxicol.Chem. 5(1):95-102	1986
104	Mercury chloride (HgCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	T	16	FW	Calamari, D., and R. Marchetti	The Toxicity of Mixtures of Metals and Surfactants to Rainbow Trout (Salmo gairdneri Rich.)	Water Res. 7(10):1453-1464	1973
105	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	T	17	FW	Barera, Y., and W.J. Adams	Resolving Some Practical Questions About Daphnia Acute Toxicity Tests	In: W.E.Bishop (Ed.), Aquatic Toxicology and Hazard Assessment, 6th Symposium, ASTM STP 802, Philadelphia, PA :509-518	1983
106	Mercury chloride (HgCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	4	d	T	17	FW	Hamilton, S.J., and K.J. Buhl	Safety Assessment of Selected Inorganic Elements to Fry of Chinook Salmon (Oncorhynchus tshawytscha)	Ecotoxicol.Environ.Saf. 20(3):307-324	1990
107	Mercury chloride (HgCl2)	Blepharisma americanum	Protozoan	Invertebrates	LC50	MOR	MORT	1	d	T	17.5	FW	Madoni, P., G. Esteban, and G. Gorbi	Acute Toxicity of Cadmium, Copper, Mercury, and Zinc to Ciliates from Activated Sludge Plants	Bull.Environ.Contam.Toxicol. 49(6):900-905	1992
108	Mercury chloride (HgCl2)	Colpidium campylum	Ciliate	Invertebrates	LC50	MOR	MORT	1	d	T	17.5	FW	Madoni, P., G. Esteban, and G. Gorbi	Acute Toxicity of Cadmium, Copper, Mercury, and Zinc to Ciliates from Activated Sludge Plants	Bull.Environ.Contam.Toxicol. 49(6):900-905	1992
109	Mercury chloride (HgCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	1	d	T	19	FW	Hamilton, S.J., and K.J. Buhl	Safety Assessment of Selected Inorganic Elements to Fry of Chinook Salmon (Oncorhynchus tshawytscha)	Ecotoxicol.Environ.Saf. 20(3):307-324	1990
110	Mercury chloride (HgCl2)	Lemna minor	Duckweed	Flowers, Trees, Shrubs, Ferns	EC10	BCM	CARC	7	d	T	19	FW	Naumann, B., M. Eberius, and K.J. Appenroth	Growth Rate Based Dose-Response Relationships and EC-Values of Ten Heavy Metals Using the Duckweed Growth Inhibition Test (ISO 20079) with Lemna minor L. Clone St	J. Plant Physiol.164(12): 1656-1664	2007
111	Mercury chloride (HgCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	PGRT	4	d	T	19.5	FW	Hickey, C.W., C. Blaise, and G. Costan	Microtesting Appraisal of ATP and Cell Recovery Toxicity End Points After Acute Exposure of Selenastrum capricornutum to Selected Chemicals	Environ. Toxicol. Water Qual.6(4): 383-403	1991
112	Chloromethylmercury	Petromyzon marinus	Sea Lamprey	Fish	LC50	MOR	MORT	6	d	T	20	FW	Mallatt, J., M.G. Barron, and C. McDonough	Acute Toxicity of Methyl Mercury to the Larval Lamprey, Petromyzon marinus	Bull.Environ.Contam.Toxicol. 37(2):281-288	1986
113	Mercury	Chironomus sp.	Midge	Insects/Spiders	LC50*	MOR	MORT	4	d	T	20	FW	Rehwoldt, R., L. Lasko, C. Shaw, and E. Wirhowski	The Acute Toxicity of Some Heavy Metal Ions Toward Benthic Organisms	Bull.Environ.Contam.Toxicol. 10(5):291-294	1973
114	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ENZ	GENZ	0.042	d	T	20	FW	Janssen, C.R., and G. Persoone	Rapid Toxicity Screening Tests for Aquatic Biota. 1. Methodology and Experiments with Daphnia magna	Environ.Toxicol.Chem. 12:711-717	1993
115	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	T	20	FW	Barera, Y., and W.J. Adams	Resolving Some Practical Questions About Daphnia Acute Toxicity Tests	In: W.E.Bishop (Ed.), Aquatic Toxicology and Hazard Assessment, 6th Symposium, ASTM STP 802, Philadelphia, PA :509-518	1983
116	Mercury chloride (HgCl2)	Austropotamobius pallipes ssp. pall	Crayfish	Crustaceans	LC50*	MOR	MORT	4	d	T	20	FW	Boutet, C., and C. Chaisemartin	Specific Toxic Properties of Metallic Salts in Austro-potamobius pallipes pallipes and Orconectes limosus (Proprietes Toxiques Specifiques des sels Metalliques chez Austropotamobius pallipes pallipes et Orconectes limosu	C.R.Seances Soc.Biol.Fil. 167(12):1933-1938 (FRE) (ENG TRANSL)	1973
117	Mercury chloride (HgCl2)	Paramecium caudatum	Ciliate	Invertebrates	LC50	MOR	MORT	1	d	T	20	FW	Madoni, P., G. Esteban, and G. Gorbi	Acute Toxicity of Cadmium, Copper, Mercury, and Zinc to Ciliates from Activated Sludge Plants	Bull.Environ.Contam.Toxicol. 49(6):900-905	1992
118	Sulfuric acid, Mercury(2+) salt(1:1)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC100	MOR	MORT	2	d	T	20	FW	Tsui, M.T.K., W.X. Wang, and L.M. Chu	Influence of Glyphosate and Its Formulation (Roundup) on the Toxicity and Bioavailability of Metals to Ceriodaphnia dubia	Environ.Pollut. 138(1):59-68	2005
119	Mercury chloride (HgCl2)	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	1	d	T	20.06	FW	Hockett, J.R., and D.R. Mount	Use of Metal Chelating Agents to Differentiate Among Sources of Acute Aquatic Toxicity	Environ.Toxicol.Chem. 15(10):1687-1693	1996
120	Mercury chloride (HgCl2)	Spirostomum ambiguum	Protozoa	Invertebrates	EC50	DVP	DFRM	1	d	T	20.2	FW	Nalecz-Jawecki, G., and J. Sawicki	Toxicity of Inorganic Compounds in the Spirotox Test: A Miniaturized Version of the Spirostomum ambiguum Test	Arch.Environ.Contam.Toxicol. 34(1):1-5	1998
121	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	LC100	ITX	IMBL	1	d	T	21	FW	Bringmann, G., and R. Kuhn	Results of the Damaging Effect of Water Pollutants on Daphnia magna (Befunde der Schadwirkung Wassergefahrdender Stoffe Gegen Daphnia magna)	Z.Wasser-Abwasser-Forsch. 10(5):161-166(ENG TRANSL)(OECDG Data File)(GER)(ENG ABS)	1977

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
122	Mercury	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	PHY	RESP	0.021	d	T	21	FW	Van der Heever, J.A., and J.U. Grobbelaar	The Use of Oxygen Evolution to Assess the Short-Term Effects of Toxicants on Algal Photosynthetic Rates	Water SA23(3): 233-237	1997
123	Mercury chloride (HgCl2)	Lemna minor	Duckweed	Flowers, Trees, Shrubs, Ferns	EC10	GRO	DWGT	7	d	T	21	FW	Naumann, B., M. Eberius, and K.J. Appenroth	Growth Rate Based Dose-Response Relationships and EC-Values of Ten Heavy Metals Using the Duckweed Growth Inhibition Test (ISO 20079) with Lemna minor L. Clone St	J. Plant Physiol.164(12): 1656-1664	2007
124	Mercury chloride (HgCl2)	Spirostomum ambiguum	Protozoa	Invertebrates	EC50	DVP	DFRM	2	d	T	21.3	FW	Nalecz-Jawecki, G., and J. Sawicki	Toxicity of Inorganic Compounds in the Spirotox Test: A Miniaturized Version of the Spirostomum ambiguum Test	Arch.Environ.Contam.Toxicol. 34(1):1-5	1998
125	Mercury chloride (HgCl2)	Chydorus sphaericus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	T	22	FW	Lalande, M., and B. Pinel-Alloul	Acute Toxicity of Cadmium, Copper, Mercury and Zinc to Chydorus sphaericus (Cladocera) from Three Quebec Lakes	Water Pollut.Res.J.Can. 18:103-113	1983
126	Mercury chloride (HgCl2)	Spirostomum ambiguum	Protozoa	Invertebrates	LC50	MOR	MORT	1	d	T	23.8	FW	Nalecz-Jawecki, G., K. Demkowicz-Dobrzanski, and J. Sawicki	Protozoan Spirostomum ambiguum as a Highly Sensitive Bioindicator for Rapid and Easy Determination of Water Quality	Sci.Total Environ. Suppl(Pt.2):1227-1234	1993
127	Mercury chloride (HgCl2)	Daphnia pulex	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	T	24.56	FW	Jindal, R., and A. Verma	Heavy Metal Toxicity to Daphnia pulex	Indian J.Environ.Health 32(3):289-292	1990
128	(Acetato-kappaO)phenylmercury	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50*	MOR	MORT	1	d	T	25	FW	MacLeod, J.C., and E. Pessah	Temperature Effects on Mercury Accumulation, Toxicity, and Metabolic Rate in Rainbow Trout (Salmo gairdneri)	J.Fish.Res.Board Can. 30:485-492	1973
129	Chloromethylmercury	Petromyzon marinus	Sea Lamprey	Fish	LC50	MOR	MORT	7	d	T	26	FW	Mallatt, J., M.G. Barron, and C. McDonough	Acute Toxicity of Methyl Mercury to the Larval Lamprey, Petromyzon marinus	Bull.Environ.Contam.Toxicol. 37(2):281-288	1986
130	Mercury chloride (HgCl2)	Brachionus calyciflorus	Rotifer	Invertebrates	LC50	MOR	MORT	1	d	T	26	FW	Couillard, Y., P. Ross, and B. Pinel-Alloul	Acute Toxicity of Six Metals to the Rotifer Brachionus calyciflorus, with Comparisons to Other Freshwater Organisms	Toxic.Assess. 4(4):451-462	1989
131	Mercury chloride (HgCl2)	Tubifex tubifex	Tubificid Worm	Worms	EC50	MOR	MORT	4	d	T	26	FW	Rathore, R.S., and B.S. Khangarot	Effects of Temperature on the Sensitivity of Sludge Worm Tubifex tubifex Muller to Selected Heavy Metals	Ecotoxicol.Environ.Saf. 53(1):27-36	2002
132	Mercury chloride (HgCl2)	Lemna minor	Duckweed	Flowers, Trees, Shrubs, Ferns	EC10	GRO	WGHT	7	d	T	26	FW	Naumann, B., M. Eberius, and K.J. Appenroth	Growth Rate Based Dose-Response Relationships and EC-Values of Ten Heavy Metals Using the Duckweed Growth Inhibition Test (ISO 20079) with Lemna minor L. Clone St	J. Plant Physiol.164(12): 1656-1664	2007
133	Mercury	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	GPOP	1	d	T	27	FW	Chen, C.Y., K.C. Lin, and D.T. Yang	Comparison of the Relative Toxicity Relationships Based on Batch and Continuous Algal Toxicity Tests	Chemosphere35(9): 1959-1965	1997
134	Mercury chloride (HgCl2)	Lemna minor	Duckweed	Flowers, Trees, Shrubs, Ferns	EC10	BCM	CHLO	7	d	T	27	FW	Naumann, B., M. Eberius, and K.J. Appenroth	Growth Rate Based Dose-Response Relationships and EC-Values of Ten Heavy Metals Using the Duckweed Growth Inhibition Test (ISO 20079) with Lemna minor L. Clone St	J. Plant Physiol.164(12): 1656-1664	2007
135	Mercury chloride (HgCl2)	Macrobrachium kistnensis	Shrimp	Crustaceans	LC50	MOR	MORT	2	d	T	27.96	FW	Ghate, H.V.	Gill Melanization and Heavy Metals in Freshwater Prawns	Indian J.Fish. 31(3):389-393	1984
136	Mercury chloride (HgCl2)	Daphnia rosea	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	T	28	FW	Lalande, M., and B. Pinel-Alloul	Heavy Metals Toxicity on Planktonic Crustacea of the Quebec Lakes (Toxicite des Metaux Lourds sur les Crustaces Planctoniques des Lacs du Quebec)	Sci.Tech.Eau 17(3):253-259 (FRE) (ENG ABS)	1984
137	Mercury chloride (HgCl2)	Cirrhinus mrigala	Carp, Hawk Fish	Fish	LC50	MOR	MORT	4	d	T	28	FW	Mohan, C.V., T.R.C. Gupta, and N.R. Menon	Acute Toxicity of Mercury on the Early Developmental Stages of Cirrhina mrigala (Ham.)	Indian J.Fish. 33(1):133-136	1986
138	Mercury chloride (HgCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	GPOP	3	d	T	28.3	FW	Chen, C.Y.	Theoretical Evaluation of the Inhibitory Effects of Mercury on Algal Growth at Various Orthophosphate Levels	Water Res.28(4)(): 931-937	1994
139	Chloromethylmercury	Petromyzon marinus	Sea Lamprey	Fish	LC50	MOR	MORT	6	d	T	29	FW	Mallatt, J., M.G. Barron, and C. McDonough	Acute Toxicity of Methyl Mercury to the Larval Lamprey, Petromyzon marinus	Bull.Environ.Contam.Toxicol. 37(2):281-288	1986
140	Mercury chloride (Hg2Cl2)	Chironomus tentans	Midge	Insects/Spiders	EC50	ITX	IMBL	2	d	T	29	FW	Khangarot, B.S., and P.K. Ray	Sensitivity of Midge Larvae of Chironomus tentans Fabricius (Diptera Chironomidae) to Heavy Metals	Bull.Environ.Contam.Toxicol. 42(3):325-330	1989
141	Mercury chloride (HgCl2)	Lemna minor	Duckweed	Flowers, Trees, Shrubs, Ferns	EC10	GRO	GRRT	7	d	T	29	FW	Naumann, B., M. Eberius, and K.J. Appenroth	Growth Rate Based Dose-Response Relationships and EC-Values of Ten Heavy Metals Using the Duckweed Growth Inhibition Test (ISO 20079) with Lemna minor L. Clone St	J. Plant Physiol.164(12): 1656-1664	2007
142	Mercury chloride (HgCl2)	Tubifex tubifex	Tubificid Worm	Worms	EC50	MOR	MORT	3	d	T	29.8	FW	Rathore, R.S., and B.S. Khangarot	Effects of Temperature on the Sensitivity of Sludge Worm Tubifex tubifex Muller to Selected Heavy Metals	Ecotoxicol.Environ.Saf. 53(1):27-36	2002
143	Mercury	Culicoides furens	Little Gray Punkie	Insects/Spiders	LC50	MOR	MORT	4	d	T	30	FW	Vedamanikam, V.J., and N.A.M. Shazilli	The Effect of Multi-Generational Exposure to Metals and Resultant Change in Median Lethal Toxicity Tests Values over Subsequent Generations	Bull.Environ.Contam.Toxicol. 80(1):63-67	2008
144	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	1	d	T	30	FW	Janssen, C.R., and G. Persoone	Rapid Toxicity Screening Tests for Aquatic Biota. 1. Methodology and Experiments with Daphnia magna	Environ.Toxicol.Chem. 12:711-717	1993
145	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	LOEL	PHY	OXYG	0.010	d	T	30	FW	Martins, J.C., M.L. Saker, L.F. Oliva Teles, and V.M. Vasconcelos	Oxygen Consumption by Daphnia magna Straus as a Marker of Chemical Stress in the Aquatic Environment	Environ.Toxicol.Chem. 26(9):1987-1991	2007
146	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	LOEL	PHY	OXYG	0.146	d	T	30	FW	Martins, J.C., M.L. Saker, L.F. Oliva Teles, and V.M. Vasconcelos	Oxygen Consumption by Daphnia magna Straus as a Marker of Chemical Stress in the Aquatic Environment	Environ.Toxicol.Chem. 26(9):1987-1991	2007
147	Mercury	Chlorella vulgaris	Green Algae	Algae, Moss, Fungi	EC10	PHY	RESP	0.021	d	T	30	FW	Van der Heever, J.A., and J.U. Grobbelaar	The Use of Oxygen Evolution to Assess the Short-Term Effects of Toxicants on Algal Photosynthetic Rates	Water SA23(3): 233-237	1997

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
148	Mercury	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	GPOP	1	d	T	30	FW	Van der Heever, J.A., and J.U. Grobbelaar	The Use of Selenastrum capricornutum Growth Potential as a Measure of Toxicity of a Few Selected Compounds	Water SA22(2): 183-191	1996
149	Mercury chloride (HgCl2)	Spirostomum ambiguum	Protozoa	Invertebrates	LC50	MOR	MORT	1	d	T	30.4	FW	Nalecz-Jawecki, G., K. Demkowicz-Dobrzanski, and J. Sawicki	Protozoan Spirostomum ambiguum as a Highly Sensitive Bioindicator for Rapid and Easy Determination of Water Quality	Sci.Total Environ. Suppl(Pt.2):1227-1234	1993
150	(Acetato-kappaO)phenylmercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50*	MOR	MORT	1	d	T	32	FW	Akiyama, A.	Acute Toxicity of Two Organic Mercury Compounds to the Teleost, Oryzias latipes, in Different Stages of Development	Bull.Jpn.Soc.Sci.Fish. 36(6):563-570	1970
151	(Acetato-kappaO)phenylmercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50*	MOR	MORT	1	d	T	32	FW	Akiyama, A.	Acute Toxicity of Two Organic Mercury Compounds to the Teleost, Oryzias latipes, in Different Stages of Development	Bull.Jpn.Soc.Sci.Fish. 36(6):563-570	1970
152	Chloromethylmercury	Petromyzon marinus	Sea Lamprey	Fish	LC50	MOR	MORT	5	d	T	33	FW	Mallatt, J., M.G. Barron, and C. McDonough	Acute Toxicity of Methyl Mercury to the Larval Lamprey, Petromyzon marinus	Bull.Environ.Contam.Toxicol. 37(2):281-288	1986
153	Mercury chloride (HgCl2)	Streptocephalus proboscideus	Fairy Shrimp	Crustaceans	LC50	MOR	MORT	1	d	T	33	FW	Centeno, M.D., L. Brendonck, and G. Persoone	Cyst-Based Toxicity Tests. III. Development and Standardization of an Acute Toxicity Test with the Freshwater Anostracan Crustacean Streptocephalus proboscideus	In: A.M.V.M.Soares and P.Calow (Eds.), Progress in Standardization of Aquatic Toxicity Tests, Lewis Publishers :37-55	1993
154	Sulfuric acid, Mercury(2+) salt(1:1)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	GRO	GGRO	14	d	T	33	FW	Vocke, R.W., K.L. Sears, J.J. O'Toole, and R.B. Wildman	Growth Responses of Selected Freshwater Algae to Trace Elements and Scrubber Ash Slurry Generated by Coal-Fired Power Plants	Water Res.14(2): 141-150	1980
155	Chloromethylmercury	Oncorhynchus mykiss	Rainbow Trout	Fish	NR-LETH	MOR	MORT	1	d	T	34	FW	Niimi, A.J., and G.P. Kissoon	Evaluation of the Critical Body Burden Concept Based on Inorganic and Organic Mercury Toxicity to Rainbow Trout (Oncorhynchus mykiss)	Arch.Environ.Contam.Toxicol. 26(2):169-178	1994
156	Mercury chloride (HgCl2)	Tubifex tubifex	Tubificid Worm	Worms	EC50	MOR	MORT	4	d	T	34	FW	Rathore, R.S., and B.S. Khangarot	Effects of Temperature on the Sensitivity of Sludge Worm Tubifex tubifex Muller to Selected Heavy Metals	Ecotoxicol.Environ.Saf. 53(1):27-36	2002
157	(Acetato-kappaO)phenylmercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50*	MOR	MORT	1	d	T	36	FW	Akiyama, A.	Acute Toxicity of Two Organic Mercury Compounds to the Teleost, Oryzias latipes, in Different Stages of Development	Bull.Jpn.Soc.Sci.Fish. 36(6):563-570	1970
158	Mercury chloride (HgCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	1	d	T	36	FW	Calamari, D., and R. Marchetti	The Toxicity of Mixtures of Metals and Surfactants to Rainbow Trout (Salmo gairdneri Rich.)	Water Res. 7(10):1453-1464	1973
159	(Acetato-kappaO)phenylmercury	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	4	d	T	37	FW	Joshi, A.G., and M.S. Rege	Acute Toxicity of Some Pesticides & a Few Inorganic Salts to the Mosquito Fish Gambusia affinis (Baird & Girard)	Indian J.Exp.Biol. 18:435-437	1980
160	Mercury chloride (HgCl2)	Chlorella vulgaris	Green Algae	Algae, Moss, Fungi	LOEC	POP	GPOP	NR	d	T	37	FW	De Jong, L.E.D.	Tolerance of Chlorella vulgaris for Metallic and Non-Metallic Ions	Antonie Leeuwenhoek31(): 301-313	1965
161	Mercury chloride (HgCl2)	Spirostomum ambiguum	Protozoa	Invertebrates	LC50	MOR	MORT	2	d	T	37.7	FW	Nalecz-Jawecki, G., and J. Sawicki	Toxicity of Inorganic Compounds in the Spirotox Test: A Miniaturized Version of the Spirostomum ambiguum Test	Arch.Environ.Contam.Toxicol. 34(1):1-5	1998
162	Mercury chloride (HgCl2)	Lemna minor	Duckweed	Flowers, Trees, Shrubs, Ferns	EC20	BCM	CARC	7	d	T	38	FW	Naumann, B., M. Eberius, and K.J. Appenroth	Growth Rate Based Dose-Response Relationships and EC-Values of Ten Heavy Metals Using the Duckweed Growth Inhibition Test (ISO 20079) with Lemna minor L. Clone St	J. Plant Physiol.164(12): 1656-1664	2007
163	Mercury chloride (HgCl2)	Villosa iris	Rainbow	Molluscs	LC50	MOR	MORT	2	d	T	39	FW	Valenti, T.W., D.S. Cherry, R.J. Neves, and J. Schmerfeld	Acute and Chronic Toxicity of Mercury to Early Life Stages of the Rainbow Mussel, Villosa iris (Bivalvia: Unionidae)	Environ.Toxicol.Chem. 24(5):1242-1246	2005
164	Mercury chloride (HgCl2)	Tubifex tubifex	Tubificid Worm	Worms	EC50	MOR	MORT	2	d	T	39	FW	Rathore, R.S., and B.S. Khangarot	Effects of Temperature on the Sensitivity of Sludge Worm Tubifex tubifex Muller to Selected Heavy Metals	Ecotoxicol.Environ.Saf. 53(1):27-36	2002
165	Mercury chloride (HgCl2)	Spirostomum ambiguum	Protozoa	Invertebrates	LC50	MOR	MORT	1	d	T	39.3	FW	Nalecz-Jawecki, G., and J. Sawicki	Toxicity of Inorganic Compounds in the Spirotox Test: A Miniaturized Version of the Spirostomum ambiguum Test	Arch.Environ.Contam.Toxicol. 34(1):1-5	1998
166	(Acetato-kappaO)phenylmercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50*	MOR	MORT	1	d	T	40	FW	Akiyama, A.	Acute Toxicity of Two Organic Mercury Compounds to the Teleost, Oryzias latipes, in Different Stages of Development	Bull.Jpn.Soc.Sci.Fish. 36(6):563-570	1970
167	Chloromethylmercury	Petromyzon marinus	Sea Lamprey	Fish	LC50	MOR	MORT	5	d	T	40	FW	Mallatt, J., M.G. Barron, and C. McDonough	Acute Toxicity of Methyl Mercury to the Larval Lamprey, Petromyzon marinus	Bull.Environ.Contam.Toxicol. 37(2):281-288	1986
168	Mercury	Culicoides furens	Little Gray Punkie	Insects/Spiders	LC50	MOR	MORT	4	d	T	40	FW	Vedamanikam, V.J., and N.A.M. Shazilli	The Effect of Multi-Generational Exposure to Metals and Resultant Change in Median Lethal Toxicity Tests Values over Subsequent Generations	Bull.Environ.Contam.Toxicol. 80(1):63-67	2008
169	Mercury chloride (HgCl2)	Nostoc commune	Blue-Green Algae	Algae, Moss, Fungi	LD50	POP	PGRT	6	d	T	40.12	FW	Singh, N., R.K. Asthana, A.M. Kayastha, S. Pandey, A.K. Chaudhary, and S.P. Singh	Thiol and Exopolysaccharide Production in a Cyanobacterium Under Heavy Metal Stress	Process Biochem.35(1-2): 63-68	1999
170	Chloromethylmercury	Petromyzon marinus	Sea Lamprey	Fish	LC50	MOR	MORT	4.542	d	T	41	FW	Mallatt, J., M.G. Barron, and C. McDonough	Acute Toxicity of Methyl Mercury to the Larval Lamprey, Petromyzon marinus	Bull.Environ.Contam.Toxicol. 37(2):281-288	1986
171	Mercury chloride (HgCl2)	Tubifex tubifex	Tubificid Worm	Worms	EC50	MOR	MORT	1	d	T	42	FW	Rathore, R.S., and B.S. Khangarot	Effects of Temperature on the Sensitivity of Sludge Worm Tubifex tubifex Muller to Selected Heavy Metals	Ecotoxicol.Environ.Saf. 53(1):27-36	2002
172	Mercury chloride (HgCl2)	Bufo melanostictus	Common Indian Toad	Amphibians	LC50	MOR	MORT	4	d	T	43.6	FW	Khangarot, B.S., and P.K. Ray	Sensitivity of Toad Tadpoles, Bufo melanostictus (Schneider), to Heavy Metals	Bull.Environ.Contam.Toxicol. 38(3):523-527	1987

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
173	Chloromethylmercury	Petromyzon marinus	Sea Lamprey	Fish	LC50	MOR	MORT	1.208	d	T	44	FW	Mallatt, J., M.G. Barron, and C. McDonough	Acute Toxicity of Methyl Mercury to the Larval Lamprey, Petromyzon marinus	Bull.Environ.Contam.Toxicol. 37(2):281-288	1986
174	Mercury chloride (HgCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	GPOP	3	d	T	44	FW	Chen, C.Y.	Theoretical Evaluation of the Inhibitory Effects of Mercury on Algal Growth at Various Orthophosphate Levels	Water Res.28(4)(): 931-937	1994
175	Mercury chloride (HgCl2)	Diaptomus leptopus	Calanoid Copepod	Crustaceans	EC50	ITX	IMBL	2	d	T	45	FW	Lalande, M., and B. Pinel-Alloul	Heavy Metals Toxicity on Planktonic Crustacea of the Quebec Lakes (Toxicite des Metaux Lourds sur les Crustaces Planctoniques des Lacs du Quebec)	Sci.Tech.Eau 17(3):253-259 (FRE) (ENG ABS)	1984
176	Mercury chloride (HgCl2)	Tropocyclops prasinus ssp. mexicanus	Cyclopoid Copepod	Crustaceans	EC50	ITX	IMBL	2	d	T	45	FW	Lalande, M., and B. Pinel-Alloul	Acute Toxicity of Cadmium, Copper, Mercury and Zinc to Tropocyclops Prasinus mexicanus (Cyclopoida, Copepoda) from Three Quebec Lakes	Environ.Toxicol.Chem. 5(1):95-102	1986
177	Mercury chloride (HgCl2)	Bufo melanostictus	Common Indian Toad	Amphibians	LC50	MOR	MORT	2	d	T	45.6	FW	Khangarot, B.S., and P.K. Ray	Sensitivity of Toad Tadpoles, Bufo melanostictus (Schneider), to Heavy Metals	Bull.Environ.Contam.Toxicol. 38(3):523-527	1987
178	Mercury chloride	Nitocra spinipes	Harpacticoid Copepod	Crustaceans	LC50	MOR	MORT	4	d	T	46	FW	Bengtsson, B.E., and B. Bergstrom	Toxicity Tests with Nitocra spinipes (Crustacea) and Some Metals Released from a Smelter Industry	In: K.Muller (Ed.), Coastal Research in the Gulf of Bothnia, Chapter 33, Dr.W.Junk Publ., The Hague, Netherlands:439-444 / Chem.Abstr.97 :439-444	1982
179	Mercury chloride (HgCl2)	Daphnia rosea	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	T	47	FW	Lalande, M., and B. Pinel-Alloul	Heavy Metals Toxicity on Planktonic Crustacea of the Quebec Lakes (Toxicite des Metaux Lourds sur les Crustaces Planctoniques des Lacs du Quebec)	Sci.Tech.Eau 17(3):253-259 (FRE) (ENG ABS)	1984
180	Mercury chloride (HgCl2)	Lemna minor	Duckweed	Flowers, Trees, Shrubs, Ferns	EC20	BCM	CHLO	7	d	T	47	FW	Naumann, B., M. Eberius, and K.J. Appenroth	Growth Rate Based Dose-Response Relationships and EC-Values of Ten Heavy Metals Using the Duckweed Growth Inhibition Test (ISO 20079) with Lemna minor L. Clone St	J. Plant Physiol.164(12): 1656-1664	2007
181	Mercury chloride (HgCl2)	Lemna minor	Duckweed	Flowers, Trees, Shrubs, Ferns	EC20	GRO	DWGT	7	d	T	47	FW	Naumann, B., M. Eberius, and K.J. Appenroth	Growth Rate Based Dose-Response Relationships and EC-Values of Ten Heavy Metals Using the Duckweed Growth Inhibition Test (ISO 20079) with Lemna minor L. Clone St	J. Plant Physiol.164(12): 1656-1664	2007
182	Mercury chloride (HgCl2)	Brachionus calyciflorus	Rotifer	Invertebrates	LC50	MOR	MORT	1	d	T	48	FW	Preston, B.L., T.W. Snell, and R. Kneisel	UV-B Exposure Increases Acute Toxicity of Pentachlorophenol and Mercury to the Rotifer Brachionus calyciflorus	Environ.Pollut. 106(1):23-31	1999
183	Mercury chloride (HgCl2)	Brachionus calyciflorus	Rotifer	Invertebrates	LC50	MOR	MORT	1	d	T	48	FW	Preston, B.L., T.W. Snell, and R. Kneisel	UV-B Exposure Increases Acute Toxicity of Pentachlorophenol and Mercury to the Rotifer Brachionus calyciflorus	Environ.Pollut. 106(1):23-31	1999
184	Mercury chloride (HgCl2)	Tubifex tubifex	Tubificid Worm	Worms	EC50	MOR	MORT	4	d	T	48	FW	Rathore, R.S., and B.S. Khangarot	Effects of Temperature on the Sensitivity of Sludge Worm Tubifex tubifex Muller to Selected Heavy Metals	Ecotoxicol.Environ.Saf. 53(1):27-36	2002
185	Mercury chloride (HgCl2)	Tubifex tubifex	Tubificid Worm	Worms	EC50	MOR	MORT	3	d	T	49	FW	Rathore, R.S., and B.S. Khangarot	Effects of Temperature on the Sensitivity of Sludge Worm Tubifex tubifex Muller to Selected Heavy Metals	Ecotoxicol.Environ.Saf. 53(1):27-36	2002
186	Chloromethylmercury	Rana pipiens	Leopard Frog	Amphibians	NR-LETH	MOR	MORT	2	d	T	50	FW	Chang, L.W., K.R. Reuhl, and A.W. Dudley Jr.	Effects of Methylmercury Chloride on Rana pipiens Tadpoles	Environ.Res. 8(1):82-91	1974
187	Chloromethylmercury	Oncorhynchus mykiss	Rainbow Trout	Fish	NR-LETH	MOR	MORT	24	d	T	50	FW	Birge, W.J., A.G. Westerman, and O.W. Roberts	Lethal and Teratogenic Effects of Metallic Pollutants on Vertebrate Embryos	In: Proc.2nd Annu.NSF-Rann Trace Contam.Environ.Conf., Springfield, VA :316-320 (U.S.NTIS LBL-3217) (Used Ref.8703)	1974
188	Mercury chloride (HgCl2)	Orconectes limosus	Crayfish	Crustaceans	LC50*	MOR	MORT	4	d	T	50	FW	Boutet, C., and C. Chaisemartin	Specific Toxic Properties of Metallic Salts in Austro-potamobius pallipes pallipes and Orconectes limosus (Proprietes Toxiques Specifiques des sels Metalliques chez Austropotamobius pallipes pallipes et Orconectes limosu	C.R.Seances Soc.Biol.Fil. 167(12):1933-1938 (FRE) (ENG TRANSL)	1973
189	Mercury chloride (HgCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	NR-LETH	MOR	MORT	24	d	T	50	FW	Birge, W.J., A.G. Westerman, and O.W. Roberts	Lethal and Teratogenic Effects of Metallic Pollutants on Vertebrate Embryos	In: Proc.2nd Annu.NSF-Rann Trace Contam.Environ.Conf., Springfield, VA :316-320 (U.S.NTIS LBL-3217) (Used Ref.8703)	1974
190	Mercury	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	GPOP	1	d	T	50	FW	Van der Heever, J.A., and J.U. Grobbelaar	The Use of Selenastrum capricornutum Growth Potential as a Measure of Toxicity of a Few Selected Compounds	Water SA22(2): 183-191	1996
191	Mercury chloride (HgCl2)	Brachionus calyciflorus	Rotifer	Invertebrates	LC50	MOR	MORT	1	d	T	51	FW	Preston, B.L., T.W. Snell, and R. Kneisel	UV-B Exposure Increases Acute Toxicity of Pentachlorophenol and Mercury to the Rotifer Brachionus calyciflorus	Environ.Pollut. 106(1):23-31	1999
192	Mercury chloride (HgCl2)	Brachionus calyciflorus	Rotifer	Invertebrates	LC50	MOR	MORT	1	d	T	51	FW	Preston, B.L., T.W. Snell, and R. Kneisel	UV-B Exposure Increases Acute Toxicity of Pentachlorophenol and Mercury to the Rotifer Brachionus calyciflorus	Environ.Pollut. 106(1):23-31	1999
193	Mercury chloride (HgCl2)	Brachionus calyciflorus	Rotifer	Invertebrates	LC50	MOR	MORT	1	d	T	51	FW	Preston, B.L., T.W. Snell, and R. Kneisel	UV-B Exposure Increases Acute Toxicity of Pentachlorophenol and Mercury to the Rotifer Brachionus calyciflorus	Environ.Pollut. 106(1):23-31	1999
194	Mercury chloride (HgCl2)	Tubifex tubifex	Tubificid Worm	Worms	EC50	MOR	MORT	1	d	T	51	FW	Rathore, R.S., and B.S. Khangarot	Effects of Temperature on the Sensitivity of Sludge Worm Tubifex tubifex Muller to Selected Heavy Metals	Ecotoxicol.Environ.Saf. 53(1):27-36	2002
195	Mercury chloride (HgCl2)	Tubifex tubifex	Tubificid Worm	Worms	EC50	MOR	MORT	2	d	T	51	FW	Rathore, R.S., and B.S. Khangarot	Effects of Temperature on the Sensitivity of Sludge Worm Tubifex tubifex Muller to Selected Heavy Metals	Ecotoxicol.Environ.Saf. 53(1):27-36	2002

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
196	Mercury chloride (HgCl2)	Tubifex tubifex	Tubificid Worm	Worms	EC50	MOR	MORT	3	d	T	51.4	FW	Rathore, R.S., and B.S. Khangarot	Effects of Temperature on the Sensitivity of Sludge Worm Tubifex tubifex Muller to Selected Heavy Metals	Ecotoxicol.Environ.Saf. 53(1):27-36	2002
197	Mercury chloride (HgCl2)	Lemna minor	Duckweed	Flowers, Trees, Shrubs, Ferns	EC20	GRO	WGHT	7	d	T	52	FW	Naumann, B., M. Eberius, and K.J. Appenroth	Growth Rate Based Dose-Response Relationships and EC-Values of Ten Heavy Metals Using the Duckweed Growth Inhibition Test (ISO 20079) with Lemna minor L. Clone St	J. Plant Physiol.164(12): 1656-1664	2007
198	Mercury chloride (HgCl2)	Caridina rajadhari	Freshwater Prawn	Crustaceans	LC50	MOR	MORT	2	d	T	52.75	FW	Ghate, H.V.	Gill Melanization and Heavy Metals in Freshwater Prawns	Indian J.Fish. 31(3):389-393	1984
199	Mercury chloride (HgCl2)	Bufo melanostictus	Common Indian Toad	Amphibians	LC50	MOR	MORT	1	d	T	52.8	FW	Khangarot, B.S., and P.K. Ray	Sensitivity of Toad Tadpoles, Bufo melanostictus (Schneider), to Heavy Metals	Bull.Environ.Contam.Toxicol. 38(3):523-527	1987
200	Mercury	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	GPOP	1	d	T	53	FW	Van der Heever, J.A., and J.U. Grobbelaar	The Use of Selenastrum capricornutum Growth Potential as a Measure of Toxicity of a Few Selected Compounds	Water SA22(2): 183-191	1996
201	(Acetato-kappaO)phenylmercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50*	MOR	MORT	1	d	T	54	FW	Akiyama, A.	Acute Toxicity of Two Organic Mercury Compounds to the Teleost, Oryzias latipes, in Different Stages of Development	Bull.Jpn.Soc.Sci.Fish. 36(6):563-570	1970
202	(Acetato-kappaO)phenylmercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50*	MOR	MORT	1	d	T	54	FW	Akiyama, A.	Acute Toxicity of Two Organic Mercury Compounds to the Teleost, Oryzias latipes, in Different Stages of Development	Bull.Jpn.Soc.Sci.Fish. 36(6):563-570	1970
203	Mercury chloride (HgCl2)	Tubifex tubifex	Tubificid Worm	Worms	EC50	MOR	MORT	2	d	T	54	FW	Rathore, R.S., and B.S. Khangarot	Effects of Temperature on the Sensitivity of Sludge Worm Tubifex tubifex Muller to Selected Heavy Metals	Ecotoxicol.Environ.Saf. 53(1):27-36	2002
204	(Acetato-kappaO)phenylmercury	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	3	d	T	56	FW	Joshi, A.G., and M.S. Rege	Acute Toxicity of Some Pesticides & a Few Inorganic Salts to the Mosquito Fish Gambusia affinis (Baird & Girard)	Indian J.Exp.Biol. 18:435-437	1980
205	(Acetato-kappaO)phenylmercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50*	MOR	MORT	1	d	T	56	FW	Akiyama, A.	Acute Toxicity of Two Organic Mercury Compounds to the Teleost, Oryzias latipes, in Different Stages of Development	Bull.Jpn.Soc.Sci.Fish. 36(6):563-570	1970
206	Mercury chloride (HgCl2)	Tubifex tubifex	Tubificid Worm	Worms	EC50	MOR	MORT	1	d	T	56	FW	Rathore, R.S., and B.S. Khangarot	Effects of Temperature on the Sensitivity of Sludge Worm Tubifex tubifex Muller to Selected Heavy Metals	Ecotoxicol.Environ.Saf. 53(1):27-36	2002
207	Mercury chloride (HgCl2)	Tubifex tubifex	Tubificid Worm	Worms	NR-LETH	MOR	MORT	2	d	T	56	FW	Rathore, R.S., and B.S. Khangarot	Effects of Temperature on the Sensitivity of Sludge Worm Tubifex tubifex Muller to Selected Heavy Metals	Ecotoxicol.Environ.Saf. 53(1):27-36	2002
208	Chloromethylmercury	Petromyzon marinus	Sea Lamprey	Fish	LC50	MOR	MORT	5	d	T	57	FW	Mallatt, J., M.G. Barron, and C. McDonough	Acute Toxicity of Methyl Mercury to the Larval Lamprey, Petromyzon marinus	Bull.Environ.Contam.Toxicol. 37(2):281-288	1986
209	Mercury chloride (HgCl2)	Ptychocheilus lucius	Colorado Squawfish	Fish	LC50	MOR	MORT	4	d	T	57	FW	Buhl, K.J.	Relative Sensitivity of Three Endangered Fishes, Colorado Squawfish, Bonytail, and Razorback Sucker, to Selected Metal Pollutants	Ecotoxicol.Environ.Saf. 37:186-192	1997
210	Mercury chloride (HgCl2)	Chydorus sphaericus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	T	59	FW	Lalande, M., and B. Pinel-Alloul	Acute Toxicity of Cadmium, Copper, Mercury and Zinc to Chydorus sphaericus (Cladocera) from Three Quebec Lakes	Water Pollut.Res.J.Can. 18:103-113	1983
211	Mercury chloride (HgCl2)	Brachionus calyciflorus	Rotifer	Invertebrates	LC50	MOR	MORT	1	d	T	59	FW	Preston, B.L., T.W. Snell, and R. Kneisel	UV-B Exposure Increases Acute Toxicity of Pentachlorophenol and Mercury to the Rotifer Brachionus calyciflorus	Environ.Pollut. 106(1):23-31	1999
212	Mercury	Chironomus sp.	Midge	Insects/Spiders	LC50*	MOR	MORT	1	d	T	60	FW	Rehwoldt, R., L. Lasko, C. Shaw, and E. Wirhowski	The Acute Toxicity of Some Heavy Metal Ions Toward Benthic Organisms	Bull.Environ.Contam.Toxicol. 10(5):291-294	1973
213	Mercury	Culicoides furens	Little Gray Punkie	Insects/Spiders	LC50	MOR	MORT	4	d	T	60	FW	Vedamanikam, V.J., and N.A.M. Shazilli	The Effect of Multi-Generational Exposure to Metals and Resultant Change in Median Lethal Toxicity Tests Values over Subsequent Generations	Bull.Environ.Contam.Toxicol. 80(1):63-67	2008
214	Mercury	Brachionus calyciflorus	Rotifer	Invertebrates	LC50	MOR	MORT	1	d	T	60	FW	Snell, T.W.	New Rotifer Bioassays for Aquatic Toxicology	Final Rep., U.S.Army Med.Res.and Dev.Command, Ft.Detrick, Frederick, MD :29 p. (U.S.NTIS AD-A258002)	1991
215	Mercury	Brachionus calyciflorus	Rotifer	Invertebrates	LC50	MOR	MORT	1	d	T	60	FW	Snell, T.W., B.D. Moffat, C. Janssen, and G. Persoone	Acute Toxicity Tests Using Rotifers IV. Effects of Cyst Age, Temperature, and Salinity on the Sensitivity of Brachionus calyciflorus	Ecotoxicol.Environ.Saf. 21(3):308-317 (OECDG Data File)	1991
216	Mercury chloride (HgCl2)	Daphnia similis	Water Flea	Crustaceans	LC50	MOR	MORT	4	d	T	60	FW	Soundrapandian, S., and K. Venkataraman	Effect of Heavy Metal Salts on the Life History of Daphnia similis Claus (Crustacea: Cladocera)	Proc.Indian Acad.Sci.Anim.Sci. 99(5):411-418	1990
217	Mercury chloride (HgCl2)	Thamnocephalus platyurus	Fairy Shrimp	Crustaceans	LC50	MOR	MORT	1	d	T	60	FW	Centeno, M.D.F., G. Persoone, and M.P. Goyvaerts	Cyst-Based Toxicity Tests. IX. The Potential of Thamnocephalus platyurus as Test Species in Comparison with Streptocephalus proboscideus (Crustacea: Branchiopoda: Anostraca)	Environ.Toxicol.Water Qual. 10(4):275-282	1995
218	Chloromethylmercury	Petromyzon marinus	Sea Lamprey	Fish	LC50	MOR	MORT	2.667	d	T	61	FW	Mallatt, J., M.G. Barron, and C. McDonough	Acute Toxicity of Methyl Mercury to the Larval Lamprey, Petromyzon marinus	Bull.Environ.Contam.Toxicol. 37(2):281-288	1986
219	Mercury chloride (HgCl2)	Gila elegans	Bonytail	Fish	LC50	MOR	MORT	4	d	T	61	FW	Buhl, K.J.	Relative Sensitivity of Three Endangered Fishes, Colorado Squawfish, Bonytail, and Razorback Sucker, to Selected Metal Pollutants	Ecotoxicol.Environ.Saf. 37:186-192	1997
220	Mercury	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	PHY	PSYN	0.167	d	T	61	FW	Van der Heever, J.A., and J.U. Grobbelaar	Evaluation of Short-Incubation-Time Small-Volume Radiocarbon-Uptake Algal Toxicity Test	J. Appl. Phycol.8(1): 65-71	1996
221	Chloromethylmercury	Petromyzon marinus	Sea Lamprey	Fish	LC50	MOR	MORT	4	d	T	62	FW	Mallatt, J., M.G. Barron, and C. McDonough	Acute Toxicity of Methyl Mercury to the Larval Lamprey, Petromyzon marinus	Bull.Environ.Contam.Toxicol. 37(2):281-288	1986

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
222	Mercury chloride (HgCl2)	Chydorus sphaericus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	T	62	FW	Lalande, M., and B. Pinel-Alloul	Acute Toxicity of Cadmium, Copper, Mercury and Zinc to Chydorus sphaericus (Cladocera) from Three Quebec Lakes	Water Pollut.Res.J.Can. 18:103-113	1983
223	Mercury	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	GPOP	2	d	T	63	FW	Van der Heever, J.A., and J.U. Grobbelaar	The Use of Selenastrum capricornutum Growth Potential as a Measure of Toxicity of a Few Selected Compounds	Water SA22(2): 183-191	1996
224	(Acetato-kappaO)phenylmercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50*	MOR	MORT	1	d	T	64	FW	Akiyama, A.	Acute Toxicity of Two Organic Mercury Compounds to the Teleost, Oryzias latipes, in Different Stages of Development	Bull.Jpn.Soc.Sci.Fish. 36(6):563-570	1970
225	Mercury chloride (HgCl2)	Streptocephalus proboscideus	Fairy Shrimp	Crustaceans	LC50	MOR	MORT	1	d	T	64	FW	Centeno, M.D., L. Brendonck, and G. Persoone	Cyst-Based Toxicity Tests. III. Development and Standardization of an Acute Toxicity Test with the Freshwater Anostracan Crustacean Streptocephalus proboscideus	In: A.M.V.M.Soares and P.Calow (Eds.), Progress in Standardization of Aquatic Toxicity Tests, Lewis Publishers :37-55	1993
226	Mercury chloride (HgCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	NR-LETH	MOR	MORT	130	d	T	64	FW	Niimi, A.J., and G.P. Kissoon	Evaluation of the Critical Body Burden Concept Based on Inorganic and Organic Mercury Toxicity to Rainbow Trout (Oncorhynchus mykiss)	Arch.Environ.Contam.Toxicol. 26(2):169-178	1994
227	Mercury chloride (HgCl2)	Brachionus calyciflorus	Rotifer	Invertebrates	LC50	MOR	MORT	1	d	T	64	FW	Preston, B.L., T.W. Snell, and R. Kneisel	UV-B Exposure Increases Acute Toxicity of Pentachlorophenol and Mercury to the Rotifer Brachionus calyciflorus	Environ.Pollut. 106(1):23-31	1999
228	Chloromethylmercury	Salvelinus fontinalis	Brook Trout	Fish	LC50	MOR	MORT	4	d	T	65	FW	McKim, J.M., G.F. Olson, G.W. Holcombe, and E.P. Hunt	Long-Term Effects of Methylmercuric Chloride on Three Generations of Brook Trout (Salvelinus fontinalis): Toxicity, Accumulation, Distribution and Elimination	J.Fish.Res.Board Can. 33(12):2726-2739	1976
229	Mercury chloride (HgCl2)	Daphnia similis	Water Flea	Crustaceans	LC50	MOR	MORT	4	d	T	68	FW	Soundrapandian, S., and K. Venkataraman	Effect of Heavy Metal Salts on the Life History of Daphnia similis Claus (Crustacea: Cladocera)	Proc.Indian Acad.Sci.Anim.Sci. 99(5):411-418	1990
230	Mercury chloride (HgCl2)	Ilyoplax gangetica	Crab	Crustaceans	LC50	MOR	MORT	1	d	T	70	FW	Amte, G.K., and K.B. Sawant	Acute Toxicity of Inorganic Mercury to Estuarine Crab Ilyoplax gangetica (Kemp)	Pollut.Res. 12(1):29-34	1992
231	Mercury chloride (HgCl2)	Aspidisca cicada	Protozoa	Invertebrates	LC50	MOR	MORT	1	d	T	70	FW	Madoni, P., G. Esteban, and G. Gorbi	Acute Toxicity of Cadmium, Copper, Mercury, and Zinc to Ciliates from Activated Sludge Plants	Bull.Environ.Contam.Toxicol. 49(6):900-905	1992
232	Mercury chloride (HgCl2)	Scenedesmus quadricauda	Green Algae	Algae, Moss, Fungi	LOEC	POP	PGRT	NR	NR	T	70	FW	Bringmann, G., and R. Kuhn	Limiting Values for the Noxious Effects of Water Pollutant Material to Blue Algae (Microcystis aeruginosa) and Green Algae (Scenedesmus quadricauda) in Cell Propagation Inhibition Tests (Grenzwerte der Schadwirkung Wasse	Vom Wasser50(): 45-60	1978
233	Chloromethylmercury	Petromyzon marinus	Sea Lamprey	Fish	LC50	MOR	MORT	2.375	d	T	71	FW	Mallatt, J., M.G. Barron, and C. McDonough	Acute Toxicity of Methyl Mercury to the Larval Lamprey, Petromyzon marinus	Bull.Environ.Contam.Toxicol. 37(2):281-288	1986
234	Chloromethylmercury	Trichogaster trichopterus	Blue Or 3-Spot Gourami	Fish	LC50*	MOR	MORT	4	d	T	71.6	FW	Roales, R.R., and A. Perlmutter	Toxicity of Methylmercury and Copper, Applied Singly and Jointly, to the Blue Gourami, Trichogaster trichopterus	Bull.Environ.Contam.Toxicol. 12(5):633-639	1974
235	(Acetato-kappaO)phenylmercury	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	2	d	T	72	FW	Joshi, A.G., and M.S. Rege	Acute Toxicity of Some Pesticides & a Few Inorganic Salts to the Mosquito Fish Gambusia affinis (Baird & Girard)	Indian J.Exp.Biol. 18:435-437	1980
236	Mercury chloride (HgCl2)	Cyprinus carpio	Common Carp	Fish	LC50	MOR	MORT	4	d	T	72	FW	Kaur, K., and A. Dhawan	Metal Toxicity to Different Life Stages of Cyprinus carpio Linn.	Indian J.Ecol. 21(2):93-98	1994
237	Mercury chloride (HgCl2)	Diaptomus leptopus	Calanoid Copepod	Crustaceans	EC50	ITX	IMBL	2	d	T	73	FW	Lalande, M., and B. Pinel-Alloul	Heavy Metals Toxicity on Planktonic Crustacea of the Quebec Lakes (Toxicite des Metaux Lourds sur les Crustaces Planctoniques des Lacs du Quebec)	Sci.Tech.Eau 17(3):253-259 (FRE) (ENG ABS)	1984
238	Mercury chloride (HgCl2)	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	7	d	T	74	FW	Snarski, V.M., and G.F. Olson	Chronic Toxicity and Bioaccumulation of Mercuric Chloride in the Fathead Minnow (Pimephales promelas)	Aquat.Toxicol. 2:143-156	1982
239	Chloromethylmercury	Trichogaster trichopterus	Blue Or 3-Spot Gourami	Fish	LC50*	MOR	MORT	2	d	T	75.4	FW	Roales, R.R., and A. Perlmutter	Toxicity of Methylmercury and Copper, Applied Singly and Jointly, to the Blue Gourami, Trichogaster trichopterus	Bull.Environ.Contam.Toxicol. 12(5):633-639	1974
240	Chloromethylmercury	Petromyzon marinus	Sea Lamprey	Fish	LC50	MOR	MORT	3	d	T	76	FW	Mallatt, J., M.G. Barron, and C. McDonough	Acute Toxicity of Methyl Mercury to the Larval Lamprey, Petromyzon marinus	Bull.Environ.Contam.Toxicol. 37(2):281-288	1986
241	Sulfuric acid, Mercury(2+) salt(1:1)	Ankistrodesmus falcatus	Green Algae	Algae, Moss, Fungi	EC50	GRO	GGRO	14	d	T	78	FW	Vocke, R.W., K.L. Sears, J.J. O'Toole, and R.B. Wildman	Growth Responses of Selected Freshwater Algae to Trace Elements and Scrubber Ash Slurry Generated by Coal-Fired Power Plants	Water Res.14(2): 141-150	1980
242	Mercury	Amnicola sp.	Spire Snail	Molluscs	LC50*	MOR	MORT	4	d	T	80	FW	Rehwoldt, R., L. Lasko, C. Shaw, and E. Wirhowski	The Acute Toxicity of Some Heavy Metal Ions Toward Benthic Organisms	Bull.Environ.Contam.Toxicol. 10(5):291-294	1973
243	Mercury chloride (HgCl2)	Spirostomum ambiguum	Protozoa	Invertebrates	EC50	MPH	ABNM	0.042	d	T	80	FW	Nalecz-Jawecki, G., K. Demkowicz-Dobrzanski, and J. Sawicki	Protozoan Spirostomum ambiguum as a Highly Sensitive Bioindicator for Rapid and Easy Determination of Water Quality	Sci.Total Environ. Suppl(Pt.2):1227-1234	1993
244	Chloromethylmercury	Salvelinus fontinalis	Brook Trout	Fish	LC50	MOR	MORT	4	d	T	84	FW	McKim, J.M., G.F. Olson, G.W. Holcombe, and E.P. Hunt	Long-Term Effects of Methylmercuric Chloride on Three Generations of Brook Trout (Salvelinus fontinalis): Toxicity, Accumulation, Distribution and Elimination	J.Fish.Res.Board Can. 33(12):2726-2739	1976

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
245	Mercury chloride (HgCl2)	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	6	d	T	84	FW	Snarski, V.M., and G.F. Olson	Chronic Toxicity and Bioaccumulation of Mercuric Chloride in the Fathead Minnow (Pimephales promelas)	Aquat.Toxicol. 2:143-156	1982
246	Sulfuric acid, Mercury(2+) salt(1:1)	Scenedesmus acutus var. acutus	Green Algae	Algae, Moss, Fungi	EC50	GRO	GGRO	14	d	T	85	FW	Vocke, R.W., K.L. Sears, J.J. O'Toole, and R.B. Wildman	Growth Responses of Selected Freshwater Algae to Trace Elements and Scrubber Ash Slurry Generated by Coal-Fired Power Plants	Water Res.14(2): 141-150	1980
247	Mercury chloride (HgCl2)	Lemna minor	Duckweed	Flowers, Trees, Shrubs, Ferns	EC20	GRO	GRRT	7	d	T	86	FW	Naumann, B., M. Eberius, and K.J. Appenroth	Growth Rate Based Dose-Response Relationships and EC-Values of Ten Heavy Metals Using the Duckweed Growth Inhibition Test (ISO 20079) with Lemna minor L. Clone St	J. Plant Physiol.164(12): 1656-1664	2007
248	Chloromethylmercury	Petromyzon marinus	Sea Lamprey	Fish	LC50	MOR	MORT	4	d	T	88	FW	Mallatt, J., M.G. Barron, and C. McDonough	Acute Toxicity of Methyl Mercury to the Larval Lamprey, Petromyzon marinus	Bull.Environ.Contam.Toxicol. 37(2):281-288	1986
249	Mercury chloride	Lampsilis fasciola	Wavy-Rayed Lampmussel	Molluscs	LC50	MOR	MORT	4	d	T	88	FW	Keller, A.E.	Personal Communication to U.S. EPA: Water Quality and Toxicity Data for Unpublished Unionid Mussel Tests	Memo to R.Pepin and C.Roberts,U.S.EPA Region 5,Chicago, IL :14 p. (Author Communication Used)	2000
250	Iodomethylmercury	Trichogaster trichopterus	Blue Or 3-Spot Gourami	Fish	LC50	MOR	MORT	4	d	T	89.5	FW	Roales, R.R.	The Effects of Sub-lethal Doses of Methylmercury and Copper, Applied Separately and Jointly, on the Immune Response of the Blue Gourami, Trichogaster trichopterus	Ph.D.Thesis, New York Univ.,NY :103 p.	1973
251	Chloromethylmercury	Petromyzon marinus	Sea Lamprey	Fish	LC50	MOR	MORT	1	d	T	90	FW	Mallatt, J., M.G. Barron, and C. McDonough	Acute Toxicity of Methyl Mercury to the Larval Lamprey, Petromyzon marinus	Bull.Environ.Contam.Toxicol. 37(2):281-288	1986
252	Mercury	Gammarus sp.	Scud, Amphipod	Crustaceans	LC50*	MOR	MORT	1	d	T	90	FW	Rehwoldt, R., L. Lasko, C. Shaw, and E. Wirhowski	The Acute Toxicity of Some Heavy Metal Ions Toward Benthic Organisms	Bull.Environ.Contam.Toxicol. 10(5):291-294	1973
253	Mercury	Morone saxatilis	Striped Bass	Fish	LC50	MOR	MORT	4	d	T	90	FW	Rehwoldt, R., L.W. Menapace, B. Nerrie, and D. Allessandrello	The Effect of Increased Temperature upon the Acute Toxicity of Some Heavy Metal Ions	Bull.Environ.Contam.Toxicol. 8(2):91-96	1972
254	Mercury chloride (HgCl2)	Cirrhinus mrigala	Carp, Hawk Fish	Fish	LC50	MOR	MORT	4	d	T	90	FW	Mohan, C.V., T.R.C. Gupta, and N.R. Menon	Acute Toxicity of Mercury on the Early Developmental Stages of Cirrhina mrigala (Ham.)	Indian J.Fish. 33(1):133-136	1986
255	Mercury chloride (HgCl2)	Xyrauchen texanus	Razorback Sucker	Fish	LC50	MOR	MORT	4	d	T	90	FW	Buhl, K.J.	Relative Sensitivity of Three Endangered Fishes, Colorado Squawfish, Bonytail, and Razorback Sucker, to Selected Metal Pollutants	Ecotoxicol.Environ.Saf. 37:186-192	1997
256	Mercury chloride (HgCl2)	Tubifex tubifex	Tubificid Worm	Worms	EC50	MOR	MORT	1	d	T	91	FW	Rathore, R.S., and B.S. Khangarot	Effects of Temperature on the Sensitivity of Sludge Worm Tubifex tubifex Muller to Selected Heavy Metals	Ecotoxicol.Environ.Saf. 53(1):27-36	2002
257	Mercury chloride (HgCl2)	Tubifex tubifex	Tubificid Worm	Worms	EC50	MOR	MORT	2	d	T	91	FW	Rathore, R.S., and B.S. Khangarot	Effects of Temperature on the Sensitivity of Sludge Worm Tubifex tubifex Muller to Selected Heavy Metals	Ecotoxicol.Environ.Saf. 53(1):27-36	2002
258	Mercury	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	GPOP	3	d	T	94	FW	Van der Heever, J.A., and J.U. Grobbelaar	The Use of Selenastrum capricornutum Growth Potential as a Measure of Toxicity of a Few Selected Compounds	Water SA22(2): 183-191	1996
259	Mercury	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	GPOP	2	d	T	94	FW	Van der Heever, J.A., and J.U. Grobbelaar	The Use of Selenastrum capricornutum Growth Potential as a Measure of Toxicity of a Few Selected Compounds	Water SA22(2): 183-191	1996
260	Mercury chloride (HgCl2)	Scapania undulata	Liverwort	Algae, Moss, Fungi	LC50	MOR	MORT	14	d	T	98	FW	Samecka-Cymerman, A., and A.J. Kempers	Preliminary Investigations into the Bioaccumulation of Mercury by the Liverwort Scapania undulata L. (Dum)	Ecotoxicol. Environ. Saf.31(1)(): 57-61	1995
261	Chloromethylmercury	Trichogaster trichopterus	Blue Or 3-Spot Gourami	Fish	LC50*	MOR	MORT	1	d	T	98.4	FW	Roales, R.R., and A. Perlmutter	Toxicity of Methylmercury and Copper, Applied Singly and Jointly, to the Blue Gourami, Trichogaster trichopterus	Bull.Environ.Contam.Toxicol. 12(5):633-639	1974
262	Mercury chloride (HgCl2)	Villosa iris	Rainbow	Molluscs	LC50	MOR	MORT	4	d	T	99	FW	Valenti, T.W., D.S. Cherry, R.J. Neves, and J. Schmerfeld	Acute and Chronic Toxicity of Mercury to Early Life Stages of the Rainbow Mussel, Villosa iris (Bivalvia: Unionidae)	Environ.Toxicol.Chem. 24(5):1242-1246	2005
263	Chloromethylmercury	Xenopus laevis	African Clawed Frog	Amphibians	NR-LETH	MOR	MORT	4	d	T	100	FW	Dumpert, K., and E. Zietz	Platanna (Xenopus laevis) as a Test Organism for Determining the Embryotoxic Effects of Environmental Chemicals	Ecotoxicol.Environ.Saf. 8:55-74 (OECDG Data File)	1984
264	Mercury	Gammarus roeseli	Scud	Crustaceans	NR-LETH	MOR	MORT	7	d	T	100	FW	Schweiger, G.	The Toxic Action of Heavy Metals Salts on Fish and Organisms on Which Fish Feed	Arch.Fischereiwiss. 8:54-78	1957
265	Mercury	Culicoides furens	Little Gray Punkie	Insects/Spiders	LC50	MOR	MORT	4	d	T	100	FW	Vedamanikam, V.J., and N.A.M. Shazilli	The Effect of Multi-Generational Exposure to Metals and Resultant Change in Median Lethal Toxicity Tests Values over Subsequent Generations	Bull.Environ.Contam.Toxicol. 80(1):63-67	2008
266	Mercury	Culicoides furens	Little Gray Punkie	Insects/Spiders	LC50	MOR	MORT	4	d	T	100	FW	Vedamanikam, V.J., and N.A.M. Shazilli	The Effect of Multi-Generational Exposure to Metals and Resultant Change in Median Lethal Toxicity Tests Values over Subsequent Generations	Bull.Environ.Contam.Toxicol. 80(1):63-67	2008
267	Mercury chloride (HgCl2)	Chironomus riparius	Midge	Insects/Spiders	LC50	MOR	MORT	4	d	T	100	FW	Rossaro, B., G.F. Gaggino, and R. Marchetti	Accumulation of Mercury in Larvae and Adults, Chironomus riparius (Meigen)	Bull.Environ.Contam.Toxicol. 37(3):402-406	1986
268	Mercury chloride (HgCl2)	Dugesia bengalensis	Planaria	Worms	LC50	MOR	MORT	4	d	T	100	FW	Aditya, A.K., and M.P. Bandyopadhyay	Mercuric Chloride Induced Changes in Dugesia bengalensis Kawakatsu, an Aquatic Planarian from Santiniketan, West Bengal	J.Environ.Biol. 16(3):233-236	1995
269	Mercury chloride (HgCl2)	Lumbriculus variegatus	Oligochaete, Worm	Worms	LC50	MOR	MORT	4	d	T	100	FW	Bailey, H.C., and D.H.W. Liu	Lumbriculus variegatus, a Benthic Oligochaete, as a Bioassay Organism	In: J.C.Eaton, P.R.Parrish, and A.C.Hendricks (Eds.), Aquatic Toxicology and Hazard Assessment, 3rd Symposium, ASTM STP 707, Philadelphia, PA :205-215	1980

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
270	Mercury chloride (HgCl2)	Tubifex tubifex	Tubificid Worm	Worms	NR-LETH	MOR	MORT	2	d	T	100	FW	Rathore, R.S., and B.S. Khangarot	Effects of Temperature on the Sensitivity of Sludge Worm Tubifex tubifex Muller to Selected Heavy Metals	Ecotoxicol.Environ.Saf. 53(1):27-36	2002
271	Mercury chloride (HgCl2)	Tubifex tubifex	Tubificid Worm	Worms	NR-LETH	MOR	MORT	2	d	T	100	FW	Rathore, R.S., and B.S. Khangarot	Effects of Temperature on the Sensitivity of Sludge Worm Tubifex tubifex Muller to Selected Heavy Metals	Ecotoxicol.Environ.Saf. 53(1):27-36	2002
272	Mercury chloride (HgCl2)	Selenastrum sp.	Green Algae	Algae, Moss, Fungi	EC50	NOC	NRNR	2	d	T	100	FW	Slooff, W.	A Comparative Study on the Short-Term Effects of 15 Chemicals on Fresh Water Organisms of Different Tropic Levels	Natl.Tech.Inf.Serv., Springfield, VA(): -	1982
273	Mercury chloride (HgCl2)	Selenastrum sp.	Green Algae	Algae, Moss, Fungi	EC50	NOC	NRNR	3	d	T	100	FW	Slooff, W.	A Comparative Study on the Short-Term Effects of 15 Chemicals on Fresh Water Organisms of Different Tropic Levels	Natl.Tech.Inf.Serv., Springfield, VA(): -	1982
274	Mercury chloride (HgCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	4	d	T	101	FW	Hamilton, S.J., and K.J. Buhl	Safety Assessment of Selected Inorganic Elements to Fry of Chinook Salmon (Oncorhynchus tshawytscha)	Ecotoxicol.Environ.Saf. 20(3):307-324	1990
275	Mercury	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	PHY	PSYN	0.042	d	T	103	FW	Van der Heever, J.A., and J.U. Grobbelaar	Evaluation of Short-Incubation-Time Small-Volume Radiocarbon-Uptake Algal Toxicity Test	J. Appl. Phycol.8(1): 65-71	1996
276	Mercury chloride (HgCl2)	Skistodiaptomus oregonensis	Calanoid Copepod	Crustaceans	EC50	ITX	IMBL	2	d	T	106	FW	Lalande, M., and B. Pinel-Alloul	Heavy Metals Toxicity on Planktonic Crustacea of the Quebec Lakes (Toxicite des Metaux Lourds sur les Crustaces Planctoniques des Lacs du Quebec)	Sci.Tech.Eau 17(3):253-259 (FRE) (ENG ABS)	1984
277	Mercury chloride (HgCl2)	Villosa iris	Rainbow	Molluscs	LC50	MOR	MORT	1	d	T	107	FW	Valenti, T.W., D.S. Cherry, R.J. Neves, and J. Schmerfeld	Acute and Chronic Toxicity of Mercury to Early Life Stages of the Rainbow Mussel, Villosa iris (Bivalvia: Unionidae)	Environ.Toxicol.Chem. 24(5):1242-1246	2005
278	Mercury chloride	Actinonaias pectorosa	Pheasantshell, Mussel	Molluscs	LC50	MOR	MORT	5	d	T	107	FW	Keller, A.E.	Personal Communication to U.S. EPA: Water Quality and Toxicity Data for Unpublished Unionid Mussel Tests	Memo to R.Pepin and C.Roberts,U.S.EPA Region 5,Chicago, IL :14 p. (Author Communication Used)	2000
279	Mercury chloride (HgCl2)	Gila elegans	Bonytail	Fish	LC50	MOR	MORT	4	d	T	108	FW	Buhl, K.J.	Relative Sensitivity of Three Endangered Fishes, Colorado Squawfish, Bonytail, and Razorback Sucker, to Selected Metal Pollutants	Ecotoxicol.Environ.Saf. 37:186-192	1997
280	Mercury	Fundulus diaphanus	Banded Killifish	Fish	LC50	MOR	MORT	4	d	T	110	FW	Rehwoldt, R., L.W. Menapace, B. Nerrie, and D. Allessandrello	The Effect of Increased Temperature upon the Acute Toxicity of Some Heavy Metal Ions	Bull.Environ.Contam.Toxicol. 8(2):91-96	1972
281	Mercury	Culicoides furens	Little Gray Punkie	Insects/Spiders	LC50	MOR	MORT	4	d	T	110	FW	Vedamanikam, V.J., and N.A.M. Shazilli	The Effect of Multi-Generational Exposure to Metals and Resultant Change in Median Lethal Toxicity Tests Values over Subsequent Generations	Bull.Environ.Contam.Toxicol. 80(1):63-67	2008
282	Mercury	Culicoides furens	Little Gray Punkie	Insects/Spiders	LC50	MOR	MORT	4	d	T	110	FW	Vedamanikam, V.J., and N.A.M. Shazilli	The Effect of Multi-Generational Exposure to Metals and Resultant Change in Median Lethal Toxicity Tests Values over Subsequent Generations	Bull.Environ.Contam.Toxicol. 80(1):63-67	2008
283	Mercury chloride (HgCl2)	Dugesia bengalensis	Planaria	Worms	LC50	MOR	MORT	3	d	T	110	FW	Aditya, A.K., and M.P. Bandyopadhyay	Mercuric Chloride Induced Changes in Dugesia bengalensis Kawakatsu, an Aquatic Planarian from Santiniketan, West Bengal	J.Environ.Biol. 16(3):233-236	1995
284	Mercury chloride (HgCl2)	Lumbriculus variegatus	Oligochaete, Worm	Worms	LC50	MOR	MORT	2	d	T	110	FW	Bailey, H.C., and D.H.W. Liu	Lumbriculus variegatus, a Benthic Oligochaete, as a Bioassay Organism	In: J.C.Eaton, P.R.Parrish, and A.C.Hendricks (Eds.), Aquatic Toxicology and Hazard Assessment, 3rd Symposium, ASTM STP 707, Philadelphia, PA :205-215	1980
285	Mercury chloride (HgCl2)	Cyclotella meneghiniana	Diatom	Algae, Moss, Fungi	EC50	POP	ABND	10	d	T	110	FW	Rao, V.N.R.	Adaptation of Algae to Heavy Metal Toxicity	In: A.K.Kashyap and H.D.Kumar (Eds.), Recent Advances in Phycology, Rastogi Publications, Meerut, India(): 261-264	1994
286	Mercury chloride (HgCl2)	Cyclotella meneghiniana	Diatom	Algae, Moss, Fungi	EC50	POP	GPOP	10	d	T	110	FW	Gowrinathan, K.P., and V.N.R. Rao	Physiological Responses of Some Plankton Diatoms to Heavy Metals	Indian J. Microbiol.29(4): 293-302	1989
287	Mercury chloride (HgCl2)	Scapania undulata	Liverwort	Algae, Moss, Fungi	LC50	MOR	MORT	14	d	T	111	FW	Samecka-Cymerman, A., and A.J. Kempers	Preliminary Investigations into the Bioaccumulation of Mercury by the Liverwort Scapania undulata L. (Dum)	Ecotoxicol. Environ. Saf.31(1)(): 57-61	1995
288	Mercury chloride (HgCl2)	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	5	d	T	112	FW	Snarski, V.M., and G.F. Olson	Chronic Toxicity and Bioaccumulation of Mercuric Chloride in the Fathead Minnow (Pimephales promelas)	Aquat.Toxicol. 2:143-156	1982
289	Mercury chloride (HgCl2)	Villosa iris	Rainbow	Molluscs	LC50	MOR	MORT	3	d	T	114	FW	Valenti, T.W., D.S. Cherry, R.J. Neves, and J. Schmerfeld	Acute and Chronic Toxicity of Mercury to Early Life Stages of the Rainbow Mussel, Villosa iris (Bivalvia: Unionidae)	Environ.Toxicol.Chem. 24(5):1242-1246	2005
290	(Acetato-kappaO)phenylmercury	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	1	d	T	115	FW	Joshi, A.G., and M.S. Rege	Acute Toxicity of Some Pesticides & a Few Inorganic Salts to the Mosquito Fish Gambusia affinis (Baird & Girard)	Indian J.Exp.Biol. 18:435-437	1980
291	(Acetato-kappaO)phenylmercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50*	MOR	MORT	1	d	T	116	FW	Akiyama, A.	Acute Toxicity of Two Organic Mercury Compounds to the Teleost, Oryzias latipes, in Different Stages of Development	Bull.Jpn.Soc.Sci.Fish. 36(6):563-570	1970
292	Mercury chloride (HgCl2)	Scapania undulata	Liverwort	Algae, Moss, Fungi	LC50	MOR	MORT	14	d	T	116	FW	Samecka-Cymerman, A., and A.J. Kempers	Preliminary Investigations into the Bioaccumulation of Mercury by the Liverwort Scapania undulata L. (Dum)	Ecotoxicol. Environ. Saf.31(1)(): 57-61	1995
293	Mercury chloride (HgCl2)	Daphnia pulex	Water Flea	Crustaceans	EC50	ITX	IMBL	1	d	T	118.35	FW	Lilius, H., T. Hastbacka, and B. Isomaa	A Comparison of the Toxicity of 30 Reference Chemicals to Daphnia magna and Daphnia pulex	Environ.Toxicol.Chem. 14(12):2085-2088	1995
294	Mercury chloride (Hg2Cl2)	Chironomus tentans	Midge	Insects/Spiders	EC50	ITX	IMBL	1	d	T	119	FW	Khangarot, B.S., and P.K. Ray	Sensitivity of Midge Larvae of Chironomus tentans Fabricius (Diptera Chironomidae) to Heavy Metals	Bull.Environ.Contam.Toxicol. 42(3):325-330	1989
295	Mercury	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	PHY	PSYN	0.021	d	T	120	FW	Van der Heever, J.A., and J.U. Grobbelaar	Evaluation of Short-Incubation-Time Small-Volume Radiocarbon-Uptake Algal Toxicity Test	J. Appl. Phycol.8(1): 65-71	1996

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
296	Mercury chloride (HgCl2)	Rangia cuneata	Common Rangia Or Clam	Molluscs	LC50	MOR	MORT	4	d	T	122	FW	Dillon, T.M.	Mercury and the Estuarine Marsh Clam, Rangia cuneata Gray. I. Toxicity	Arch.Environ.Contam.Toxicol. 6(2/3):249-255	1977
297	Mercury chloride (HgCl2)	Lemna minor	Duckweed	Flowers, Trees, Shrubs, Ferns	EC50	BCM	CARC	7	d	T	123	FW	Naumann, B., M. Eberius, and K.J. Appenroth	Growth Rate Based Dose-Response Relationships and EC-Values of Ten Heavy Metals Using the Duckweed Growth Inhibition Test (ISO 20079) with Lemna minor L. Clone St	J. Plant Physiol.164(12): 1656-1664	2007
298	Mercury chloride (HgCl2)	Thymallus arcticus	Arctic Grayling	Fish	LC50	MOR	MORT	4	d	T	124	FW	Buhl, K.J., and S.J. Hamilton	Relative Sensitivity of Early Life Stages of Arctic Grayling, Coho Salmon, and Rainbow Trout to Nine Inorganics	Ecotoxicol.Environ.Saf. 22:184-197	1991
299	Mercury chloride (HgCl2)	Euplotes patella	Protozoa	Invertebrates	LC50	MOR	MORT	1	d	T	125	FW	Madoni, P., G. Esteban, and G. Gorbi	Acute Toxicity of Cadmium, Copper, Mercury, and Zinc to Ciliates from Activated Sludge Plants	Bull.Environ.Contam.Toxicol. 49(6):900-905	1992
300	Mercury chloride (HgCl2)	Scapania undulata	Liverwort	Algae, Moss, Fungi	LC50	MOR	MORT	14	d	T	126	FW	Samecka-Cymerman, A., and A.J. Kempers	Preliminary Investigations into the Bioaccumulation of Mercury by the Liverwort Scapania undulata L. (Dum)	Ecotoxicol. Environ. Saf.31(1)(): 57-61	1995
301	Mercury chloride (HgCl2)	Xyrauchen texanus	Razorback Sucker	Fish	LC50	MOR	MORT	4	d	T	128	FW	Buhl, K.J.	Relative Sensitivity of Three Endangered Fishes, Colorado Squawfish, Bonytail, and Razorback Sucker, to Selected Metal Pollutants	Ecotoxicol.Environ.Saf. 37:186-192	1997
302	Mercury chloride (HgCl2)	Chlorella vulgaris	Green Algae	Algae, Moss, Fungi	LC50	MOR	MORT	12	d	T	128	FW	Mohanty, R.C., L. Mohanty, and P.K. Mohapatra	Effect of Glucose, Glutamate, and 2-Oxoglutarate on Mercury Toxicity to Chlorella vulgaris	Bull. Environ. Contam. Toxicol.51(): 130-137	1993
303	Mercury chloride (HgCl2)	Cypris sp.	Ostracod	Crustaceans	LC50	MOR	MORT	2	d	T	130	FW	Qureshi, S.A., A.B. Saksena, and V.P. Singh	Acute Toxicity of Some Heavy Metals to Fish Food Organisms	Int.J.Environ.Stud. 14(4):325-327	1980
304	Mercury chloride (HgCl2)	Dugesia bengalensis	Planaria	Worms	LC50	MOR	MORT	2	d	T	130	FW	Aditya, A.K., and M.P. Bandyopadhyay	Mercuric Chloride Induced Changes in Dugesia bengalensis Kawakatsu, an Aquatic Planarian from Santiniketan, West Bengal	J.Environ.Biol. 16(3):233-236	1995
305	Mercury chloride (HgCl2)	Scapania undulata	Liverwort	Algae, Moss, Fungi	LC50	MOR	MORT	14	d	T	132	FW	Samecka-Cymerman, A., and A.J. Kempers	Preliminary Investigations into the Bioaccumulation of Mercury by the Liverwort Scapania undulata L. (Dum)	Ecotoxicol. Environ. Saf.31(1)(): 57-61	1995
306	Chloromethylmercury	Petromyzon marinus	Sea Lamprey	Fish	LC50	MOR	MORT	1.417	d	T	134	FW	Mallatt, J., M.G. Barron, and C. McDonough	Acute Toxicity of Methyl Mercury to the Larval Lamprey, Petromyzon marinus	Bull.Environ.Contam.Toxicol. 37(2):281-288	1986
307	Mercury chloride (HgCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	NR-LETH	MOR	MORT	75	d	T	135	FW	Niimi, A.J., and G.P. Kissoon	Evaluation of the Critical Body Burden Concept Based on Inorganic and Organic Mercury Toxicity to Rainbow Trout (Oncorhynchus mykiss)	Arch.Environ.Contam.Toxicol. 26(2):169-178	1994
308	Mercury chloride (HgCl2)	Lymnaea luteola	Pond Snail	Molluscs	LC50	MOR	MORT	4	d	T	135	FW	Mathur, S., B.S. Khangarot, and V.S. Durve	Acute Toxicity of Mercury, Copper and Zinc to a Freshwater Pulmonate Snail, Lymnaea luteola (Lamarck)	Acta Hydrochim.Hydrobiol. 9(4):381-389	1981
309	Mercury chloride (HgCl2)	Villosa iris	Rainbow	Molluscs	LC50	MOR	MORT	2	d	T	135	FW	Valenti, T.W., D.S. Cherry, R.J. Neves, and J. Schmerfeld	Acute and Chronic Toxicity of Mercury to Early Life Stages of the Rainbow Mussel, Villosa iris (Bivalvia: Unionidae)	Environ.Toxicol.Chem. 24(5):1242-1246	2005
310	Mercury chloride (HgCl2)	Lemna minor	Duckweed	Flowers, Trees, Shrubs, Ferns	EC50	BCM	CHLO	7	d	T	135	FW	Naumann, B., M. Eberius, and K.J. Appenroth	Growth Rate Based Dose-Response Relationships and EC-Values of Ten Heavy Metals Using the Duckweed Growth Inhibition Test (ISO 20079) with Lemna minor L. Clone St	J. Plant Physiol.164(12): 1656-1664	2007
311	Mercury chloride (HgCl2)	Scapania undulata	Liverwort	Algae, Moss, Fungi	LC50	MOR	MORT	14	d	T	137	FW	Samecka-Cymerman, A., and A.J. Kempers	Preliminary Investigations into the Bioaccumulation of Mercury by the Liverwort Scapania undulata L. (Dum)	Ecotoxicol. Environ. Saf.31(1)(): 57-61	1995
312	Mercury	Anguilla rostrata	American Eel	Fish	LC50	MOR	MORT	4	d	T	140	FW	Rehwoldt, R., L.W. Menapace, B. Nerrie, and D. Allessandrello	The Effect of Increased Temperature upon the Acute Toxicity of Some Heavy Metal Ions	Bull.Environ.Contam.Toxicol. 8(2):91-96	1972
313	Mercury	Morone saxatilis	Striped Bass	Fish	LC50	MOR	MORT	2	d	T	140	FW	Rehwoldt, R., L.W. Menapace, B. Nerrie, and D. Allessandrello	The Effect of Increased Temperature upon the Acute Toxicity of Some Heavy Metal Ions	Bull.Environ.Contam.Toxicol. 8(2):91-96	1972
314	Mercury chloride (HgCl2)	Procambarus clarkii	Red Swamp Crayfish	Crustaceans	LC50	ITX	IMBL	4	d	T	140	FW	Medina, J., J. Diaz-Mayans, F. Hernandez, A. Pastor, J. Del Ramo, and A. Torreblanca	Study of the Toxicity and Bioaccumulation of Some Heavy Metals in the Crayfish Procambarus clarkii (Girard, 1852) of the Albufera Lake of Valencia, Spain	In: Final Reports on Research Projects Dealing with Mercury, Toxicity and Analytical Techniques, UNEP, Athens, Greece, MAP Tech.Rep.Ser.No.51 :105-131	1991
315	Mercury chloride (HgCl2)	Procambarus clarkii	Red Swamp Crayfish	Crustaceans	LC50	MOR	MORT	4	d	T	140	FW	Del Ramo, J., J. Diaz-Mayans, A. Torreblanca, and A. Nunez	Effects of Temperature on the Acute Toxicity of Heavy Metals (Cr, Cd, and Hg) to the Freshwater Crayfish, Procambarus clarkii (Girard)	Bull.Environ.Contam.Toxicol. 38(5):736-741	1987
316	Sulfuric acid, Mercury(2+) salt(1:1)	Oncorhynchus gorbuscha	Pink Salmon	Fish	LC50	MOR	MORT	7	d	T	140	FW	Servizi, J.A., and D.W. Martens	Effects of Selected Heavy Metals on Early Life of Sockeye and Pink Salmon	Rep.No.39, Int.Pacific Salmon Fish.Comm.(Br.Col.) :26 p.	1978
317	Sulfuric acid, Mercury(2+) salt(1:1)	Oncorhynchus gorbuscha	Pink Salmon	Fish	LC50	MOR	MORT	7	d	T	140	FW	Servizi, J.A., and D.W. Martens	Effects of Selected Heavy Metals on Early Life of Sockeye and Pink Salmon	Rep.No.39, Int.Pacific Salmon Fish.Comm.(Br.Col.) :26 p.	1978
318	Mercury chloride (HgCl2)	Selenastrum sp.	Green Algae	Algae, Moss, Fungi	EC50	NOC	NRNR	4	d	T	140	FW	Slooff, W.	A Comparative Study on the Short-Term Effects of 15 Chemicals on Fresh Water Organisms of Different Tropic Levels	Natl.Tech.Inf.Serv., Springfield, VA(): -	1982
319	(Acetato-kappaO)phenylmercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50*	MOR	MORT	1	d	T	142	FW	Akiyama, A.	Acute Toxicity of Two Organic Mercury Compounds to the Teleost, Oryzias latipes, in Different Stages of Development	Bull.Jpn.Soc.Sci.Fish. 36(6):563-570	1970
320	Mercury chloride (HgCl2)	Scapania undulata	Liverwort	Algae, Moss, Fungi	LC50	MOR	MORT	14	d	T	145	FW	Samecka-Cymerman, A., and A.J. Kempers	Preliminary Investigations into the Bioaccumulation of Mercury by the Liverwort Scapania undulata L. (Dum)	Ecotoxicol. Environ. Saf.31(1)(): 57-61	1995
321	Mercury chloride (HgCl2)	Anodonta imbecillis	Mussel	Molluscs	LC50	MOR	MORT	4	d	T	147	FW	Keller, A.E., and S.G. Zam	The Acute Toxicity of Selected Metals to the Freshwater Mussel, Anodonta imbecilis	Environ.Toxicol.Chem. 10(4):539-546	1991

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
322	Mercury chloride (HgCl2)	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	T	150	FW	Call, D.J., L.T. Brooke, N. Ahmad, and J.E. Richter	Toxicity and Metabolism Studies with EPA (Environmental Protection Agency) Priority Pollutants and Related Chemicals in Freshwater Organisms	EPA 600/3-83-095, U.S.EPA, Duluth, MN :120 p. (NTIS/PB83-263665)	1983
323	Mercury chloride (HgCl2)	Dugesia bengalensis	Planaria	Worms	LC50	MOR	MORT	1	d	T	150	FW	Aditya, A.K., and M.P. Bandyopadhyay	Mercuric Chloride Induced Changes in Dugesia bengalensis Kawakatsu, an Aquatic Planarian from Santiniketan, West Bengal	J.Environ.Biol. 16(3):233-236	1995
324	Chloromethylmercury	Petromyzon marinus	Sea Lamprey	Fish	LC50	MOR	MORT	2	d	T	151	FW	Mallatt, J., M.G. Barron, and C. McDonough	Acute Toxicity of Methyl Mercury to the Larval Lamprey, Petromyzon marinus	Bull.Environ.Contam.Toxicol. 37(2):281-288	1986
325	Mercury chloride (HgCl2)	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	3	d	T	155	FW	Call, D.J., L.T. Brooke, N. Ahmad, and J.E. Richter	Toxicity and Metabolism Studies with EPA (Environmental Protection Agency) Priority Pollutants and Related Chemicals in Freshwater Organisms	EPA 600/3-83-095, U.S.EPA, Duluth, MN :120 p. (NTIS/PB83-263665)	1983
326	Mercury chloride (HgCl2)	Scapania undulata	Liverwort	Algae, Moss, Fungi	LC50	MOR	MORT	14	d	T	155	FW	Samecka-Cymerman, A., and A.J. Kempers	Preliminary Investigations into the Bioaccumulation of Mercury by the Liverwort Scapania undulata L. (Dum)	Ecotoxicol. Environ. Saf.31(1)(): 57-61	1995
327	Mercury	Fundulus diaphanus	Banded Killifish	Fish	LC50	MOR	MORT	2	d	T	160	FW	Rehwoldt, R., L.W. Menapace, B. Nerrie, and D. Allessandrello	The Effect of Increased Temperature upon the Acute Toxicity of Some Heavy Metal Ions	Bull.Environ.Contam.Toxicol. 8(2):91-96	1972
328	Mercury chloride (HgCl2)	Copepoda	Copepod Subclass	Crustaceans	NR-LETH	MOR	MORT	14	d	T	160	FW	Borgmann, U., R. Cove, and C. Loveridge	Effect of Metals on the Biomass Production Kinetics of Freshwater Copepods	Can.J.Fish.Aquat.Sci. 37(4):567-575	1980
329	Mercury chloride (HgCl2)	Cirrhinus mrigala	Carp, Hawk Fish	Fish	LC50	MOR	MORT	2	d	T	160	FW	Mohan, C.V., T.R.C. Gupta, and N.R. Menon	Acute Toxicity of Mercury on the Early Developmental Stages of Cirrhina mrigala (Ham.)	Indian J.Fish. 33(1):133-136	1986
330	Mercury chloride (HgCl2)	Cyclotella meneghiniana	Diatom	Algae, Moss, Fungi	EC50	POP	ABND	10	d	T	160	FW	Rao, V.N.R.	Adaptation of Algae to Heavy Metal Toxicity	In: A.K.Kashyap and H.D.Kumar (Eds.), Recent Advances in Phycology, Rastogi Publications, Meerut, India(): 261-264	1994
331	Mercury chloride (HgCl2)	Cyclotella meneghiniana	Diatom	Algae, Moss, Fungi	EC50	POP	GPOP	10	d	T	160	FW	Gowrinathan, K.P., and V.N.R. Rao	Physiological Responses of Some Plankton Diatoms to Heavy Metals	Indian J. Microbiol.29(4): 293-302	1989
332	Mercury chloride (HgCl2)	Villosa iris	Rainbow	Molluscs	LC50	MOR	MORT	1	d	T	162	FW	Valenti, T.W., D.S. Cherry, R.J. Neves, and J. Schmerfeld	Acute and Chronic Toxicity of Mercury to Early Life Stages of the Rainbow Mussel, Villosa iris (Bivalvia: Unionidae)	Environ.Toxicol.Chem. 24(5):1242-1246	2005
333	Chloromethylmercury	Petromyzon marinus	Sea Lamprey	Fish	LC50	MOR	MORT	1	d	T	166	FW	Mallatt, J., M.G. Barron, and C. McDonough	Acute Toxicity of Methyl Mercury to the Larval Lamprey, Petromyzon marinus	Bull.Environ.Contam.Toxicol. 37(2):281-288	1986
334	Mercury chloride (HgCl2)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	1	d	T	168	FW	Hamilton, S.J., and K.J. Buhl	Safety Assessment of Selected Inorganic Elements to Fry of Chinook Salmon (Oncorhynchus tshawytscha)	Ecotoxicol.Environ.Saf. 20(3):307-324	1990
335	Mercury chloride (HgCl2)	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	T	168	FW	Snarski, V.M., and G.F. Olson	Chronic Toxicity and Bioaccumulation of Mercuric Chloride in the Fathead Minnow (Pimephales promelas)	Aquat.Toxicol. 2:143-156	1982
336	Mercury chloride (HgCl2)	Ptychocheilus lucius	Colorado Squawfish	Fish	LC50	MOR	MORT	4	d	T	168	FW	Buhl, K.J.	Relative Sensitivity of Three Endangered Fishes, Colorado Squawfish, Bonytail, and Razorback Sucker, to Selected Metal Pollutants	Ecotoxicol.Environ.Saf. 37:186-192	1997
337	Mercury chloride (HgCl2)	Cirrhinus mrigala	Carp, Hawk Fish	Fish	LC50	MOR	MORT	0.833	d	T	170	FW	Mohan, C.V., T.R.C. Gupta, and N.R. Menon	Acute Toxicity of Mercury on the Early Developmental Stages of Cirrhina mrigala (Ham.)	Indian J.Fish. 33(1):133-136	1986
338	Mercury chloride (HgCl2)	Anodonta imbecillis	Mussel	Molluscs	LC50	MOR	MORT	4	d	T	171	FW	Keller, A.E., and S.G. Zam	The Acute Toxicity of Selected Metals to the Freshwater Mussel, Anodonta imbecilis	Environ.Toxicol.Chem. 10(4):539-546	1991
339	Mercuric nitrate	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	T	172	FW	Spehar, R.L., and J.T. Fiandt	Acute and Chronic Effects of Water Quality Criteria-Based Metal Mixtures on Three Aquatic Species	Environ.Toxicol.Chem. 5(10):917-931	1986
340	(Acetato-kappaO)phenylmercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50*	MOR	MORT	1	d	T	180	FW	Akiyama, A.	Acute Toxicity of Two Organic Mercury Compounds to the Teleost, Oryzias latipes, in Different Stages of Development	Bull.Jpn.Soc.Sci.Fish. 36(6):563-570	1970
341	Iodomethylmercury	Trichogaster trichopterus	Blue Or 3-Spot Gourami	Fish	NR-LETH	MOR	MORT	1	d	T	180	FW	Roales, R.R.	The Effects of Sub-lethal Doses of Methylmercury and Copper, Applied Separately and Jointly, on the Immune Response of the Blue Gourami, Trichogaster trichopterus	Ph.D.Thesis, New York Univ.,NY :103 p.	1973
342	Mercury	Cyprinus carpio	Common Carp	Fish	LC50	MOR	MORT	4	d	T	180	FW	Rehwoldt, R., L.W. Menapace, B. Nerrie, and D. Allessandrello	The Effect of Increased Temperature upon the Acute Toxicity of Some Heavy Metal Ions	Bull.Environ.Contam.Toxicol. 8(2):91-96	1972
343	Mercury chloride (HgCl2)	Daphnia sp.	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	T	180	FW	Qureshi, S.A., A.B. Saksena, and V.P. Singh	Acute Toxicity of Some Heavy Metals to Fish Food Organisms	Int.J.Environ.Stud. 14(4):325-327	1980
344	Mercury chloride (HgCl2)	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	4	d	T	180	FW	Joshi, A.G., and M.S. Rege	Acute Toxicity of Some Pesticides & a Few Inorganic Salts to the Mosquito Fish Gambusia affinis (Baird & Girard)	Indian J.Exp.Biol. 18:435-437	1980
345	Sulfuric acid, Mercury(2+) salt(1:1)	Oncorhynchus nerka	Sockeye Salmon	Fish	LC50	MOR	MORT	7	d	T	180	FW	Servizi, J.A., and D.W. Martens	Effects of Selected Heavy Metals on Early Life of Sockeye and Pink Salmon	Rep.No.39, Int.Pacific Salmon Fish.Comm.(Br.Col.) :26 p.	1978
346	Sulfuric acid, Mercury(2+) salt(1:1)	Oncorhynchus nerka	Sockeye Salmon	Fish	LC50	MOR	MORT	7	d	T	180	FW	Servizi, J.A., and D.W. Martens	Effects of Selected Heavy Metals on Early Life of Sockeye and Pink Salmon	Rep.No.39, Int.Pacific Salmon Fish.Comm.(Br.Col.) :26 p.	1978
347	Mercury chloride (HgCl2)	Lymnaea luteola	Pond Snail	Molluscs	LC50	MOR	MORT	2	d	T	188	FW	Mathur, S., B.S. Khangarot, and V.S. Durve	Acute Toxicity of Mercury, Copper and Zinc to a Freshwater Pulmonate Snail, Lymnaea luteola (Lamarck)	Acta Hydrochim.Hydrobiol. 9(4):381-389	1981
348	Mercury	Anguilla rostrata	American Eel	Fish	LC50	MOR	MORT	2	d	T	190	FW	Rehwoldt, R., L.W. Menapace, B. Nerrie, and D. Allessandrello	The Effect of Increased Temperature upon the Acute Toxicity of Some Heavy Metal Ions	Bull.Environ.Contam.Toxicol. 8(2):91-96	1972
349	Mercury chloride (HgCl2)	Euplotes affinis	Protozoa	Invertebrates	LC50	MOR	MORT	1	d	T	190	FW	Madoni, P., G. Esteban, and G. Gorbi	Acute Toxicity of Cadmium, Copper, Mercury, and Zinc to Ciliates from Activated Sludge Plants	Bull.Environ.Contam.Toxicol. 49(6):900-905	1992

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
350	Mercury chloride	Lemna aequinoctiales	Duckweed	Flowers, Trees, Shrubs, Ferns	EC50	POP	BMAS	4	d	T	190	FW	Bengtsson, B.E., J.P. Bongo, and B. Eklund	Assessment of Duckweed Lemna aequinoctialis as a Toxicological Bioassay for Tropical Environments in Developing Countries	Ambio28(2): 152-155	1999
351	Chloromethylmercury	Petromyzon marinus	Sea Lamprey	Fish	LC50	MOR	MORT	3	d	T	191	FW	Mallatt, J., M.G. Barron, and C. McDonough	Acute Toxicity of Methyl Mercury to the Larval Lamprey, Petromyzon marinus	Bull.Environ.Contam.Toxicol. 37(2):281-288	1986
352	Mercury chloride (HgCl2)	Lemna minor	Duckweed	Flowers, Trees, Shrubs, Ferns	EC50	GRO	WGHT	7	d	T	191	FW	Naumann, B., M. Eberius, and K.J. Appenroth	Growth Rate Based Dose-Response Relationships and EC-Values of Ten Heavy Metals Using the Duckweed Growth Inhibition Test (ISO 20079) with Lemna minor L. Clone St	J. Plant Physiol.164(12): 1656-1664	2007
353	Mercury chloride (HgCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	T	193	FW	Buhl, K.J., and S.J. Hamilton	Relative Sensitivity of Early Life Stages of Arctic Grayling, Coho Salmon, and Rainbow Trout to Nine Inorganics	Ecotoxicol.Environ.Saf. 22:184-197	1991
354	Mercury chloride (HgCl2)	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	2	d	T	196	FW	Call, D.J., L.T. Brooke, N. Ahmad, and J.E. Richter	Toxicity and Metabolism Studies with EPA (Environmental Protection Agency) Priority Pollutants and Related Chemicals in Freshwater Organisms	EPA 600/3-83-095, U.S.EPA, Duluth, MN :120 p. (NTIS/PB83-263665)	1983
355	Mercury chloride (HgCl2)	Colpidium campylum	Ciliate	Invertebrates	EC50	POP	ABND	1	d	T	197	FW	Dive, D., S. Robert, E. Angrand, C. Bel, H. Bonnemain, L. Brun, Y. Demarque, A. Le Du, and Bouhouti El	A Bioassay Using the Measurement of Growth Inhibition of a Ciliate Protozoan: Colpidium campylum Stokes	Hydrobiologia 188/189:181-188	1989
356	Mercury chloride (HgCl2)	Tropocyclops prasinus ssp. mexicanus	Cyclopoid Copepod	Crustaceans	EC50	ITX	IMBL	2	d	T	199	FW	Lalande, M., and B. Pinel-Alloul	Acute Toxicity of Cadmium, Copper, Mercury and Zinc to Tropocyclops Prasinus mexicanus (Cyclopoida, Copepoda) from Three Quebec Lakes	Environ.Toxicol.Chem. 5(1):95-102	1986
357	Mercury chloride (HgCl2)	Cypris sp.	Ostracod	Crustaceans	LC50	MOR	MORT	1	d	T	200	FW	Qureshi, S.A., A.B. Saksena, and V.P. Singh	Acute Toxicity of Some Heavy Metals to Fish Food Organisms	Int.J.Environ.Stud. 14(4):325-327	1980
358	Mercury chloride (HgCl2)	Cirrhinus mrigala	Carp, Hawk Fish	Fish	LC50	MOR	MORT	4	d	T	200	FW	Verma, S.R., I.P. Tonk, A.K. Gupta, and M. Saxena	Evaluation of an Application Factor for Determining the Safe Concentration of Agricultural and Industrial Chemicals	Water Res. 18(1):111-115	1984
359	Sulfuric acid, Mercury(2+) salt(1:1)	Heteropneustes fossilis	Indian Catfish	Fish	LC50	MOR	MORT	1	d	T	200	FW	Banerjee, V.	Effect of Heavy Metal Poisoning on Peripheral Haemogram in Heteropneustes fossilis (Bloch): I. Mercuric Sulfate (LC50)	Comp.Physiol.Ecol. 11(4):173-176	1986
360	Sulfuric acid, Dimercury (1+) salt	Elodea canadensis	Waterweed	Flowers, Trees, Shrubs, Ferns	LOEL	PHY	BLUM	3	d	T	200.59	FW	Kochetov, Y.V., and B.N. Tarusov	Ultraweak Chemiluminescence of the Leaves of Aquatic Plants on Exposure to the Salts of Heavy Metals	Biophysics (Engl. Transl. Biofizika)20(3): 551-554	1975
361	Mercury chloride	Lemna aequinoctiales	Duckweed	Flowers, Trees, Shrubs, Ferns	LOEC	POP	ABND	0.333	d	T	200.59	FW	Li, T., and Z. Xiong	A Novel Response of Wild-Type Duckweed (Lemna paucicostata Hegelm.) to Heavy Metals	Environ. Toxicol.19(2): 95-102	2004
362	Mercury chloride	Lemna aequinoctiales	Duckweed	Flowers, Trees, Shrubs, Ferns	LOEC	POP	ABND	1	d	T	200.59	FW	Li, T., and Z. Xiong	A Novel Response of Wild-Type Duckweed (Lemna paucicostata Hegelm.) to Heavy Metals	Environ. Toxicol.19(2): 95-102	2004
363	Mercury chloride	Lemna aequinoctiales	Duckweed	Flowers, Trees, Shrubs, Ferns	LOEC	POP	ABND	2	d	T	200.59	FW	Li, T., and Z. Xiong	A Novel Response of Wild-Type Duckweed (Lemna paucicostata Hegelm.) to Heavy Metals	Environ. Toxicol.19(2): 95-102	2004
364	(Acetato-kappaO)phenylmercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50*	MOR	MORT	1	d	T	210	FW	Akiyama, A.	Acute Toxicity of Two Organic Mercury Compounds to the Teleost, Oryzias latipes, in Different Stages of Development	Bull.Jpn.Soc.Sci.Fish. 36(6):563-570	1970
365	(Acetato-kappaO)phenylmercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50*	MOR	MORT	1	d	T	210	FW	Akiyama, A.	Acute Toxicity of Two Organic Mercury Compounds to the Teleost, Oryzias latipes, in Different Stages of Development	Bull.Jpn.Soc.Sci.Fish. 36(6):563-570	1970
366	Mercury	Cyprinus carpio	Common Carp	Fish	LC50	MOR	MORT	2	d	T	210	FW	Rehwoldt, R., L.W. Menapace, B. Nerrie, and D. Allessandrello	The Effect of Increased Temperature upon the Acute Toxicity of Some Heavy Metal Ions	Bull.Environ.Contam.Toxicol. 8(2):91-96	1972
367	Mercury chloride (HgCl2)	Cirrhinus mrigala	Carp, Hawk Fish	Fish	LC50	MOR	MORT	2	d	T	210	FW	Mohan, C.V., T.R.C. Gupta, and N.R. Menon	Acute Toxicity of Mercury on the Early Developmental Stages of Cirrhina mrigala (Ham.)	Indian J.Fish. 33(1):133-136	1986
368	Sulfuric acid, Mercury(2+) salt(1:1)	Oncorhynchus gorbuscha	Pink Salmon	Fish	LC50	MOR	MORT	7	d	T	210	FW	Servizi, J.A., and D.W. Martens	Effects of Selected Heavy Metals on Early Life of Sockeye and Pink Salmon	Rep.No.39, Int.Pacific Salmon Fish.Comm.(Br.Col.) :26 p.	1978
369	Mercury chloride (HgCl2)	Navicula confervacea	Diatom	Algae, Moss, Fungi	EC50	POP	ABND	10	d	T	210	FW	Rao, V.N.R.	Adaptation of Algae to Heavy Metal Toxicity	In: A.K.Kashyap and H.D.Kumar (Eds.), Recent Advances in Phycology, Rastogi Publications, Meerut, India(): 261-264	1994
370	Mercury chloride (HgCl2)	Navicula confervacea	Diatom	Algae, Moss, Fungi	EC50	POP	GPOP	10	d	T	210	FW	Gowrinathan, K.P., and V.N.R. Rao	Physiological Responses of Some Plankton Diatoms to Heavy Metals	Indian J. Microbiol.29(4): 293-302	1989
371	Mercury chloride (HgCl2)	Anodonta imbecillis	Mussel	Molluscs	LC50	MOR	MORT	2	d	T	216	FW	Keller, A.E., and S.G. Zam	The Acute Toxicity of Selected Metals to the Freshwater Mussel, Anodonta imbecilis	Environ.Toxicol.Chem. 10(4):539-546	1991
372	Mercury chloride (HgCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	T	217	FW	Buhl, K.J., and S.J. Hamilton	Relative Sensitivity of Early Life Stages of Arctic Grayling, Coho Salmon, and Rainbow Trout to Nine Inorganics	Ecotoxicol.Environ.Saf. 22:184-197	1991
373	Mercury chloride (HgCl2)	Thymallus arcticus	Arctic Grayling	Fish	LC50	MOR	MORT	4	d	T	218	FW	Buhl, K.J., and S.J. Hamilton	Relative Sensitivity of Early Life Stages of Arctic Grayling, Coho Salmon, and Rainbow Trout to Nine Inorganics	Ecotoxicol.Environ.Saf. 22:184-197	1991
374	(Acetato-kappaO)phenylmercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50*	MOR	MORT	1	d	T	220	FW	Akiyama, A.	Acute Toxicity of Two Organic Mercury Compounds to the Teleost, Oryzias latipes, in Different Stages of Development	Bull.Jpn.Soc.Sci.Fish. 36(6):563-570	1970
375	Mercury	Morone americana	White Perch	Fish	LC50	MOR	MORT	4	d	T	220	FW	Rehwoldt, R., L.W. Menapace, B. Nerrie, and D. Allessandrello	The Effect of Increased Temperature upon the Acute Toxicity of Some Heavy Metal Ions	Bull.Environ.Contam.Toxicol. 8(2):91-96	1972

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376	Mercury	Morone saxatilis	Striped Bass	Fish	LC50	MOR	MORT	1	d	T	220	FW	Rehwoldt, R., L.W. Menapace, B. Nerrie, and D. Allessandrello	The Effect of Increased Temperature upon the Acute Toxicity of Some Heavy Metal Ions	Bull.Environ.Contam.Toxicol. 8(2):91-96	1972
377	Mercury chloride (HgCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50*	MOR	MORT	4	d	T	220	FW	MacLeod, J.C., and E. Pessah	Temperature Effects on Mercury Accumulation, Toxicity, and Metabolic Rate in Rainbow Trout (Salmo gairdneri)	J.Fish.Res.Board Can. 30:485-492	1973
378	Sulfuric acid, Mercury(2+) salt(1:1)	Oncorhynchus gorbuscha	Pink Salmon	Fish	LC50	MOR	MORT	7	d	T	220	FW	Servizi, J.A., and D.W. Martens	Effects of Selected Heavy Metals on Early Life of Sockeye and Pink Salmon	Rep.No.39, Int.Pacific Salmon Fish.Comm.(Br.Col.) :26 p.	1978
379	Sulfuric acid, Mercury(2+) salt(1:1)	Oncorhynchus nerka	Sockeye Salmon	Fish	LC50	MOR	MORT	7	d	T	220	FW	Servizi, J.A., and D.W. Martens	Effects of Selected Heavy Metals on Early Life of Sockeye and Pink Salmon	Rep.No.39, Int.Pacific Salmon Fish.Comm.(Br.Col.) :26 p.	1978
380	Mercury chloride (HgCl2)	Lemna minor	Duckweed	Flowers, Trees, Shrubs, Ferns	EC50	GRO	DWGT	7	d	T	221	FW	Naumann, B., M. Eberius, and K.J. Appenroth	Growth Rate Based Dose-Response Relationships and EC-Values of Ten Heavy Metals Using the Duckweed Growth Inhibition Test (ISO 20079) with Lemna minor L. Clone St	J. Plant Physiol.164(12): 1656-1664	2007
381	Mercury chloride (HgCl2)	Colpidium campylum	Ciliate	Invertebrates	EC50	POP	ABND	1	d	T	233	FW	Dive, D., S. Robert, E. Angrand, C. Bel, H. Bonnemain, L. Brun, Y. Demarque, A. Le Du, and Bouhouti El	A Bioassay Using the Measurement of Growth Inhibition of a Ciliate Protozoan: Colpidium campylum Stokes	Hydrobiologia 188/189:181-188	1989
382	Mercury chloride (HgCl2)	Anodonta imbecillis	Mussel	Molluscs	LC50	MOR	MORT	2	d	T	233	FW	Keller, A.E., and S.G. Zam	The Acute Toxicity of Selected Metals to the Freshwater Mussel, Anodonta imbecilis	Environ.Toxicol.Chem. 10(4):539-546	1991
383	Mercury chloride (HgCl2)	Villosa iris	Rainbow	Molluscs	NR-LETH	MOR	MORT	1	d	T	234	FW	Valenti, T.W., D.S. Cherry, R.J. Neves, and J. Schmerfeld	Acute and Chronic Toxicity of Mercury to Early Life Stages of the Rainbow Mussel, Villosa iris (Bivalvia: Unionidae)	Environ.Toxicol.Chem. 24(5):1242-1246	2005
384	(Acetato-kappaO)phenylmercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50*	MOR	MORT	1	d	T	235	FW	Akiyama, A.	Acute Toxicity of Two Organic Mercury Compounds to the Teleost, Oryzias latipes, in Different Stages of Development	Bull.Jpn.Soc.Sci.Fish. 36(6):563-570	1970
385	Mercury chloride (HgCl2)	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	4	d	T	238	FW	Buhl, K.J., and S.J. Hamilton	Relative Sensitivity of Early Life Stages of Arctic Grayling, Coho Salmon, and Rainbow Trout to Nine Inorganics	Ecotoxicol.Environ.Saf. 22:184-197	1991
386	Mercury chloride (HgCl2)	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	1	d	T	240	FW	Call, D.J., L.T. Brooke, N. Ahmad, and J.E. Richter	Toxicity and Metabolism Studies with EPA (Environmental Protection Agency) Priority Pollutants and Related Chemicals in Freshwater Organisms	EPA 600/3-83-095, U.S.EPA, Duluth, MN :120 p. (NTIS/PB83-263665)	1983
387	Mercury	Scenedesmus quadricauda	Green Algae	Algae, Moss, Fungi	EC50	POP	GPOP	12	d	T	240	FW	Fargasova, A.	Comparative Toxicity of Five Metals on Various Biological Subjects	Bull. Environ. Contam. Toxicol.53(2): 317-324	1994
388	Mercury chloride (HgCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	NR-LETH	MOR	MORT	47	d	T	241	FW	Niimi, A.J., and G.P. Kissoon	Evaluation of the Critical Body Burden Concept Based on Inorganic and Organic Mercury Toxicity to Rainbow Trout (Oncorhynchus mykiss)	Arch.Environ.Contam.Toxicol. 26(2):169-178	1994
389	Mercury chloride (HgCl2)	Rangia cuneata	Common Rangia Or Clam	Molluscs	LC50	MOR	MORT	3	d	T	242	FW	Dillon, T.M.	Mercury and the Estuarine Marsh Clam, Rangia cuneata Gray. I. Toxicity	Arch.Environ.Contam.Toxicol. 6(2/3):249-255	1977
390	Mercury chloride (HgCl2)	Scapania undulata	Liverwort	Algae, Moss, Fungi	LC50	MOR	MORT	14	d	T	242	FW	Samecka-Cymerman, A., and A.J. Kempers	Preliminary Investigations into the Bioaccumulation of Mercury by the Liverwort Scapania undulata L. (Dum)	Ecotoxicol. Environ. Saf.31(1)(): 57-61	1995
391	(Acetato-kappaO)phenylmercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50*	MOR	MORT	1	d	T	250	FW	Akiyama, A.	Acute Toxicity of Two Organic Mercury Compounds to the Teleost, Oryzias latipes, in Different Stages of Development	Bull.Jpn.Soc.Sci.Fish. 36(6):563-570	1970
392	Mercury	Anguilla rostrata	American Eel	Fish	LC50	MOR	MORT	1	d	T	250	FW	Rehwoldt, R., L.W. Menapace, B. Nerrie, and D. Allessandrello	The Effect of Increased Temperature upon the Acute Toxicity of Some Heavy Metal Ions	Bull.Environ.Contam.Toxicol. 8(2):91-96	1972
393	Mercury	Oncorhynchus mykiss	Rainbow Trout	Fish	NR-LETH	MOR	MORT	5.33	d	T	250	FW	Schweiger, G.	The Toxic Action of Heavy Metals Salts on Fish and Organisms on Which Fish Feed	Arch.Fischereiwiss. 8:54-78	1957
394	Sulfuric acid, Mercury(2+) salt(1:1)	Microcoleus vaginatus	Blue-Green Algae	Algae, Moss, Fungi	EC50	GRO	GGRO	14	d	T	253	FW	Vocke, R.W., K.L. Sears, J.J. O'Toole, and R.B. Wildman	Growth Responses of Selected Freshwater Algae to Trace Elements and Scrubber Ash Slurry Generated by Coal-Fired Power Plants	Water Res.14(2): 141-150	1980
395	(Acetato-kappaO)phenylmercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50*	MOR	MORT	1	d	T	263	FW	Akiyama, A.	Acute Toxicity of Two Organic Mercury Compounds to the Teleost, Oryzias latipes, in Different Stages of Development	Bull.Jpn.Soc.Sci.Fish. 36(6):563-570	1970
396	Mercury	Fundulus diaphanus	Banded Killifish	Fish	LC50	MOR	MORT	1	d	T	270	FW	Rehwoldt, R., L.W. Menapace, B. Nerrie, and D. Allessandrello	The Effect of Increased Temperature upon the Acute Toxicity of Some Heavy Metal Ions	Bull.Environ.Contam.Toxicol. 8(2):91-96	1972
397	Mercury	Dugesia tigrina	Turbellarian, Flatworm	Worms	LC50	MOR	MORT	4	d	T	270	FW	See, C.L., A.L. Buikema Jr., and J. Cairns Jr.	The Effects of Selected Toxicants on Survival of Dugesia tigrina (Turbellaria)	ASB (Assoc.Southeast.Biol.) Bull. 21(2):82	1974
398	Mercury chloride (HgCl2)	Colpidium campylum	Ciliate	Invertebrates	EC50	POP	ABND	1	d	T	276	FW	Dive, D., S. Robert, E. Angrand, C. Bel, H. Bonnemain, L. Brun, Y. Demarque, A. Le Du, and Bouhouti El	A Bioassay Using the Measurement of Growth Inhibition of a Ciliate Protozoan: Colpidium campylum Stokes	Hydrobiologia 188/189:181-188	1989
399	Mercury chloride (HgCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50*	MOR	MORT	4	d	T	280	FW	MacLeod, J.C., and E. Pessah	Temperature Effects on Mercury Accumulation, Toxicity, and Metabolic Rate in Rainbow Trout (Salmo gairdneri)	J.Fish.Res.Board Can. 30:485-492	1973
400	Mercury chloride (HgCl2)	Tubifex tubifex	Tubificid Worm	Worms	LC50	MOR	MORT	4	d	T	280	FW	Fargasova, A.	Ecotoxicology of Metals Related to Freshwater Benthos	Gen.Physiol.Biophys. 18(Focus Issue):48-53	1999
401	Sulfuric acid, Mercury(2+) salt(1:1)	Oncorhynchus nerka	Sockeye Salmon	Fish	LC50	MOR	MORT	7	d	T	280	FW	Servizi, J.A., and D.W. Martens	Effects of Selected Heavy Metals on Early Life of Sockeye and Pink Salmon	Rep.No.39, Int.Pacific Salmon Fish.Comm.(Br.Col.) :26 p.	1978
402	Sulfuric acid, Mercury(2+) salt(1:1)	Oncorhynchus nerka	Sockeye Salmon	Fish	LC50	MOR	MORT	7	d	T	280	FW	Servizi, J.A., and D.W. Martens	Effects of Selected Heavy Metals on Early Life of Sockeye and Pink Salmon	Rep.No.39, Int.Pacific Salmon Fish.Comm.(Br.Col.) :26 p.	1978

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
403	Mercury chloride	Lemna aequinoctiales	Duckweed	Flowers, Trees, Shrubs, Ferns	EC50	POP	BMAS	4	d	T	280	FW	Bengtsson, B.E., J.P. Bongo, and B. Eklund	Assessment of Duckweed Lemna aequinoctialis as a Toxicological Bioassay for Tropical Environments in Developing Countries	Ambio28(2): 152-155	1999
404	Mercury chloride (HgCl2)	Scapania undulata	Liverwort	Algae, Moss, Fungi	LC50	MOR	MORT	14	d	T	281	FW	Samecka-Cymerman, A., and A.J. Kempers	Preliminary Investigations into the Bioaccumulation of Mercury by the Liverwort Scapania undulata L. (Dum)	Ecotoxicol. Environ. Saf.31(1)(): 57-61	1995
405	Mercury chloride (HgCl2)	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	4	d	T	282	FW	Buhl, K.J., and S.J. Hamilton	Relative Sensitivity of Early Life Stages of Arctic Grayling, Coho Salmon, and Rainbow Trout to Nine Inorganics	Ecotoxicol.Environ.Saf. 22:184-197	1991
406	Mercury	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	LC50	MOR	MORT	2	d	T	290	FW	Abbasi, S.A., P.C. Nipaney, and R. Soni	Studies on Environmental Management of Mercury (II), Chromium (VI) and Zinc (II) with Respect to the Impact on Some Arthropods and Protozoans - Toxicity of Zinc (II)	Int.J.Environ.Stud. 32:181-187	1988
407	Mercury chloride (HgCl2)	Skistodiaptomus oregonensis	Calanoid Copepod	Crustaceans	EC50	ITX	IMBL	2	d	T	291	FW	Lalande, M., and B. Pinel-Alloul	Heavy Metals Toxicity on Planktonic Crustacea of the Quebec Lakes (Toxicite des Metaux Lourds sur les Crustaces Planctoniques des Lacs du Quebec)	Sci.Tech.Eau 17(3):253-259 (FRE) (ENG ABS)	1984
408	Chloromethylmercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	2	d	T	300	FW	Tsuji, S., Y. Tonogai, Y. Ito, and S. Kanoh	The Influence of Rearing Temperatures on the Toxicity of Various Environmental Pollutants for Killifish (Oryzias latipes)	J.Hyg.Chem.(Eisei Kagaku) 32(1):46-53 (JPN) (ENG ABS)	1986
409	Mercury	Lepomis gibbosus	Pumpkinseed	Fish	LC50	MOR	MORT	4	d	T	300	FW	Rehwoldt, R., L.W. Menapace, B. Nerrie, and D. Allessandrello	The Effect of Increased Temperature upon the Acute Toxicity of Some Heavy Metal Ions	Bull.Environ.Contam.Toxicol. 8(2):91-96	1972
410	Mercury	Salvelinus fontinalis	Brook Trout	Fish	NR-LETH	MOR	MORT	4.25	d	T	300	FW	Schweiger, G.	The Toxic Action of Heavy Metals Salts on Fish and Organisms on Which Fish Feed	Arch.Fischereiwiss. 8:54-78	1957
411	Mercury	Chironomus plumosus	Midge	Insects/Spiders	LC50	MOR	MORT	4	d	T	300	FW	Vedamanikam, V.J., and N.A.M. Shazilli	The Effect of Multi-Generational Exposure to Metals and Resultant Change in Median Lethal Toxicity Tests Values over Subsequent Generations	Bull.Environ.Contam.Toxicol. 80(1):63-67	2008
412	Mercury	Chironomus plumosus	Midge	Insects/Spiders	LC50	MOR	MORT	4	d	T	300	FW	Vedamanikam, V.J., and N.A.M. Shazilli	The Effect of Multi-Generational Exposure to Metals and Resultant Change in Median Lethal Toxicity Tests Values over Subsequent Generations	Bull.Environ.Contam.Toxicol. 80(1):63-67	2008
413	Mercury	Tubifex tubifex	Tubificid Worm	Worms	NR-LETH	MOR	MORT	7	d	T	300	FW	Schweiger, G.	The Toxic Action of Heavy Metals Salts on Fish and Organisms on Which Fish Feed	Arch.Fischereiwiss. 8:54-78	1957
414	Mercury chloride (HgCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50*	MOR	MORT	2	d	T	300	FW	MacLeod, J.C., and E. Pessah	Temperature Effects on Mercury Accumulation, Toxicity, and Metabolic Rate in Rainbow Trout (Salmo gairdneri)	J.Fish.Res.Board Can. 30:485-492	1973
415	Sulfuric acid, Mercury(2+) salt(1:1)	Oncorhynchus nerka	Sockeye Salmon	Fish	LC50	MOR	MORT	7	d	T	300	FW	Servizi, J.A., and D.W. Martens	Effects of Selected Heavy Metals on Early Life of Sockeye and Pink Salmon	Rep.No.39, Int.Pacific Salmon Fish.Comm.(Br.Col.) :26 p.	1978
416	Mercury	Chlorella vulgaris	Green Algae	Algae, Moss, Fungi	NR-LETH	MOR	MORT	10	d	T	300	FW	Mohanty, R.C., L. Mohanty, and P.K. Mohapatra	Change in Toxicity Effect of Mercury at Static Concentration to Chlorella vulgaris with Addition of Organic Carbon Sources	Acta Biol. Hung44(2-3)(): 211-222	1993
417	Mercury chloride (HgCl2)	Cyprinus carpio	Common Carp	Fish	LC50	MOR	MORT	4	d	T	305	FW	Kaur, K., and A. Dhawan	Metal Toxicity to Different Life Stages of Cyprinus carpio Linn.	Indian J.Ecol. 21(2):93-98	1994
418	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	2	d	T	310	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
419	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	3	d	T	310	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
420	Sulfuric acid, Mercury(2+) salt(1:1)	Oncorhynchus nerka	Sockeye Salmon	Fish	LC50	MOR	MORT	7	d	T	310	FW	Servizi, J.A., and D.W. Martens	Effects of Selected Heavy Metals on Early Life of Sockeye and Pink Salmon	Rep.No.39, Int.Pacific Salmon Fish.Comm.(Br.Col.) :26 p.	1978
421	Mercury chloride (HgCl2)	Chironomus riparius	Midge	Insects/Spiders	LC50	MOR	MORT	2	d	T	316	FW	Rossaro, B., G.F. Gaggino, and R. Marchetti	Accumulation of Mercury in Larvae and Adults, Chironomus riparius (Meigen)	Bull.Environ.Contam.Toxicol. 37(3):402-406	1986
422	Mercury chloride (HgCl2)	Daphnia sp.	Water Flea	Crustaceans	LC50	MOR	MORT	1	d	T	320	FW	Qureshi, S.A., A.B. Saksena, and V.P. Singh	Acute Toxicity of Some Heavy Metals to Fish Food Organisms	Int.J.Environ.Stud. 14(4):325-327	1980
423	Mercury chloride (HgCl2)	Tubifex tubifex	Tubificid Worm	Worms	NR-LETH	MOR	MORT	2	d	T	320	FW	Rathore, R.S., and B.S. Khangarot	Effects of Temperature on the Sensitivity of Sludge Worm Tubifex tubifex Muller to Selected Heavy Metals	Ecotoxicol.Environ.Saf. 53(1):27-36	2002
424	Mercury	Cyprinus carpio	Common Carp	Fish	LC50	MOR	MORT	1	d	T	330	FW	Rehwoldt, R., L.W. Menapace, B. Nerrie, and D. Allessandrello	The Effect of Increased Temperature upon the Acute Toxicity of Some Heavy Metal Ions	Bull.Environ.Contam.Toxicol. 8(2):91-96	1972
425	Mercury chloride (HgCl2)	Lymnaea luteola	Pond Snail	Molluscs	LC50	MOR	MORT	1	d	T	330	FW	Mathur, S., B.S. Khangarot, and V.S. Durve	Acute Toxicity of Mercury, Copper and Zinc to a Freshwater Pulmonate Snail, Lymnaea luteola (Lamarck)	Acta Hydrochim.Hydrobiol. 9(4):381-389	1981
426	Mercury	Morone americana	White Perch	Fish	LC50	MOR	MORT	2	d	T	340	FW	Rehwoldt, R., L.W. Menapace, B. Nerrie, and D. Allessandrello	The Effect of Increased Temperature upon the Acute Toxicity of Some Heavy Metal Ions	Bull.Environ.Contam.Toxicol. 8(2):91-96	1972
427	Chloromethylmercury	Mystus vittatus	Striped Catfish	Fish	LC50*	MOR	MORT	4	d	T	350	FW	Dutt, D., and A.K. Sharma	Toxicity and Respiratory Effects of Mercuric Chloride(HgCl2) and Methyl Mercuric Chloride(CH3HgCl) on Catfish, Mystus vittatus	Uttar Pradesh J.Zool. 9(1):43-47	1989
428	Mercury	Oncorhynchus mykiss	Rainbow Trout	Fish	NR-LETH	MOR	MORT	0.570	d	T	350	FW	Schweiger, G.	The Toxic Action of Heavy Metals Salts on Fish and Organisms on Which Fish Feed	Arch.Fischereiwiss. 8:54-78	1957
429	Mercury	Salvelinus fontinalis	Brook Trout	Fish	NR-LETH	MOR	MORT	0.875	d	T	350	FW	Schweiger, G.	The Toxic Action of Heavy Metals Salts on Fish and Organisms on Which Fish Feed	Arch.Fischereiwiss. 8:54-78	1957

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
430	Mercury chloride (HgCl2)	Procambarus clarkii	Red Swamp Crayfish	Crustaceans	LC50	ITX	IMBL	4	d	T	350	FW	Medina, J., J. Diaz-Mayans, F. Hernandez, A. Pastor, J. Del Ramo, and A. Torreblanca	Study of the Toxicity and Bioaccumulation of Some Heavy Metals in the Crayfish Procambarus clarkii (Girard, 1852) of the Albufera Lake of Valencia, Spain	In: Final Reports on Research Projects Dealing with Mercury, Toxicity and Analytical Techniques, UNEP, Athens, Greece, MAP Tech.Rep.Ser.No.51 :105-131	1991
431	Mercury chloride (HgCl2)	Procambarus clarkii	Red Swamp Crayfish	Crustaceans	LC50	MOR	MORT	4	d	T	350	FW	Del Ramo, J., J. Diaz-Mayans, A. Torreblanca, and A. Nunez	Effects of Temperature on the Acute Toxicity of Heavy Metals (Cr, Cd, and Hg) to the Freshwater Crayfish, Procambarus clarkii (Girard)	Bull.Environ.Contam.Toxicol. 38(5):736-741	1987
432	Mercury chloride (HgCl2)	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	2	d	T	350	FW	Heisinger, J.F., C.D. Hansen, and J.H. Kim	Effect of Selenium Dioxide on the Accumulation and Acute Toxicity of Mercuric Chloride in Goldfish	Arch.Environ.Contam.Toxicol. 8(3):279-283	1979
433	(Acetato-kappaO)phenylmercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	1	d	T	360	FW	Tsuji, S., Y. Tonogai, Y. Ito, and S. Kanoh	The Influence of Rearing Temperatures on the Toxicity of Various Environmental Pollutants for Killifish (Oryzias latipes)	J.Hyg.Chem.(Eisei Kagaku) 32(1):46-53 (JPN) (ENG ABS)	1986
434	(Acetato-kappaO)phenylmercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	2	d	T	360	FW	Tsuji, S., Y. Tonogai, Y. Ito, and S. Kanoh	The Influence of Rearing Temperatures on the Toxicity of Various Environmental Pollutants for Killifish (Oryzias latipes)	J.Hyg.Chem.(Eisei Kagaku) 32(1):46-53 (JPN) (ENG ABS)	1986
435	(Acetato-kappaO)phenylmercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	1	d	T	370	FW	Tsuji, S., Y. Tonogai, Y. Ito, and S. Kanoh	The Influence of Rearing Temperatures on the Toxicity of Various Environmental Pollutants for Killifish (Oryzias latipes)	J.Hyg.Chem.(Eisei Kagaku) 32(1):46-53 (JPN) (ENG ABS)	1986
436	(Acetato-kappaO)phenylmercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	2	d	T	370	FW	Tsuji, S., Y. Tonogai, Y. Ito, and S. Kanoh	The Influence of Rearing Temperatures on the Toxicity of Various Environmental Pollutants for Killifish (Oryzias latipes)	J.Hyg.Chem.(Eisei Kagaku) 32(1):46-53 (JPN) (ENG ABS)	1986
437	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	3	d	T	370	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
438	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	3	d	T	370	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
439	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	4	d	T	370	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
440	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	4	d	T	370	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
441	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	5	d	T	370	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
442	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	5.042	d	T	370	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
443	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	6.375	d	T	370	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
444	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	6.4	d	T	370	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
445	Mercury chloride	Lemna aequinoctiales	Duckweed	Flowers, Trees, Shrubs, Ferns	EC50	POP	ABND	4	d	T	370	FW	Bengtsson, B.E., J.P. Bongo, and B. Eklund	Assessment of Duckweed Lemna aequinoctialis as a Toxicological Bioassay for Tropical Environments in Developing Countries	Ambio28(2): 152-155	1999
446	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	2	d	T	374	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
447	Mercury chloride (HgCl2)	Lymnaea luteola	Pond Snail	Molluscs	LC50	MOR	MORT	0.5	d	T	376	FW	Mathur, S., B.S. Khangarot, and V.S. Durve	Acute Toxicity of Mercury, Copper and Zinc to a Freshwater Pulmonate Snail, Lymnaea luteola (Lamarck)	Acta Hydrochim.Hydrobiol. 9(4):381-389	1981
448	Chloromethylmercury	Mystus vittatus	Striped Catfish	Fish	LC50*	MOR	MORT	3	d	T	380	FW	Dutt, D., and A.K. Sharma	Toxicity and Respiratory Effects of Mercuric Chloride(HgCl2) and Methyl Mercuric Chloride(CH3HgCl) on Catfish, Mystus vittatus	Uttar Pradesh J.Zool. 9(1):43-47	1989
449	Mercury chloride (HgCl2)	Barbus ticto	Two-Spot Or Tic Tac Toe Barb	Fish	LC50	MOR	MORT	1	d	T	380	FW	Saxena, A.B., D.S. Rao, and Z.U. Khan	Studies on the Acute Toxicities of Copper, Mercury, and Cadmium to Danio malabaricus and Puntius ticto	J.Environ.Sci.Health Part A 17(5):657-665	1982
450	Mercury chloride (HgCl2)	Tubifex tubifex	Tubificid Worm	Worms	LC50	MOR	MORT	2	d	T	380	FW	Fargasova, A.	Ecotoxicology of Metals Related to Freshwater Benthos	Gen.Physiol.Biophys. 18(Focus Issue):48-53	1999
451	Mercury	Lepomis gibbosus	Pumpkinseed	Fish	LC50	MOR	MORT	2	d	T	390	FW	Rehwoldt, R., L.W. Menapace, B. Nerrie, and D. Allessandrello	The Effect of Increased Temperature upon the Acute Toxicity of Some Heavy Metal Ions	Bull.Environ.Contam.Toxicol. 8(2):91-96	1972
452	Mercury	Chironomus plumosus	Midge	Insects/Spiders	LC50	MOR	MORT	4	d	T	400	FW	Vedamanikam, V.J., and N.A.M. Shazilli	The Effect of Multi-Generational Exposure to Metals and Resultant Change in Median Lethal Toxicity Tests Values over Subsequent Generations	Bull.Environ.Contam.Toxicol. 80(1):63-67	2008

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
453	Mercury chloride (HgCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50*	MOR	MORT	4	d	T	400	FW	MacLeod, J.C., and E. Pessah	Temperature Effects on Mercury Accumulation, Toxicity, and Metabolic Rate in Rainbow Trout (Salmo gairdneri)	J.Fish.Res.Board Can. 30:485-492	1973
454	Mercury chloride	Lemna aequinoctiales	Duckweed	Flowers, Trees, Shrubs, Ferns	LOEC	POP	ABND	0.292	d	T	401.18	FW	Li, T., and Z. Xiong	A Novel Response of Wild-Type Duckweed (Lemna paucicostata Hegelm.) to Heavy Metals	Environ. Toxicol.19(2): 95-102	2004
455	Mercury	Lepomis gibbosus	Pumpkinseed	Fish	LC50	MOR	MORT	1	d	T	410	FW	Rehwoldt, R., L.W. Menapace, B. Nerrie, and D. Allessandrello	The Effect of Increased Temperature upon the Acute Toxicity of Some Heavy Metal Ions	Bull.Environ.Contam.Toxicol. 8(2):91-96	1972
456	Mercury chloride (HgCl2)	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	3	d	T	410	FW	Joshi, A.G., and M.S. Rege	Acute Toxicity of Some Pesticides & a Few Inorganic Salts to the Mosquito Fish Gambusia affinis (Baird & Girard)	Indian J.Exp.Biol. 18:435-437	1980
457	Chloromethylmercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	1	d	T	420	FW	Tsuji, S., Y. Tonogai, Y. Ito, and S. Kanoh	The Influence of Rearing Temperatures on the Toxicity of Various Environmental Pollutants for Killifish (Oryzias latipes)	J.Hyg.Chem.(Eisei Kagaku) 32(1):46-53 (JPN) (ENG ABS)	1986
458	Chloromethylmercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	2	d	T	420	FW	Tsuji, S., Y. Tonogai, Y. Ito, and S. Kanoh	The Influence of Rearing Temperatures on the Toxicity of Various Environmental Pollutants for Killifish (Oryzias latipes)	J.Hyg.Chem.(Eisei Kagaku) 32(1):46-53 (JPN) (ENG ABS)	1986
459	Mercury	Morone americana	White Perch	Fish	LC50	MOR	MORT	1	d	T	420	FW	Rehwoldt, R., L.W. Menapace, B. Nerrie, and D. Allessandrello	The Effect of Increased Temperature upon the Acute Toxicity of Some Heavy Metal Ions	Bull.Environ.Contam.Toxicol. 8(2):91-96	1972
460	Mercury chloride (HgCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	T	420	FW	Daoust, P.Y.	Acute Pathological Effects of Mercury, Cadmium and Copper in Rainbow Trout	Ph.D.Thesis, Saskatoon, Saskatchewan :331 p.	1981
461	Mercury chloride (HgCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	NR-LETH	MOR	MORT	4	d	T	426	FW	Niimi, A.J., and G.P. Kissoon	Evaluation of the Critical Body Burden Concept Based on Inorganic and Organic Mercury Toxicity to Rainbow Trout (Oncorhynchus mykiss)	Arch.Environ.Contam.Toxicol. 26(2):169-178	1994
462	Chloromethylmercury	Mystus vittatus	Striped Catfish	Fish	LC50*	MOR	MORT	2	d	T	430	FW	Dutt, D., and A.K. Sharma	Toxicity and Respiratory Effects of Mercuric Chloride(HgCl2) and Methyl Mercuric Chloride(CH3HgCl) on Catfish, Mystus vittatus	Uttar Pradesh J.Zool. 9(1):43-47	1989
463	Mercury chloride (HgCl2)	Mystus vittatus	Striped Catfish	Fish	LC50*	MOR	MORT	4	d	T	440	FW	Dutt, D., and A.K. Sharma	Toxicity and Respiratory Effects of Mercuric Chloride(HgCl2) and Methyl Mercuric Chloride(CH3HgCl) on Catfish, Mystus vittatus	Uttar Pradesh J.Zool. 9(1):43-47	1989
464	Mercury chloride (HgCl2)	Caenorhabditis elegans	Nematode	Worms	LC50	MOR	MORT	4	d	T	440	FW	Williams, P.L., and D.B. Dusenbery	Aquatic Toxicity Testing Using the Nematode, Caenorhabditis elegans	Environ.Toxicol.Chem. 9(10):1285-1290	1990
465	Mercury chloride (HgCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50*	MOR	MORT	2	d	T	450	FW	MacLeod, J.C., and E. Pessah	Temperature Effects on Mercury Accumulation, Toxicity, and Metabolic Rate in Rainbow Trout (Salmo gairdneri)	J.Fish.Res.Board Can. 30:485-492	1973
466	Chloromethylmercury	Mystus vittatus	Striped Catfish	Fish	LC50*	MOR	MORT	1	d	T	460	FW	Dutt, D., and A.K. Sharma	Toxicity and Respiratory Effects of Mercuric Chloride(HgCl2) and Methyl Mercuric Chloride(CH3HgCl) on Catfish, Mystus vittatus	Uttar Pradesh J.Zool. 9(1):43-47	1989
467	Chloromethylmercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	1	d	T	460	FW	Tsuji, S., Y. Tonogai, Y. Ito, and S. Kanoh	The Influence of Rearing Temperatures on the Toxicity of Various Environmental Pollutants for Killifish (Oryzias latipes)	J.Hyg.Chem.(Eisei Kagaku) 32(1):46-53 (JPN) (ENG ABS)	1986
468	Chloromethylmercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	2	d	T	460	FW	Tsuji, S., Y. Tonogai, Y. Ito, and S. Kanoh	The Influence of Rearing Temperatures on the Toxicity of Various Environmental Pollutants for Killifish (Oryzias latipes)	J.Hyg.Chem.(Eisei Kagaku) 32(1):46-53 (JPN) (ENG ABS)	1986
469	Mercury chloride (HgCl2)	Nitzschia obtusa	Diatom	Algae, Moss, Fungi	EC50	POP	ABND	10	d	T	460	FW	Rao, V.N.R.	Adaptation of Algae to Heavy Metal Toxicity	In: A.K.Kashyap and H.D.Kumar (Eds.), Recent Advances in Phycology, Rastogi Publications, Meerut, India(): 261-264	1994
470	Mercury chloride (HgCl2)	Nitzschia obtusa	Diatom	Algae, Moss, Fungi	EC50	POP	GPOP	10	d	T	460	FW	Gowrinathan, K.P., and V.N.R. Rao	Physiological Responses of Some Plankton Diatoms to Heavy Metals	Indian J. Microbiol.29(4): 293-302	1989
471	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	4	d	T	470	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
472	(Acetato-kappaO)phenylmercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	2	d	T	480	FW	Tsuji, S., Y. Tonogai, Y. Ito, and S. Kanoh	The Influence of Rearing Temperatures on the Toxicity of Various Environmental Pollutants for Killifish (Oryzias latipes)	J.Hyg.Chem.(Eisei Kagaku) 32(1):46-53 (JPN) (ENG ABS)	1986
473	(Acetato)-3-pyridyl mercury	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	3	d	T	490	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
474	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	2	d	T	490	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
475	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	2	d	T	490	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
476	Chloromethylmercury	Rana pipiens	Leopard Frog	Amphibians	NR-LETH	MOR	MORT	1	d	T	500	FW	Chang, L.W., K.R. Reuhl, and A.W. Dudley Jr.	Effects of Methylmercury Chloride on Rana pipiens Tadpoles	Environ.Res. 8(1):82-91	1974
477	Mercury	Oncorhynchus mykiss	Rainbow Trout	Fish	NR-LETH	MOR	MORT	0.458	d	T	500	FW	Schweiger, G.	The Toxic Action of Heavy Metals Salts on Fish and Organisms on Which Fish Feed	Arch.Fischereiwiss. 8:54-78	1957
478	Mercury	Oncorhynchus mykiss	Rainbow Trout	Fish	NR-LETH	MOR	MORT	1	d	T	500	FW	Schweiger, G.	The Toxic Action of Heavy Metals Salts on Fish and Organisms on Which Fish Feed	Arch.Fischereiwiss. 8:54-78	1957

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
479	Mercury	Salvelinus fontinalis	Brook Trout	Fish	NR-LETH	MOR	MORT	0.75	d	T	500	FW	Schweiger, G.	The Toxic Action of Heavy Metals Salts on Fish and Organisms on Which Fish Feed	Arch.Fischereiwiss. 8:54-78	1957
480	Mercury	Salvelinus fontinalis	Brook Trout	Fish	NR-LETH	MOR	MORT	3.667	d	T	500	FW	Schweiger, G.	The Toxic Action of Heavy Metals Salts on Fish and Organisms on Which Fish Feed	Arch.Fischereiwiss. 8:54-78	1957
481	Mercury chloride (HgCl2)	Salmo trutta ssp. fario	Brown Trout	Fish	LOEC	REP	MOTL	0.000	d	T	500	FW	Lahnsteiner, F., N. Mansour, and B. Berger	The Effect of Inorganic and Organic Pollutants on Sperm Motility of Some Freshwater Teleosts	J.Fish Biol. 65(5):1283-1297	2004
482	Mercury chloride (HgCl2)	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	NR-LETH	MOR	MORT	3	d	T	500	FW	Abbasi, S.A., P.C. Nipaney, and R. Soni	Environmental Consequences of the Inhibition in the Hatching of Pupae of Aedes aegypti by Mercury, Zinc and Chromium-the Abnormal Toxicity of Zinc	Int.J.Environ.Stud. 24(2):107-114	1985
483	Mercury chloride (HgCl2)	Tubifex tubifex	Tubificid Worm	Worms	LC50	MOR	MORT	1	d	T	510	FW	Fargasova, A.	Ecotoxicology of Metals Related to Freshwater Benthos	Gen.Physiol.Biophys. 18(Focus Issue):48-53	1999
484	(Acetato-kappaO)phenylmercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	1	d	T	520	FW	Tsuji, S., Y. Tonogai, Y. Ito, and S. Kanoh	The Influence of Rearing Temperatures on the Toxicity of Various Environmental Pollutants for Killifish (Oryzias latipes)	J.Hyg.Chem.(Eisei Kagaku) 32(1):46-53 (JPN) (ENG ABS)	1986
485	Mercury chloride (HgCl2)	Mystus vittatus	Striped Catfish	Fish	LC50*	MOR	MORT	3	d	T	520	FW	Dutt, D., and A.K. Sharma	Toxicity and Respiratory Effects of Mercuric Chloride(HgCl2) and Methyl Mercuric Chloride(CH3HgCl) on Catfish, Mystus vittatus	Uttar Pradesh J.Zool. 9(1):43-47	1989
486	Mercury chloride (HgCl2)	Colpidium campylum	Ciliate	Invertebrates	EC50	POP	ABND	1	d	T	537	FW	Dive, D., S. Robert, E. Angrand, C. Bel, H. Bonnemain, L. Brun, Y. Demarque, A. Le Du, and Bouhouti El	A Bioassay Using the Measurement of Growth Inhibition of a Ciliate Protozoan: Colpidium campylum Stokes	Hydrobiologia 188/189:181-188	1989
487	Mercury chloride	Lemna aequinoctiales	Duckweed	Flowers, Trees, Shrubs, Ferns	EC50	POP	ABND	4	d	T	540	FW	Bengtsson, B.E., J.P. Bongo, and B. Eklund	Assessment of Duckweed Lemna aequinoctialis as a Toxicological Bioassay for Tropical Environments in Developing Countries	Ambio28(2): 152-155	1999
488	Mercury chloride (HgCl2)	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	2	d	T	560	FW	Joshi, A.G., and M.S. Rege	Acute Toxicity of Some Pesticides & a Few Inorganic Salts to the Mosquito Fish Gambusia affinis (Baird & Girard)	Indian J.Exp.Biol. 18:435-437	1980
489	(Acetato-kappaO)phenylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	4	d	T	580	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
490	Mercury chloride (HgCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	BCM	ATPT	0.167	d	T	590	FW	Hickey, C.W., C. Blaise, and G. Costan	Microtesting Appraisal of ATP and Cell Recovery Toxicity End Points After Acute Exposure of Selenastrum capricornutum to Selected Chemicals	Environ. Toxicol. Water Qual.6(4): 383-403	1991
491	(Acetato-kappaO)phenylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	3	d	T	600	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
492	Chloromethylmercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	1	d	T	600	FW	Tsuji, S., Y. Tonogai, Y. Ito, and S. Kanoh	The Influence of Rearing Temperatures on the Toxicity of Various Environmental Pollutants for Killifish (Oryzias latipes)	J.Hyg.Chem.(Eisei Kagaku) 32(1):46-53 (JPN) (ENG ABS)	1986
493	Mercury	Cyclops sp.	Cyclopoid Copepod	Crustaceans	LC50	MOR	MORT	2	d	T	600	FW	Abbasi, S.A., P.C. Nipaney, and R. Soni	Studies on Environmental Management of Mercury (II), Chromium (VI) and Zinc (II) with Respect to the Impact on Some Arthropods and Protozoans - Toxicity of Zinc (II)	Int.J.Environ.Stud. 32:181-187	1988
494	Mercury	Chironomus plumosus	Midge	Insects/Spiders	LC50	MOR	MORT	4	d	T	600	FW	Vedamanikam, V.J., and N.A.M. Shazilli	The Effect of Multi-Generational Exposure to Metals and Resultant Change in Median Lethal Toxicity Tests Values over Subsequent Generations	Bull.Environ.Contam.Toxicol. 80(1):63-67	2008
495	Mercury chloride (HgCl2)	Mystus vittatus	Striped Catfish	Fish	LC50*	MOR	MORT	2	d	T	600	FW	Dutt, D., and A.K. Sharma	Toxicity and Respiratory Effects of Mercuric Chloride(HgCl2) and Methyl Mercuric Chloride(CH3HgCl) on Catfish, Mystus vittatus	Uttar Pradesh J.Zool. 9(1):43-47	1989
496	Mercury chloride (HgCl2)	Anabas testudineus	Climbing Perch	Fish	LC50	MOR	MORT	4	d	T	641	FW	Sinha, T.K.P., and K. Kumar	Acute Toxicity of Mercuric Chloride to Anabas testudineus (Bloch)	Environ.Ecol. 10(3):720-722	1992
497	Mercury chloride (HgCl2)	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	1	d	T	650	FW	Joshi, A.G., and M.S. Rege	Acute Toxicity of Some Pesticides & a Few Inorganic Salts to the Mosquito Fish Gambusia affinis (Baird & Girard)	Indian J.Exp.Biol. 18:435-437	1980
498	Mercury chloride (HgCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50*	MOR	MORT	2	d	T	650	FW	MacLeod, J.C., and E. Pessah	Temperature Effects on Mercury Accumulation, Toxicity, and Metabolic Rate in Rainbow Trout (Salmo gairdneri)	J.Fish.Res.Board Can. 30:485-492	1973
499	Mercury chloride (HgCl2)	Rana heckscheri	River Frog	Amphibians	LC50	MOR	MORT	4	d	T	680	FW	Punzo, F.	Effect of Mercuric Chloride on Fertilization and Larval Development in the River Frog, Rana heckscheri (Wright) (Anura: Ranidae)	Bull.Environ.Contam.Toxicol. 51(4):575-581	1993
500	Mercury chloride (HgCl2)	Lemna minor	Duckweed	Flowers, Trees, Shrubs, Ferns	EC50	GRO	GRRT	7	d	T	683	FW	Naumann, B., M. Eberius, and K.J. Appenroth	Growth Rate Based Dose-Response Relationships and EC-Values of Ten Heavy Metals Using the Duckweed Growth Inhibition Test (ISO 20079) with Lemna minor L. Clone St	J. Plant Physiol.164(12): 1656-1664	2007
501	Mercury chloride (HgCl2)	Catostomus commersoni	White Sucker	Fish	LC50	MOR	MORT	4	d	T	687	FW	Duncan, D.A., and J.F. Klaverkamp	Tolerance and Resistance to Cadmium in White Suckers (Catostomus commersoni) Previously Exposed to Cadmium, Mercury, Zinc, or Selenium	Can.J.Fish.Aquat.Sci. 40(2):128-138	1983
502	Mercury chloride (HgCl2)	Philodina acuticornis	Rotifer	Invertebrates	EC50	ITX	IMBL	4	d	T	700	FW	Buikema, A.L.Jr., J. Cairns Jr., and G.W. Sullivan	Evaluation of Philodina acuticornis (Rotifera) as Bioassay Organisms for Heavy Metals	Water Resour.Bull. 10(4):648-661	1974

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
503	Chloro(2-hydroxyphenyl)mercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50*	MOR	MORT	1	d	T	720	FW	Akiyama, A.	Acute Toxicity of Two Organic Mercury Compounds to the Teleost, Oryzias latipes, in Different Stages of Development	Bull.Jpn.Soc.Sci.Fish. 36(6):563-570	1970
504	Mercury chloride (HgCl2)	Clarias lazera	Catfish	Fish	LC50	MOR	MORT	4	d	T	720	FW	Hilmy, A.M., N.A. El Domiaty, A.Y. Daabees, and F.I. Moussa	Short-Term Effects of Mercury on Survival, Behaviour, Bioaccumulation and Ionic Pattern in the Catfish (Clarias lazera)	Comp.Biochem.Physiol.C 87(2):303-308	1987
505	Mercury chloride (HgCl2)	Catostomus commersoni	White Sucker	Fish	LC50	MOR	MORT	3	d	T	740	FW	Duncan, D.A., and J.F. Klaverkamp	Tolerance and Resistance to Cadmium in White Suckers (Catostomus commersoni) Previously Exposed to Cadmium, Mercury, Zinc, or Selenium	Can.J.Fish.Aquat.Sci. 40(2):128-138	1983
506	Mercury chloride (HgCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50*	MOR	MORT	1	d	T	750	FW	MacLeod, J.C., and E. Pessah	Temperature Effects on Mercury Accumulation, Toxicity, and Metabolic Rate in Rainbow Trout (Salmo gairdneri)	J.Fish.Res.Board Can. 30:485-492	1973
507	Mercury chloride (HgCl2)	Mystus vittatus	Striped Catfish	Fish	LC50*	MOR	MORT	1	d	T	760	FW	Dutt, D., and A.K. Sharma	Toxicity and Respiratory Effects of Mercuric Chloride(HgCl2) and Methyl Mercuric Chloride(CH3HgCl) on Catfish, Mystus vittatus	Uttar Pradesh J.Zool. 9(1):43-47	1989
508	(Acetato-kappaO)phenylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	2	d	T	780	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
509	Mercury chloride (HgCl2)	Procambarus clarkii	Red Swamp Crayfish	Crustaceans	LC50	ITX	IMBL	4	d	T	790	FW	Medina, J., J. Diaz-Mayans, F. Hernandez, A. Pastor, J. Del Ramo, and A. Torreblanca	Study of the Toxicity and Bioaccumulation of Some Heavy Metals in the Crayfish Procambarus clarkii (Girard, 1852) of the Albufera Lake of Valencia, Spain	In: Final Reports on Research Projects Dealing with Mercury, Toxicity and Analytical Techniques, UNEP, Athens, Greece, MAP Tech.Rep.Ser.No.51 :105-131	1991
510	Mercury chloride (HgCl2)	Procambarus clarkii	Red Swamp Crayfish	Crustaceans	LC50	MOR	MORT	4	d	T	790	FW	Del Ramo, J., J. Diaz-Mayans, A. Torreblanca, and A. Nunez	Effects of Temperature on the Acute Toxicity of Heavy Metals (Cr, Cd, and Hg) to the Freshwater Crayfish, Procambarus clarkii (Girard)	Bull.Environ.Contam.Toxicol. 38(5):736-741	1987
511	Mercury	Cyprinidae	Minnow,Carp Family	Fish	NR-LETH	MOR	MORT	3.5	d	T	800	FW	Schweiger, G.	The Toxic Action of Heavy Metals Salts on Fish and Organisms on Which Fish Feed	Arch.Fischereiwiss. 8:54-78	1957
512	Mercury	Oncorhynchus mykiss	Rainbow Trout	Fish	NR-LETH	MOR	MORT	0.340	d	T	800	FW	Schweiger, G.	The Toxic Action of Heavy Metals Salts on Fish and Organisms on Which Fish Feed	Arch.Fischereiwiss. 8:54-78	1957
513	Mercury	Salvelinus fontinalis	Brook Trout	Fish	NR-LETH	MOR	MORT	0.680	d	T	800	FW	Schweiger, G.	The Toxic Action of Heavy Metals Salts on Fish and Organisms on Which Fish Feed	Arch.Fischereiwiss. 8:54-78	1957
514	Mercury chloride (HgCl2)	Philodina acuticornis	Rotifer	Invertebrates	EC50	ITX	IMBL	4	d	T	800	FW	Buikema, A.L.Jr., J. Cairns Jr., and G.W. Sullivan	Evaluation of Philodina acuticornis (Rotifera) as Bioassay Organisms for Heavy Metals	Water Resour.Bull. 10(4):648-661	1974
515	Mercury chloride	Lemna aequinoctiales	Duckweed	Flowers, Trees, Shrubs, Ferns	LOEC	POP	ABND	0.25	d	T	802.36	FW	Li, T., and Z. Xiong	A Novel Response of Wild-Type Duckweed (Lemna paucicostata Hegelm.) to Heavy Metals	Environ. Toxicol.19(2): 95-102	2004
516	Mercury chloride (HgCl2)	Clarias lazera	Catfish	Fish	LC50	MOR	MORT	3	d	T	810	FW	Hilmy, A.M., N.A. El Domiaty, A.Y. Daabees, and F.I. Moussa	Short-Term Effects of Mercury on Survival, Behaviour, Bioaccumulation and Ionic Pattern in the Catfish (Clarias lazera)	Comp.Biochem.Physiol.C 87(2):303-308	1987
517	Mercury chloride (HgCl2)	Carassius auratus	Goldfish	Fish	LC50	MOR	MORT	9	d	T	820	FW	Weir, P.A., and C.H. Hine	Effects of Various Metals on Behavior of Conditioned Goldfish	Arch.Environ.Health 20(1):45-51	1970
518	Mercury chloride (HgCl2)	Catostomus commersoni	White Sucker	Fish	LC50	MOR	MORT	2	d	T	830	FW	Duncan, D.A., and J.F. Klaverkamp	Tolerance and Resistance to Cadmium in White Suckers (Catostomus commersoni) Previously Exposed to Cadmium, Mercury, Zinc, or Selenium	Can.J.Fish.Aquat.Sci. 40(2):128-138	1983
519	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	3	d	T	850	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
520	Mercury chloride (HgCl2)	Eudiaptomus padanus ssp. padanus	Calanoid Copepod	Crustaceans	EC50*	ITX	IMBL	2	d	T	850	FW	Baudouin, M.F., and P. Scoppa	Acute Toxicity of Various Metals to Freshwater Zooplankton	Bull.Environ.Contam.Toxicol. 12(6):745-751	1974
521	Mercury chloride (HgCl2)	Channa marulius	Snake-Head Catfish	Fish	LC50	MOR	MORT	1	d	T	860	FW	Khangarot, B.S.	Effect of Zinc, Copper and Mercury on Channa marulius (Hamilton)	Acta Hydrochim.Hydrobiol. 9(6):639-649	1981
522	Mercury chloride (HgCl2)	Clarias lazera	Catfish	Fish	LC50	MOR	MORT	2	d	T	880	FW	Hilmy, A.M., N.A. El Domiaty, A.Y. Daabees, and F.I. Moussa	Short-Term Effects of Mercury on Survival, Behaviour, Bioaccumulation and Ionic Pattern in the Catfish (Clarias lazera)	Comp.Biochem.Physiol.C 87(2):303-308	1987
523	Mercury	Chironomus plumosus	Midge	Insects/Spiders	LC50	MOR	MORT	4	d	T	900	FW	Vedamanikam, V.J., and N.A.M. Shazilli	The Effect of Multi-Generational Exposure to Metals and Resultant Change in Median Lethal Toxicity Tests Values over Subsequent Generations	Bull.Environ.Contam.Toxicol. 80(1):63-67	2008
524	Mercury chloride (HgCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	1	d	T	903	FW	Wobeser, G.	Acute Toxicity of Methyl Mercury Chloride and Mercuric Chloride for Rainbow Trout (Salmo gairdneri) Fry and Fingerlings	J.Fish.Res.Board Can. 32(1):2005-2013	1975
525	Mercury chloride (HgCl2)	Channa marulius	Snake-Head Catfish	Fish	LC50	MOR	MORT	0.5	d	T	941	FW	Khangarot, B.S.	Effect of Zinc, Copper and Mercury on Channa marulius (Hamilton)	Acta Hydrochim.Hydrobiol. 9(6):639-649	1981
526	Mercury chloride (HgCl2)	Clarias lazera	Catfish	Fish	LC50	MOR	MORT	1	d	T	960	FW	Hilmy, A.M., N.A. El Domiaty, A.Y. Daabees, and F.I. Moussa	Short-Term Effects of Mercury on Survival, Behaviour, Bioaccumulation and Ionic Pattern in the Catfish (Clarias lazera)	Comp.Biochem.Physiol.C 87(2):303-308	1987
527	Chloromethylmercury	Carassius auratus	Goldfish	Fish	NR-LETH	MOR	MORT	3	d	T	1000	FW	Birge, W.J., A.G. Westerman, and O.W. Roberts	Lethal and Teratogenic Effects of Metallic Pollutants on Vertebrate Embryos	In: Proc.2nd Annu.NSF-Rann Trace Contam.Environ.Conf., Springfield, VA :316-320 (U.S.NTIS LBL-3217) (Used Ref.8703)	1974

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
528	Chloromethylmercury	Ictalurus punctatus	Channel Catfish	Fish	NR-LETH	MOR	MORT	6	d	T	1000	FW	Birge, W.J., A.G. Westerman, and O.W. Roberts	Lethal and Teratogenic Effects of Metallic Pollutants on Vertebrate Embryos	In: Proc.2nd Annu.NSF-Rann Trace Contam.Environ.Conf., Springfield, VA :316-320 (U.S.NTIS LBL-3217) (Used Ref.8703)	1974
529	Mercury	Cyprinidae	Minnow,Carp Family	Fish	NR-LETH	MOR	MORT	2.5	d	T	1000	FW	Schweiger, G.	The Toxic Action of Heavy Metals Salts on Fish and Organisms on Which Fish Feed	Arch.Fischereiwiss. 8:54-78	1957
530	Mercury	Nais sp.	Oligochaete	Worms	LC50*	MOR	MORT	4	d	T	1000	FW	Rehwoldt, R., L. Lasko, C. Shaw, and E. Wirhowski	The Acute Toxicity of Some Heavy Metal Ions Toward Benthic Organisms	Bull.Environ.Contam.Toxicol. 10(5):291-294	1973
531	Mercury chloride (HgCl2)	Catostomus commersoni	White Sucker	Fish	LC50	MOR	MORT	1	d	T	1000	FW	Duncan, D.A., and J.F. Klaverkamp	Tolerance and Resistance to Cadmium in White Suckers (Catostomus commersoni) Previously Exposed to Cadmium, Mercury, Zinc, or Selenium	Can.J.Fish.Aquat.Sci. 40(2):128-138	1983
532	Mercury chloride (HgCl2)	Oreochromis mossambicus	Mozambique Tilapia	Fish	LC50	MOR	MORT	2	d	T	1000	FW	Menezes, M.R., and S.Z. Qasim	Determination of Acute Toxicity Levels of Mercury to the Fish Tilapia mossambica (Peters)	Proc.Indian Acad.Sci.Anim.Sci. 92(5):375-380	1983
533	Mercury chloride (HgCl2)	Oreochromis mossambicus	Mozambique Tilapia	Fish	LC50	MOR	MORT	4	d	T	1000	FW	Qureshi, S.A., and A.B. Saksena	The Acute Toxicity of Some Heavy Metals to Tilapia mossambica (Peters)	Aqua Sci.Tech.Reviews (India) 1:19-20	1980
534	Mercury chloride (HgCl2)	Fundulus heteroclitus	Mummichog	Fish	NR-LETH	MOR	MORT	18	d	T	1000	FW	Weis, J.S., and P. Weis	Effects of Heavy Metals on Development of the Killifish, Fundulus heterclitus	J.Fish Biol. 11(1):49-54	1977
535	Mercury chloride (HgCl2)	Chironomus plumosus	Midge	Insects/Spiders	LC50	MOR	MORT	4	d	T	1000	FW	Vedamanikam, V.J., and N.A.M. Shazili	The Chironomid Larval Tube, a Mechanism to Protect the Organism from Environmental Disturbances?	Toxicol.Environ.Chem. 91(1):171-176	2009
536	Mercury chloride (HgCl2)	Philodina acuticornis	Rotifer	Invertebrates	EC50	ITX	IMBL	1	d	T	1000	FW	Buikema, A.L.Jr., J. Cairns Jr., and G.W. Sullivan	Evaluation of Philodina acuticornis (Rotifera) as Bioassay Organisms for Heavy Metals	Water Resour.Bull. 10(4):648-661	1974
537	Mercury chloride (HgCl2)	Caenorhabditis elegans	Nematode	Worms	LC50	MOR	MORT	3	d	T	1000	FW	Williams, P.L., and D.B. Dusenbery	Aquatic Toxicity Testing Using the Nematode, Caenorhabditis elegans	Environ.Toxicol.Chem. 9(10):1285-1290	1990
538	Mercury chloride (HgCl2)	Azolla pinnata	Water Velvet	Flowers, Trees, Shrubs, Ferns	LOEC	PHY	PSII	14	d	T	1000	FW	Sarkar, A., and S. Jana	Effects of Combinations of Heavy Metals on Hill Activity of Azolla pinnata	Water Air Soil Pollut.35(1-2): 141-145	1987
539	Mercury chloride (HgCl2)	Azolla pinnata	Water Velvet	Flowers, Trees, Shrubs, Ferns	LOEC	PHY	PSII	28	d	T	1000	FW	Sarkar, A., and S. Jana	Effects of Combinations of Heavy Metals on Hill Activity of Azolla pinnata	Water Air Soil Pollut.35(1-2): 141-145	1987
540	Mercury	Chironomus plumosus	Midge	Insects/Spiders	LC50	MOR	MORT	4	d	T	1050	FW	Vedamanikam, V.J., and N.A.M. Shazilli	The Effect of Multi-Generational Exposure to Metals and Resultant Change in Median Lethal Toxicity Tests Values over Subsequent Generations	Bull.Environ.Contam.Toxicol. 80(1):63-67	2008
541	Mercury chloride (HgCl2)	Chironomus riparius	Midge	Insects/Spiders	LC50	MOR	MORT	1	d	T	1074	FW	Rossaro, B., G.F. Gaggino, and R. Marchetti	Accumulation of Mercury in Larvae and Adults, Chironomus riparius (Meigen)	Bull.Environ.Contam.Toxicol. 37(3):402-406	1986
542	Mercury	Tinca tinca	Tench	Fish	NR-LETH	MOR	MORT	7.17	d	T	1100	FW	Schweiger, G.	The Toxic Action of Heavy Metals Salts on Fish and Organisms on Which Fish Feed	Arch.Fischereiwiss. 8:54-78	1957
543	Mercury	Amnicola sp.	Spire Snail	Molluscs	LC50*	MOR	MORT	1	d	T	1100	FW	Rehwoldt, R., L. Lasko, C. Shaw, and E. Wirhowski	The Acute Toxicity of Some Heavy Metal Ions Toward Benthic Organisms	Bull.Environ.Contam.Toxicol. 10(5):291-294	1973
544	Mercury	Chironomus plumosus	Midge	Insects/Spiders	LC50	MOR	MORT	4	d	T	1200	FW	Vedamanikam, V.J., and N.A.M. Shazilli	The Effect of Multi-Generational Exposure to Metals and Resultant Change in Median Lethal Toxicity Tests Values over Subsequent Generations	Bull.Environ.Contam.Toxicol. 80(1):63-67	2008
545	Mercury	Trichoptera	Caddisfly Order	Insects/Spiders	LC50*	MOR	MORT	4	d	T	1200	FW	Rehwoldt, R., L. Lasko, C. Shaw, and E. Wirhowski	The Acute Toxicity of Some Heavy Metal Ions Toward Benthic Organisms	Bull.Environ.Contam.Toxicol. 10(5):291-294	1973
546	Mercury	Zygoptera	Damselfly Order	Insects/Spiders	LC50*	MOR	MORT	4	d	T	1200	FW	Rehwoldt, R., L. Lasko, C. Shaw, and E. Wirhowski	The Acute Toxicity of Some Heavy Metal Ions Toward Benthic Organisms	Bull.Environ.Contam.Toxicol. 10(5):291-294	1973
547	Mercury chloride (HgCl2)	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	2	d	T	1200	FW	Tsuji, S., Y. Tonogai, Y. Ito, and S. Kanoh	The Influence of Rearing Temperatures on the Toxicity of Various Environmental Pollutants for Killifish (Oryzias latipes)	J.Hyg.Chem.(Eisei Kagaku) 32(1):46-53 (JPN) (ENG ABS)	1986
548	Mercury chloride (HgCl2)	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	2	d	T	1200	FW	Tsuji, S., Y. Tonogai, Y. Ito, and S. Kanoh	The Influence of Rearing Temperatures on the Toxicity of Various Environmental Pollutants for Killifish (Oryzias latipes)	J.Hyg.Chem.(Eisei Kagaku) 32(1):46-53 (JPN) (ENG ABS)	1986
549	Mercury chloride (HgCl2)	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	2	d	T	1200	FW	Tsuji, S., Y. Tonogai, Y. Ito, and S. Kanoh	The Influence of Rearing Temperatures on the Toxicity of Various Environmental Pollutants for Killifish (Oryzias latipes)	J.Hyg.Chem.(Eisei Kagaku) 32(1):46-53 (JPN) (ENG ABS)	1986
550	Mercury	Myriophyllum spicatum	Eurasian Watermilfoil	Flowers, Trees, Shrubs, Ferns	EC50	GRO	GGRO	32	d	T	1200	FW	Stanley, R.A.	Toxicity of Heavy Metals and Salts to Eurasian Watermilfoil (Myriophyllum spicatum L.)	Arch. Environ. Contam. Toxicol.2(4): 331-341	1974
551	Mercury chloride (HgCl2)	Channa punctata	Snake-Head Catfish	Fish	LC50	MOR	MORT	4	d	T	1210	FW	Pandey, S., R. Kumar, S. Sharma, N.S. Nagpure, S.K. Srivastava, and M.S. Verma	Acute Toxicity Bioassays of Mercuric Chloride and Malathion on Air-Breathing Fish Channa punctatus (Bloch)	Ecotoxicol.Environ.Saf. 61(1):114-120	2005
552	Chloro(2-hydroxyphenyl)mercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50*	MOR	MORT	1	d	T	1260	FW	Akiyama, A.	Acute Toxicity of Two Organic Mercury Compounds to the Teleost, Oryzias latipes, in Different Stages of Development	Bull.Jpn.Soc.Sci.Fish. 36(6):563-570	1970
553	Mercury chloride (HgCl2)	Nitzschia palea	Diatom	Algae, Moss, Fungi	EC50	POP	ABND	10	d	T	1260	FW	Rao, V.N.R.	Adaptation of Algae to Heavy Metal Toxicity	In: A.K.Kashyap and H.D.Kumar (Eds.), Recent Advances in Phycology, Rastogi Publications, Meerut, India(): 261-264	1994
554	Mercury chloride (HgCl2)	Nitzschia palea	Diatom	Algae, Moss, Fungi	EC50	POP	GPOP	10	d	T	1260	FW	Gowrinathan, K.P., and V.N.R. Rao	Physiological Responses of Some Plankton Diatoms to Heavy Metals	Indian J. Microbiol.29(4): 293-302	1989
555	Mercury	Tinca tinca	Tench	Fish	NR-LETH	MOR	MORT	4.25	d	T	1300	FW	Schweiger, G.	The Toxic Action of Heavy Metals Salts on Fish and Organisms on Which Fish Feed	Arch.Fischereiwiss. 8:54-78	1957
556	Mercury chloride (HgCl2)	Philodina acuticornis	Rotifer	Invertebrates	EC50	ITX	IMBL	2	d	T	1300	FW	Buikema, A.L.Jr., J. Cairns Jr., and G.W. Sullivan	Evaluation of Philodina acuticornis (Rotifera) as Bioassay Organisms for Heavy Metals	Water Resour.Bull. 10(4):648-661	1974

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
557	Chloro(2-hydroxyphenyl)mercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50*	MOR	MORT	1	d	T	1310	FW	Akiyama, A.	Acute Toxicity of Two Organic Mercury Compounds to the Teleost, Oryzias latipes, in Different Stages of Development	Bull.Jpn.Soc.Sci.Fish. 36(6):563-570	1970
558	Mercury chloride (HgCl2)	Chironomus plumosus	Midge	Insects/Spiders	LC50	MOR	MORT	4	d	T	1330	FW	Vedamanikam, V.J., and N.A.M. Shazili	The Chironomid Larval Tube, a Mechanism to Protect the Organism from Environmental Disturbances?	Toxicol.Environ.Chem. 91(1):171-176	2009
559	Mercury chloride (HgCl2)	Chironomus plumosus	Midge	Insects/Spiders	LC50	MOR	MORT	4	d	T	1330	FW	Vedamanikam, V.J., and N.A.M. Shazili	The Chironomid Larval Tube, a Mechanism to Protect the Organism from Environmental Disturbances?	Toxicol.Environ.Chem. 91(1):171-176	2009
560	Mercury chloride (HgCl2)	Chironomus plumosus	Midge	Insects/Spiders	LC50	MOR	MORT	4	d	T	1330	FW	Vedamanikam, V.J., and N.A.M. Shazili	The Chironomid Larval Tube, a Mechanism to Protect the Organism from Environmental Disturbances?	Toxicol.Environ.Chem. 91(1):171-176	2009
561	Mercury chloride (HgCl2)	Chironomus plumosus	Midge	Insects/Spiders	LC50	MOR	MORT	4	d	T	1330	FW	Vedamanikam, V.J., and N.A.M. Shazili	The Chironomid Larval Tube, a Mechanism to Protect the Organism from Environmental Disturbances?	Toxicol.Environ.Chem. 91(1):171-176	2009
562	Mercury chloride (HgCl2)	Oreochromis mossambicus	Mozambique Tilapia	Fish	LC50	MOR	MORT	2	d	T	1400	FW	Qureshi, S.A., and A.B. Saksena	The Acute Toxicity of Some Heavy Metals to Tilapia mossambica (Peters)	Aqua Sci.Tech.Reviews (India) 1:19-20	1980
563	Mercury chloride (HgCl2)	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	1	d	T	1400	FW	Akiyama, A.	Acute Toxicity of Two Organic Mercury Compounds to the Teleost, Oryzias latipes, in Different Stages of Development	Bull.Jpn.Soc.Sci.Fish. 36(6):563-570	1970
564	Mercury chloride (HgCl2)	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	1	d	T	1400	FW	Tsuji, S., Y. Tonogai, Y. Ito, and S. Kanoh	The Influence of Rearing Temperatures on the Toxicity of Various Environmental Pollutants for Killifish (Oryzias latipes)	J.Hyg.Chem.(Eisei Kagaku) 32(1):46-53 (JPN) (ENG ABS)	1986
565	Mercury chloride (HgCl2)	Philodina acuticornis	Rotifer	Invertebrates	EC50	ITX	IMBL	2	d	T	1400	FW	Buikema, A.L.Jr., J. Cairns Jr., and G.W. Sullivan	Evaluation of Philodina acuticornis (Rotifera) as Bioassay Organisms for Heavy Metals	Water Resour.Bull. 10(4):648-661	1974
566	Mercury chloride (HgCl2)	Rana heckscheri	River Frog	Amphibians	LC50	MOR	MORT	0.125	d	T	1430	FW	Punzo, F.	Effect of Mercuric Chloride on Fertilization and Larval Development in the River Frog, Rana heckscheri (Wright) (Anura: Ranidae)	Bull.Environ.Contam.Toxicol. 51(4):575-581	1993
567	(Acetato-kappaO)phenylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	1	d	T	1500	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
568	Mercury	Cyprinidae	Minnow,Carp Family	Fish	NR-LETH	MOR	MORT	1.010	d	T	1500	FW	Schweiger, G.	The Toxic Action of Heavy Metals Salts on Fish and Organisms on Which Fish Feed	Arch.Fischereiwiss. 8:54-78	1957
569	Mercury	Tinca tinca	Tench	Fish	NR-LETH	MOR	MORT	3	d	T	1500	FW	Schweiger, G.	The Toxic Action of Heavy Metals Salts on Fish and Organisms on Which Fish Feed	Arch.Fischereiwiss. 8:54-78	1957
570	Mercury	Tinca tinca	Tench	Fish	NR-LETH	MOR	MORT	4.3	d	T	1500	FW	Schweiger, G.	The Toxic Action of Heavy Metals Salts on Fish and Organisms on Which Fish Feed	Arch.Fischereiwiss. 8:54-78	1957
571	Mercury chloride (HgCl2)	Procambarus clarkii	Red Swamp Crayfish	Crustaceans	NR-LETH	MOR	MORT	3	d	T	1500	FW	Diaz-Mayans, J., A. Torreblanca, J. Del Ramo, and A. Nunez	Oxygen Uptake by Excised Gills of Procambarus clarkii (Girard) From Albufera Lake of Valencia, Spain, Under Heavy Metal Treatments	Bull.Environ.Contam.Toxicol. 36(6):912-917	1986
572	Chloro(2-hydroxyphenyl)mercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50*	MOR	MORT	1	d	T	1590	FW	Akiyama, A.	Acute Toxicity of Two Organic Mercury Compounds to the Teleost, Oryzias latipes, in Different Stages of Development	Bull.Jpn.Soc.Sci.Fish. 36(6):563-570	1970
573	Mercury chloride (HgCl2)	Chironomus plumosus	Midge	Insects/Spiders	LC50	MOR	MORT	4	d	T	1590	FW	Vedamanikam, V.J., and N.A.M. Shazili	The Chironomid Larval Tube, a Mechanism to Protect the Organism from Environmental Disturbances?	Toxicol.Environ.Chem. 91(1):171-176	2009
574	Mercury chloride (HgCl2)	Chironomus plumosus	Midge	Insects/Spiders	LC50	MOR	MORT	4	d	T	1590	FW	Vedamanikam, V.J., and N.A.M. Shazili	The Chironomid Larval Tube, a Mechanism to Protect the Organism from Environmental Disturbances?	Toxicol.Environ.Chem. 91(1):171-176	2009
575	Mercury chloride (HgCl2)	Catostomus commersoni	White Sucker	Fish	LC50	MOR	MORT	0.5	d	T	1600	FW	Duncan, D.A., and J.F. Klaverkamp	Tolerance and Resistance to Cadmium in White Suckers (Catostomus commersoni) Previously Exposed to Cadmium, Mercury, Zinc, or Selenium	Can.J.Fish.Aquat.Sci. 40(2):128-138	1983
576	Mercury chloride (HgCl2)	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	1	d	T	1600	FW	Tsuji, S., Y. Tonogai, Y. Ito, and S. Kanoh	The Influence of Rearing Temperatures on the Toxicity of Various Environmental Pollutants for Killifish (Oryzias latipes)	J.Hyg.Chem.(Eisei Kagaku) 32(1):46-53 (JPN) (ENG ABS)	1986
577	Mercury chloride (HgCl2)	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	1	d	T	1600	FW	Tsuji, S., Y. Tonogai, Y. Ito, and S. Kanoh	The Influence of Rearing Temperatures on the Toxicity of Various Environmental Pollutants for Killifish (Oryzias latipes)	J.Hyg.Chem.(Eisei Kagaku) 32(1):46-53 (JPN) (ENG ABS)	1986
578	Mercury chloride (HgCl2)	Philodina acuticornis	Rotifer	Invertebrates	EC50	ITX	IMBL	4	d	T	1600	FW	Buikema, A.L.Jr., J. Cairns Jr., and G.W. Sullivan	Evaluation of Philodina acuticornis (Rotifera) as Bioassay Organisms for Heavy Metals	Water Resour.Bull. 10(4):648-661	1974
579	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	2	d	T	1610	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
580	Chloro(2-hydroxyphenyl)mercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50*	MOR	MORT	1	d	T	1620	FW	Akiyama, A.	Acute Toxicity of Two Organic Mercury Compounds to the Teleost, Oryzias latipes, in Different Stages of Development	Bull.Jpn.Soc.Sci.Fish. 36(6):563-570	1970
581	Mercury chloride (HgCl2)	Philodina acuticornis	Rotifer	Invertebrates	EC50	ITX	IMBL	2	d	T	1700	FW	Buikema, A.L.Jr., J. Cairns Jr., and G.W. Sullivan	Evaluation of Philodina acuticornis (Rotifera) as Bioassay Organisms for Heavy Metals	Water Resour.Bull. 10(4):648-661	1974
582	Chloro(2-hydroxyphenyl)mercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50*	MOR	MORT	1	d	T	1710	FW	Akiyama, A.	Acute Toxicity of Two Organic Mercury Compounds to the Teleost, Oryzias latipes, in Different Stages of Development	Bull.Jpn.Soc.Sci.Fish. 36(6):563-570	1970
583	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	1	d	T	1710	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
584	Mercury chloride (HgCl2)	Oreochromis mossambicus	Mozambique Tilapia	Fish	LC50	MOR	MORT	1	d	T	1800	FW	Qureshi, S.A., and A.B. Saksena	The Acute Toxicity of Some Heavy Metals to Tilapia mossambica (Peters)	Aqua Sci.Tech.Reviews (India) 1:19-20	1980
585	Mercury chloride (HgCl2)	Chironomus sp.	Midge	Insects/Spiders	LC50	MOR	MORT	2	d	T	1800	FW	Qureshi, S.A., A.B. Saksena, and V.P. Singh	Acute Toxicity of Four Heavy Metals to Benthic Fish Food Organisms From the River Khan, Ujjain	Int.J.Environ.Stud. 15(1):59-61	1980
586	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	3	d	T	1810	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
587	Mercury	Nais sp.	Oligochaete	Worms	LC50*	MOR	MORT	1	d	T	1900	FW	Rehwoldt, R., L. Lasko, C. Shaw, and E. Wirhowski	The Acute Toxicity of Some Heavy Metal Ions Toward Benthic Organisms	Bull.Environ.Contam.Toxicol. 10(5):291-294	1973
588	Mercury	Anabolia nervosa	Quiver Fly	Insects/Spiders	NR-LETH	MOR	MORT	7	d	T	2000	FW	Schweiger, G.	The Toxic Action of Heavy Metals Salts on Fish and Organisms on Which Fish Feed	Arch.Fischereiwiss. 8:54-78	1957
589	Mercury chloride (HgCl2)	Danio malabaricus	Giant Danio	Fish	LC50	MOR	MORT	1	d	T	2000	FW	Saxena, A.B., D.S. Rao, and Z.U. Khan	Studies on the Acute Toxicities of Copper, Mercury, and Cadmium to Danio malabaricus and Puntius ticto	J.Environ.Sci.Health Part A 17(5):657-665	1982
590	Mercury chloride (HgCl2)	Acroneuria lycorias	Stonefly	Insects/Spiders	LC50	MOR	MORT	4	d	T	2000	FW	Warnick, S.L., and H.L. Bell	The Acute Toxicity of Some Heavy Metals to Different Species of Aquatic Insects	J.Water Pollut.Control Fed. 41(2 Pt.1):280-284	1969
591	Mercury chloride (HgCl2)	Ephemerella subvaria	Mayfly	Insects/Spiders	LC50	MOR	MORT	4	d	T	2000	FW	Warnick, S.L., and H.L. Bell	The Acute Toxicity of Some Heavy Metals to Different Species of Aquatic Insects	J.Water Pollut.Control Fed. 41(2 Pt.1):280-284	1969
592	Mercury chloride (HgCl2)	Hydropsyche betteni	Caddisfly	Insects/Spiders	LC50	MOR	MORT	4	d	T	2000	FW	Warnick, S.L., and H.L. Bell	The Acute Toxicity of Some Heavy Metals to Different Species of Aquatic Insects	J.Water Pollut.Control Fed. 41(2 Pt.1):280-284	1969
593	Mercury chloride (HgCl2)	Philodina acuticornis	Rotifer	Invertebrates	EC50	ITX	IMBL	1	d	T	2000	FW	Buikema, A.L.Jr., J. Cairns Jr., and G.W. Sullivan	Evaluation of Philodina acuticornis (Rotifera) as Bioassay Organisms for Heavy Metals	Water Resour.Bull. 10(4):648-661	1974
594	Mercury chloride (HgCl2)	Philodina acuticornis	Rotifer	Invertebrates	EC50	ITX	IMBL	2	d	T	2000	FW	Buikema, A.L.Jr., J. Cairns Jr., and G.W. Sullivan	Evaluation of Philodina acuticornis (Rotifera) as Bioassay Organisms for Heavy Metals	Water Resour.Bull. 10(4):648-661	1974
595	Mercury chloride (HgCl2)	Caenorhabditis elegans	Nematode	Worms	LOEC	DVP	GDVP	1	d	T	2000	FW	Donkin, S.G., and P.L. Williams	Influence of Developmental Stage, Salts and Food Presence on Various End Points Using Caenorhabditis elegans for Aquatic Toxicity Testing	Environ.Toxicol.Chem. 14(12):2139-2147	1995
596	Mercury chloride (HgCl2)	Caenorhabditis elegans	Nematode	Worms	LOEC	DVP	GDVP	1	d	T	2000	FW	Donkin, S.G., and P.L. Williams	Influence of Developmental Stage, Salts and Food Presence on Various End Points Using Caenorhabditis elegans for Aquatic Toxicity Testing	Environ.Toxicol.Chem. 14(12):2139-2147	1995
597	Mercury chloride (HgCl2)	Caenorhabditis elegans	Nematode	Worms	LOEC	DVP	GDVP	4	d	T	2000	FW	Donkin, S.G., and P.L. Williams	Influence of Developmental Stage, Salts and Food Presence on Various End Points Using Caenorhabditis elegans for Aquatic Toxicity Testing	Environ.Toxicol.Chem. 14(12):2139-2147	1995
598	Mercury chloride (HgCl2)	Vallisneria americana	Water-Celery, Tapegrass	Flowers, Trees, Shrubs, Ferns	EC50	BCM	CHLO	7	d	T	2006	FW	Gupta, M., and P. Chandra	Bioaccumulation and Toxicity of Mercury in Rooted-Submerged Macrophyte Vallisneria spiralis	Environ. Pollut.103(2-3): 327-332	1998
599	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	6.4	d	T	2020	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
600	Mercury	Amnicola sp.	Spire Snail	Molluscs	LC50*	MOR	MORT	4	d	T	2100	FW	Rehwoldt, R., L. Lasko, C. Shaw, and E. Wirhowski	The Acute Toxicity of Some Heavy Metal Ions Toward Benthic Organisms	Bull.Environ.Contam.Toxicol. 10(5):291-294	1973
601	Mercury chloride (HgCl2)	Philodina acuticornis	Rotifer	Invertebrates	EC50	ITX	IMBL	4	d	T	2100	FW	Buikema, A.L.Jr., J. Cairns Jr., and G.W. Sullivan	Evaluation of Philodina acuticornis (Rotifera) as Bioassay Organisms for Heavy Metals	Water Resour.Bull. 10(4):648-661	1974
602	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	1	d	T	2180	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
603	Mercury chloride (HgCl2)	Cyclops abyssorum ssp. prealpinus	Cyclopoid Copepod	Crustaceans	EC50*	ITX	IMBL	2	d	T	2200	FW	Baudouin, M.F., and P. Scoppa	Acute Toxicity of Various Metals to Freshwater Zooplankton	Bull.Environ.Contam.Toxicol. 12(6):745-751	1974
604	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	5	d	T	2210	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
605	(Acetato-kappaO)phenylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	0.333	d	T	2300	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
606	Mercury chloride (HgCl2)	Panagrellus silusiae	Beet Nematode	Worms	LC50	MOR	MORT	3	d	T	2300	FW	Haight, M., T. Mudry, and J. Pasternak	Toxicity of Seven Heavy Metals on Panagrellus silusiae: The Efficacy of the Free-Living Nematode as an In Vivo Toxicological Bioassay	Nematologica 28:1-11	1982
607	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	4	d	T	2430	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
608	Mercury chloride (HgCl2)	Chironomus plumosus	Midge	Insects/Spiders	LC50	MOR	MORT	4	d	T	2540	FW	Vedamanikam, V.J., and N.A.M. Shazili	The Chironomid Larval Tube, a Mechanism to Protect the Organism from Environmental Disturbances?	Toxicol.Environ.Chem. 91(1):171-176	2009
609	(Acetato-kappaO)phenylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	0.167	d	T	2700	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
610	Mercury chloride (HgCl2)	Philodina acuticornis	Rotifer	Invertebrates	EC50	ITX	IMBL	1	d	T	2800	FW	Buikema, A.L.Jr., J. Cairns Jr., and G.W. Sullivan	Evaluation of Philodina acuticornis (Rotifera) as Bioassay Organisms for Heavy Metals	Water Resour.Bull. 10(4):648-661	1974
611	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	2	d	T	2810	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
612	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	3	d	T	2810	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
613	Mercury chloride (HgCl2)	Panagrellus silusiae	Beet Nematode	Worms	LC50	MOR	MORT	3	d	T	2810	FW	Haight, M., T. Mudry, and J. Pasternak	Toxicity of Seven Heavy Metals on Panagrellus silusiae: The Efficacy of the Free-Living Nematode as an In Vivo Toxicological Bioassay	Nematologica 28:1-11	1982
614	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	1	d	T	2960	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
615	Mercury chloride (HgCl2)	Caenorhabditis elegans	Nematode	Worms	LC50	MOR	MORT	2	d	T	3000	FW	Williams, P.L., and D.B. Dusenbery	Aquatic Toxicity Testing Using the Nematode, Caenorhabditis elegans	Environ.Toxicol.Chem. 9(10):1285-1290	1990
616	(Acetato-kappaO)phenylmercury	Chlorella pyrenoidosa	Green Algae	Algae, Moss, Fungi	NR-LETH	MOR	MORT	0.007	d	T	3000	FW	Fitzgerald, G.P., and S.L. Faust	Bioassay for Algicidal vs. Algistatic Chemicals	Water Sewage Works(): 296-298	1963
617	(Acetato-kappaO)phenylmercury	Chlorella pyrenoidosa	Green Algae	Algae, Moss, Fungi	NR-LETH	MOR	MORT	0.007	d	T	3000	FW	Fitzgerald, G.P., and S.L. Faust	Bioassay for Algicidal vs. Algistatic Chemicals	Water Sewage Works(): 296-298	1963
618	(Acetato-kappaO)phenylmercury	Chlorella pyrenoidosa	Green Algae	Algae, Moss, Fungi	NR-LETH	MOR	MORT	0.083	d	T	3000	FW	Fitzgerald, G.P., and S.L. Faust	Bioassay for Algicidal vs. Algistatic Chemicals	Water Sewage Works(): 296-298	1963
619	(Acetato-kappaO)phenylmercury	Chlorella pyrenoidosa	Green Algae	Algae, Moss, Fungi	NR-LETH	MOR	MORT	0.083	d	T	3000	FW	Fitzgerald, G.P., and S.L. Faust	Bioassay for Algicidal vs. Algistatic Chemicals	Water Sewage Works(): 296-298	1963
620	(Acetato-kappaO)phenylmercury	Chlorella pyrenoidosa	Green Algae	Algae, Moss, Fungi	NR-LETH	MOR	MORT	0.167	d	T	3000	FW	Fitzgerald, G.P., and S.L. Faust	Bioassay for Algicidal vs. Algistatic Chemicals	Water Sewage Works(): 296-298	1963
621	(Acetato-kappaO)phenylmercury	Chlorella pyrenoidosa	Green Algae	Algae, Moss, Fungi	NR-LETH	MOR	MORT	0.167	d	T	3000	FW	Fitzgerald, G.P., and S.L. Faust	Bioassay for Algicidal vs. Algistatic Chemicals	Water Sewage Works(): 296-298	1963
622	(Acetato-kappaO)phenylmercury	Chlorella pyrenoidosa	Green Algae	Algae, Moss, Fungi	NR-LETH	MOR	MORT	0.25	d	T	3000	FW	Fitzgerald, G.P., and S.L. Faust	Bioassay for Algicidal vs. Algistatic Chemicals	Water Sewage Works(): 296-298	1963
623	(Acetato-kappaO)phenylmercury	Chlorella pyrenoidosa	Green Algae	Algae, Moss, Fungi	NR-LETH	MOR	MORT	0.25	d	T	3000	FW	Fitzgerald, G.P., and S.L. Faust	Bioassay for Algicidal vs. Algistatic Chemicals	Water Sewage Works(): 296-298	1963
624	(Acetato-kappaO)phenylmercury	Chlorella pyrenoidosa	Green Algae	Algae, Moss, Fungi	NR-LETH	MOR	MORT	0.5	d	T	3000	FW	Fitzgerald, G.P., and S.L. Faust	Bioassay for Algicidal vs. Algistatic Chemicals	Water Sewage Works(): 296-298	1963
625	(Acetato-kappaO)phenylmercury	Chlorella pyrenoidosa	Green Algae	Algae, Moss, Fungi	NR-LETH	MOR	MORT	0.5	d	T	3000	FW	Fitzgerald, G.P., and S.L. Faust	Bioassay for Algicidal vs. Algistatic Chemicals	Water Sewage Works(): 296-298	1963
626	(Acetato-kappaO)phenylmercury	Chlorella pyrenoidosa	Green Algae	Algae, Moss, Fungi	NR-LETH	MOR	MORT	1	d	T	3000	FW	Fitzgerald, G.P., and S.L. Faust	Bioassay for Algicidal vs. Algistatic Chemicals	Water Sewage Works(): 296-298	1963
627	(Acetato-kappaO)phenylmercury	Chlorella pyrenoidosa	Green Algae	Algae, Moss, Fungi	NR-LETH	MOR	MORT	1	d	T	3000	FW	Fitzgerald, G.P., and S.L. Faust	Bioassay for Algicidal vs. Algistatic Chemicals	Water Sewage Works(): 296-298	1963
628	(Acetato-kappaO)phenylmercury	Chlorella pyrenoidosa	Green Algae	Algae, Moss, Fungi	NR-LETH	MOR	MORT	6	d	T	3000	FW	Fitzgerald, G.P., and S.L. Faust	Bioassay for Algicidal vs. Algistatic Chemicals	Water Sewage Works(): 296-298	1963
629	(Acetato-kappaO)phenylmercury	Chlorella pyrenoidosa	Green Algae	Algae, Moss, Fungi	NR-LETH	MOR	MORT	6	d	T	3000	FW	Fitzgerald, G.P., and S.L. Faust	Bioassay for Algicidal vs. Algistatic Chemicals	Water Sewage Works(): 296-298	1963
630	Mercury chloride (HgCl2)	Chlamydomonas reinhardtii	Green Algae	Algae, Moss, Fungi	EC50	PHY	OXYG	0.010	d	T	3009	FW	Overnell, J.	The Effect of Some Heavy Metal Ions on Photosynthesis in a Freshwater Alga	Pestic. Biochem. Physiol.5(1): 19-26	1975
631	Mercury chloride (HgCl2)	Panagrellus silusiae	Beet Nematode	Worms	LC50	MOR	MORT	2	d	T	3080	FW	Haight, M., T. Mudry, and J. Pasternak	Toxicity of Seven Heavy Metals on Panagrellus silusiae: The Efficacy of the Free-Living Nematode as an In Vivo Toxicological Bioassay	Nematologica 28:1-11	1982
632	Mercury	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	T	3100	FW	Rayms-Keller, A., K.E. Olson, M. McGaw, C. Oray, J.O. Carlson, and B.J. Beaty	Effect of Heavy Metals on Aedes aegypti (Diptera: Culicidae) Larvae	Ecotoxicol.Environ.Saf. 39(1):41-47	1998
633	Mercury	Zygoptera	Damselfly Order	Insects/Spiders	LC50*	MOR	MORT	1	d	T	3200	FW	Rehwoldt, R., L. Lasko, C. Shaw, and E. Wirhowski	The Acute Toxicity of Some Heavy Metal Ions Toward Benthic Organisms	Bull.Environ.Contam.Toxicol. 10(5):291-294	1973
634	Mercury chloride (HgCl2)	Tubifex tubifex	Tubificid Worm	Worms	LC50	MOR	MORT	2	d	T	3200	FW	Qureshi, S.A., A.B. Saksena, and V.P. Singh	Acute Toxicity of Four Heavy Metals to Benthic Fish Food Organisms From the River Khan, Ujjain	Int.J.Environ.Stud. 15(1):59-61	1980
635	Mercury chloride (HgCl2)	Panagrellus silusiae	Beet Nematode	Worms	LC50	MOR	MORT	2	d	T	3280	FW	Haight, M., T. Mudry, and J. Pasternak	Toxicity of Seven Heavy Metals on Panagrellus silusiae: The Efficacy of the Free-Living Nematode as an In Vivo Toxicological Bioassay	Nematologica 28:1-11	1982

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636	(Acetato-kappaO)phenylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	3	d	T	3300	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
637	(Acetato-kappaO)phenylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	4	d	T	3300	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
638	(Acetato-kappaO)phenylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	1.875	d	T	3400	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
639	Mercury	Myriophyllum spicatum	Eurasian Watermilfoil	Flowers, Trees, Shrubs, Ferns	EC50	POP	BMAS	32	d	T	3400	FW	Stanley, R.A.	Toxicity of Heavy Metals and Salts to Eurasian Watermilfoil (Myriophyllum spicatum L.)	Arch. Environ. Contam. Toxicol.2(4): 331-341	1974
640	Mercury	Chironomus riparius	Midge	Insects/Spiders	NR-LETH	MOR	MORT	7	d	T	3500	FW	Schweiger, G.	The Toxic Action of Heavy Metals Salts on Fish and Organisms on Which Fish Feed	Arch.Fischereiwiss. 8:54-78	1957
641	Mercury chloride (HgCl2)	Caenorhabditis elegans	Nematode	Worms	LC50	MOR	MORT	2	d	T	3500	FW	Stringham, E.G., and E.P.M. Candido	Transgenic hsp16-lacZ Strains of the Soil Nematode Caenorhabditis elegans as Biological Monitors of Environmental Stress	Environ.Toxicol.Chem. 13(8):1211-1220	1994
642	Chloro(2-hydroxyphenyl)mercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50*	MOR	MORT	1	d	T	3530	FW	Akiyama, A.	Acute Toxicity of Two Organic Mercury Compounds to the Teleost, Oryzias latipes, in Different Stages of Development	Bull.Jpn.Soc.Sci.Fish. 36(6):563-570	1970
643	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	0.333	d	T	3660	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
644	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	1	d	T	3750	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
645	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	1	d	T	3750	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
646	(Acetato)-3-pyridyl mercury	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	1	d	T	3800	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
647	Mercury chloride (HgCl2)	Channa punctata	Snake-Head Catfish	Fish	NR-LETH	MOR	MORT	4	d	T	4000	FW	Pandey, S., R. Kumar, S. Sharma, N.S. Nagpure, S.K. Srivastava, and M.S. Verma	Acute Toxicity Bioassays of Mercuric Chloride and Malathion on Air-Breathing Fish Channa punctatus (Bloch)	Ecotoxicol.Environ.Saf. 61(1):114-120	2005
648	Mercury chloride (HgCl2)	Chironomus sp.	Midge	Insects/Spiders	LC50	MOR	MORT	1	d	T	4000	FW	Qureshi, S.A., A.B. Saksena, and V.P. Singh	Acute Toxicity of Four Heavy Metals to Benthic Fish Food Organisms From the River Khan, Ujjain	Int.J.Environ.Stud. 15(1):59-61	1980
649	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	1.667	d	T	4018	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
650	(Acetato-kappaO)phenylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	1	d	T	4100	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
651	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	2	d	T	4120	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
652	Mercury chloride (HgCl2)	Panagrellus silusiae	Beet Nematode	Worms	LC50	MOR	MORT	1	d	T	4330	FW	Haight, M., T. Mudry, and J. Pasternak	Toxicity of Seven Heavy Metals on Panagrellus silusiae: The Efficacy of the Free-Living Nematode as an In Vivo Toxicological Bioassay	Nematologica 28:1-11	1982
653	Mercury	Myriophyllum spicatum	Eurasian Watermilfoil	Flowers, Trees, Shrubs, Ferns	EC50	POP	BMAS	32	d	T	4400	FW	Stanley, R.A.	Toxicity of Heavy Metals and Salts to Eurasian Watermilfoil (Myriophyllum spicatum L.)	Arch. Environ. Contam. Toxicol.2(4): 331-341	1974
654	Mercury	Cyprinidae	Minnow,Carp Family	Fish	NR-LETH	MOR	MORT	2.417	d	T	4500	FW	Schweiger, G.	The Toxic Action of Heavy Metals Salts on Fish and Organisms on Which Fish Feed	Arch.Fischereiwiss. 8:54-78	1957
655	Chloromethylmercury	Micropterus salmoides	Largemouth Bass	Fish	NR-LETH	MOR	MORT	4	d	T	5000	FW	Birge, W.J., A.G. Westerman, and O.W. Roberts	Lethal and Teratogenic Effects of Metallic Pollutants on Vertebrate Embryos	In: Proc.2nd Annu.NSF-Rann Trace Contam.Environ.Conf., Springfield, VA :316-320 (U.S.NTIS LBL-3217) (Used Ref.8703)	1974
656	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	0.167	d	T	5000	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
657	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	1	d	T	5000	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
658	Mercury	Cyprinidae	Minnow,Carp Family	Fish	NR-LETH	MOR	MORT	0.354	d	T	5000	FW	Schweiger, G.	The Toxic Action of Heavy Metals Salts on Fish and Organisms on Which Fish Feed	Arch.Fischereiwiss. 8:54-78	1957
659	Mercury	Tinca tinca	Tench	Fish	NR-LETH	MOR	MORT	0.524	d	T	5000	FW	Schweiger, G.	The Toxic Action of Heavy Metals Salts on Fish and Organisms on Which Fish Feed	Arch.Fischereiwiss. 8:54-78	1957
660	Mercury chloride (HgCl2)	Rana heckscheri	River Frog	Amphibians	NR-LETH	MOR	MORT	0.125	d	T	5000	FW	Punzo, F.	Effect of Mercuric Chloride on Fertilization and Larval Development in the River Frog, Rana heckscheri (Wright) (Anura: Ranidae)	Bull.Environ.Contam.Toxicol. 51(4):575-581	1993

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
661	Mercury chloride (HgCl2)	Lota lota	Burbot	Fish	LOEC	REP	MOTL	0.000	d	T	5000	FW	Lahnsteiner, F., N. Mansour, and B. Berger	The Effect of Inorganic and Organic Pollutants on Sperm Motility of Some Freshwater Teleosts	J.Fish Biol. 65(5):1283-1297	2004
662	Mercury chloride (HgCl2)	Lota lota	Burbot	Fish	LOEC	REP	VCTY	0.000	d	T	5000	FW	Lahnsteiner, F., N. Mansour, and B. Berger	The Effect of Inorganic and Organic Pollutants on Sperm Motility of Some Freshwater Teleosts	J.Fish Biol. 65(5):1283-1297	2004
663	Mercury chloride (HgCl2)	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	NR-LETH	MOR	MORT	3	d	T	5000	FW	Abbasi, S.A., P.C. Nipaney, and R. Soni	Environmental Consequences of the Inhibition in the Hatching of Pupae of Aedes aegypti by Mercury, Zinc and Chromium-the Abnormal Toxicity of Zinc	Int.J.Environ.Stud. 24(2):107-114	1985
664	Mercuric nitrate	Anabas scandens	Climbing Perch	Fish	NR-LETH	MOR	MORT	1	d	T	5000	FW	Panigrahi, A.K., and B.N. Misra	Toxicological Effects of Mercury on a Freshwater Fish, Anabas scandens, Cuv. and Val. and Their Ecological Implications	Environ.Pollut. 16(1):31-39	1978
665	Mercury chloride (HgCl2)	Rangia cuneata	Common Rangia Or Clam	Molluscs	LC50*	MOR	MORT	4	d	T	5100	FW	Olson, K.R., and R.C. Harrel	Effect of Salinity on Acute Toxicity of Mercury, Copper, and Chromium for Rangia cuneata (Pelecypoda, Mactridae)	Contrib.Mar.Sci. 17:9-13	1973
666	Mercury chloride (HgCl2)	Panagrellus silusiae	Beet Nematode	Worms	LC50	MOR	MORT	1	d	T	5110	FW	Haight, M., T. Mudry, and J. Pasternak	Toxicity of Seven Heavy Metals on Panagrellus silusiae: The Efficacy of the Free-Living Nematode as an In Vivo Toxicological Bioassay	Nematologica 28:1-11	1982
667	Mercury chloride (HgCl2)	Rangia cuneata	Common Rangia Or Clam	Molluscs	LC50*	MOR	MORT	3	d	T	5500	FW	Olson, K.R., and R.C. Harrel	Effect of Salinity on Acute Toxicity of Mercury, Copper, and Chromium for Rangia cuneata (Pelecypoda, Mactridae)	Contrib.Mar.Sci. 17:9-13	1973
668	Mercury	Trichoptera	Caddisfly Order	Insects/Spiders	LC50*	MOR	MORT	1	d	T	5600	FW	Rehwoldt, R., L. Lasko, C. Shaw, and E. Wirhowski	The Acute Toxicity of Some Heavy Metal Ions Toward Benthic Organisms	Bull.Environ.Contam.Toxicol. 10(5):291-294	1973
669	Mercury chloride (HgCl2)	Tubifex tubifex	Tubificid Worm	Worms	LC50	MOR	MORT	1	d	T	5600	FW	Qureshi, S.A., A.B. Saksena, and V.P. Singh	Acute Toxicity of Four Heavy Metals to Benthic Fish Food Organisms From the River Khan, Ujjain	Int.J.Environ.Stud. 15(1):59-61	1980
670	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	0.333	d	T	5790	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
671	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	0.333	d	T	5790	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
672	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	0.333	d	T	5790	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
673	(Acetato)-3-pyridyl mercury	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	0.333	d	T	5800	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
674	Mercury	Amnicola sp.	Spire Snail	Molluscs	LC50*	MOR	MORT	1	d	T	6300	FW	Rehwoldt, R., L. Lasko, C. Shaw, and E. Wirhowski	The Acute Toxicity of Some Heavy Metal Ions Toward Benthic Organisms	Bull.Environ.Contam.Toxicol. 10(5):291-294	1973
675	Mercury chloride (HgCl2)	Rangia cuneata	Common Rangia Or Clam	Molluscs	LC50*	MOR	MORT	2	d	T	6300	FW	Olson, K.R., and R.C. Harrel	Effect of Salinity on Acute Toxicity of Mercury, Copper, and Chromium for Rangia cuneata (Pelecypoda, Mactridae)	Contrib.Mar.Sci. 17:9-13	1973
676	(Acetato-kappaO)phenylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	0.083	d	T	8300	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
677	(Acetato-kappaO)phenylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	0.333	d	T	9100	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
678	Mercury chloride (HgCl2)	Caenorhabditis elegans	Nematode	Worms	LC50	MOR	MORT	1	d	T	10000	FW	Williams, P.L., and D.B. Dusenbery	Aquatic Toxicity Testing Using the Nematode, Caenorhabditis elegans	Environ.Toxicol.Chem. 9(10):1285-1290	1990
679	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	0.333	d	T	10760	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
680	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	0.167	d	T	11860	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
681	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	0.167	d	T	11860	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
682	(Acetato)-3-pyridyl mercury	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	0.167	d	T	11900	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
683	Mercury	Myriophyllum spicatum	Eurasian Watermilfoil	Flowers, Trees, Shrubs, Ferns	EC50	GRO	GGRO	32	d	T	12000	FW	Stanley, R.A.	Toxicity of Heavy Metals and Salts to Eurasian Watermilfoil (Myriophyllum spicatum L.)	Arch. Environ. Contam. Toxicol.2(4): 331-341	1974
684	Mercury chloride (HgCl2)	Caenorhabditis elegans	Nematode	Worms	LC50	MOR	MORT	1	d	T	13000	FW	Stringham, E.G., and E.P.M. Candido	Transgenic hsp16-lacZ Strains of the Soil Nematode Caenorhabditis elegans as Biological Monitors of Environmental Stress	Environ.Toxicol.Chem. 13(8):1211-1220	1994
685	Mercury chloride (HgCl2)	Caenorhabditis elegans	Nematode	Worms	LC50	MOR	MORT	1	d	T	14442	FW	Tatara, C.P., M.C. Newman, J.T. McCloskey, and P.L. Williams	Predicting Relative Metal Toxicity with Ion Characteristics: Caenorhabditis elegans LC50	Aquat.Toxicol. 39(3/4):279-290	1997
686	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	0.167	d	T	18250	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
687	Mercury chloride (HgCl2)	Eichhornia crassipes	Water-Hyacinth	Flowers, Trees, Shrubs, Ferns	LOEC	GRO	AREA	21	d	T	20059	FW	Odjegba, V.J., and I.O. Fasidi	Phytoremediation of Heavy Metals by Eichhornia crassipes	Environmentalist27(3): 349-355	2007
688	Mercury chloride (HgCl2)	Eichhornia crassipes	Water-Hyacinth	Flowers, Trees, Shrubs, Ferns	LOEC	GRO	BMAS	14	d	T	20059	FW	Odjegba, V.J., and I.O. Fasidi	Phytoremediation of Heavy Metals by Eichhornia crassipes	Environmentalist27(3): 349-355	2007
689	Mercury chloride (HgCl2)	Eichhornia crassipes	Water-Hyacinth	Flowers, Trees, Shrubs, Ferns	LOEC	GRO	BMAS	14	d	T	20059	FW	Odjegba, V.J., and I.O. Fasidi	Phytoremediation of Heavy Metals by Eichhornia crassipes	Environmentalist27(3): 349-355	2007
690	Mercury chloride (HgCl2)	Eichhornia crassipes	Water-Hyacinth	Flowers, Trees, Shrubs, Ferns	LOEC	GRO	BMAS	21	d	T	20059	FW	Odjegba, V.J., and I.O. Fasidi	Phytoremediation of Heavy Metals by Eichhornia crassipes	Environmentalist27(3): 349-355	2007
691	Mercury chloride (HgCl2)	Eichhornia crassipes	Water-Hyacinth	Flowers, Trees, Shrubs, Ferns	LOEC	GRO	LGTH	21	d	T	20059	FW	Odjegba, V.J., and I.O. Fasidi	Phytoremediation of Heavy Metals by Eichhornia crassipes	Environmentalist27(3): 349-355	2007
692	Mercury chloride (HgCl2)	Eichhornia crassipes	Water-Hyacinth	Flowers, Trees, Shrubs, Ferns	LOEC	GRO	RLGR	21	d	T	20059	FW	Odjegba, V.J., and I.O. Fasidi	Phytoremediation of Heavy Metals by Eichhornia crassipes	Environmentalist27(3): 349-355	2007
693	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	0.333	d	T	21070	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
694	(Acetato-kappaO)phenylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	0.042	d	T	25000	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
695	(Acetato-kappaO)phenylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	0.083	d	T	25000	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
696	(Acetato-kappaO)phenylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	0.167	d	T	25000	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
697	Mercury chloride (HgCl2)	Clarias gariepinus	Zambezi Barbel	Fish	LOEC	REP	MOTL	0.000	d	T	25000	FW	Lahnsteiner, F., N. Mansour, and B. Berger	The Effect of Inorganic and Organic Pollutants on Sperm Motility of Some Freshwater Teleosts	J.Fish Biol. 65(5):1283-1297	2004
698	Mercury chloride (HgCl2)	Clarias gariepinus	Zambezi Barbel	Fish	LOEC	REP	VCTY	0.000	d	T	25000	FW	Lahnsteiner, F., N. Mansour, and B. Berger	The Effect of Inorganic and Organic Pollutants on Sperm Motility of Some Freshwater Teleosts	J.Fish Biol. 65(5):1283-1297	2004
699	Mercury chloride (HgCl2)	Chironomus plumosus	Midge	Insects/Spiders	LC50	MOR	MORT	4	d	T	25600	FW	Vedamanikam, V.J., and N.A.M. Shazili	The Chironomid Larval Tube, a Mechanism to Protect the Organism from Environmental Disturbances?	Toxicol.Environ.Chem. 91(1):171-176	2009
700	(Acetato)-3-pyridyl mercury	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	0.083	d	T	34000	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
701	Mercury chloride (HgCl2)	Chironomus plumosus	Midge	Insects/Spiders	LC50	MOR	MORT	4	d	T	34000	FW	Vedamanikam, V.J., and N.A.M. Shazili	The Chironomid Larval Tube, a Mechanism to Protect the Organism from Environmental Disturbances?	Toxicol.Environ.Chem. 91(1):171-176	2009
702	Mercury chloride (HgCl2)	Chironomus plumosus	Midge	Insects/Spiders	LC50	MOR	MORT	4	d	T	34000	FW	Vedamanikam, V.J., and N.A.M. Shazili	The Chironomid Larval Tube, a Mechanism to Protect the Organism from Environmental Disturbances?	Toxicol.Environ.Chem. 91(1):171-176	2009
703	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	0.083	d	T	34090	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
704	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	0.083	d	T	34090	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
705	Mercury chloride (HgCl2)	Chironomus plumosus	Midge	Insects/Spiders	LC50	MOR	MORT	4	d	T	34100	FW	Vedamanikam, V.J., and N.A.M. Shazili	The Chironomid Larval Tube, a Mechanism to Protect the Organism from Environmental Disturbances?	Toxicol.Environ.Chem. 91(1):171-176	2009
706	Mercury chloride (HgCl2)	Chironomus plumosus	Midge	Insects/Spiders	LC50	MOR	MORT	4	d	T	34100	FW	Vedamanikam, V.J., and N.A.M. Shazili	The Chironomid Larval Tube, a Mechanism to Protect the Organism from Environmental Disturbances?	Toxicol.Environ.Chem. 91(1):171-176	2009
707	Mercury chloride (HgCl2)	Chironomus plumosus	Midge	Insects/Spiders	LC50	MOR	MORT	4	d	T	37100	FW	Vedamanikam, V.J., and N.A.M. Shazili	The Chironomid Larval Tube, a Mechanism to Protect the Organism from Environmental Disturbances?	Toxicol.Environ.Chem. 91(1):171-176	2009
708	(Acetato-kappaO)phenylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	0.042	d	T	40000	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
709	Mercury chloride (HgCl2)	Chironomus plumosus	Midge	Insects/Spiders	LC50	MOR	MORT	4	d	T	42200	FW	Vedamanikam, V.J., and N.A.M. Shazili	The Chironomid Larval Tube, a Mechanism to Protect the Organism from Environmental Disturbances?	Toxicol.Environ.Chem. 91(1):171-176	2009
710	Mercury chloride (HgCl2)	Chironomus plumosus	Midge	Insects/Spiders	LC50	MOR	MORT	4	d	T	42200	FW	Vedamanikam, V.J., and N.A.M. Shazili	The Chironomid Larval Tube, a Mechanism to Protect the Organism from Environmental Disturbances?	Toxicol.Environ.Chem. 91(1):171-176	2009
711	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	0.042	d	T	50000	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
712	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	0.042	d	T	50000	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
713	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	0.042	d	T	50000	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
714	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	0.083	d	T	50000	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
715	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	0.333	d	T	50000	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
716	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	0.333	d	T	50000	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
717	(Acetato)pyridylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	0.333	d	T	50000	FW	Clemens, H.P., and K.E. Sneed	Effect of Temperature and Physiological Condition on Tolerance of Channel Catfish to Pyridylmercuric Acetate (PMA)	Prog.Fish-Cult. 20(4):147-150	1958
718	Mercury	Cyprinidae	Minnow,Carp Family	Fish	NR-LETH	MOR	MORT	0.1875	d	T	50000	FW	Schweiger, G.	The Toxic Action of Heavy Metals Salts on Fish and Organisms on Which Fish Feed	Arch.Fischereiwiss. 8:54-78	1957
719	Mercury	Tinca tinca	Tench	Fish	NR-LETH	MOR	MORT	0.1875	d	T	50000	FW	Schweiger, G.	The Toxic Action of Heavy Metals Salts on Fish and Organisms on Which Fish Feed	Arch.Fischereiwiss. 8:54-78	1957
720	Mercury chloride (HgCl2)	Leuciscus cephalus	Chub	Fish	LOEC	REP	MOTL	0.000	d	T	50000	FW	Lahnsteiner, F., N. Mansour, and B. Berger	The Effect of Inorganic and Organic Pollutants on Sperm Motility of Some Freshwater Teleosts	J.Fish Biol. 65(5):1283-1297	2004
721	Mercury chloride (HgCl2)	Leuciscus cephalus	Chub	Fish	LOEC	REP	VCTY	0.000	d	T	50000	FW	Lahnsteiner, F., N. Mansour, and B. Berger	The Effect of Inorganic and Organic Pollutants on Sperm Motility of Some Freshwater Teleosts	J.Fish Biol. 65(5):1283-1297	2004
722	Mercury	Cyprinidae	Minnow,Carp Family	Fish	NR-LETH	MOR	MORT	0.104	d	T	75000	FW	Schweiger, G.	The Toxic Action of Heavy Metals Salts on Fish and Organisms on Which Fish Feed	Arch.Fischereiwiss. 8:54-78	1957
723	Mercury	Cyprinidae	Minnow,Carp Family	Fish	NR-LETH	MOR	MORT	0.052	d	T	100000	FW	Schweiger, G.	The Toxic Action of Heavy Metals Salts on Fish and Organisms on Which Fish Feed	Arch.Fischereiwiss. 8:54-78	1957
724	Mercury chloride (HgCl2)	Caenorhabditis elegans	Nematode	Worms	LOEC	DVP	GDVP	4	d	T	201000	FW	Donkin, S.G., and P.L. Williams	Influence of Developmental Stage, Salts and Food Presence on Various End Points Using Caenorhabditis elegans for Aquatic Toxicity Testing	Environ.Toxicol.Chem. 14(12):2139-2147	1995
725	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	T	1.3*	FW	Canton, J.H., and D.M.M. Adema	Reproducibility of Short-Term and Reproduction Toxicity Experiments with Daphnia magna and Comparison of the Sensitivity of Daphnia magna with Daphnia pulex and Daphnia cucullata in Short-Term Experiments	Hydrobiologia 59(2):135-140 (Used Reference 2018)	1978
726	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	T	1.6*	FW	Canton, J.H., and D.M.M. Adema	Reproducibility of Short-Term and Reproduction Toxicity Experiments with Daphnia magna and Comparison of the Sensitivity of Daphnia magna with Daphnia pulex and Daphnia cucullata in Short-Term Experiments	Hydrobiologia 59(2):135-140 (Used Reference 2018)	1978
727	Chloromethylmercury	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	1	d	T	100*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
728	Mercury chloride (HgCl2)	Heteropneustes fossilis	Indian Catfish	Fish	LC50	MOR	MORT	4	d	T	1000*	FW	Gupta, P.K., and K.V. Sastry	Alterations in the Activities of Three Dehydrogenases in the Digestive System of Two Teleost Fishes Exposed to Mercuric Chloride	Environ.Res. 24:15-23	1981
729	Mercury chloride (HgCl2)	Oreochromis mossambicus	Mozambique Tilapia	Fish	LC50	MOR	MORT	2	d	T	1000*	FW	Naidu, K.A., K.A. Naidu, and R. Ramamurthi	Acute Effect of Mercury Toxicity on Some Enzymes in Liver of Teleost Sarotherodon mossambicus	Ecotoxicol.Environ.Saf. 8(3):215-218	1984
730	Mercury chloride (HgCl2)	Anabas scandens	Climbing Perch	Fish	LC50	MOR	MORT	1	d	T	1020*	FW	Shaw, B.P., A. Sahu, and A.K. Panigrahi	Comparative Toxicity of an Effluent from a Chlor-Alkali Industry and HgCl2	Bull.Environ.Contam.Toxicol. 45(2):280-287	1990
731	Mercury chloride (HgCl2)	Anabas scandens	Climbing Perch	Fish	LC50	MOR	MORT	1	d	T	1030*	FW	Shaw, B.P., A. Sahu, and A.K. Panigrahi	Comparative Toxicity of an Effluent from a Chlor-Alkali Industry and HgCl2	Bull.Environ.Contam.Toxicol. 45(2):280-287	1990
732	Mercury chloride (HgCl2)	Channa punctata	Snake-Head Catfish	Fish	LC50	MOR	MORT	3	d	T	1040*	FW	Saxena, O.P., and A. Parashari	Comparative Study of the Toxicity of Six Heavy Metals to Channa punctatus	J.Environ.Biol. 4(2):91-94	1983
733	Mercury chloride (HgCl2)	Anacystis nidulans	Blue-Green Algae	Algae, Moss, Fungi	EC50	GRO	GGRO	1	d	T	107.1*	FW	Thomas, D.L., and J.G. Montes	Spectrophotometrically Assayed Inhibitory Effects of Mercuric Compounds on Anabaena flos-aquae and Anacystis nidulans (Cyanophyceae)	J. Phycol.14(4)(): 494-499	1978
734	Chloromethylmercury	Pteronarcys californica	Stonefly	Insects/Spiders	NR-LETH	MOR	MORT	1	d	T	10700*	FW	Elder, J.A., and A.R. Gaufin	The Toxicity of Three Mercurials to Pteronarcys californica Newport, and Some Possible Physiological Effects Which Influence the Toxicities	Environ.Res. 7(2):169-175	1974
735	Chloromethylmercury	Pteronarcys californica	Stonefly	Insects/Spiders	NR-LETH	MOR	MORT	3	d	T	10700*	FW	Elder, J.A., and A.R. Gaufin	The Toxicity of Three Mercurials to Pteronarcys californica Newport, and Some Possible Physiological Effects Which Influence the Toxicities	Environ.Res. 7(2):169-175	1974
736	Mercury chloride (HgCl2)	Oreochromis mossambicus	Mozambique Tilapia	Fish	LC50	MOR	MORT	2	d	T	1100*	FW	Naidu, K.A., K.A. Naidu, and R. Ramamurthi	Histological Observations in Gills of the Teleost Sarotherodon mossambicus with Reference to Mercury Toxicity	Ecotoxicol.Environ.Saf. 7(5):455-462	1983
737	Mercury chloride (HgCl2)	Cyprinus carpio	Common Carp	Fish	LC50	MOR	MORT	4	d	T	1110*	FW	Shrivastava, S., K.S. Rao, S. Dhanekar, and S.S. Pandya	Determination of Acute Mercury Toxicity to Developing Stages of Cyprinus carpio and Cirrhinus mrigala	Fish.Technol. 25(1):29-31	1988
738	Mercury chloride (HgCl2)	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	3	d	T	118*	FW	Holcombe, G.W., G.L. Phipps, and J.T. Fiandt	Toxicity of Selected Priority Pollutants to Various Aquatic Organisms	Ecotoxicol.Environ.Saf. 7(4):400-409 (OECDG Data File)	1983
739	Mercury chloride (HgCl2)	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	4	d	T	118*	FW	Holcombe, G.W., G.L. Phipps, and J.T. Fiandt	Toxicity of Selected Priority Pollutants to Various Aquatic Organisms	Ecotoxicol.Environ.Saf. 7(4):400-409 (OECDG Data File)	1983
740	Mercuric acetate	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	T	119*	FW	Curtis, M.W., T.L. Copeland, and C.H. Ward	Acute Toxicity of 12 Industrial Chemicals to Freshwater and Saltwater Organisms	Water Res. 13(2):137-141	1979

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
741	(Acetato-kappaO)phenylmercury	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	3	d	T	12*	FW	El Sebae, A.H., M.A. El Amayem, I. Sharaf, and M. Massod	Factors Affecting Acute and Chronic Toxicity of Chlorinated Pesticides and Their Biomagnification in Alexandria Region	In: Papers Presented at the FAO/UNEP Meeting on the Toxicity and Bioaccumulation of Selected Substances in Marine Organisms, Rovinj, Yugoslavia, 5-9 Nov., 1984, FAO Fish.Rep.No.334 (Suppl.):73-79	1986
742	Mercury chloride (HgCl2)	Channa punctata	Snake-Head Catfish	Fish	LC50*	MOR	MORT	2	d	T	12.4*	FW	Dey, S., and S. Bhattacharya	Ovarian Damage to Channa punctatus After Chronic Exposure to Low Concentrations of Elsan, Mercury, and Ammonia	Ecotoxicol.Environ.Saf. 17(2):247-257	1989
743	Mercuric acetate	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	T	120*	FW	Curtis, M.W., T.L. Copeland, and C.H. Ward	Aquatic Toxicity of Substances Proposed for Spill Prevention Regulation	In: Proc.Natl.Conf.Control of Hazardous Material Spills, Miami Beach, FL :99-103	1978
744	Mercuric acetate	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	T	120*	FW	Curtis, M.W., and C.H. Ward	Aquatic Toxicity of Forty Industrial Chemicals: Testing in Support of Hazardous Substance Spill Prevention Regulation	J.Hydrol. 51:359-367(Author Communication Used)	1981
745	Chloromethylmercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	2	d	T	124*	FW	Nagashima, Y., T. Kikuchi, and M. Chiba	Toxicity and Accumulation of Mercury in Fish, the Himedaka Oryzias latipes	Bull.Jpn.Soc.Sci.Fish. 50(1):95-99	1984
746	Mercury chloride (HgCl2)	Nemoura cinerea	Stonefly	Insects/Spiders	LC50	MOR	MORT	2	d	T	126*	FW	Slooff, W.	Benthic Macroinvertebrates and Water Quality Assessment: Some Toxicological Considerations	Aquat.Toxicol. 4:73-82	1983
747	Mercury chloride (HgCl2)	Microhyla ornata	Frog	Amphibians	LC50	MOR	MORT	4	d	T	126.4*	FW	Ghate, H.V., and L. Mulherkar	Effect of Mercuric Chloride on Embryonic Development of the Frog Microhyla ornata	Indian J.Exp.Biol. 18(10):1094-1096	1980
748	(Acetato-kappaO)phenylmercury	Anacystis nidulans	Blue-Green Algae	Algae, Moss, Fungi	EC50	GRO	GGRO	1	d	T	13*	FW	Thomas, D.L., and J.G. Montes	Spectrophotometrically Assayed Inhibitory Effects of Mercuric Compounds on Anabaena flos-aquae and Anacystis nidulans (Cyanophyceae)	J. Phycol.14(4)(): 494-499	1978
749	Mercury chloride (HgCl2)	Labeo rohita	Rohu	Fish	LC50	MOR	MORT	4	d	T	130*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
750	Mercury chloride (HgCl2)	Channa punctata	Snake-Head Catfish	Fish	LC50	MOR	MORT	4	d	T	1300*	FW	Gupta, P.K., and K.V. Sastry	Alterations in the Activities of Three Dehydrogenases in the Digestive System of Two Teleost Fishes Exposed to Mercuric Chloride	Environ.Res. 24:15-23	1981
751	Mercury chloride (HgCl2)	Channa punctata	Snake-Head Catfish	Fish	LC50	MOR	MORT	4	d	T	1300*	FW	Sastry, K.V., P.K. Gupta, and P.V. Malik	A Comparative Study of the Effect of Acute and Chronic Mercuric Chloride Treatment on the Activities of a Few Digestive Enzymes of a Teleost	Bull.Environ.Contam.Toxicol. 22(1/2):28-34	1979
752	Mercury chloride (HgCl2)	Channa punctata	Snake-Head Catfish	Fish	LC50	MOR	MORT	4	d	T	1300*	FW	Sastry, K.V., and M.K. Agrawal	Mercuric Chloride Induced Enzymological Changes in Kidney and Ovary of a Teleost Fish, Channa punctatus	Bull.Environ.Contam.Toxicol. 22(1/2):38-43	1979
753	Mercury chloride (HgCl2)	Channa punctata	Snake-Head Catfish	Fish	LC50	MOR	MORT	4	d	T	1300*	FW	Sastry, K.V., and P.K. Gupta	Effect of Mercuric Chloride on the Digestive System of a Teleost Fish, Channa punctatus	Bull.Environ.Contam.Toxicol. 20(3):353-360	1978
754	Mercury chloride (HgCl2)	Channa punctata	Snake-Head Catfish	Fish	LC50*	MOR	MORT	4	d	T	1300*	FW	Sastry, K.V., and P.K. Gupta	Effect of Mercuric Chloride on the Digestive System of Channa punctatus: A Histopathological Study	Environ.Res. 16(1-3):270-278	1978
755	Mercury chloride (HgCl2)	Tubificidae	Oligochaete Family	Worms	LC50	MOR	MORT	2	d	T	133*	FW	Slooff, W.	Benthic Macroinvertebrates and Water Quality Assessment: Some Toxicological Considerations	Aquat.Toxicol. 4:73-82	1983
756	Mercury chloride (HgCl2)	Channa punctata	Snake-Head Catfish	Fish	LC50	MOR	MORT	2	d	T	1330*	FW	Saxena, O.P., and A. Parashari	Comparative Study of the Toxicity of Six Heavy Metals to Channa punctatus	J.Environ.Biol. 4(2):91-94	1983
757	Mercury chloride (HgCl2)	Barbus conchonius	Rosy Barb	Fish	LC50	MOR	MORT	4	d	T	134.7*	FW	Gill, T.S., and J.C. Pant	Effects of Sublethal Concentrations of Mercury in a Teleost Puntius conchonius: Biochemical and Haematological Responses	Indian J.Exp.Biol. 19(6):571-573	1981
758	(Acetato-kappaO)phenylmercury	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	2	d	T	14*	FW	El Sebae, A.H., M.A. El Amayem, I. Sharaf, and M. Massod	Factors Affecting Acute and Chronic Toxicity of Chlorinated Pesticides and Their Biomagnification in Alexandria Region	In: Papers Presented at the FAO/UNEP Meeting on the Toxicity and Bioaccumulation of Selected Substances in Marine Organisms, Rovinj, Yugoslavia, 5-9 Nov., 1984, FAO Fish.Rep.No.334 (Suppl.):73-79	1986
759	Chloromethylmercury	Lymnaea acuminata	Pond Snail	Molluscs	LC50	MOR	MORT	4	d	T	140*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
760	(Acetato-kappaO)phenylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	0.333	d	T	1400*	FW	Clemens, H.P., and K.E. Sneed	The Chemical Control of Some Diseases and Parasites of Channel Catfish	Prog.Fish-Cult. 20(1):8-15	1958
761	Mercury chloride (HgCl2)	Poecilia reticulata	Guppy	Fish	LC50	MOR	MORT	4	d	T	14000*	FW	Deshmukh, S.S., and V.B. Marathe	Size Related Toxicity of Copper and Mercury to Lebistes reticulatus (Peter), Labeo rohita (Ham.) and Cyprinus carpio Linn	Indian J.Exp.Biol. 18:421-423	1980
762	Mercury chloride (HgCl2)	Asellus aquaticus	Aquatic Sowbug	Crustaceans	LC50	MOR	MORT	2	d	T	148*	FW	Slooff, W.	Benthic Macroinvertebrates and Water Quality Assessment: Some Toxicological Considerations	Aquat.Toxicol. 4:73-82	1983
763	(Acetato-kappaO)phenylmercury	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	1	d	T	15*	FW	El Sebae, A.H., M.A. El Amayem, I. Sharaf, and M. Massod	Factors Affecting Acute and Chronic Toxicity of Chlorinated Pesticides and Their Biomagnification in Alexandria Region	In: Papers Presented at the FAO/UNEP Meeting on the Toxicity and Bioaccumulation of Selected Substances in Marine Organisms, Rovinj, Yugoslavia, 5-9 Nov., 1984, FAO Fish.Rep.No.334 (Suppl.):73-79	1986
764	Mercury chloride (HgCl2)	Anabas testudineus	Climbing Perch	Fish	LC50	MOR	MORT	1	d	T	1500*	FW	Banerjee, V., and K. Kumari	Effect of Zinc, Mercury and Cadmium on Erythrocyte and Related Parameters in the Fish Anabas testudineus	Environ.Ecol. 6(3):737-739	1988
765	Mercury chloride (HgCl2)	Channa punctata	Snake-Head Catfish	Fish	LC50	MOR	MORT	4	d	T	1567*	FW	Agarwal, S.K.	Bioassay Evaluation of Acute Toxicity Levels of Mercuric Chloride to an Air-Breathing Fish Channa punctatus (Bloch): Mortality and Behaviour Study	J.Environ.Biol. 12(2):99-106	1991

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
766	Chloromethylmercury	Moina dubia	Water Flea	Crustaceans	LC50	MOR	MORT	1	d	T	16*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
767	Mercury chloride (HgCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	T	160*	FW	Qureshi, A.A., K.W. Flood, S.R. Thompson, S.M. Janhurst, C.S. Inniss, and D.A. Rokosh	Comparison of a Luminescent Bacterial Test with Other Bioassays for Determining Toxicity of Pure Compounds and Complex Effluents	In: J.G.Pearson, R.B.Foster and W.E.Bishop (Eds.), Aquatic Toxicology and Hazard Assessment, 5th Confrence, ASTM STP 766, Philadelphia, PA :179-195	1982
768	(Acetato-kappaO)phenylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	0.167	d	T	1600*	FW	Clemens, H.P., and K.E. Sneed	The Chemical Control of Some Diseases and Parasites of Channel Catfish	Prog.Fish-Cult. 20(1):8-15	1958
769	Mercury chloride (HgCl2)	Corixa punctata	Water Boatman	Insects/Spiders	LC50	MOR	MORT	2	d	T	163*	FW	Slooff, W.	Benthic Macroinvertebrates and Water Quality Assessment: Some Toxicological Considerations	Aquat.Toxicol. 4:73-82	1983
770	Mercury chloride (HgCl2)	Channa punctata	Snake-Head Catfish	Fish	LC50	MOR	MORT	3	d	T	1699*	FW	Agarwal, S.K.	Bioassay Evaluation of Acute Toxicity Levels of Mercuric Chloride to an Air-Breathing Fish Channa punctatus (Bloch): Mortality and Behaviour Study	J.Environ.Biol. 12(2):99-106	1991
771	Mercury chloride (HgCl2)	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	4	d	T	170*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
772	Mercury chloride (HgCl2)	Bufo melanostictus	Common Indian Toad	Amphibians	LC50	MOR	MORT	4	d	T	185*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
773	Mercury chloride (HgCl2)	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	2	d	T	185*	FW	Holcombe, G.W., G.L. Phipps, and J.T. Fiandt	Toxicity of Selected Priority Pollutants to Various Aquatic Organisms	Ecotoxicol.Environ.Saf. 7(4):400-409 (OECDG Data File)	1983
774	Mercury chloride (HgCl2)	Channa punctata	Snake-Head Catfish	Fish	LC50	MOR	MORT	2	d	T	1863*	FW	Agarwal, S.K.	Bioassay Evaluation of Acute Toxicity Levels of Mercuric Chloride to an Air-Breathing Fish Channa punctatus (Bloch): Mortality and Behaviour Study	J.Environ.Biol. 12(2):99-106	1991
775	Mercury chloride (HgCl2)	Channa punctata	Snake-Head Catfish	Fish	LC50	MOR	MORT	1	d	T	1880*	FW	Saxena, O.P., and A. Parashari	Comparative Study of the Toxicity of Six Heavy Metals to Channa punctatus	J.Environ.Biol. 4(2):91-94	1983
776	(Acetato-kappaO)phenylmercury	Moina macrocopa	Water Flea	Crustaceans	LC50*	MOR	MORT	0.125	d	T	190*	FW	Nishiuchi, Y., and Y. Hashimoto	Toxicity of Pesticides to Some Fresh Water Organisms	Rev.Plant Prot.Res. 2:137-139	1969
777	(Acetato-kappaO)phenylmercury	Tilapia zillii	Tilapia	Fish	LC50	MOR	MORT	1	d	T	190*	FW	El Sebae, A.H., M.A. El Amayem, I. Sharaf, and M. Massod	Factors Affecting Acute and Chronic Toxicity of Chlorinated Pesticides and Their Biomagnification in Alexandria Region	In: Papers Presented at the FAO/UNEP Meeting on the Toxicity and Bioaccumulation of Selected Substances in Marine Organisms, Rovinj, Yugoslavia, 5-9 Nov., 1984, FAO Fish.Rep.No.334 (Suppl.):73-79	1986
778	Mercury chloride (HgCl2)	Barbus sophore	Two Spot Barb, Dotted Barb	Fish	NR-LETH	MOR	MORT	4	d	T	190*	FW	Shrivastava, S., and K.S. Rao	Studies on Activity Recovery in Some Mercury-Exposed Freshwater Fish by Using Selected Weeds	Bull.Environ.Contam.Toxicol. 42(6):840-846	1989
779	(Acetato-kappaO)phenylmercury	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50*	MOR	MORT	2	d	T	2*	FW	Alabaster, J.S.	Survival of Fish in 164 Herbicides, Insecticides, Fungicides, Wetting Agents and Miscellaneous Substances	Int.Pest Control 11(2):29-35 (Author Communication Used)	1969
780	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	T	2.1*	FW	Canton, J.H., and D.M.M. Adema	Reproducibility of Short-Term and Reproduction Toxicity Experiments with Daphnia magna and Comparison of the Sensitivity of Daphnia magna with Daphnia pulex and Daphnia cucullata in Short-Term Experiments	Hydrobiologia 59(2):135-140 (Used Reference 2018)	1978
781	Mercury chloride (HgCl2)	Daphnia pulex	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	T	2.2*	FW	Canton, J.H., and D.M.M. Adema	Reproducibility of Short-Term and Reproduction Toxicity Experiments with Daphnia magna and Comparison of the Sensitivity of Daphnia magna with Daphnia pulex and Daphnia cucullata in Short-Term Experiments	Hydrobiologia 59(2):135-140 (Used Reference 2018)	1978
782	Mercury chloride (HgCl2)	Daphnia pulex	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	T	2.2*	FW	Canton, J.H., and D.M.M. Adema	Reproducibility of Short-Term and Reproduction Toxicity Experiments with Daphnia magna and Comparison of the Sensitivity of Daphnia magna with Daphnia pulex and Daphnia cucullata in Short-Term Experiments	Hydrobiologia 59(2):135-140 (Used Reference 2018)	1978
783	Mercury chloride (HgCl2)	Daphnia cucullata	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	T	2.3*	FW	Canton, J.H., and D.M.M. Adema	Reproducibility of Short-Term and Reproduction Toxicity Experiments with Daphnia magna and Comparison of the Sensitivity of Daphnia magna with Daphnia pulex and Daphnia cucullata in Short-Term Experiments	Hydrobiologia 59(2):135-140 (Used Reference 2018)	1978
784	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	T	2.3*	FW	Canton, J.H., and D.M.M. Adema	Reproducibility of Short-Term and Reproduction Toxicity Experiments with Daphnia magna and Comparison of the Sensitivity of Daphnia magna with Daphnia pulex and Daphnia cucullata in Short-Term Experiments	Hydrobiologia 59(2):135-140 (Used Reference 2018)	1978
785	Mercury chloride (HgCl2)	Daphnia cucullata	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	T	2.4*	FW	Canton, J.H., and D.M.M. Adema	Reproducibility of Short-Term and Reproduction Toxicity Experiments with Daphnia magna and Comparison of the Sensitivity of Daphnia magna with Daphnia pulex and Daphnia cucullata in Short-Term Experiments	Hydrobiologia 59(2):135-140 (Used Reference 2018)	1978

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
786	Chloromethylmercury	Anabaena flosaquae	Blue-Green Algae	Algae, Moss, Fungi	EC50	GRO	GGRO	1	d	T	2.8*	FW	Thomas, D.L., and J.G. Montes	Spectrophotometrically Assayed Inhibitory Effects of Mercuric Compounds on Anabaena flos-aquae and Anacystis nidulans (Cyanophyceae)	J. Phycol.14(4)(): 494-499	1978
787	(Acetato-kappaO)phenylmercury	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	0.167	d	T	20*	FW	El Sebae, A.H., M.A. El Amayem, I. Sharaf, and M. Massod	Factors Affecting Acute and Chronic Toxicity of Chlorinated Pesticides and Their Biomagnification in Alexandria Region	In: Papers Presented at the FAO/UNEP Meeting on the Toxicity and Bioaccumulation of Selected Substances in Marine Organisms, Rovinj, Yugoslavia, 5-9 Nov., 1984, FAO Fish.Rep.No.334 (Suppl.):73-79	1986
788	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	T	20*	FW	Qureshi, A.A., K.W. Flood, S.R. Thompson, S.M. Janhurst, C.S. Inniss, and D.A. Rokosh	Comparison of a Luminescent Bacterial Test with Other Bioassays for Determining Toxicity of Pure Compounds and Complex Effluents	In: J.G.Pearson, R.B.Foster and W.E.Bishop (Eds.), Aquatic Toxicology and Hazard Assessment, 5th Confrence, ASTM STP 766, Philadelphia, PA :179-195	1982
789	Chloromethylmercury	Lymnaea acuminata	Pond Snail	Molluscs	LC50	MOR	MORT	2	d	T	200*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
790	Mercury chloride (HgCl2)	Rana breviceps	Frog	Amphibians	LC50	MOR	MORT	4	d	T	200*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
791	Mercury chloride (HgCl2)	Heteropneustes fossilis	Indian Catfish	Fish	NR-LETH	MOR	MORT	4	d	T	2000*	FW	Shrivastava, S., and K.S. Rao	Studies on Activity Recovery in Some Mercury-Exposed Freshwater Fish by Using Selected Weeds	Bull.Environ.Contam.Toxicol. 42(6):840-846	1989
792	Mercury chloride (HgCl2)	Channa punctata	Snake-Head Catfish	Fish	LC50	MOR	MORT	1	d	T	2014*	FW	Agarwal, S.K.	Bioassay Evaluation of Acute Toxicity Levels of Mercuric Chloride to an Air-Breathing Fish Channa punctatus (Bloch): Mortality and Behaviour Study	J.Environ.Biol. 12(2):99-106	1991
793	Mercury chloride (HgCl2)	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	1	d	T	207*	FW	Holcombe, G.W., G.L. Phipps, and J.T. Fiandt	Toxicity of Selected Priority Pollutants to Various Aquatic Organisms	Ecotoxicol.Environ.Saf. 7(4):400-409 (OECDG Data File)	1983
794	Chloromethylmercury	Lymnaea acuminata	Pond Snail	Molluscs	LC50	MOR	MORT	1	d	T	220*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
795	(Acetato-kappaO)phenylmercury	Daphnia pulex	Water Flea	Crustaceans	LC50*	MOR	MORT	0.125	d	T	230*	FW	Nishiuchi, Y., and Y. Hashimoto	Toxicity of Pesticides to Some Fresh Water Organisms	Rev.Plant Prot.Res. 2:137-139	1969
796	Mercury chloride (HgCl2)	Labeo rohita	Rohu	Fish	LC50	MOR	MORT	2	d	T	230*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
797	Mercury chloride (HgCl2)	Erpobdella octoculata	Leech	Worms	LC50	MOR	MORT	2	d	T	237*	FW	Slooff, W.	Benthic Macroinvertebrates and Water Quality Assessment: Some Toxicological Considerations	Aquat.Toxicol. 4:73-82	1983
798	Chloromethylmercury	Rana pipiens	Leopard Frog	Amphibians	NR-LETH	MOR	MORT	5	d	T	24*	FW	Dial, N.A.	Methylmercury: Teratogenic and Lethal Effects in Frog Embryos	Teratology 13(3):327-330	1976
799	Chloromethylmercury	Rana pipiens	Leopard Frog	Amphibians	NR-LETH	MOR	MORT	5	d	T	24*	FW	Dial, N.A.	Methylmercury: Teratogenic and Lethal Effects in Frog Embryos	Teratology 13(3):327-330	1976
800	Chloromethylmercury	Rana pipiens	Leopard Frog	Amphibians	NR-LETH	MOR	MORT	5	d	T	24*	FW	Dial, N.A.	Methylmercury: Teratogenic and Lethal Effects in Frog Embryos	Teratology 13(3):327-330	1976
801	Mercury chloride (HgCl2)	Bufo melanostictus	Common Indian Toad	Amphibians	LC50	MOR	MORT	2	d	T	240*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
802	(Acetato-kappaO)phenylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	0.042	d	T	24000*	FW	Clemens, H.P., and K.E. Sneed	The Chemical Control of Some Diseases and Parasites of Channel Catfish	Prog.Fish-Cult. 20(1):8-15	1958
803	Chloromethylmercury	Pteronarcys californica	Stonefly	Insects/Spiders	LC50*	MOR	MORT	2	d	T	24900*	FW	Elder, J.A., and A.R. Gaufin	The Toxicity of Three Mercurials to Pteronarcys californica Newport, and Some Possible Physiological Effects Which Influence the Toxicities	Environ.Res. 7(2):169-175	1974
804	Mercury chloride (HgCl2)	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	2	d	T	250*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
805	Mercury chloride (HgCl2)	Pteronarcys californica	Stonefly	Insects/Spiders	NR-LETH	MOR	MORT	1	d	T	25000*	FW	Elder, J.A., and A.R. Gaufin	The Toxicity of Three Mercurials to Pteronarcys californica Newport, and Some Possible Physiological Effects Which Influence the Toxicities	Environ.Res. 7(2):169-175	1974
806	Mercury chloride (HgCl2)	Pteronarcys californica	Stonefly	Insects/Spiders	NR-LETH	MOR	MORT	3	d	T	25000*	FW	Elder, J.A., and A.R. Gaufin	The Toxicity of Three Mercurials to Pteronarcys californica Newport, and Some Possible Physiological Effects Which Influence the Toxicities	Environ.Res. 7(2):169-175	1974
807	Mercuric acetate	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	2	d	T	260*	FW	Curtis, M.W., T.L. Copeland, and C.H. Ward	Aquatic Toxicity of Substances Proposed for Spill Prevention Regulation	In: Proc.Natl.Conf.Control of Hazardous Material Spills, Miami Beach, FL :99-103	1978
808	Mercuric acetate	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	2	d	T	263*	FW	Curtis, M.W., T.L. Copeland, and C.H. Ward	Acute Toxicity of 12 Industrial Chemicals to Freshwater and Saltwater Organisms	Water Res. 13(2):137-141	1979
809	Mercury chloride (HgCl2)	Moina dubia	Water Flea	Crustaceans	LC50	MOR	MORT	4	d	T	27*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
810	Mercury chloride (HgCl2)	Aplexa hypnorum	Snail	Molluscs	LC50	MOR	MORT	4	d	T	273*	FW	Holcombe, G.W., G.L. Phipps, and J.T. Fiandt	Toxicity of Selected Priority Pollutants to Various Aquatic Organisms	Ecotoxicol.Environ.Saf. 7(4):400-409 (OECDG Data File)	1983
811	Mercury chloride (HgCl2)	Chironomus tentans	Midge	Insects/Spiders	LC50	MOR	MORT	2	d	T	2780*	FW	Ziegenfuss, P.S., W.J. Renaudette, and W.J. Adams	Methodology for Assessing the Acute Toxicity of Chemicals Sorbed to Sediments: Testing the Equilibrium Partitioning Theory	In: T.M.Poston and R.Purdy (Eds.), Aquatic Toxicology and Environmental Fate, 9th Volume, ASTM STP 921, Philadelphia, PA :479-493	1986
812	(Acetato-kappaO)phenylmercury	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50*	MOR	MORT	1	d	T	3*	FW	Alabaster, J.S.	Survival of Fish in 164 Herbicides, Insecticides, Fungicides, Wetting Agents and Miscellaneous Substances	Int.Pest Control 11(2):29-35 (Author Communication Used)	1969

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
813	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	T	3.2*	FW	Canton, J.H., and D.M.M. Adema	Reproducibility of Short-Term and Reproduction Toxicity Experiments with Daphnia magna and Comparison of the Sensitivity of Daphnia magna with Daphnia pulex and Daphnia cucullata in Short-Term Experiments	Hydrobiologia 59(2):135-140 (Used Reference 2018)	1978
814	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	T	3.2*	FW	Canton, J.H., and D.M.M. Adema	Reproducibility of Short-Term and Reproduction Toxicity Experiments with Daphnia magna and Comparison of the Sensitivity of Daphnia magna with Daphnia pulex and Daphnia cucullata in Short-Term Experiments	Hydrobiologia 59(2):135-140 (Used Reference 2018)	1978
815	Mercury chloride (HgCl2)	Moina dubia	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	T	30*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
816	Mercury chloride (HgCl2)	Ambystoma mexicanum	Mexican Axolotl	Amphibians	LC50	MOR	MORT	2	d	T	300*	FW	Slooff, W., and R. Baerselman	Comparison of the Usefulness of the Mexican Axolotl (Ambystoma mexicanum) and the Clawed Toad (Xenopus laevis) in Toxicological Bioassays	Bull.Environ.Contam.Toxicol. 24(3):439-443	1980
817	Mercury chloride (HgCl2)	Labeo rohita	Rohu	Fish	LC50	MOR	MORT	1	d	T	300*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
818	Mercury chloride (HgCl2)	Tilapia zillii	Tilapia	Fish	LC50	MOR	MORT	1	d	T	3100*	FW	El Sebae, A.H., M.A. El Amayem, I. Sharaf, and M. Massod	Factors Affecting Acute and Chronic Toxicity of Chlorinated Pesticides and Their Biomagnification in Alexandria Region	In: Papers Presented at the FAO/UNEP Meeting on the Toxicity and Bioaccumulation of Selected Substances in Marine Organisms, Rovinj, Yugoslavia, 5-9 Nov., 1984, FAO Fish.Rep.No.334 (Suppl.):73-79	1986
819	Mercuric acetate	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	1	d	T	330*	FW	Curtis, M.W., T.L. Copeland, and C.H. Ward	Aquatic Toxicity of Substances Proposed for Spill Prevention Regulation	In: Proc.Natl.Conf.Control of Hazardous Material Spills, Miami Beach, FL :99-103	1978
820	Mercury chloride (HgCl2)	Rana breviceps	Frog	Amphibians	LC50	MOR	MORT	2	d	T	330*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
821	Mercuric acetate	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	1	d	T	332*	FW	Curtis, M.W., T.L. Copeland, and C.H. Ward	Acute Toxicity of 12 Industrial Chemicals to Freshwater and Saltwater Organisms	Water Res. 13(2):137-141	1979
822	Mercury chloride (HgCl2)	Lymnaea acuminata	Pond Snail	Molluscs	LC50	MOR	MORT	4	d	T	340*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
823	(Acetato-kappaO)phenylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	4	d	T	350*	FW	Clemens, H.P., and K.E. Sneed	The Chemical Control of Some Diseases and Parasites of Channel Catfish	Prog.Fish-Cult. 20(1):8-15	1958
824	Mercury chloride (HgCl2)	Bufo melanostictus	Common Indian Toad	Amphibians	LC50	MOR	MORT	1	d	T	355*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
825	(Acetato-kappaO)phenylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	3	d	T	360*	FW	Clemens, H.P., and K.E. Sneed	The Chemical Control of Some Diseases and Parasites of Channel Catfish	Prog.Fish-Cult. 20(1):8-15	1958
826	Mercury chloride (HgCl2)	Cloeon dipterum	Mayfly	Insects/Spiders	LC50	MOR	MORT	2	d	T	37.0*	FW	Slooff, W.	Benthic Macroinvertebrates and Water Quality Assessment: Some Toxicological Considerations	Aquat.Toxicol. 4:73-82	1983
827	Mercury chloride (HgCl2)	Catla catla	Catla	Fish	LC50	MOR	MORT	1	d	T	370*	FW	Rai, R.	Responses of Serum Protein in a Freshwater Fish to Experimental Mercury Poisoning	J.Environ.Biol. 8(2-Suppl):225-228	1987
828	Mercury chloride (HgCl2)	Cyprinus carpio	Common Carp	Fish	LC50	MOR	MORT	4	d	T	370*	FW	Shrivastava, S., K.S. Rao, S. Dhanekar, and S.S. Pandya	Determination of Acute Mercury Toxicity to Developing Stages of Cyprinus carpio and Cirrhinus mrigala	Fish.Technol. 25(1):29-31	1988
829	Mercury chloride (HgCl2)	Labeo rohita	Rohu	Fish	LC50	MOR	MORT	4	d	T	3850*	FW	Deshmukh, S.S., and V.B. Marathe	Size Related Toxicity of Copper and Mercury to Lebistes reticulatus (Peter), Labeo rohita (Ham.) and Cyprinus carpio Linn	Indian J.Exp.Biol. 18:421-423	1980
830	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	T	4*	FW	Ziegenfuss, P.S., W.J. Renaudette, and W.J. Adams	Methodology for Assessing the Acute Toxicity of Chemicals Sorbed to Sediments: Testing the Equilibrium Partitioning Theory	In: T.M.Poston and R.Purdy (Eds.), Aquatic Toxicology and Environmental Fate, 9th Volume, ASTM STP 921, Philadelphia, PA :479-493	1986
831	Mercury chloride (HgCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2.667	d	T	4.4*	FW	Anderson, B.G.	The Apparent Thresholds of Toxicity to Daphnia magna for Chlorides of Various Metals when Added to Lake Erie Water	Trans.Am.Fish.Soc. 78:96-113	1948
832	(Acetato-kappaO)phenylmercury	Carassius auratus	Goldfish	Fish	LC50*	MOR	MORT	2	d	T	40*	FW	Nishiuchi, Y., and Y. Hashimoto	Toxicity of Pesticides to Some Fresh Water Organisms	Rev.Plant Prot.Res. 2:137-139	1969
833	Mercuric acetate	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	T	40*	FW	Curtis, M.W., T.L. Copeland, and C.H. Ward	Aquatic Toxicity of Substances Proposed for Spill Prevention Regulation	In: Proc.Natl.Conf.Control of Hazardous Material Spills, Miami Beach, FL :99-103	1978
834	Mercury chloride (HgCl2)	Cyprinus carpio	Common Carp	Fish	LC50	MOR	MORT	4	d	T	40*	FW	Shrivastava, S., K.S. Rao, S. Dhanekar, and S.S. Pandya	Determination of Acute Mercury Toxicity to Developing Stages of Cyprinus carpio and Cirrhinus mrigala	Fish.Technol. 25(1):29-31	1988
835	Mercury chloride (HgCl2)	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	1	d	T	400*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
836	Mercury chloride (HgCl2)	Lymnaea acuminata	Pond Snail	Molluscs	LC50	MOR	MORT	2	d	T	400*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
837	Mercury chloride (HgCl2)	Chironomus riparius	Midge	Insects/Spiders	LC50	MOR	MORT	2	d	T	407*	FW	Slooff, W.	Benthic Macroinvertebrates and Water Quality Assessment: Some Toxicological Considerations	Aquat.Toxicol. 4:73-82	1983
838	Mercury chloride (HgCl2)	Lymnaea stagnalis	Great Pond Snail	Molluscs	LC50	MOR	MORT	2	d	T	451*	FW	Slooff, W.	Benthic Macroinvertebrates and Water Quality Assessment: Some Toxicological Considerations	Aquat.Toxicol. 4:73-82	1983

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839	(Acetato-kappaO)phenylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	2	d	T	460*	FW	Clemens, H.P., and K.E. Sneed	The Chemical Control of Some Diseases and Parasites of Channel Catfish	Prog.Fish-Cult. 20(1):8-15	1958
840	Mercury chloride (HgCl2)	Moina dubia	Water Flea	Crustaceans	LC50	MOR	MORT	1	d	T	48*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
841	Mercury chloride (HgCl2)	Rana breviceps	Frog	Amphibians	LC50	MOR	MORT	1	d	T	480*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
842	Mercury chloride (HgCl2)	Labeo rohita	Rohu	Fish	LC50	MOR	MORT	4	d	T	48000*	FW	Deshmukh, S.S., and V.B. Marathe	Size Related Toxicity of Copper and Mercury to Lebistes reticulatus (Peter), Labeo rohita (Ham.) and Cyprinus carpio Linn	Indian J.Exp.Biol. 18:421-423	1980
843	Chloromethylmercury	Anacystis nidulans	Blue-Green Algae	Algae, Moss, Fungi	EC50	GRO	GGRO	1	d	T	5.0*	FW	Thomas, D.L., and J.G. Montes	Spectrophotometrically Assayed Inhibitory Effects of Mercuric Compounds on Anabaena flos-aquae and Anacystis nidulans (Cyanophyceae)	J. Phycol.14(4)(): 494-499	1978
844	(Acetato-kappaO)phenylmercury	Cyprinus carpio	Common Carp	Fish	LC50*	MOR	MORT	2	d	T	50*	FW	Nishiuchi, Y., and Y. Hashimoto	Toxicity of Pesticides to Some Fresh Water Organisms	Rev.Plant Prot.Res. 2:137-139	1969
845	Mercury chloride (HgCl2)	Barbus conchonius	Rosy Barb	Fish	LC50	MOR	MORT	4	d	T	50.8*	FW	Gill, T.S., and J.C. Pant	Effects of Sublethal Concentrations of Mercury in a Teleost Puntius conchonius: Biochemical and Haematological Responses	Indian J.Exp.Biol. 19(6):571-573	1981
846	Mercury chloride (HgCl2)	Etroplus maculatus	Pearlspot	Fish	LC50	MOR	MORT	4	d	T	500*	FW	Gaikwad, S.A.	Acute Toxicity of Mercury, Copper and Selenium to the Fish Etroplus maculatus	Environ.Ecol. 7(3):694-696	1989
847	(Acetato-kappaO)phenylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	0.083	d	T	5000*	FW	Clemens, H.P., and K.E. Sneed	The Chemical Control of Some Diseases and Parasites of Channel Catfish	Prog.Fish-Cult. 20(1):8-15	1958
848	Mercury chloride (HgCl2)	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	2	d	T	520*	FW	Nagashima, Y., T. Kikuchi, and M. Chiba	Toxicity and Accumulation of Mercury in Fish, the Himedaka Oryzias latipes	Bull.Jpn.Soc.Sci.Fish. 50(1):95-99	1984
849	Mercury chloride (HgCl2)	Anabaena flosaquae	Blue-Green Algae	Algae, Moss, Fungi	EC50	GRO	GGRO	1	d	T	53.2*	FW	Thomas, D.L., and J.G. Montes	Spectrophotometrically Assayed Inhibitory Effects of Mercuric Compounds on Anabaena flos-aquae and Anacystis nidulans (Cyanophyceae)	J. Phycol.14(4)(): 494-499	1978
850	Chloromethylmercury	Labeo rohita	Rohu	Fish	LC50	MOR	MORT	4	d	T	54*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
851	Mercury chloride (HgCl2)	Dugesia lugubris	Turbellarian Flatworm	Worms	LC50	MOR	MORT	2	d	T	55.4*	FW	Slooff, W.	Benthic Macroinvertebrates and Water Quality Assessment: Some Toxicological Considerations	Aquat.Toxicol. 4:73-82	1983
852	Mercury chloride (HgCl2)	Lymnaea acuminata	Pond Snail	Molluscs	LC50	MOR	MORT	1	d	T	555*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
853	Chloromethylmercury	Bufo melanostictus	Common Indian Toad	Amphibians	LC50	MOR	MORT	4	d	T	56*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
854	Mercury chloride (HgCl2)	Hydra oligactis	Hydra	Invertebrates	LC50	MOR	MORT	2	d	T	56.2*	FW	Slooff, W.	Benthic Macroinvertebrates and Water Quality Assessment: Some Toxicological Considerations	Aquat.Toxicol. 4:73-82	1983
855	Mercury chloride (HgCl2)	Pteronarcys californica	Stonefly	Insects/Spiders	LC50*	MOR	MORT	2	d	T	58000*	FW	Elder, J.A., and A.R. Gaufin	The Toxicity of Three Mercurials to Pteronarcys californica Newport, and Some Possible Physiological Effects Which Influence the Toxicities	Environ.Res. 7(2):169-175	1974
856	(Acetato-kappaO)phenylmercury	Anabaena flosaquae	Blue-Green Algae	Algae, Moss, Fungi	EC50	GRO	GGRO	1	d	T	6*	FW	Thomas, D.L., and J.G. Montes	Spectrophotometrically Assayed Inhibitory Effects of Mercuric Compounds on Anabaena flos-aquae and Anacystis nidulans (Cyanophyceae)	J. Phycol.14(4)(): 494-499	1978
857	Chloromethylmercury	Rana breviceps	Frog	Amphibians	LC50	MOR	MORT	4	d	T	60*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
858	Mercury chloride (HgCl2)	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	4	d	T	600*	FW	El Sebae, A.H., M.A. El Amayem, I. Sharaf, and M. Massod	Factors Affecting Acute and Chronic Toxicity of Chlorinated Pesticides and Their Biomagnification in Alexandria Region	In: Papers Presented at the FAO/UNEP Meeting on the Toxicity and Bioaccumulation of Selected Substances in Marine Organisms, Rovinj, Yugoslavia, 5-9 Nov., 1984, FAO Fish.Rep.No.334 (Suppl.):73-79	1986
859	Chloromethylmercury	Bufo melanostictus	Common Indian Toad	Amphibians	LC50	MOR	MORT	1	d	T	65*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
860	Chloromethylmercury	Bufo melanostictus	Common Indian Toad	Amphibians	LC50	MOR	MORT	2	d	T	65*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
861	Mercury chloride (HgCl2)	Channa punctata	Snake-Head Catfish	Fish	LC50	MOR	MORT	4	d	T	670*	FW	Saxena, O.P., and A. Parashari	Comparative Study of the Toxicity of Six Heavy Metals to Channa punctatus	J.Environ.Biol. 4(2):91-94	1983
862	Mercury chloride (HgCl2)	Gammarus pulex	Scud	Crustaceans	LC50	MOR	MORT	2	d	T	7.39*	FW	Slooff, W.	Benthic Macroinvertebrates and Water Quality Assessment: Some Toxicological Considerations	Aquat.Toxicol. 4:73-82	1983
863	Mercury chloride (HgCl2)	Barbus conchonius	Rosy Barb	Fish	LC50	MOR	MORT	4	d	T	7.86*	FW	Gill, T.S., and J.C. Pant	Effects of Sublethal Concentrations of Mercury in a Teleost Puntius conchonius: Biochemical and Haematological Responses	Indian J.Exp.Biol. 19(6):571-573	1981
864	Chloromethylmercury	Rana breviceps	Frog	Amphibians	LC50	MOR	MORT	2	d	T	70*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
865	Chloromethylmercury	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	4	d	T	70*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
866	Chloromethylmercury	Labeo rohita	Rohu	Fish	LC50	MOR	MORT	2	d	T	70*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
867	Mercury chloride (HgCl2)	Xenopus laevis	African Clawed Frog	Amphibians	LC50	MOR	MORT	2	d	T	70*	FW	De Zwart, D., and W. Slooff	Toxicity of Mixtures of Heavy Metals and Petrochemicals to Xenopus laevis	Bull.Environ.Contam.Toxicol. 38:345-351	1987
868	Mercury chloride (HgCl2)	Xenopus laevis	African Clawed Frog	Amphibians	LC50	MOR	MORT	2	d	T	70*	FW	Slooff, W., and R. Baerselman	Comparison of the Usefulness of the Mexican Axolotl (Ambystoma mexicanum) and the Clawed Toad (Xenopus laevis) in Toxicological Bioassays	Bull.Environ.Contam.Toxicol. 24(3):439-443	1980
869	Mercury chloride (HgCl2)	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	2	d	T	700*	FW	El Sebae, A.H., M.A. El Amayem, I. Sharaf, and M. Massod	Factors Affecting Acute and Chronic Toxicity of Chlorinated Pesticides and Their Biomagnification in Alexandria Region	In: Papers Presented at the FAO/UNEP Meeting on the Toxicity and Bioaccumulation of Selected Substances in Marine Organisms, Rovinj, Yugoslavia, 5-9 Nov., 1984, FAO Fish.Rep.No.334 (Suppl.):73-79	1986
870	Mercury chloride (HgCl2)	Oreochromis mossambicus	Mozambique Tilapia	Fish	NR-LETH	MOR	MORT	4	d	T	700*	FW	Shrivastava, S., and K.S. Rao	Studies on Activity Recovery in Some Mercury-Exposed Freshwater Fish by Using Selected Weeds	Bull.Environ.Contam.Toxicol. 42(6):840-846	1989
871	Mercury chloride (HgCl2)	Cirrhinus mrigala	Carp, Hawk Fish	Fish	LC50	MOR	MORT	4	d	T	74*	FW	Shrivastava, S., K.S. Rao, S. Dhanekar, and S.S. Pandya	Determination of Acute Mercury Toxicity to Developing Stages of Cyprinus carpio and Cirrhinus mrigala	Fish.Technol. 25(1):29-31	1988
872	Mercury chloride (HgCl2)	Cirrhinus mrigala	Carp, Hawk Fish	Fish	LC50	MOR	MORT	4	d	T	74*	FW	Shrivastava, S., K.S. Rao, S. Dhanekar, and S.S. Pandya	Determination of Acute Mercury Toxicity to Developing Stages of Cyprinus carpio and Cirrhinus mrigala	Fish.Technol. 25(1):29-31	1988
873	Mercury chloride (HgCl2)	Barbus conchonius	Rosy Barb	Fish	LC50	MOR	MORT	4	d	T	74.9*	FW	Gill, T.S., and J.C. Pant	Effects of Sublethal Concentrations of Mercury in a Teleost Puntius conchonius: Biochemical and Haematological Responses	Indian J.Exp.Biol. 19(6):571-573	1981
874	Mercury chloride (HgCl2)	Carassius auratus	Goldfish	Fish	NR-LETH	MOR	MORT	0.667	d	T	740*	FW	Ellis, M.M.	Toxicity of Phenyl Mercuric Lactate for Fish	Spec.Sci.Rep., No.42, U.S.Fish Wildl.Serv. :6 p.	1947
875	Mercury chloride (HgCl2)	Cirrhinus mrigala	Carp, Hawk Fish	Fish	LC50	MOR	MORT	4	d	T	742*	FW	Shrivastava, S., K.S. Rao, S. Dhanekar, and S.S. Pandya	Determination of Acute Mercury Toxicity to Developing Stages of Cyprinus carpio and Cirrhinus mrigala	Fish.Technol. 25(1):29-31	1988
876	Mercury chloride (HgCl2)	Ischnura elegans	Damselfly	Insects/Spiders	LC50	MOR	MORT	2	d	T	7613*	FW	Slooff, W.	Benthic Macroinvertebrates and Water Quality Assessment: Some Toxicological Considerations	Aquat.Toxicol. 4:73-82	1983
877	Mercury chloride (HgCl2)	Poecilia reticulata	Guppy	Fish	LC50	MOR	MORT	4	d	T	7800*	FW	Deshmukh, S.S., and V.B. Marathe	Size Related Toxicity of Copper and Mercury to Lebistes reticulatus (Peter), Labeo rohita (Ham.) and Cyprinus carpio Linn	Indian J.Exp.Biol. 18:421-423	1980
878	Chloromethylmercury	Moina dubia	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	T	8*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
879	Chloromethylmercury	Moina dubia	Water Flea	Crustaceans	LC50	MOR	MORT	4	d	T	8*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
880	(Acetato-kappaO)phenylmercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50*	MOR	MORT	2	d	T	80*	FW	Nishiuchi, Y., and Y. Hashimoto	Toxicity of Pesticides to Some Fresh Water Organisms	Rev.Plant Prot.Res. 2:137-139	1969
881	Chloromethylmercury	Rana breviceps	Frog	Amphibians	LC50	MOR	MORT	1	d	T	80*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
882	Mercury chloride (HgCl2)	Microhyla ornata	Frog	Amphibians	LC50	MOR	MORT	4	d	T	87.82*	FW	Ghate, H.V., and L. Mulherkar	Effect of Mercuric Chloride on Embryonic Development of the Frog Microhyla ornata	Indian J.Exp.Biol. 18(10):1094-1096	1980
883	(Acetato-kappaO)phenylmercury	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	1	d	T	870*	FW	Clemens, H.P., and K.E. Sneed	The Chemical Control of Some Diseases and Parasites of Channel Catfish	Prog.Fish-Cult. 20(1):8-15	1958
884	Mercury chloride (HgCl2)	Oreochromis mossambicus	Mozambique Tilapia	Fish	LC50	MOR	MORT	3	d	T	883*	FW	Shaw, B.P., A. Sahu, and A.K. Panigrahi	Comparative Toxicity of an Effluent from a Chlor-Alkali Industry and HgCl2	Bull.Environ.Contam.Toxicol. 45(2):280-287	1990
885	Mercury chloride (HgCl2)	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	1	d	T	890*	FW	El Sebae, A.H., M.A. El Amayem, I. Sharaf, and M. Massod	Factors Affecting Acute and Chronic Toxicity of Chlorinated Pesticides and Their Biomagnification in Alexandria Region	In: Papers Presented at the FAO/UNEP Meeting on the Toxicity and Bioaccumulation of Selected Substances in Marine Organisms, Rovinj, Yugoslavia, 5-9 Nov., 1984, FAO Fish.Rep.No.334 (Suppl.):73-79	1986
886	Mercury chloride (HgCl2)	Oreochromis mossambicus	Mozambique Tilapia	Fish	LC50	MOR	MORT	3	d	T	890*	FW	Shaw, B.P., A. Sahu, and A.K. Panigrahi	Comparative Toxicity of an Effluent from a Chlor-Alkali Industry and HgCl2	Bull.Environ.Contam.Toxicol. 45(2):280-287	1990
887	Chloromethylmercury	Labeo rohita	Rohu	Fish	LC50	MOR	MORT	1	d	T	90*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
888	Mercury chloride (HgCl2)	Oreochromis mossambicus	Mozambique Tilapia	Fish	LC50	MOR	MORT	2	d	T	912*	FW	Shaw, B.P., A. Sahu, and A.K. Panigrahi	Comparative Toxicity of an Effluent from a Chlor-Alkali Industry and HgCl2	Bull.Environ.Contam.Toxicol. 45(2):280-287	1990
889	Mercury chloride (HgCl2)	Oreochromis mossambicus	Mozambique Tilapia	Fish	LC50	MOR	MORT	2	d	T	935*	FW	Shaw, B.P., A. Sahu, and A.K. Panigrahi	Comparative Toxicity of an Effluent from a Chlor-Alkali Industry and HgCl2	Bull.Environ.Contam.Toxicol. 45(2):280-287	1990
890	Mercury chloride (HgCl2)	Oreochromis mossambicus	Mozambique Tilapia	Fish	LC50	MOR	MORT	1	d	T	957*	FW	Shaw, B.P., A. Sahu, and A.K. Panigrahi	Comparative Toxicity of an Effluent from a Chlor-Alkali Industry and HgCl2	Bull.Environ.Contam.Toxicol. 45(2):280-287	1990
891	Chloromethylmercury	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	2	d	T	96*	FW	Paulose, P.V.	Comparative Study of Inorganic and Organic Mercury Poisoning on Selected Freshwater Organisms	J.Environ.Biol. 9(2):203-206	1988
892	Mercury chloride (HgCl2)	Anabas scandens	Climbing Perch	Fish	LC50	MOR	MORT	3	d	T	964*	FW	Shaw, B.P., A. Sahu, and A.K. Panigrahi	Comparative Toxicity of an Effluent from a Chlor-Alkali Industry and HgCl2	Bull.Environ.Contam.Toxicol. 45(2):280-287	1990
893	Mercury chloride (HgCl2)	Anabas scandens	Climbing Perch	Fish	LC50	MOR	MORT	3	d	T	964*	FW	Shaw, B.P., A. Sahu, and A.K. Panigrahi	Comparative Toxicity of an Effluent from a Chlor-Alkali Industry and HgCl2	Bull.Environ.Contam.Toxicol. 45(2):280-287	1990

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
894	Mercury chloride (HgCl2)	Anabas scandens	Climbing Perch	Fish	LC50	MOR	MORT	2	d	T	986*	FW	Shaw, B.P., A. Sahu, and A.K. Panigrahi	Comparative Toxicity of an Effluent from a Chlor-Alkali Industry and HgCl2	Bull.Environ.Contam.Toxicol. 45(2):280-287	1990
895	Mercury chloride (HgCl2)	Anabas scandens	Climbing Perch	Fish	LC50	MOR	MORT	2	d	T	994*	FW	Shaw, B.P., A. Sahu, and A.K. Panigrahi	Comparative Toxicity of an Effluent from a Chlor-Alkali Industry and HgCl2	Bull.Environ.Contam.Toxicol. 45(2):280-287	1990
896	Mercuric oxide	Amphipoda	Scud Order	Crustaceans	LC16	MOR	MORT	2	d	T	0.0039	SW	Bhat, U.G., and K. Vamsee	Toxicity of Heavy Metals Cu, Cd and Hg to the Gammarid Amphipod Parhalella natalensis (Stebbing)	Sci.Total Environ. Suppl.:887-897	1993
897	Mercuric oxide	Amphipoda	Scud Order	Crustaceans	LC50	MOR	MORT	2	d	T	0.004	SW	Bhat, U.G., and K. Vamsee	Toxicity of Heavy Metals Cu, Cd and Hg to the Gammarid Amphipod Parhalella natalensis (Stebbing)	Sci.Total Environ. Suppl.:887-897	1993
898	Mercuric oxide	Amphipoda	Scud Order	Crustaceans	LC16	MOR	MORT	1.75	d	T	0.0048	SW	Bhat, U.G., and K. Vamsee	Toxicity of Heavy Metals Cu, Cd and Hg to the Gammarid Amphipod Parhalella natalensis (Stebbing)	Sci.Total Environ. Suppl.:887-897	1993
899	Mercuric oxide	Amphipoda	Scud Order	Crustaceans	LC50	MOR	MORT	1.75	d	T	0.0048	SW	Bhat, U.G., and K. Vamsee	Toxicity of Heavy Metals Cu, Cd and Hg to the Gammarid Amphipod Parhalella natalensis (Stebbing)	Sci.Total Environ. Suppl.:887-897	1993
900	Mercuric oxide	Amphipoda	Scud Order	Crustaceans	LC84	MOR	MORT	2	d	T	0.0078	SW	Bhat, U.G., and K. Vamsee	Toxicity of Heavy Metals Cu, Cd and Hg to the Gammarid Amphipod Parhalella natalensis (Stebbing)	Sci.Total Environ. Suppl.:887-897	1993
901	Mercuric oxide	Amphipoda	Scud Order	Crustaceans	LC84	MOR	MORT	1.75	d	T	0.009	SW	Bhat, U.G., and K. Vamsee	Toxicity of Heavy Metals Cu, Cd and Hg to the Gammarid Amphipod Parhalella natalensis (Stebbing)	Sci.Total Environ. Suppl.:887-897	1993
902	Mercuric oxide	Amphipoda	Scud Order	Crustaceans	LC16	MOR	MORT	1.5	d	T	0.0103	SW	Bhat, U.G., and K. Vamsee	Toxicity of Heavy Metals Cu, Cd and Hg to the Gammarid Amphipod Parhalella natalensis (Stebbing)	Sci.Total Environ. Suppl.:887-897	1993
903	Mercuric oxide	Amphipoda	Scud Order	Crustaceans	LC50	MOR	MORT	1.5	d	T	0.0103	SW	Bhat, U.G., and K. Vamsee	Toxicity of Heavy Metals Cu, Cd and Hg to the Gammarid Amphipod Parhalella natalensis (Stebbing)	Sci.Total Environ. Suppl.:887-897	1993
904	Mercuric oxide	Amphipoda	Scud Order	Crustaceans	LC16	MOR	MORT	1.25	d	T	0.0113	SW	Bhat, U.G., and K. Vamsee	Toxicity of Heavy Metals Cu, Cd and Hg to the Gammarid Amphipod Parhalella natalensis (Stebbing)	Sci.Total Environ. Suppl.:887-897	1993
905	Mercuric oxide	Amphipoda	Scud Order	Crustaceans	LC50	MOR	MORT	1.25	d	T	0.0114	SW	Bhat, U.G., and K. Vamsee	Toxicity of Heavy Metals Cu, Cd and Hg to the Gammarid Amphipod Parhalella natalensis (Stebbing)	Sci.Total Environ. Suppl.:887-897	1993
906	Mercuric oxide	Amphipoda	Scud Order	Crustaceans	LC16	MOR	MORT	1	d	T	0.0135	SW	Bhat, U.G., and K. Vamsee	Toxicity of Heavy Metals Cu, Cd and Hg to the Gammarid Amphipod Parhalella natalensis (Stebbing)	Sci.Total Environ. Suppl.:887-897	1993
907	Mercuric oxide	Amphipoda	Scud Order	Crustaceans	LC50	MOR	MORT	1	d	T	0.0136	SW	Bhat, U.G., and K. Vamsee	Toxicity of Heavy Metals Cu, Cd and Hg to the Gammarid Amphipod Parhalella natalensis (Stebbing)	Sci.Total Environ. Suppl.:887-897	1993
908	Mercuric oxide	Amphipoda	Scud Order	Crustaceans	LC84	MOR	MORT	1.5	d	T	0.0172	SW	Bhat, U.G., and K. Vamsee	Toxicity of Heavy Metals Cu, Cd and Hg to the Gammarid Amphipod Parhalella natalensis (Stebbing)	Sci.Total Environ. Suppl.:887-897	1993
909	Mercuric oxide	Amphipoda	Scud Order	Crustaceans	LC84	MOR	MORT	1.25	d	T	0.0181	SW	Bhat, U.G., and K. Vamsee	Toxicity of Heavy Metals Cu, Cd and Hg to the Gammarid Amphipod Parhalella natalensis (Stebbing)	Sci.Total Environ. Suppl.:887-897	1993
910	Mercuric oxide	Amphipoda	Scud Order	Crustaceans	LC16	MOR	MORT	0.75	d	T	0.0198	SW	Bhat, U.G., and K. Vamsee	Toxicity of Heavy Metals Cu, Cd and Hg to the Gammarid Amphipod Parhalella natalensis (Stebbing)	Sci.Total Environ. Suppl.:887-897	1993
911	Mercuric oxide	Amphipoda	Scud Order	Crustaceans	LC50	MOR	MORT	0.75	d	T	0.0199	SW	Bhat, U.G., and K. Vamsee	Toxicity of Heavy Metals Cu, Cd and Hg to the Gammarid Amphipod Parhalella natalensis (Stebbing)	Sci.Total Environ. Suppl.:887-897	1993
912	Mercuric oxide	Amphipoda	Scud Order	Crustaceans	LC84	MOR	MORT	1	d	T	0.021	SW	Bhat, U.G., and K. Vamsee	Toxicity of Heavy Metals Cu, Cd and Hg to the Gammarid Amphipod Parhalella natalensis (Stebbing)	Sci.Total Environ. Suppl.:887-897	1993
913	Mercuric oxide	Amphipoda	Scud Order	Crustaceans	LC84	MOR	MORT	0.75	d	T	0.0312	SW	Bhat, U.G., and K. Vamsee	Toxicity of Heavy Metals Cu, Cd and Hg to the Gammarid Amphipod Parhalella natalensis (Stebbing)	Sci.Total Environ. Suppl.:887-897	1993
914	Methyl mercury(1+), Ion	Callinectes sapidus	Blue Crab	Crustaceans	EC50	MOR	HTCH	NR	ht	T	0.1	SW	Lee, R., and Y. Oshima	Effects of Selected Pesticides, Metals and Organometallics on Development of Blue Crab (Callinectes sapidus) Embryos	Mar.Environ.Res. 46(1-5):479-482	1998
915	Mercury chloride (HgCl2)	Arbacia punctulata	Purple-Spined Sea Urchin	Invertebrates	NR-LETH	MOR	MORT	0.625	d	T	0.2	SW	Waterman, A.J.	Effect of Salts of Heavy Metals on Development of the Sea Urchin, Arbacia punctulata	Biol.Bull. 73(3):401-420	1937
916	Methyl mercury(1+), Ion	Callinectes sapidus	Blue Crab	Crustaceans	EC50	MOR	HTCH	NR	d	T	0.3	SW	Lee, R.F., S.A. Steinert, K. Nakayama, and Y. Oshima	Use of DNA Strand Damage (Comet Assay) and Embryo Hatching Effects to Assess Contaminant Exposure in Blue Crab (Callinectes sapidus) Embryos	In: D.S.Henshel, M.C.Black, and M.C.Harrass (Eds.), Environmental Toxicology and Risk Assessment: Standardization of Biomarkers for Endocrine Disruption and Environmental Assessment, 8th Volume, ASTM STP 1364, West Conshohocken, PA :341-349	1999
917	Chloromethylmercury	Laminaria saccharina	Tangleweed, Brown Algae	Algae, Moss, Fungi	LOEL	POP	ABND	14	d	T	0.5	SW	Thompson, R.S., and E.M. Burrows	The Toxicity of Copper, Zinc, and Mercury to the Brown Macroalga Laminaria saccharina	In: G.Persoone, E.Jaspers, and C.Claus (Eds.), Ecotoxicol.Testing for the Mar.Environ., Vol.2, State Univ.Ghent and Inst.Mar.Sci.Res., Bredene, Belgium(): 259-269	1984
918	Mercury chloride (HgCl2)	Gonyaulax polyedra	Dinoflagellate	Algae, Moss, Fungi	LOEC	MOR	SURV	4	d	T	0.5	SW	Okamoto, O.K., L. Shao, J.W. Hastings, and P. Colepicolo	Acute and Chronic Effects of Toxic Metals on Viability, Encystment and Bioluminescence in the Dinoflagellate Gonyaulax polyedra	Comp. Biochem. Physiol. C Comp. Pharm. Toxicol.123(1): 75-83	1999
919	Mercury	Phaeodactylum tricornutum	Diatom	Algae, Moss, Fungi	EC50	POP	GPOP	NR	NR	T	0.88	SW	Chen, C., L. Zhang, and Y. Wu	The Complexing Capacity of Natural Organic Matters for Copper in Estuarine Water and Its Effect on Growth of Diatom in Xiamen Estuarine Harbor	Chin. Environ Sci (Zhongguo Huanjing Kexue)8(1): 29-35	1988
920	Chloromethylmercury	Laminaria saccharina	Tangleweed, Brown Algae	Algae, Moss, Fungi	LOEL	MOR	SURV	14	d	T	1	SW	Thompson, R.S., and E.M. Burrows	The Toxicity of Copper, Zinc, and Mercury to the Brown Macroalga Laminaria saccharina	In: G.Persoone, E.Jaspers, and C.Claus (Eds.), Ecotoxicol.Testing for the Mar.Environ., Vol.2, State Univ.Ghent and Inst.Mar.Sci.Res., Bredene, Belgium(): 259-269	1984
921	Mercury chloride (HgCl2)	Gonyaulax polyedra	Dinoflagellate	Algae, Moss, Fungi	LOEC	MOR	SURV	2	d	T	1	SW	Okamoto, O.K., L. Shao, J.W. Hastings, and P. Colepicolo	Acute and Chronic Effects of Toxic Metals on Viability, Encystment and Bioluminescence in the Dinoflagellate Gonyaulax polyedra	Comp. Biochem. Physiol. C Comp. Pharm. Toxicol.123(1): 75-83	1999

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
922	Mercury chloride (HgCl2)	Americamysis bahia	Opossum Shrimp	Crustaceans	LC50	MOR	MORT	35	d	T	1.8	SW	Gentile, J.H., S.M. Gentile, G. Hoffman, J.F. Heltshe, and N. Hairston Jr.	The Effects of a Chronic Mercury Exposure on Survival, Reproduction and Population Dynamics of Mysidopsis bahia	Environ.Toxicol.Chem. 2:61-68	1983
923	Mercury chloride (HgCl2)	Callinectes sapidus	Blue Crab	Crustaceans	EC50	MOR	HTCH	NR	ht	T	1.9	SW	Lee, R., and Y. Oshima	Effects of Selected Pesticides, Metals and Organometallics on Development of Blue Crab (Callinectes sapidus) Embryos	Mar.Environ.Res. 46(1-5):479-482	1998
924	Mercury chloride (HgCl2)	Callinectes sapidus	Blue Crab	Crustaceans	EC50	MOR	HTCH	NR	d	T	2	SW	Lee, R.F., S.A. Steinert, K. Nakayama, and Y. Oshima	Use of DNA Strand Damage (Comet Assay) and Embryo Hatching Effects to Assess Contaminant Exposure in Blue Crab (Callinectes sapidus) Embryos	In: D.S.Henshel, M.C.Black, and M.C.Harrass (Eds.), Environmental Toxicology and Risk Assessment: Standardization of Biomarkers for Endocrine Disruption and Environmental Assessment, 8th Volume, ASTM STP 1364, West Conshohocken, PA :341-349	1999
925	Mercury chloride (HgCl2)	Meretrix lusoria	Clam	Molluscs	EC50	DVP	GDVP	1.25	d	T	2.5	SW	Chin, T.S., and H.C. Chen	Toxic Effects of Mercury on the Hard Clam, Meretrix lusoria, in Various Salinities	Comp.Biochem.Physiol.C 105(3):501-507	1993
926	Mercury	Bacillariophyta	Diatom Division	Algae, Moss, Fungi	EC50	POP	PGRT	3	d	T	2.5	SW	Wu, Y., C. Chen, and L. Wang	Relationship Between Heavy Metal Pollution and Water Productivity in Xiamen Estuarine Harbor	Chin. J. Oceanol. Limnol.5(3): 205-216	1987
927	Mercury chloride (HgCl2)	Acartia tonsa	Calanoid Copepod	Crustaceans	LC50	MOR	MORT	1	d	T	3	SW	Reeve, M.R., G.D. Grice, V.R. Gibson, M.A. Walter, K. Darcy, and T. Ikeda	A Controlled Environmental Pollution Experiment (CEPEX) and Its Usefulness in the Study of Larger Marine Zooplankton Under Toxic Stress	In: Effects of Pollutants on Aquatic Organisms, Volume 2 :145-162 (U.S.NTIS PB-259395/2ST)	1976
928	Mercury	Bacillariophyta	Diatom Division	Algae, Moss, Fungi	EC50	POP	PGRT	3	d	T	3.45	SW	Wu, Y., C. Chen, and L. Wang	Relationship Between Heavy Metal Pollution and Water Productivity in Xiamen Estuarine Harbor	Chin. J. Oceanol. Limnol.5(3): 205-216	1987
929	Mercury	Americamysis bahia	Opossum Shrimp	Crustaceans	LC50	MOR	MORT	4	d	T	3.5	SW	Lussier, S.M., J.H. Gentile, and J. Walker	Acute and Chronic Effects of Heavy Metals and Cyanide on Mysidopsis bahia (Crustacea: Mysidacea)	Aquat.Toxicol. 7(1/2):25-35	1985
930	Mercury chloride (HgCl2)	Americamysis bahia	Opossum Shrimp	Crustaceans	LC50	MOR	MORT	4	d	T	3.5	SW	Gentile, J.H., S.M. Gentile, G. Hoffman, J.F. Heltshe, and N. Hairston Jr.	The Effects of a Chronic Mercury Exposure on Survival, Reproduction and Population Dynamics of Mysidopsis bahia	Environ.Toxicol.Chem. 2:61-68	1983
931	Mercury chloride (HgCl2)	Mytilus galloprovincialis	Mediterranean Mussel	Molluscs	EC50	DVP	GDVP	2	d	T	3.5	SW	Pavicic, J., M. Skreblin, I. Kregar, M. Tusek-Znidaric, and P. Stegnar	Embryo-Larval Tolerance of Mytilus galloprovincialis, Exposed to the Elevated Sea Water Metal Concentrations-I. Toxic Effects of Cd, Zn and Hg in	Comp.Biochem.Physiol.C 107(2):249-257	1994
932	Mercury	Bacillariophyta	Diatom Division	Algae, Moss, Fungi	EC50	POP	PGRT	3	d	T	3.5	SW	Wu, Y., C. Chen, and L. Wang	Relationship Between Heavy Metal Pollution and Water Productivity in Xiamen Estuarine Harbor	Chin. J. Oceanol. Limnol.5(3): 205-216	1987
933	Mercury chloride (HgCl2)	Asterionella japonica	Diatom	Algae, Moss, Fungi	EC50	POP	PGRT	NR	d	T	3.811	SW	Fisher, N.S., and G.J. Jones	Heavy Metals and Marine Phytoplankton: Correlation of Toxicity and Sulfhydryl-Binding	J. Phycol.17(1): 108-111	1981
934	Mercury chloride (HgCl2)	Mya arenaria	Sand Gaper, Soft Shell Clam	Molluscs	LC50	MOR	MORT	7	d	T	4	SW	Eisler, R., and R.J. Hennekey	Acute Toxicities of Cd2+, Cr+6, Hg2+, Ni2+ and Zn2+ to Estuarine Macrofauna	Arch.Environ.Contam.Toxicol. 6(2/3):315-323	1977
935	Mercury	Gymnodinium splendens	Dinoflagellate	Algae, Moss, Fungi	LOEC	POP	PGRT	2	d	T	4	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
936	Mercury chloride (HgCl2)	Gonyaulax polyedra	Dinoflagellate	Algae, Moss, Fungi	LC50	MOR	SURV	4	d	T	4	SW	Okamoto, O.K., L. Shao, J.W. Hastings, and P. Colepicolo	Acute and Chronic Effects of Toxic Metals on Viability, Encystment and Bioluminescence in the Dinoflagellate Gonyaulax polyedra	Comp. Biochem. Physiol. C Comp. Pharm. Toxicol.123(1): 75-83	1999
937	Mercury chloride (HgCl2)	Mercenaria mercenaria	Northern Quahog Or Hard Clam	Molluscs	LC50	MOR	MORT	NR	d	T	4.8	SW	Calabrese, A., and D.A. Nelson	Inhibition of Embryonic Development of the Hard Clam, Mercenaria mercenaria, by Heavy Metals	Bull.Environ.Contam.Toxicol. 11(1):92-97	1974
938	Mercury	Bacillariophyta	Diatom Division	Algae, Moss, Fungi	EC50	POP	PGRT	3	d	T	4.89	SW	Wu, Y., C. Chen, and L. Wang	Relationship Between Heavy Metal Pollution and Water Productivity in Xiamen Estuarine Harbor	Chin. J. Oceanol. Limnol.5(3): 205-216	1987
939	Mercury chloride (HgCl2)	Scophthalmus aquosus	Windowpane Flounder	Fish	LOEC	BCM	CACO	60	d	T	5	SW	Dawson, M.A.	Blood Chemistry of the Windowpane Flounder Scophthalmus aquosus in Long Island Sound: Geographical, Seasonal, and Experimental Variations	Fish.Bull. 88(3):429-437	1990
940	Mercury chloride (HgCl2)	Meretrix lusoria	Clam	Molluscs	EC50	DVP	GDVP	1.25	d	T	5	SW	Chin, T.S., and H.C. Chen	Toxic Effects of Mercury on the Hard Clam, Meretrix lusoria, in Various Salinities	Comp.Biochem.Physiol.C 105(3):501-507	1993
941	Chloromethylmercury	Laminaria saccharina	Tangleweed, Brown Algae	Algae, Moss, Fungi	LOEL	GRO	AREA	14	d	T	5	SW	Thompson, R.S., and E.M. Burrows	The Toxicity of Copper, Zinc, and Mercury to the Brown Macroalga Laminaria saccharina	In: G.Persoone, E.Jaspers, and C.Claus (Eds.), Ecotoxicol.Testing for the Mar.Environ., Vol.2, State Univ.Ghent and Inst.Mar.Sci.Res., Bredene, Belgium(): 259-269	1984
942	Mercury	Gymnodinium splendens	Dinoflagellate	Algae, Moss, Fungi	LOEC	POP	PGRT	2	d	T	5	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
943	Mercury	Gymnodinium splendens	Dinoflagellate	Algae, Moss, Fungi	LOEC	POP	PGRT	2	d	T	5	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
944	Mercury chloride	Laminaria saccharina	Tangleweed, Brown Algae	Algae, Moss, Fungi	LOEL	MOR	SURV	14	d	T	5	SW	Thompson, R.S., and E.M. Burrows	The Toxicity of Copper, Zinc, and Mercury to the Brown Macroalga Laminaria saccharina	In: G.Persoone, E.Jaspers, and C.Claus (Eds.), Ecotoxicol.Testing for the Mar.Environ., Vol.2, State Univ.Ghent and Inst.Mar.Sci.Res., Bredene, Belgium(): 259-269	1984
945	Mercury chloride	Laminaria saccharina	Tangleweed, Brown Algae	Algae, Moss, Fungi	LOEL	POP	ABND	14	d	T	5	SW	Thompson, R.S., and E.M. Burrows	The Toxicity of Copper, Zinc, and Mercury to the Brown Macroalga Laminaria saccharina	In: G.Persoone, E.Jaspers, and C.Claus (Eds.), Ecotoxicol.Testing for the Mar.Environ., Vol.2, State Univ.Ghent and Inst.Mar.Sci.Res., Bredene, Belgium(): 259-269	1984
946	Mercury chloride (HgCl2)	Gonyaulax polyedra	Dinoflagellate	Algae, Moss, Fungi	LC50	MOR	SURV	2	d	T	5.5	SW	Okamoto, O.K., L. Shao, J.W. Hastings, and P. Colepicolo	Acute and Chronic Effects of Toxic Metals on Viability, Encystment and Bioluminescence in the Dinoflagellate Gonyaulax polyedra	Comp. Biochem. Physiol. C Comp. Pharm. Toxicol.123(1): 75-83	1999

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
947	Mercury chloride (HgCl2)	Crassostrea virginica	American Or Virginia Oyster	Molluscs	LC50	MOR	MORT	2	d	T	5.6	SW	Calabrese, A., R.S. Collier, D.A. Nelson, and J.R. MacInnes	The Toxicity of Heavy Metals to Embryos of the American Oyster Crassostrea virginica	Mar.Biol.(Berlin) 18(3):162-166	1973
948	Mercury chloride (HgCl2)	Mytilus edulis	Common Bay Mussel,Blue Mussel	Molluscs	EC50	DVP	GDVP	2	d	T	5.8	SW	Martin, M., K.E. Osborn, P. Billig, and N. Glickstein	Toxicities of Ten Metals to Crassostrea gigas and Mytilus edulis Embryos and Cancer magister Larvae	Mar.Pollut.Bull. 12(9):305-308 (Author Communication Used)	1981
949	Mercury chloride (HgCl2)	Crassostrea gigas	Pacific Oyster	Molluscs	EC50	DVP	GDVP	2	d	T	6.7	SW	Martin, M., K.E. Osborn, P. Billig, and N. Glickstein	Toxicities of Ten Metals to Crassostrea gigas and Mytilus edulis Embryos and Cancer magister Larvae	Mar.Pollut.Bull. 12(9):305-308 (Author Communication Used)	1981
950	Mercury	Gymnodinium splendens	Dinoflagellate	Algae, Moss, Fungi	LOEC	POP	PGRT	2	d	T	8	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
951	Mercury chloride (HgCl2)	Lingulodinium polyedrum	Dinoflagellate	Algae, Moss, Fungi	EC50	PHY	BLUM	1	d	T	8	SW	Rosen, G., A. Osorio-Robayo, I. Rivera-Duarte, and D. Lapota	Comparison of Bioluminescent Dinoflagellate (QwikLite) and Bacterial (Microtox) Rapid Bioassays for the Detection of Metal and Ammonia Toxicity	Arch. Environ. Contam. Toxicol.54(4): 606-611	2008
952	Mercury chloride (HgCl2)	Cancer magister	Dungeness Or Edible Crab	Crustaceans	LC50	MOR	MORT	1	d	T	8.2	SW	Martin, M., K.E. Osborn, P. Billig, and N. Glickstein	Toxicities of Ten Metals to Crassostrea gigas and Mytilus edulis Embryos and Cancer magister Larvae	Mar.Pollut.Bull. 12(9):305-308 (Author Communication Used)	1981
953	Mercury	Acartia clausi	Calanoid Copepod	Crustaceans	LC50	MOR	MORT	4	d	T	10	SW	Gentile, S., and J. Cardin	Unpublished Laboratory Data	U.S.EPA, Narragansett, RI :5 p.	1982
954	Mercury	Acartia tonsa	Calanoid Copepod	Crustaceans	LC50	MOR	MORT	4	d	T	10	SW	Sosnowski, S.L., and J.H. Gentile	Toxicological Comparison of Natural and Cultured Populations of Acartia tonsa to Cadmium, Copper, and Mercury	J.Fish.Res.Board Can. 35(10):1366-1369	1978
955	Mercury chloride (HgCl2)	Crangon crangon	Common Shrimp, Sand Shrimp	Crustaceans	LC50	MOR	MORT	2	d	T	10	SW	Connor, P.M.	Acute Toxicity of Heavy Metals to Some Marine Larvae	Mar.Pollut.Bull. 3(12):190-192	1972
956	Mercury chloride (HgCl2)	Gammarus aequicauda	Scud	Crustaceans	LC50	MOR	MORT	4	d	T	10	SW	Annicchiarico, C., F. Biandolino, N. Cardellicchio, A. Di Leo, S. Giandomenico, and E. Prato	Predicting Toxicity in Marine Sediment in Taranto Gulf (Ionian Sea, Southern Italy) Using Sediment Quality Guidelines and a Battery Bioassay	Ecotoxicology 16(2):239-246	2007
957	Mercury chloride (HgCl2)	Scophthalmus aquosus	Windowpane Flounder	Fish	LOEC	BCM	NACO	60	d	T	10	SW	Dawson, M.A.	Blood Chemistry of the Windowpane Flounder Scophthalmus aquosus in Long Island Sound: Geographical, Seasonal, and Experimental Variations	Fish.Bull. 88(3):429-437	1990
958	Mercury chloride (HgCl2)	Meretrix lusoria	Clam	Molluscs	EC50	DVP	GDVP	1.25	d	T	10	SW	Chin, T.S., and H.C. Chen	Toxic Effects of Mercury on the Hard Clam, Meretrix lusoria, in Various Salinities	Comp.Biochem.Physiol.C 105(3):501-507	1993
959	Mercury chloride (HgCl2)	Mytilus galloprovincialis	Mediterranean Mussel	Molluscs	LC50	MOR	MORT	4	d	T	10	SW	Annicchiarico, C., F. Biandolino, N. Cardellicchio, A. Di Leo, S. Giandomenico, and E. Prato	Predicting Toxicity in Marine Sediment in Taranto Gulf (Ionian Sea, Southern Italy) Using Sediment Quality Guidelines and a Battery Bioassay	Ecotoxicology 16(2):239-246	2007
960	Mercury	Gymnodinium splendens	Dinoflagellate	Algae, Moss, Fungi	LOEC	POP	PGRT	2	d	T	10	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
961	Mercury chloride (HgCl2)	Pyrocystis noctiluca	Dinoflagellate	Algae, Moss, Fungi	EC50	PHY	BLUM	1	d	T	10	SW	Rosen, G., A. Osorio-Robayo, I. Rivera-Duarte, and D. Lapota	Comparison of Bioluminescent Dinoflagellate (QwikLite) and Bacterial (Microtox) Rapid Bioassays for the Detection of Metal and Ammonia Toxicity	Arch. Environ. Contam. Toxicol.54(4): 606-611	2008
962	Mercury chloride (HgCl2)	Ditylum brightwellii	Diatom	Algae, Moss, Fungi	EC50	GRO	GGRO	5	d	T	10	SW	Canterford, G.S., and D.R. Canterford	Toxicity of Heavy Metals to the Marine Diatom Ditylum brightwellii (West) Grunow: Correlation between Toxicity and Metal Speciation	J. Mar. Biol. Assoc. U. K.60(1): 227-242	1980
963	Mercury chloride (HgCl2)	Crassostrea virginica	American Or Virginia Oyster	Molluscs	EC50	DVP	GDVP	2	d	T	10.2	SW	MacInnes, J.R., and A. Calabrese	Response of Embryos of the American Oyster, Crassostrea virginica, to Heavy Metals at Different Temperatures	In: D.S.McLusky, and A.J.Berry (Eds.), Physiology and Behaviour of Marine Organisms, Permagon Press, New York, NY :195-202	1978
964	Mercury chloride (HgCl2)	Ferosagitta hispida	Arrow Worm	Worms	LC50	MOR	MORT	1	d	T	11	SW	Reeve, M.R., G.D. Grice, V.R. Gibson, M.A. Walter, K. Darcy, and T. Ikeda	A Controlled Environmental Pollution Experiment (CEPEX) and Its Usefulness in the Study of Larger Marine Zooplankton Under Toxic Stress	In: Effects of Pollutants on Aquatic Organisms, Volume 2 :145-162 (U.S.NTIS PB-259395/2ST)	1976
965	Mercury	Gymnodinium splendens	Dinoflagellate	Algae, Moss, Fungi	LOEC	POP	PGRT	2	d	T	11	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
966	Mercury chloride (HgCl2)	Crassostrea virginica	American Or Virginia Oyster	Molluscs	EC50	DVP	GDVP	2	d	T	11.4	SW	MacInnes, J.R., and A. Calabrese	Response of Embryos of the American Oyster, Crassostrea virginica, to Heavy Metals at Different Temperatures	In: D.S.McLusky, and A.J.Berry (Eds.), Physiology and Behaviour of Marine Organisms, Permagon Press, New York, NY :195-202	1978
967	Mercury chloride (HgCl2)	Haliotis rubra	Blacklip Abalone	Molluscs	EC10	DVP	NORM	2	d	T	11.9	SW	Gorski, J., and D. Nugegoda	Sublethal Toxicity of Trace Metals to Larvae of the Blacklip Abalone, Haliotis rubra	Environ.Toxicol.Chem. 25(5):1360-1367	2006
968	Mercury	Gymnodinium splendens	Dinoflagellate	Algae, Moss, Fungi	LOEC	POP	PGRT	2	d	T	12	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
969	Mercury chloride (HgCl2)	Crassostrea virginica	American Or Virginia Oyster	Molluscs	EC50	DVP	GDVP	2	d	T	12.6	SW	MacInnes, J.R., and A. Calabrese	Response of Embryos of the American Oyster, Crassostrea virginica, to Heavy Metals at Different Temperatures	In: D.S.McLusky, and A.J.Berry (Eds.), Physiology and Behaviour of Marine Organisms, Permagon Press, New York, NY :195-202	1978
970	Mercury	Acartia tonsa	Calanoid Copepod	Crustaceans	LC50	MOR	MORT	3	d	T	13	SW	Sosnowski, S.L., and J.H. Gentile	Toxicological Comparison of Natural and Cultured Populations of Acartia tonsa to Cadmium, Copper, and Mercury	J.Fish.Res.Board Can. 35(10):1366-1369	1978
971	Mercury	Acartia tonsa	Calanoid Copepod	Crustaceans	LC50	MOR	MORT	4	d	T	14	SW	Sosnowski, S.L., and J.H. Gentile	Toxicological Comparison of Natural and Cultured Populations of Acartia tonsa to Cadmium, Copper, and Mercury	J.Fish.Res.Board Can. 35(10):1366-1369	1978
972	Mercury chloride (HgCl2)	Carcinus maenas	Green Or Europeon Shore Crab	Crustaceans	LC50	MOR	MORT	2	d	T	14	SW	Connor, P.M.	Acute Toxicity of Heavy Metals to Some Marine Larvae	Mar.Pollut.Bull. 3(12):190-192	1972
973	Mercury chloride (HgCl2)	Capitella capitata	Polychaete Worm	Worms	LC50	MOR	MORT	4	d	T	14	SW	Reish, D.J., J.M. Martin, F.M. Piltz, and J.Q. Word	The Effect of Heavy Metals on Laboratory Populations of Two Polychaetes with Comparisons to the Water Quality Conditions and Standards in Southern California Marine Waters	Water Res. 10:299-302	1976

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974	Mercury	Gymnodinium splendens	Dinoflagellate	Algae, Moss, Fungi	LOEC	POP	PGRT	2	d	T	14	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
975	Mercury	Acartia tonsa	Calanoid Copepod	Crustaceans	LC50	MOR	MORT	4	d	T	15	SW	Sosnowski, S.L., and J.H. Gentile	Toxicological Comparison of Natural and Cultured Populations of Acartia tonsa to Cadmium, Copper, and Mercury	J.Fish.Res.Board Can. 35(10):1366-1369	1978
976	Mercury chloride (HgCl2)	Mnemiopsis mccradyi	Comb Jelly	Invertebrates	LC50	MOR	MORT	1	d	T	15	SW	Reeve, M.R., G.D. Grice, V.R. Gibson, M.A. Walter, K. Darcy, and T. Ikeda	A Controlled Environmental Pollution Experiment (CEPEX) and Its Usefulness in the Study of Larger Marine Zooplankton Under Toxic Stress	In: Effects of Pollutants on Aquatic Organisms, Volume 2 :145-162 (U.S.NTIS PB-259395/2ST)	1976
977	Mercury	Gymnodinium splendens	Dinoflagellate	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	15	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
978	Mercury chloride (HgCl2)	Penaeus indicus	Indian Prawn	Crustaceans	LC50	MOR	MORT	4	d	T	15.3	SW	McClurg, T.P.	Effects of Fluoride, Cadmium and Mercury on the Estuarine Prawn Penaeus indicus	Water S.A. 10(1):40-45	1984
979	Mercury	Acartia tonsa	Calanoid Copepod	Crustaceans	LC50	MOR	MORT	3	d	T	16	SW	Sosnowski, S.L., and J.H. Gentile	Toxicological Comparison of Natural and Cultured Populations of Acartia tonsa to Cadmium, Copper, and Mercury	J.Fish.Res.Board Can. 35(10):1366-1369	1978
980	Mercury chloride (HgCl2)	Haliotis rubra	Blacklip Abalone	Molluscs	LOEC	DVP	NORM	2	d	T	16	SW	Gorski, J., and D. Nugegoda	Sublethal Toxicity of Trace Metals to Larvae of the Blacklip Abalone, Haliotis rubra	Environ.Toxicol.Chem. 25(5):1360-1367	2006
981	Mercury	Gymnodinium splendens	Dinoflagellate	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	16	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
982	Mercury chloride (HgCl2)	Penaeus indicus	Indian Prawn	Crustaceans	LC50	MOR	MORT	2	d	T	16.1	SW	McClurg, T.P.	Effects of Fluoride, Cadmium and Mercury on the Estuarine Prawn Penaeus indicus	Water S.A. 10(1):40-45	1984
983	Mercury	Acartia tonsa	Calanoid Copepod	Crustaceans	LC50	MOR	MORT	2	d	T	17	SW	Sosnowski, S.L., and J.H. Gentile	Toxicological Comparison of Natural and Cultured Populations of Acartia tonsa to Cadmium, Copper, and Mercury	J.Fish.Res.Board Can. 35(10):1366-1369	1978
984	Mercury	Acartia tonsa	Calanoid Copepod	Crustaceans	LC50	MOR	MORT	3	d	T	17	SW	Sosnowski, S.L., and J.H. Gentile	Toxicological Comparison of Natural and Cultured Populations of Acartia tonsa to Cadmium, Copper, and Mercury	J.Fish.Res.Board Can. 35(10):1366-1369	1978
985	Mercury chloride (HgCl2)	Penaeus setiferus	Northern White Shrimp	Crustaceans	EC50*	ITX	IMBL	4	d	T	17	SW	Green, F.A.J., J.W. Anderson, S.R. Petrocelli, B.J. Presley, and R. Sims	Effect of Mercury on the Survival, Respiration, and Growth of Postlarval White Shrimp, Penaeus setiferus	Mar.Biol.(Berlin) 37:75-81 (U.S.NTIS PB-261881)	1976
986	Mercury chloride (HgCl2)	Neanthes arenaceodentata	Polychaete Worm	Worms	LC50	MOR	MORT	28	d	T	17	SW	Reish, D.J., J.M. Martin, F.M. Piltz, and J.Q. Word	The Effect of Heavy Metals on Laboratory Populations of Two Polychaetes with Comparisons to the Water Quality Conditions and Standards in Southern California Marine Waters	Water Res. 10:299-302	1976
987	Mercury	Acartia tonsa	Calanoid Copepod	Crustaceans	LC50	MOR	MORT	1	d	T	17.5	SW	Sosnowski, S.L., and J.H. Gentile	Toxicological Comparison of Natural and Cultured Populations of Acartia tonsa to Cadmium, Copper, and Mercury	J.Fish.Res.Board Can. 35(10):1366-1369	1978
988	Mercury chloride (HgCl2)	Penaeus chinensis	Fleshy Prawn	Crustaceans	LC50*	MOR	MORT	2	d	T	18	SW	Wu, Z., and G. Chen	Studies of Acute intoxication by Some Harmful Substances on Penaeus orientalis K.	Mar.Sci.(Qingdao) 4:36-40 (CHI) (ENG ABS)	1988
989	Mercury	Gymnodinium splendens	Dinoflagellate	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	18	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
990	Mercury	Thalassiosira pseudonana	Diatom	Algae, Moss, Fungi	LOEC	POP	PGRT	2	d	T	18	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
991	Mercury	Acartia tonsa	Calanoid Copepod	Crustaceans	LC50	MOR	MORT	2	d	T	19	SW	Sosnowski, S.L., and J.H. Gentile	Toxicological Comparison of Natural and Cultured Populations of Acartia tonsa to Cadmium, Copper, and Mercury	J.Fish.Res.Board Can. 35(10):1366-1369	1978
992	Mercury	Acartia tonsa	Calanoid Copepod	Crustaceans	LC50	MOR	MORT	2	d	T	19	SW	Sosnowski, S.L., and J.H. Gentile	Toxicological Comparison of Natural and Cultured Populations of Acartia tonsa to Cadmium, Copper, and Mercury	J.Fish.Res.Board Can. 35(10):1366-1369	1978
993	Mercury	Gymnodinium splendens	Dinoflagellate	Algae, Moss, Fungi	LOEC	POP	PGRT	2	d	T	19	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
994	Mercury chloride (HgCl2)	Haliotis rubra	Blacklip Abalone	Molluscs	EC50	DVP	NORM	2	d	T	19.8	SW	Gorski, J., and D. Nugegoda	Sublethal Toxicity of Trace Metals to Larvae of the Blacklip Abalone, Haliotis rubra	Environ.Toxicol.Chem. 25(5):1360-1367	2006
995	Mercury	Acartia tonsa	Calanoid Copepod	Crustaceans	LC50	MOR	MORT	1	d	T	20	SW	Sosnowski, S.L., and J.H. Gentile	Toxicological Comparison of Natural and Cultured Populations of Acartia tonsa to Cadmium, Copper, and Mercury	J.Fish.Res.Board Can. 35(10):1366-1369	1978
996	Mercury	Acartia tonsa	Calanoid Copepod	Crustaceans	LC50	MOR	MORT	4	d	T	20	SW	Gentile, S., and J. Cardin	Unpublished Laboratory Data	U.S.EPA, Narragansett, RI :5 p.	1982
997	Mercury chloride (HgCl2)	Penaeus setiferus	Northern White Shrimp	Crustaceans	EC50*	ITX	IMBL	4	d	T	20	SW	Green, F.A.J., J.W. Anderson, S.R. Petrocelli, B.J. Presley, and R. Sims	Effect of Mercury on the Survival, Respiration, and Growth of Postlarval White Shrimp, Penaeus setiferus	Mar.Biol.(Berlin) 37:75-81 (U.S.NTIS PB-261881)	1976
998	Mercury chloride (HgCl2)	Homarus americanus	American Lobster	Crustaceans	LC50	MOR	MORT	4	d	T	20	SW	Johnson, M.W., and J.H. Gentile	Acute Toxicity of Cadmium, Copper, and Mercury to Larval American Lobster Homarus americanus	Bull.Environ.Contam.Toxicol. 22(1/2):258-264	1979
999	Mercury chloride (HgCl2)	Talitrus saltator	Amphipod	Crustaceans	LC50	MOR	MORT	3	d	T	20	SW	Ungherese, G., and A. Ugolini	Sandhopper Solar Orientation as a Behavioural Biomarker of Trace Metals Contamination	Environ.Pollut. 157(4):1360-1364	2009
1000	Mercury chloride (HgCl2)	Asterias forbesii	Common Starfish	Invertebrates	LC50	MOR	MORT	7	d	T	20	SW	Eisler, R., and R.J. Hennekey	Acute Toxicities of Cd2+, Cr+6, Hg2+, Ni2+ and Zn2+ to Estuarine Macrofauna	Arch.Environ.Contam.Toxicol. 6(2/3):315-323	1977
1001	Mercury chloride (HgCl2)	Meretrix lusoria	Clam	Molluscs	EC50	DVP	GDVP	1.25	d	T	20	SW	Chin, T.S., and H.C. Chen	Toxic Effects of Mercury on the Hard Clam, Meretrix lusoria, in Various Salinities	Comp.Biochem.Physiol.C 105(3):501-507	1993

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
1002	Mercury chloride (HgCl2)	Ferosagitta hispida	Arrow Worm	Worms	LC50	MOR	MORT	1	d	T	20	SW	Reeve, M.R., G.D. Grice, V.R. Gibson, M.A. Walter, K. Darcy, and T. Ikeda	A Controlled Environmental Pollution Experiment (CEPEX) and Its Usefulness in the Study of Larger Marine Zooplankton Under Toxic Stress	In: Effects of Pollutants on Aquatic Organisms, Volume 2 :145-162 (U.S.NTIS PB-259395/2ST)	1976
1003	Mercury chloride (HgCl2)	Neanthes arenaceodentata	Polychaete Worm	Worms	LC50	MOR	MORT	4	d	T	20	SW	Reish, D.J.	The Effects of Heavy Metals on Polychaetous Annelids	Rev.Int.Oceanogr.Med. 49(3):99-104	1978
1004	Mercury chloride (HgCl2)	Paracentrotus lividus	Sea Urchin, Echinoderm	Invertebrates	LOEC	DVP	GDVP	3	d	T	20.06	SW	Warnau, M., M. Iaccarino, A. De Biase, A. Temara, M. Jangoux, P. Dubois, and G. Pagano	Spermiotoxicity and Embryotoxicity of Heavy Metals in the Echinoid Paracentrotus lividus	Environ.Toxicol.Chem. 15(11):1931-1936	1996
1005	Mercury chloride (HgCl2)	Paramecium bursaria	Ciliate	Invertebrates	LOEL	CEL	LGTH	0.014	d	T	20.06	SW	Khan, S.M.M.K., C. Yoshimura, M. Arikawa, G. Omura, S. Nishiyama, Y. Suetomo, S. Kakuta, and T. Suzaki	Axopodial Degradation in the Heliozoon Raphidiophrys contractilis: A Novel Bioassay System for Detecting Heavy Metal Toxicity in an Aquatic Environment	Environ.Sci. 13(4):193-200	2006
1006	Mercury chloride (HgCl2)	Paramecium caudatum	Ciliate	Invertebrates	LOEL	CEL	LGTH	0.014	d	T	20.06	SW	Khan, S.M.M.K., C. Yoshimura, M. Arikawa, G. Omura, S. Nishiyama, Y. Suetomo, S. Kakuta, and T. Suzaki	Axopodial Degradation in the Heliozoon Raphidiophrys contractilis: A Novel Bioassay System for Detecting Heavy Metal Toxicity in an Aquatic Environment	Environ.Sci. 13(4):193-200	2006
1007	Mercury chloride (HgCl2)	Ceratocorys horrida	Dinoflagellate	Algae, Moss, Fungi	EC50	PHY	BLUM	1	d	T	21	SW	Rosen, G., A. Osorio-Robayo, I. Rivera-Duarte, and D. Lapota	Comparison of Bioluminescent Dinoflagellate (QwikLite) and Bacterial (Microtox) Rapid Bioassays for the Detection of Metal and Ammonia Toxicity	Arch. Environ. Contam. Toxicol.54(4): 606-611	2008
1008	Mercury	Acartia tonsa	Calanoid Copepod	Crustaceans	LC50	MOR	MORT	1	d	T	22	SW	Sosnowski, S.L., and J.H. Gentile	Toxicological Comparison of Natural and Cultured Populations of Acartia tonsa to Cadmium, Copper, and Mercury	J.Fish.Res.Board Can. 35(10):1366-1369	1978
1009	Mercury	Calanoida	Copepod Order	Crustaceans	LC50	MOR	MORT	2	d	T	22	SW	Reeve, M.R., M.A. Walter, K. Darcy, and T. Ikeda	Evaluation of Potential Indicators of Sub-lethal Toxic Stress on Marine Zooplankton (Feeding, Fecundity, Respiration, and Excretion): Controlled Ecosystem Pollution Experiment	Bull.Mar.Sci. 27(1):105-113	1977
1010	Mercury chloride (HgCl2)	Neanthes arenaceodentata	Polychaete Worm	Worms	LC50	MOR	MORT	4	d	T	22	SW	Reish, D.J., J.M. Martin, F.M. Piltz, and J.Q. Word	The Effect of Heavy Metals on Laboratory Populations of Two Polychaetes with Comparisons to the Water Quality Conditions and Standards in Southern California Marine Waters	Water Res. 10:299-302	1976
1011	Mercury	Gymnodinium splendens	Dinoflagellate	Algae, Moss, Fungi	LOEC	POP	PGRT	2	d	T	23	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1012	Mercury	Gymnodinium splendens	Dinoflagellate	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	25	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1013	Chloroethylmercury	Plumaria elegans	Red Algae	Algae, Moss, Fungi	LD50	MOR	MORT	0.75	d	T	26	SW	Boney, A.D., E.D.S. Corner, and B.W.P. Sparrow	The Effects of Various Poisons on the Growth and Viability of Sporelings of the Red Alga Plumaria elegans (Bonnem.) Schm.	Biochem. Pharmacol.2(): 37-49	1959
1014	Mercury	Gymnodinium splendens	Dinoflagellate	Algae, Moss, Fungi	LOEC	POP	PGRT	2	d	T	26	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1015	Mercury chloride (HgCl2)	Mulinia lateralis	Clam	Molluscs	EC50	PHY	GPHY	3	d	T	26.5	SW	Ho, M.S., and P.L. Zubkoff	The Effects of Mercury, Copper, and Zinc on Calcium Uptake by Larvae of the Clam, Mulinia lateralis	Water Air Soil Pollut. 17(4):409-414	1982
1016	Mercury chloride (HgCl2)	Artemia salina	Brine Shrimp	Crustaceans	LC50	MOR	MORT	1	d	T	27	SW	Reeve, M.R., G.D. Grice, V.R. Gibson, M.A. Walter, K. Darcy, and T. Ikeda	A Controlled Environmental Pollution Experiment (CEPEX) and Its Usefulness in the Study of Larger Marine Zooplankton Under Toxic Stress	In: Effects of Pollutants on Aquatic Organisms, Volume 2 :145-162 (U.S.NTIS PB-259395/2ST)	1976
1017	Mercury	Thalassiosira pseudonana	Diatom	Algae, Moss, Fungi	LOEC	POP	PGRT	2	d	T	27	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1018	Mercury chloride (HgCl2)	Perna viridis	Green Mussel	Molluscs	EC50	BEH	DTCH	4	d	T	29	SW	Mohan, C.V., T.R.C. Gupta, H.P.C. Shetty, and N.R. Menon	Combined Toxicity of Mercury and Cadmium to the Tropical Green Mussel Perna viridis	Dis.Aquat.Org. 2(1):65-72	1986
1019	Mercury	Gymnodinium splendens	Dinoflagellate	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	29	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1020	Mercury	Thalassiosira pseudonana	Diatom	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	30	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1021	Mercury chloride (HgCl2)	Tabularia fasciculata	Pennate Diatom	Algae, Moss, Fungi	EC50	POP	ABND	10	d	T	30	SW	Rao, V.N.R.	Adaptation of Algae to Heavy Metal Toxicity	In: A.K.Kashyap and H.D.Kumar (Eds.), Recent Advances in Phycology, Rastogi Publications, Meerut, India(): 261-264	1994
1022	Mercury	Calanoida	Copepod Order	Crustaceans	LC50	MOR	MORT	2	d	T	31	SW	Reeve, M.R., M.A. Walter, K. Darcy, and T. Ikeda	Evaluation of Potential Indicators of Sub-lethal Toxic Stress on Marine Zooplankton (Feeding, Fecundity, Respiration, and Excretion): Controlled Ecosystem Pollution Experiment	Bull.Mar.Sci. 27(1):105-113	1977
1023	Mercury chloride (HgCl2)	Labidocera scotti	Calanoid Copepod	Crustaceans	LC50	MOR	MORT	1	d	T	31	SW	Reeve, M.R., G.D. Grice, V.R. Gibson, M.A. Walter, K. Darcy, and T. Ikeda	A Controlled Environmental Pollution Experiment (CEPEX) and Its Usefulness in the Study of Larger Marine Zooplankton Under Toxic Stress	In: Effects of Pollutants on Aquatic Organisms, Volume 2 :145-162 (U.S.NTIS PB-259395/2ST)	1976
1024	Mercury	Thalassiosira pseudonana	Diatom	Algae, Moss, Fungi	LOEC	POP	PGRT	2	d	T	31	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1025	Mercury	Calanoida	Copepod Order	Crustaceans	LC50	MOR	MORT	2	d	T	32	SW	Reeve, M.R., M.A. Walter, K. Darcy, and T. Ikeda	Evaluation of Potential Indicators of Sub-lethal Toxic Stress on Marine Zooplankton (Feeding, Fecundity, Respiration, and Excretion): Controlled Ecosystem Pollution Experiment	Bull.Mar.Sci. 27(1):105-113	1977
1026	Mercury	Thalassiosira pseudonana	Diatom	Algae, Moss, Fungi	LOEC	POP	PGRT	2	d	T	32	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
1027	Mercury chloride (HgCl2)	Acartia tonsa	Calanoid Copepod	Crustaceans	LC50	MOR	MORT	1	d	T	34	SW	Reeve, M.R., G.D. Grice, V.R. Gibson, M.A. Walter, K. Darcy, and T. Ikeda	A Controlled Environmental Pollution Experiment (CEPEX) and Its Usefulness in the Study of Larger Marine Zooplankton Under Toxic Stress	In: Effects of Pollutants on Aquatic Organisms, Volume 2 :145-162 (U.S.NTIS PB-259395/2ST)	1976
1028	Mercury	Thalassiosira pseudonana	Diatom	Algae, Moss, Fungi	LOEC	POP	PGRT	2	d	T	34	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1029	Mercury chloride (HgCl2)	Artemia salina	Brine Shrimp	Crustaceans	LC50	MOR	MORT	1	d	T	35	SW	Reeve, M.R., G.D. Grice, V.R. Gibson, M.A. Walter, K. Darcy, and T. Ikeda	A Controlled Environmental Pollution Experiment (CEPEX) and Its Usefulness in the Study of Larger Marine Zooplankton Under Toxic Stress	In: Effects of Pollutants on Aquatic Organisms, Volume 2 :145-162 (U.S.NTIS PB-259395/2ST)	1976
1030	Mercury	Leiostomus xanthurus	Spot	Fish	LC50	MOR	MORT	4	d	T	36	SW	D'Asaro, C.N.	Effects Assessment of Selected Chemicals on Estuarine and Marine Organisms	EPA-600/X-85/056,U.S.EPA,Gulf Breeze,FL :77 p.	1985
1031	Mercury chloride (HgCl2)	Leiostomus xanthurus	Spot	Fish	LC50	MOR	MORT	4	d	T	36	SW	Hansen, D.J.	Section on Acute Toxicity Tests to be Inserted in the April 1983 Report on Site Specific FAV's	March 21st Memo from D.J.Hansen, U.S.EPA, Gulf Breeze, FL, to W.A.Brungs, U.S.EPA, Narragansette, RI :7 p.	1983
1032	Mercury chloride (HgCl2)	Perna viridis	Green Mussel	Molluscs	EC50	BEH	DTCH	4	d	T	38	SW	Mohan, C.V., T.R.C. Gupta, H.P.C. Shetty, and N.R. Menon	Combined Toxicity of Mercury and Cadmium to the Tropical Green Mussel Perna viridis	Dis.Aquat.Org. 2(1):65-72	1986
1033	Mercury	Gymnodinium splendens	Dinoflagellate	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	38	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1034	Mercury	Thalassiosira pseudonana	Diatom	Algae, Moss, Fungi	LOEC	POP	PGRT	2	d	T	39	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1035	Mercury chloride (HgCl2)	Meretrix lusoria	Clam	Molluscs	EC50	DVP	GDVP	1.25	d	T	40	SW	Chin, T.S., and H.C. Chen	Toxic Effects of Mercury on the Hard Clam, Meretrix lusoria, in Various Salinities	Comp.Biochem.Physiol.C 105(3):501-507	1993
1036	Mercury	Skeletonema costatum	Diatom	Algae, Moss, Fungi	EC50	POP	GPOP	10	d	T	40	SW	Govindarajan, S., C.P. Valsaraj, R. Mohan, V. Hariprasad, and R. Ramasubramanian	Toxicity of Heavy Metals in Aquaculture Organisms: Penaeus indicus, Perna viridis, Artemia salina and Skeletonema costatum	Pollut. Res.12(3): 187-189	1993
1037	Mercury chloride (HgCl2)	Thalassiosira weissflogii	Diatom	Algae, Moss, Fungi	EC50	POP	ABND	10	d	T	40	SW	Rao, V.N.R.	Adaptation of Algae to Heavy Metal Toxicity	In: A.K.Kashyap and H.D.Kumar (Eds.), Recent Advances in Phycology, Rastogi Publications, Meerut, India(): 261-264	1994
1038	Mercury chloride (Hg2Cl2)	Namanereis sp.	Polychaete	Worms	LC50	MOR	MORT	4	d	T	41	SW	Varshney, P.K., and S.A.H. Abidi	Toxicity of Mercury, Copper and Lead in the Polychaete Namanereis merukensis Horst	Indian J.Mar.Sci. 17:83-84	1988
1039	Mercury	Pandalus borealis	Northern Longbeak	Crustaceans	EC50	ITX	PARL	1.125	d	T	42	SW	St.Amand, L., R. Gagnon, T.T. Packard, and C. Savenkoff	Effects of Inorganic Mercury on the Respiration and the Swimming Activity of Shrimp Larvae, Pandalus borealis	Comp.Biochem.Physiol.C 122(1):33-43	1999
1040	Mercury chloride (HgCl2)	Artemia salina	Brine Shrimp	Crustaceans	LC50	MOR	MORT	1	d	T	42	SW	Reeve, M.R., G.D. Grice, V.R. Gibson, M.A. Walter, K. Darcy, and T. Ikeda	A Controlled Environmental Pollution Experiment (CEPEX) and Its Usefulness in the Study of Larger Marine Zooplankton Under Toxic Stress	In: Effects of Pollutants on Aquatic Organisms, Volume 2 :145-162 (U.S.NTIS PB-259395/2ST)	1976
1041	Mercury	Thalassiosira pseudonana	Diatom	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	43	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1042	Mercury	Thalassiosira pseudonana	Diatom	Algae, Moss, Fungi	LOEC	POP	PGRT	2	d	T	43	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1043	Mercury	Pandalus borealis	Northern Longbeak	Crustaceans	EC50	ITX	PARL	1.125	d	T	44	SW	St.Amand, L., R. Gagnon, T.T. Packard, and C. Savenkoff	Effects of Inorganic Mercury on the Respiration and the Swimming Activity of Shrimp Larvae, Pandalus borealis	Comp.Biochem.Physiol.C 122(1):33-43	1999
1044	Chloromethylmercury	Plumaria elegans	Red Algae	Algae, Moss, Fungi	LD50	MOR	MORT	0.75	d	T	44	SW	Boney, A.D., E.D.S. Corner, and B.W.P. Sparrow	The Effects of Various Poisons on the Growth and Viability of Sporelings of the Red Alga Plumaria elegans (Bonnem.) Schm.	Biochem. Pharmacol.2(): 37-49	1959
1045	Mercury chloride (HgCl2)	Capitella capitata	Polychaete Worm	Worms	LC50	MOR	MORT	4	d	T	47	SW	Reish, D.J., and J.A. Lemay	Toxicity and Bioconcentration of Metals and Organic Compounds by Polychaeta	Ophelia 5(Suppl.):653-660	1991
1046	Mercury	Thalassiosira pseudonana	Diatom	Algae, Moss, Fungi	LOEC	POP	PGRT	2	d	T	47	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1047	Mercury	Thalassiosira pseudonana	Diatom	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	49	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1048	Mercury chloride (HgCl2)	Euchaeta marina	Calanoid Copepod	Crustaceans	LC50	MOR	MORT	1	d	T	50	SW	Reeve, M.R., G.D. Grice, V.R. Gibson, M.A. Walter, K. Darcy, and T. Ikeda	A Controlled Environmental Pollution Experiment (CEPEX) and Its Usefulness in the Study of Larger Marine Zooplankton Under Toxic Stress	In: Effects of Pollutants on Aquatic Organisms, Volume 2 :145-162 (U.S.NTIS PB-259395/2ST)	1976
1049	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	4	d	T	50	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1050	Mercury chloride (HgCl2)	Pagurus longicarpus	Longwrist Hermit Crab	Crustaceans	LC50	MOR	MORT	4	d	T	50	SW	Eisler, R., and R.J. Hennekey	Acute Toxicities of Cd2+, Cr+6, Hg2+, Ni2+ and Zn2+ to Estuarine Macrofauna	Arch.Environ.Contam.Toxicol. 6(2/3):315-323	1977
1051	Mercury chloride (HgCl2)	Pagurus longicarpus	Longwrist Hermit Crab	Crustaceans	LC50	MOR	MORT	7	d	T	50	SW	Eisler, R., and R.J. Hennekey	Acute Toxicities of Cd2+, Cr+6, Hg2+, Ni2+ and Zn2+ to Estuarine Macrofauna	Arch.Environ.Contam.Toxicol. 6(2/3):315-323	1977
1052	Mercury chloride (HgCl2)	Petrolisthes armatus	Porcelain Crab	Crustaceans	LC50	MOR	MORT	4	d	T	50	SW	Roesijadi, G., S.R. Petrocelli, J.W. Anderson, B.J. Presley, and R. Sims	Survival and Chloride Ion Regulation of the Porcelain Crab Petrolisthes armatus Exposed to Mercury	Mar.Biol.(Berlin) 27:213-217 (U.S.NTIS PB-245664)	1974
1053	Mercury	Macrocystis pyrifera	Giant Kelp	Algae, Moss, Fungi	EC50	PHY	PSYN	4	d	T	50	SW	Clendenning, K.A., and W.J. North	Effects of Waste on the Giant Kelp, Macrocystis pyrifera	In: E.A.Pearson (Ed.), Proc.1st Conf.Waste Disposal Marine Environ, Berkeley, CA(): 82-91	1959
1054	Mercury	Gymnodinium splendens	Dinoflagellate	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	50	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1055	Mercury	Gymnodinium splendens	Dinoflagellate	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	50	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
1056	Mercury chloride	Laminaria saccharina	Tangleweed, Brown Algae	Algae, Moss, Fungi	LOEL	GRO	AREA	14	d	T	50	SW	Thompson, R.S., and E.M. Burrows	The Toxicity of Copper, Zinc, and Mercury to the Brown Macroalga Laminaria saccharina	In: G.Persoone, E.Jaspers, and C.Claus (Eds.), Ecotoxicol.Testing for the Mar.Environ., Vol.2, State Univ.Ghent and Inst.Mar.Sci.Res., Bredene, Belgium(): 259-269	1984
1057	Mercury chloride (HgCl2)	Triceratium sp.	Diatom	Algae, Moss, Fungi	EC50	POP	ABND	10	d	T	50	SW	Rao, V.N.R.	Adaptation of Algae to Heavy Metal Toxicity	In: A.K.Kashyap and H.D.Kumar (Eds.), Recent Advances in Phycology, Rastogi Publications, Meerut, India(): 261-264	1994
1058	Mercury chloride (HgCl2)	Achnanthes hauckiana	Diatom	Algae, Moss, Fungi	EC50	POP	ABND	10	d	T	50	SW	Rao, V.N.R.	Adaptation of Algae to Heavy Metal Toxicity	In: A.K.Kashyap and H.D.Kumar (Eds.), Recent Advances in Phycology, Rastogi Publications, Meerut, India(): 261-264	1994
1059	Mercury	Thalassiosira pseudonana	Diatom	Algae, Moss, Fungi	LOEC	POP	PGRT	2	d	T	53	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1060	Mercury chloride (HgCl2)	Petrolisthes armatus	Porcelain Crab	Crustaceans	LC50	MOR	MORT	2	d	T	54	SW	Roesijadi, G., S.R. Petrocelli, J.W. Anderson, B.J. Presley, and R. Sims	Survival and Chloride Ion Regulation of the Porcelain Crab Petrolisthes armatus Exposed to Mercury	Mar.Biol.(Berlin) 27:213-217 (U.S.NTIS PB-245664)	1974
1061	Phenylmercuric chloride	Plumaria elegans	Red Algae	Algae, Moss, Fungi	LD50	MOR	MORT	0.75	d	T	54	SW	Boney, A.D., E.D.S. Corner, and B.W.P. Sparrow	The Effects of Various Poisons on the Growth and Viability of Sporelings of the Red Alga Plumaria elegans (Bonnem.) Schm.	Biochem. Pharmacol.2(): 37-49	1959
1062	Mercury	Thalassiosira pseudonana	Diatom	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	56	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1063	Mercury chloride (HgCl2)	Rangia cuneata	Common Rangia Or Clam	Molluscs	LC50	MOR	MORT	3	d	T	57	SW	Dillon, T.M.	Mercury and the Estuarine Marsh Clam, Rangia cuneata Gray. I. Toxicity	Arch.Environ.Contam.Toxicol. 6(2/3):249-255	1977
1064	Mercury chloride (HgCl2)	Rangia cuneata	Common Rangia Or Clam	Molluscs	LC50	MOR	MORT	4	d	T	58	SW	Dillon, T.M.	Mercury and the Estuarine Marsh Clam, Rangia cuneata Gray. I. Toxicity	Arch.Environ.Contam.Toxicol. 6(2/3):249-255	1977
1065	Mercury	Isochrysis galbana	Haptophyte	Algae, Moss, Fungi	LOEC	POP	PGRT	2	d	T	58	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1066	Mercury chloride (HgCl2)	Balanus crenatus	Acorn Or Rock Barnacle	Crustaceans	LC50*	MOR	MORT	0.25	d	T	60	SW	Pyefinch, K.A., and J.C. Mott	The Sensitivity of Barnacles and Their Larvae to Copper and Mercury	J.Exp.Biol. 25(3):276-298	1948
1067	Mercury chloride (HgCl2)	Petrolisthes armatus	Porcelain Crab	Crustaceans	LC50	MOR	MORT	4	d	T	60	SW	Roesijadi, G., S.R. Petrocelli, J.W. Anderson, B.J. Presley, and R. Sims	Survival and Chloride Ion Regulation of the Porcelain Crab Petrolisthes armatus Exposed to Mercury	Mar.Biol.(Berlin) 27:213-217 (U.S.NTIS PB-245664)	1974
1068	Mercury chloride (HgCl2)	Terapon jarbua	Tigerfish	Fish	LC50	MOR	MORT	4	d	T	60	SW	Krishnakumari, L., P.K. Varshney, S.N. Gajbhiye, K. Govindan, and V.R. Nair	Toxicity of Some Metals on the Fish Therapon jarbua (Forsskal, 1775)	Indian J.Mar.Sci. 12(1):64-66	1983
1069	Mercury chloride (HgCl2)	Asterias forbesii	Common Starfish	Invertebrates	LC50	MOR	MORT	4	d	T	60	SW	Eisler, R., and R.J. Hennekey	Acute Toxicities of Cd2+, Cr+6, Hg2+, Ni2+ and Zn2+ to Estuarine Macrofauna	Arch.Environ.Contam.Toxicol. 6(2/3):315-323	1977
1070	Mercury chloride (HgCl2)	Nereis virens	Polychaete Worm	Worms	LC50	MOR	MORT	7	d	T	60	SW	Eisler, R., and R.J. Hennekey	Acute Toxicities of Cd2+, Cr+6, Hg2+, Ni2+ and Zn2+ to Estuarine Macrofauna	Arch.Environ.Contam.Toxicol. 6(2/3):315-323	1977
1071	Mercury chloride (HgCl2)	Pectinaria californiensis	Cone Worm	Worms	LC50	MOR	MORT	4	d	T	60	SW	Reish, D.J., and J.A. Lemay	Toxicity and Bioconcentration of Metals and Organic Compounds by Polychaeta	Ophelia 5(Suppl.):653-660	1991
1072	Mercury	Gymnodinium splendens	Dinoflagellate	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	60	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1073	Mercury chloride (HgCl2)	Amphora coffeaeformis	Diatom	Algae, Moss, Fungi	EC50	POP	ABND	10	d	T	60	SW	Rao, V.N.R.	Adaptation of Algae to Heavy Metal Toxicity	In: A.K.Kashyap and H.D.Kumar (Eds.), Recent Advances in Phycology, Rastogi Publications, Meerut, India(): 261-264	1994
1074	Mercury chloride (HgCl2)	Fragilaria pinnata	Diatom	Algae, Moss, Fungi	EC50	POP	ABND	10	d	T	60	SW	Rao, V.N.R.	Adaptation of Algae to Heavy Metal Toxicity	In: A.K.Kashyap and H.D.Kumar (Eds.), Recent Advances in Phycology, Rastogi Publications, Meerut, India(): 261-264	1994
1075	Mercury	Thalassiosira pseudonana	Diatom	Algae, Moss, Fungi	LOEC	POP	PGRT	2	d	T	62	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1076	Mercury chloride (HgCl2)	Petrolisthes armatus	Porcelain Crab	Crustaceans	LC50	MOR	MORT	1	d	T	64	SW	Roesijadi, G., S.R. Petrocelli, J.W. Anderson, B.J. Presley, and R. Sims	Survival and Chloride Ion Regulation of the Porcelain Crab Petrolisthes armatus Exposed to Mercury	Mar.Biol.(Berlin) 27:213-217 (U.S.NTIS PB-245664)	1974
1077	Mercury chloride (HgCl2)	Petrolisthes armatus	Porcelain Crab	Crustaceans	LC50	MOR	MORT	4	d	T	64	SW	Roesijadi, G., S.R. Petrocelli, J.W. Anderson, B.J. Presley, and R. Sims	Survival and Chloride Ion Regulation of the Porcelain Crab Petrolisthes armatus Exposed to Mercury	Mar.Biol.(Berlin) 27:213-217 (U.S.NTIS PB-245664)	1974
1078	Mercury chloride (HgCl2)	Petrolisthes armatus	Porcelain Crab	Crustaceans	LC50	MOR	MORT	4	d	T	64	SW	Roesijadi, G., S.R. Petrocelli, J.W. Anderson, B.J. Presley, and R. Sims	Survival and Chloride Ion Regulation of the Porcelain Crab Petrolisthes armatus Exposed to Mercury	Mar.Biol.(Berlin) 27:213-217 (U.S.NTIS PB-245664)	1974
1079	Mercury chloride (HgCl2)	Petrolisthes armatus	Porcelain Crab	Crustaceans	LC50	MOR	MORT	2	d	T	65	SW	Roesijadi, G., S.R. Petrocelli, J.W. Anderson, B.J. Presley, and R. Sims	Survival and Chloride Ion Regulation of the Porcelain Crab Petrolisthes armatus Exposed to Mercury	Mar.Biol.(Berlin) 27:213-217 (U.S.NTIS PB-245664)	1974
1080	Mercury chloride (HgCl2)	Brachionus plicatilis	Rotifer	Invertebrates	LC50	MOR	MORT	1	d	T	65	SW	Reeve, M.R., G.D. Grice, V.R. Gibson, M.A. Walter, K. Darcy, and T. Ikeda	A Controlled Environmental Pollution Experiment (CEPEX) and Its Usefulness in the Study of Larger Marine Zooplankton Under Toxic Stress	In: Effects of Pollutants on Aquatic Organisms, Volume 2 :145-162 (U.S.NTIS PB-259395/2ST)	1976
1081	Mercury chloride (HgCl2)	Ferosagitta hispida	Arrow Worm	Worms	LC50	MOR	MORT	1	d	T	66	SW	Reeve, M.R., G.D. Grice, V.R. Gibson, M.A. Walter, K. Darcy, and T. Ikeda	A Controlled Environmental Pollution Experiment (CEPEX) and Its Usefulness in the Study of Larger Marine Zooplankton Under Toxic Stress	In: Effects of Pollutants on Aquatic Organisms, Volume 2 :145-162 (U.S.NTIS PB-259395/2ST)	1976
1082	Mercury	Menidia peninsulae	Tidewater Silverside	Fish	LC50	MOR	MORT	4	d	T	70	SW	D'Asaro, C.N.	Effects Assessment of Selected Chemicals on Estuarine and Marine Organisms	EPA-600/X-85/056,U.S.EPA,Gulf Breeze,FL :77 p.	1985
1083	Mercury chloride (HgCl2)	Corophium insidiosum	Scud	Crustaceans	LC50	MOR	MORT	4	d	T	70	SW	Annicchiarico, C., F. Biandolino, N. Cardellicchio, A. Di Leo, S. Giandomenico, and E. Prato	Predicting Toxicity in Marine Sediment in Taranto Gulf (Ionian Sea, Southern Italy) Using Sediment Quality Guidelines and a Battery Bioassay	Ecotoxicology 16(2):239-246	2007
1084	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	3	d	T	70	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
1085	Mercury chloride (HgCl2)	Terapon jarbua	Tigerfish	Fish	LC50	MOR	MORT	3	d	T	70	SW	Krishnakumari, L., P.K. Varshney, S.N. Gajbhiye, K. Govindan, and V.R. Nair	Toxicity of Some Metals on the Fish Therapon jarbua (Forsskal, 1775)	Indian J.Mar.Sci. 12(1):64-66	1983
1086	Mercury chloride (HgCl2)	Nereis virens	Polychaete Worm	Worms	LC50	MOR	MORT	4	d	T	70	SW	Eisler, R., and R.J. Hennekey	Acute Toxicities of Cd2+, Cr+6, Hg2+, Ni2+ and Zn2+ to Estuarine Macrofauna	Arch.Environ.Contam.Toxicol. 6(2/3):315-323	1977
1087	Mercury chloride (HgCl2)	Menidia peninsulae	Tidewater Silverside	Fish	LC50	MOR	MORT	4	d	T	71	SW	Hansen, D.J.	Section on Acute Toxicity Tests to be Inserted in the April 1983 Report on Site Specific FAV's	March 21st Memo from D.J.Hansen, U.S.EPA, Gulf Breeze, FL, to W.A.Brungs, U.S.EPA, Narragansette, RI :7 p.	1983
1088	Mercury chloride (HgCl2)	Terapon jarbua	Tigerfish	Fish	LC50	MOR	MORT	1	d	T	71	SW	Krishnakumari, L., P.K. Varshney, S.N. Gajbhiye, K. Govindan, and V.R. Nair	Toxicity of Some Metals on the Fish Therapon jarbua (Forsskal, 1775)	Indian J.Mar.Sci. 12(1):64-66	1983
1089	Mercury chloride (HgCl2)	Terapon jarbua	Tigerfish	Fish	LC50	MOR	MORT	2	d	T	71	SW	Krishnakumari, L., P.K. Varshney, S.N. Gajbhiye, K. Govindan, and V.R. Nair	Toxicity of Some Metals on the Fish Therapon jarbua (Forsskal, 1775)	Indian J.Mar.Sci. 12(1):64-66	1983
1090	Mercury chloride (HgCl2)	Perna indica	Brown Mussel	Molluscs	LC50	MOR	MORT	4	d	T	71.35	SW	Baby, K.V., and N.R. Menon	Oxygen Uptake in the Brown Mussel, Perna indica (Kuriakose & Nair) Under Sublethal Stress of Hg, Cd & Zn	Indian J.Mar.Sci. 15(2):127-128	1986
1091	Mercury	Thalassiosira pseudonana	Diatom	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	73	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1092	Mercury	Gymnodinium splendens	Dinoflagellate	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	74	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1093	Mercury	Isochrysis galbana	Haptophyte	Algae, Moss, Fungi	LOEC	POP	PGRT	2	d	T	74	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1094	Mercury	Thalassiosira pseudonana	Diatom	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	75	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1095	Mercury	Pseudodiaptomus coronatus	Calanoid Copepod	Crustaceans	LC50	MOR	MORT	4	d	T	79	SW	Gentile, S., and J. Cardin	Unpublished Laboratory Data	U.S.EPA, Narragansett, RI :5 p.	1982
1096	Mercury chloride (HgCl2)	Ferosagitta hispida	Arrow Worm	Worms	LC50	MOR	MORT	1	d	T	79	SW	Reeve, M.R., G.D. Grice, V.R. Gibson, M.A. Walter, K. Darcy, and T. Ikeda	A Controlled Environmental Pollution Experiment (CEPEX) and Its Usefulness in the Study of Larger Marine Zooplankton Under Toxic Stress	In: Effects of Pollutants on Aquatic Organisms, Volume 2 :145-162 (U.S.NTIS PB-259395/2ST)	1976
1097	Mercury chloride (HgCl2)	Allorchestes compressa	Scud, Amphipod	Crustaceans	LC50	MOR	MORT	4	d	T	80	SW	Ahsanullah, M.	Acute Toxicity of Chromium, Mercury, Molybdenum and Nickel to the Amphipod Allorchestes compressa	Aust.J.Mar.Freshw.Res. 33(3):465-474	1982
1098	Mercury chloride (HgCl2)	Balanus crenatus	Acorn Or Rock Barnacle	Crustaceans	LC50*	MOR	MORT	0.25	d	T	80	SW	Pyefinch, K.A., and J.C. Mott	The Sensitivity of Barnacles and Their Larvae to Copper and Mercury	J.Exp.Biol. 25(3):276-298	1948
1099	Mercury chloride (Hg2Cl2)	Namanereis sp.	Polychaete	Worms	NR-LETH	MOR	MORT	4	d	T	80	SW	Varshney, P.K., and S.A.H. Abidi	Toxicity of Mercury, Copper and Lead in the Polychaete Namanereis merukensis Horst	Indian J.Mar.Sci. 17:83-84	1988
1100	Mercury	Dunaliella tertiolecta	Green Algae	Algae, Moss, Fungi	EC50	ENZ	BGAL	0.083	d	T	81	SW	Peterson, S.M., and J.L. Stauber	New Algal Enzyme Bioassay for the Rapid Assessment of Aquatic Toxicity	Bull. Environ. Toxicol. Chem.56(5): 750-757	1996
1101	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	2	d	T	85	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1102	Mercury	Thalassiosira pseudonana	Diatom	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	88	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1103	Mercury chloride (HgCl2)	Balanus balanoides	Common Barnacle	Crustaceans	LC50*	MOR	MORT	0.25	d	T	90	SW	Pyefinch, K.A., and J.C. Mott	The Sensitivity of Barnacles and Their Larvae to Copper and Mercury	J.Exp.Biol. 25(3):276-298	1948
1104	Mercury chloride (HgCl2)	Balanus crenatus	Acorn Or Rock Barnacle	Crustaceans	LC50*	MOR	MORT	0.25	d	T	90	SW	Pyefinch, K.A., and J.C. Mott	The Sensitivity of Barnacles and Their Larvae to Copper and Mercury	J.Exp.Biol. 25(3):276-298	1948
1105	Mercury chloride (HgCl2)	Carcinus maenas	Green Or Europeon Shore Crab	Crustaceans	LOEC	ENZ	CEST	4	d	T	90	SW	Elumalai, M., C. Antunes, and L. Guilhermino	Enzymatic Biomarkers in the Crab Carcinus maenas from the Minho River Estuary (NW Portugal) Exposed to Zinc and Mercury	Chemosphere 66(7):1249-1255	2007
1106	Mercury chloride (HgCl2)	Ctenodrilus serratus	Polychaete Worm	Worms	LC50	MOR	MORT	4	d	T	90	SW	Reish, D.J.	The Effects of Heavy Metals on Polychaetous Annelids	Rev.Int.Oceanogr.Med. 49(3):99-104	1978
1107	Mercury chloride (HgCl2)	Neanthes arenaceodentata	Polychaete Worm	Worms	LC50	MOR	MORT	28	d	T	90	SW	Reish, D.J., J.M. Martin, F.M. Piltz, and J.Q. Word	The Effect of Heavy Metals on Laboratory Populations of Two Polychaetes with Comparisons to the Water Quality Conditions and Standards in Southern California Marine Waters	Water Res. 10:299-302	1976
1108	Mercury chloride (HgCl2)	Neanthes grubei	Polychaete	Worms	LC50	MOR	MORT	4	d	T	90	SW	Reish, D.J., and J.A. Lemay	Toxicity and Bioconcentration of Metals and Organic Compounds by Polychaeta	Ophelia 5(Suppl.):653-660	1991
1109	Mercury chloride (HgCl2)	Ophryotrocha diadema	Polychaete	Worms	LC50	MOR	MORT	4	d	T	90	SW	Reish, D.J.	The Effects of Heavy Metals on Polychaetous Annelids	Rev.Int.Oceanogr.Med. 49(3):99-104	1978
1110	Mercury	Gymnodinium splendens	Dinoflagellate	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	90	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1111	Mercury	Isochrysis galbana	Haptophyte	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	90	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1112	Mercury chloride (HgCl2)	Ferosagitta hispida	Arrow Worm	Worms	LC50	MOR	MORT	1	d	T	94	SW	Reeve, M.R., G.D. Grice, V.R. Gibson, M.A. Walter, K. Darcy, and T. Ikeda	A Controlled Environmental Pollution Experiment (CEPEX) and Its Usefulness in the Study of Larger Marine Zooplankton Under Toxic Stress	In: Effects of Pollutants on Aquatic Organisms, Volume 2 :145-162 (U.S.NTIS PB-259395/2ST)	1976
1113	Mercury	Thalassiosira pseudonana	Diatom	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	95	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1114	Mercury chloride (HgCl2)	Penaeus chinensis	Fleshy Prawn	Crustaceans	LC50*	MOR	MORT	1	d	T	100	SW	Wu, Z., and G. Chen	Studies of Acute intoxication by Some Harmful Substances on Penaeus orientalis K.	Mar.Sci.(Qingdao) 4:36-40 (CHI) (ENG ABS)	1988

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
1115	Mercury chloride (HgCl2)	Capitella capitata	Polychaete Worm	Worms	LC50	MOR	MORT	28	d	T	100	SW	Reish, D.J., J.M. Martin, F.M. Piltz, and J.Q. Word	The Effect of Heavy Metals on Laboratory Populations of Two Polychaetes with Comparisons to the Water Quality Conditions and Standards in Southern California Marine Waters	Water Res. 10:299-302	1976
1116	Mercury chloride (HgCl2)	Capitella capitata	Polychaete Worm	Worms	LC50	MOR	MORT	4	d	T	100	SW	Reish, D.J.	The Effects of Heavy Metals on Polychaetous Annelids	Rev.Int.Oceanogr.Med. 49(3):99-104	1978
1117	Mercury chloride (HgCl2)	Capitella capitata	Polychaete Worm	Worms	LC50	MOR	MORT	4	d	T	100	SW	Reish, D.J., J.M. Martin, F.M. Piltz, and J.Q. Word	The Effect of Heavy Metals on Laboratory Populations of Two Polychaetes with Comparisons to the Water Quality Conditions and Standards in Southern California Marine Waters	Water Res. 10:299-302	1976
1118	Mercury chloride (HgCl2)	Neanthes arenaceodentata	Polychaete Worm	Worms	LC50	MOR	MORT	4	d	T	100	SW	Reish, D.J., J.M. Martin, F.M. Piltz, and J.Q. Word	The Effect of Heavy Metals on Laboratory Populations of Two Polychaetes with Comparisons to the Water Quality Conditions and Standards in Southern California Marine Waters	Water Res. 10:299-302	1976
1119	Mercury chloride (HgCl2)	Nerilla antennata	Mesopsammic Annelid	Worms	NR-LETH	MOR	MORT	10	d	T	100	SW	Magagnini, G.	Effects of Mercury on the Marine Interstitial Species Nerilla antennata (Archiannelida, Nerillidae)	Boll.Zool. 60(1):69-72	1993
1120	Mercury chloride (HgCl2)	Nerilla antennata	Mesopsammic Annelid	Worms	NR-LETH	MOR	MORT	4	d	T	100	SW	Magagnini, G.	Effects of Mercury on the Marine Interstitial Species Nerilla antennata (Archiannelida, Nerillidae)	Boll.Zool. 60(1):69-72	1993
1121	Mercury	Isochrysis galbana	Haptophyte	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	100	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1122	Mercury	Isochrysis galbana	Haptophyte	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	100	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1123	Mercury	Thalassiosira pseudonana	Diatom	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	100	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1124	Mercury	Isochrysis galbana	Haptophyte	Algae, Moss, Fungi	LOEC	POP	PGRT	2	d	T	100	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1125	Mercury	Isochrysis galbana	Haptophyte	Algae, Moss, Fungi	LOEC	POP	PGRT	2	d	T	100	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1126	Mercury	Isochrysis galbana	Haptophyte	Algae, Moss, Fungi	LOEC	POP	PGRT	2	d	T	100	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1127	Iodophenylmercury	Plumaria elegans	Red Algae	Algae, Moss, Fungi	LD50	MOR	MORT	0.75	d	T	104	SW	Boney, A.D., E.D.S. Corner, and B.W.P. Sparrow	The Effects of Various Poisons on the Growth and Viability of Sporelings of the Red Alga Plumaria elegans (Bonnem.) Schm.	Biochem. Pharmacol.2(): 37-49	1959
1128	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	4	d	T	105	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1129	Mercury	Isochrysis galbana	Haptophyte	Algae, Moss, Fungi	LOEC	POP	PGRT	2	d	T	110	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1130	Mercury	Isochrysis galbana	Haptophyte	Algae, Moss, Fungi	LOEC	POP	PGRT	2	d	T	110	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1131	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	1	d	T	115	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1132	Mercury chloride (HgCl2)	Ferosagitta hispida	Arrow Worm	Worms	LC50	MOR	MORT	1	d	T	118	SW	Reeve, M.R., G.D. Grice, V.R. Gibson, M.A. Walter, K. Darcy, and T. Ikeda	A Controlled Environmental Pollution Experiment (CEPEX) and Its Usefulness in the Study of Larger Marine Zooplankton Under Toxic Stress	In: Effects of Pollutants on Aquatic Organisms, Volume 2 :145-162 (U.S.NTIS PB-259395/2ST)	1976
1133	Mercury	Isochrysis galbana	Haptophyte	Algae, Moss, Fungi	LOEC	POP	PGRT	2	d	T	120	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1134	Chloromethylmercury	Palaemonetes vulgaris	Marsh Grass Shrimp	Crustaceans	LC50	MOR	MORT	1	d	T	125	SW	Ray, G.L., and M.R. Tripp	The Uptake of Mercury From Water by the Grass Shrimp, Palaemonetes vulgaris (Say)	J.Environ.Qual. 5(2):193-196	1976
1135	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	3	d	T	125	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1136	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	4	d	T	125	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1137	Mercury chloride (HgCl2)	Idotea balthica	Aquatic Sowbug, Isopod	Crustaceans	LC50	MOR	MORT	4	d	T	140	SW	Annicchiarico, C., F. Biandolino, N. Cardellicchio, A. Di Leo, S. Giandomenico, and E. Prato	Predicting Toxicity in Marine Sediment in Taranto Gulf (Ionian Sea, Southern Italy) Using Sediment Quality Guidelines and a Battery Bioassay	Ecotoxicology 16(2):239-246	2007
1138	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	0.5	d	T	145	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1139	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	3	d	T	150	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1140	Mercury chloride (HgCl2)	Palaemon elegans	Rockpool Prawn	Crustaceans	LC50	MOR	MORT	4	d	T	150	SW	Lorenzon, S., M. Francese, and E.A. Ferrero	Heavy Metal Toxicity and Differential Effects on the Hyperglycemic Stress Response in the Shrimp Palaemon elegans	Arch.Environ.Contam.Toxicol. 39(2):167-176	2000
1141	Mercury chloride (HgCl2)	Mytilus edulis	Common Bay Mussel,Blue Mussel	Molluscs	LC50	MOR	MORT	7	d	T	150	SW	Martin, J.M., F.M. Piltz, and D.J. Reish	Studies on the Mytilus edulis Community in Alamitos Bay, California. V. The Effects of Heavy Metals on Byssal Thread Production	Veliger 18(2):183-187	1975
1142	Mercury chloride (HgCl2)	Neanthes arenaceodentata	Polychaete Worm	Worms	LC50	MOR	MORT	4	d	T	150	SW	Reish, D.J., and J.A. Lemay	Toxicity and Bioconcentration of Metals and Organic Compounds by Polychaeta	Ophelia 5(Suppl.):653-660	1991

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
1143	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	3	d	T	155	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1144	Mercury Iodine	Plumaria elegans	Red Algae	Algae, Moss, Fungi	LD50	MOR	MORT	0.75	d	T	156	SW	Boney, A.D., E.D.S. Corner, and B.W.P. Sparrow	The Effects of Various Poisons on the Growth and Viability of Sporelings of the Red Alga Plumaria elegans (Bonnem.) Schm.	Biochem. Pharmacol.2(): 37-49	1959
1145	Mercury	Eurytemora affinis	Calanoid Copepod	Crustaceans	LC50	MOR	MORT	4	d	T	158	SW	Gentile, S., and J. Cardin	Unpublished Laboratory Data	U.S.EPA, Narragansett, RI :5 p.	1982
1146	Mercury chloride (HgCl2)	Balanus crenatus	Acorn Or Rock Barnacle	Crustaceans	LC50*	MOR	MORT	0.25	d	T	160	SW	Pyefinch, K.A., and J.C. Mott	The Sensitivity of Barnacles and Their Larvae to Copper and Mercury	J.Exp.Biol. 25(3):276-298	1948
1147	Mercury chloride (HgCl2)	Ophryotrocha labronica	Polychaete	Worms	LC50	MOR	MORT	4	d	T	160	SW	Reish, D.J., and J.A. Lemay	Toxicity and Bioconcentration of Metals and Organic Compounds by Polychaeta	Ophelia 5(Suppl.):653-660	1991
1148	Mercury	Isochrysis galbana	Haptophyte	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	160	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1149	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	2	d	T	165	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1150	Mercury	Isochrysis galbana	Haptophyte	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	170	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1151	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	2	d	T	175	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1152	Mercury chloride (HgCl2)	Artemia salina	Brine Shrimp	Crustaceans	LC50	MOR	MORT	1	d	T	180	SW	Reeve, M.R., G.D. Grice, V.R. Gibson, M.A. Walter, K. Darcy, and T. Ikeda	A Controlled Environmental Pollution Experiment (CEPEX) and Its Usefulness in the Study of Larger Marine Zooplankton Under Toxic Stress	In: Effects of Pollutants on Aquatic Organisms, Volume 2 :145-162 (U.S.NTIS PB-259395/2ST)	1976
1153	Mercury	Isochrysis galbana	Haptophyte	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	180	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1154	Mercury	Isochrysis galbana	Haptophyte	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	180	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1155	Mercury chloride (HgCl2)	Gracilaria tenuistipitata	Red Algae	Algae, Moss, Fungi	EC50	POP	PGRT	4	d	T	180	SW	Haglund, K., M. Bjorklund, S. Gunnare, A. Sandberg, U. Olander, and M. Pedersen	New Method for Toxicity Assessment in Marine and Brackish Environments Using the Macroalga Gracilaria tenuistipitata (Gracilariales, Rhodophyta)	Hydrobiologia326-327(): 317-325	1996
1156	Chloromethylmercury	Fundulus heteroclitus	Mummichog	Fish	LC50	MOR	MORT	4	d	T	190	SW	Khan, A.T., and J.S. Weis	Effects of Embryonic Pre-Exposure to Mercury on Larval Tolerance in Two Populations of Killifish (Fundulus heteroclitus)	Environ.Sci. 2(4):201-207	1994
1157	Mercury chloride (HgCl2)	Carcinus maenas	Green Or Europeon Shore Crab	Crustaceans	LOEC	ENZ	LADH	4	d	T	190	SW	Elumalai, M., C. Antunes, and L. Guilhermino	Enzymatic Biomarkers in the Crab Carcinus maenas from the Minho River Estuary (NW Portugal) Exposed to Zinc and Mercury	Chemosphere 66(7):1249-1255	2007
1158	Mercury chloride (HgCl2)	Mytilus edulis	Common Bay Mussel,Blue Mussel	Molluscs	EC50	GRO	RGNR	7	d	T	200	SW	Martin, J.M., F.M. Piltz, and D.J. Reish	Studies on the Mytilus edulis Community in Alamitos Bay, California. V. The Effects of Heavy Metals on Byssal Thread Production	Veliger 18(2):183-187	1975
1159	Mercury	Isochrysis galbana	Haptophyte	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	200	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1160	Mercury chloride (HgCl2)	Tetrahymena thermophila	Ciliate Protozoa	Invertebrates	LOEL	CEL	LGTH	0.014	d	T	200.6	SW	Khan, S.M.M.K., C. Yoshimura, M. Arikawa, G. Omura, S. Nishiyama, Y. Suetomo, S. Kakuta, and T. Suzaki	Axopodial Degradation in the Heliozoon Raphidiophrys contractilis: A Novel Bioassay System for Detecting Heavy Metal Toxicity in an Aquatic Environment	Environ.Sci. 13(4):193-200	2006
1161	Chloromethylmercury	Fundulus heteroclitus	Mummichog	Fish	LC50	MOR	MORT	4	d	T	210	SW	Khan, A.T., and J.S. Weis	Effects of Embryonic Pre-Exposure to Mercury on Larval Tolerance in Two Populations of Killifish (Fundulus heteroclitus)	Environ.Sci. 2(4):201-207	1994
1162	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	3	d	T	210	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1163	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	0.5	d	T	215	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1164	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	2	d	T	215	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1165	Mercury chloride (HgCl2)	Balanus balanoides	Common Barnacle	Crustaceans	LC50*	MOR	MORT	0.25	d	T	230	SW	Pyefinch, K.A., and J.C. Mott	The Sensitivity of Barnacles and Their Larvae to Copper and Mercury	J.Exp.Biol. 25(3):276-298	1948
1166	Mercury chloride (HgCl2)	Balanus balanoides	Common Barnacle	Crustaceans	LC50*	MOR	MORT	0.25	d	T	230	SW	Pyefinch, K.A., and J.C. Mott	The Sensitivity of Barnacles and Their Larvae to Copper and Mercury	J.Exp.Biol. 25(3):276-298	1948
1167	Mercury chloride (HgCl2)	Nitocra spinipes	Harpacticoid Copepod	Crustaceans	LC50	MOR	MORT	4	d	T	230	SW	Bengtsson, B.E.	Use of a Harpacticoid Copepod in Toxicity Tests	Mar.Pollut.Bull. 9:238-241	1978
1168	Mercury chloride (HgCl2)	Fundulus heteroclitus	Mummichog	Fish	LC50	MOR	MORT	4	d	T	230	SW	Jackim, E., J.M. Hamlin, and S. Sonis	Effects of Metal Poisoning on Five Liver Enzymes in the Killifish (Fundulus heteroclitus)	J.Fish.Res.Board Can. 27(2):383-390 (Author Communication Used)	1970
1169	Mercury chloride (HgCl2)	Perna viridis	Green Mussel	Molluscs	LC50	MOR	MORT	3.5	d	T	230	SW	Mohan, C.V., T.R.C. Gupta, H.P.C. Shetty, and N.R. Menon	Combined Toxicity of Mercury and Cadmium to the Tropical Green Mussel Perna viridis	Dis.Aquat.Org. 2(1):65-72	1986
1170	Mercury chloride (HgCl2)	Perna viridis	Green Mussel	Molluscs	LC50	MOR	MORT	4	d	T	230	SW	Mohan, C.V., T.R.C. Gupta, H.P.C. Shetty, and N.R. Menon	Combined Toxicity of Mercury and Cadmium to the Tropical Green Mussel Perna viridis	Dis.Aquat.Org. 2(1):65-72	1986
1171	Mercury chloride (HgCl2)	Carcinus maenas	Green Or Europeon Shore Crab	Crustaceans	EC50	ENZ	CEST	4	d	T	235	SW	Elumalai, M., C. Antunes, and L. Guilhermino	Enzymatic Biomarkers in the Crab Carcinus maenas from the Minho River Estuary (NW Portugal) Exposed to Zinc and Mercury	Chemosphere 66(7):1249-1255	2007
1172	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	1	d	T	235	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985

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1173	Mercury chloride (HgCl2)	Perna viridis	Green Mussel	Molluscs	LC50	MOR	MORT	3	d	T	250	SW	Mohan, C.V., T.R.C. Gupta, H.P.C. Shetty, and N.R. Menon	Combined Toxicity of Mercury and Cadmium to the Tropical Green Mussel Perna viridis	Dis.Aquat.Org. 2(1):65-72	1986
1174	Mercury chloride (HgCl2)	Palaemon elegans	Rockpool Prawn	Crustaceans	LC50	MOR	MORT	2	d	T	260	SW	Lorenzon, S., M. Francese, and E.A. Ferrero	Heavy Metal Toxicity and Differential Effects on the Hyperglycemic Stress Response in the Shrimp Palaemon elegans	Arch.Environ.Contam.Toxicol. 39(2):167-176	2000
1175	Mercury	Isochrysis galbana	Haptophyte	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	280	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1176	Mercury	Isochrysis galbana	Haptophyte	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	280	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1177	Mercury	Chrysiptera cyanea	Damselfish	Fish	LC50	MOR	MORT	4	d	T	300	SW	Hori, H., M. Tateishi, K. Takayanagi, and H. Yamada	Applicability of Artificial Seawater as a Rearing Seawater for Toxicity Tests of Hazardous Chemicals by Marine Fish Species	Bull.Jpn.Soc.Sci.Fish. (4):614-622 (JPN) (ENG ABS)	1996
1178	Mercury chloride (HgCl2)	Balanus balanoides	Common Barnacle	Crustaceans	LC50*	MOR	MORT	0.25	d	T	300	SW	Pyefinch, K.A., and J.C. Mott	The Sensitivity of Barnacles and Their Larvae to Copper and Mercury	J.Exp.Biol. 25(3):276-298	1948
1179	Mercury chloride (HgCl2)	Balanus balanoides	Common Barnacle	Crustaceans	LC50*	MOR	MORT	0.25	d	T	300	SW	Pyefinch, K.A., and J.C. Mott	The Sensitivity of Barnacles and Their Larvae to Copper and Mercury	J.Exp.Biol. 25(3):276-298	1948
1180	Mercury	Dunaliella tertiolecta	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	3	d	T	300	SW	Peterson, S.M., and J.L. Stauber	New Algal Enzyme Bioassay for the Rapid Assessment of Aquatic Toxicity	Bull. Environ. Toxicol. Chem.56(5): 750-757	1996
1181	Mercury	Isochrysis galbana	Haptophyte	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	300	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1182	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	2	d	T	310	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1183	Mercury	Isochrysis galbana	Haptophyte	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	310	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1184	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	3	d	T	330	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1185	Mercury chloride (HgCl2)	Ascidiella aspersa	Sea Squirt	Miscellaneous	LC50	MOR	MORT	1	d	T	330	SW	Prakasam, V.R., and J. Azariah	Toxic Effect of Hg on the Tissue Respiration of Monascidian, ascidiella Aspersa	J.Ecobiol. 3(2):106-109	1991
1186	Mercury	Isochrysis galbana	Haptophyte	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	330	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1187	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	1	d	T	340	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1188	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	4	d	T	340	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1189	Mercury chloride (HgCl2)	Euplotes mutabilis	Ciliated Protozoan	Invertebrates	LOEC	MOR	MORT	NR	d	T	360	SW	Al-Rasheid, K.A.S., and M.A. Sleigh	The Effects of Heavy Metals on the Feeding Rate of Euplotes mutabilis (Tuffrau, 1960)	Eur.J.Protistol. 30(3):270-279	1994
1190	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	3	d	T	365	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1191	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	1	d	T	368	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1192	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	2	d	T	368	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1193	Mercury chloride (HgCl2)	Cynoglossus joyneri	Red Tongue Sole	Fish	LC50	MOR	MORT	4	d	T	370	SW	Cui, K., Y. Liu, and L. Hou	Effects of Six Heavy Metals on Hatching Eggs and Survival of Larval of Marine Fish	Oceanol.Limnol.Sin.(Haiyang Yu Huzhao) 18(2):138-144 (CHI) (ENG ABS)	1987
1194	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	3	d	T	380	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1195	Mercury chloride (HgCl2)	Liza macrolepis	Borneo Mullet	Fish	LC50	MOR	MORT	4	d	T	380	SW	Helmy, M.M., A.E. Lemke, P.G. Jacob, and Y.Y. Al-Sultan	Haematological Changes in Kuwait Mullet, Liza macrolepis (Smith), Induced by Heavy Metals	Indian J.Mar.Sci. 8(4):278-281	1979
1196	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	1	d	T	390	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1197	Mercury	Chrysiptera cyanea	Damselfish	Fish	LC50	MOR	MORT	3	d	T	400	SW	Hori, H., M. Tateishi, K. Takayanagi, and H. Yamada	Applicability of Artificial Seawater as a Rearing Seawater for Toxicity Tests of Hazardous Chemicals by Marine Fish Species	Bull.Jpn.Soc.Sci.Fish. (4):614-622 (JPN) (ENG ABS)	1996
1198	Mercury	Chrysiptera cyanea	Damselfish	Fish	LC50	MOR	MORT	3	d	T	400	SW	Hori, H., M. Tateishi, K. Takayanagi, and H. Yamada	Applicability of Artificial Seawater as a Rearing Seawater for Toxicity Tests of Hazardous Chemicals by Marine Fish Species	Bull.Jpn.Soc.Sci.Fish. (4):614-622 (JPN) (ENG ABS)	1996
1199	Mercury	Chrysiptera cyanea	Damselfish	Fish	LC50	MOR	MORT	4	d	T	400	SW	Hori, H., M. Tateishi, K. Takayanagi, and H. Yamada	Applicability of Artificial Seawater as a Rearing Seawater for Toxicity Tests of Hazardous Chemicals by Marine Fish Species	Bull.Jpn.Soc.Sci.Fish. (4):614-622 (JPN) (ENG ABS)	1996
1200	Mercury	Chrysiptera cyanea	Damselfish	Fish	LC50	MOR	MORT	4	d	T	400	SW	Hori, H., M. Tateishi, K. Takayanagi, and H. Yamada	Applicability of Artificial Seawater as a Rearing Seawater for Toxicity Tests of Hazardous Chemicals by Marine Fish Species	Bull.Jpn.Soc.Sci.Fish. (4):614-622 (JPN) (ENG ABS)	1996
1201	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	0.5	d	T	400	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1202	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	2	d	T	400	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1203	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	3	d	T	400	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
1204	Mercury chloride (HgCl2)	Palaemonetes vulgaris	Marsh Grass Shrimp	Crustaceans	LC50	MOR	MORT	1	d	T	400	SW	Ray, G.L., and M.R. Tripp	The Uptake of Mercury From Water by the Grass Shrimp, Palaemonetes vulgaris (Say)	J.Environ.Qual. 5(2):193-196	1976
1205	Mercury chloride (HgCl2)	Mya arenaria	Sand Gaper, Soft Shell Clam	Molluscs	LC50	MOR	MORT	4	d	T	400	SW	Eisler, R., and R.J. Hennekey	Acute Toxicities of Cd2+, Cr+6, Hg2+, Ni2+ and Zn2+ to Estuarine Macrofauna	Arch.Environ.Contam.Toxicol. 6(2/3):315-323	1977
1206	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	0.5	d	T	415	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1207	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	3	d	T	415	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1208	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	3	d	T	425	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1209	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	3	d	T	425	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1210	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	1	d	T	430	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1211	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	2	d	T	440	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1212	Mercury chloride (HgCl2)	Skeletonema costatum	Diatom	Algae, Moss, Fungi	EC50	POP	ABND	10	d	T	440	SW	Rao, V.N.R.	Adaptation of Algae to Heavy Metal Toxicity	In: A.K.Kashyap and H.D.Kumar (Eds.), Recent Advances in Phycology, Rastogi Publications, Meerut, India(): 261-264	1994
1213	Mercury chloride (HgCl2)	Skeletonema costatum	Diatom	Algae, Moss, Fungi	EC50	POP	GPOP	10	d	T	440	SW	Gowrinathan, K.P., and V.N.R. Rao	Physiological Responses of Some Plankton Diatoms to Heavy Metals	Indian J. Microbiol.29(4): 293-302	1989
1214	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	0.5	d	T	445	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1215	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	0.5	d	T	450	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1216	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	2	d	T	450	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1217	Mercury chloride (HgCl2)	Palaemon elegans	Rockpool Prawn	Crustaceans	LC50	MOR	MORT	4	d	T	470	SW	Lorenzon, S., M. Francese, and E.A. Ferrero	Heavy Metal Toxicity and Differential Effects on the Hyperglycemic Stress Response in the Shrimp Palaemon elegans	Arch.Environ.Contam.Toxicol. 39(2):167-176	2000
1218	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	2	d	T	475	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1219	Mercury	Crangon crangon	Common Shrimp, Sand Shrimp	Crustaceans	LC50*	MOR	MORT	2	d	T	480	SW	Portmann, J.E.	Progress Report on a Programme of Insecticide Analysis and Toxicity-Testing in Relation to the Marine Environment	Helgol.Wiss.Meeresunters. 17:247-256 (Author Communication Used)	1968
1220	Mercury	Thalassiosira pseudonana	Diatom	Algae, Moss, Fungi	LC50	POP	PGRT	2	d	T	480	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1221	Mercury chloride (HgCl2)	Balanus balanoides	Common Barnacle	Crustaceans	LC50*	MOR	MORT	0.25	d	T	500	SW	Pyefinch, K.A., and J.C. Mott	The Sensitivity of Barnacles and Their Larvae to Copper and Mercury	J.Exp.Biol. 25(3):276-298	1948
1222	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	2	d	T	500	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1223	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	2	d	T	500	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1224	Mercury chloride (HgCl2)	Antithamnion plumula	Red Algae	Algae, Moss, Fungi	LD50	MOR	MORT	0.021	d	T	500	SW	Boney, A.D., and E.D.S. Corner	Application of Toxic Agents in the Study of the Ecological Resistance of Intertidal Red Algae	J. Mar. Biol. Assoc. U. K.38(): 267-275	1959
1225	Mercury chloride (HgCl2)	Paracentrotus lividus	Sea Urchin, Echinoderm	Invertebrates	NR-LETH	MOR	MORT	0.917	d	T	501.5	SW	Congiu, A.M., E. Calendi, and G. Ugazio	Effects of Metal Ions and CCl4 on Sea Urchin Embryo (Paracentrotus lividus)	Res.Commun.Chem.Pathol.Pharmacol. 43(2):317-323	1984
1226	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	1	d	T	510	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1227	Mercury chloride (HgCl2)	Perna viridis	Green Mussel	Molluscs	LC50	MOR	MORT	2.5	d	T	520	SW	Mohan, C.V., T.R.C. Gupta, H.P.C. Shetty, and N.R. Menon	Combined Toxicity of Mercury and Cadmium to the Tropical Green Mussel Perna viridis	Dis.Aquat.Org. 2(1):65-72	1986
1228	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	1	d	T	565	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1229	Mercury	Crangon crangon	Common Shrimp, Sand Shrimp	Crustaceans	LC50*	MOR	MORT	2	d	T	580	SW	Portmann, J.E.	Progress Report on a Programme of Insecticide Analysis and Toxicity-Testing in Relation to the Marine Environment	Helgol.Wiss.Meeresunters. 17:247-256 (Author Communication Used)	1968
1230	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	1	d	T	580	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1231	Mercury chloride (HgCl2)	Liza macrolepis	Borneo Mullet	Fish	LC100	MOR	MORT	4	d	T	590	SW	Helmy, M.M., A.E. Lemke, P.G. Jacob, and Y.Y. Al-Sultan	Haematological Changes in Kuwait Mullet, Liza macrolepis (Smith), Induced by Heavy Metals	Indian J.Mar.Sci. 8(4):278-281	1979
1232	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	1	d	T	592	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1233	Mercury	Chrysiptera cyanea	Damselfish	Fish	LC50	MOR	MORT	2	d	T	600	SW	Hori, H., M. Tateishi, K. Takayanagi, and H. Yamada	Applicability of Artificial Seawater as a Rearing Seawater for Toxicity Tests of Hazardous Chemicals by Marine Fish Species	Bull.Jpn.Soc.Sci.Fish. (4):614-622 (JPN) (ENG ABS)	1996
1234	Mercury	Chrysiptera cyanea	Damselfish	Fish	LC50	MOR	MORT	2	d	T	600	SW	Hori, H., M. Tateishi, K. Takayanagi, and H. Yamada	Applicability of Artificial Seawater as a Rearing Seawater for Toxicity Tests of Hazardous Chemicals by Marine Fish Species	Bull.Jpn.Soc.Sci.Fish. (4):614-622 (JPN) (ENG ABS)	1996

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
1235	Mercury	Chrysiptera cyanea	Damselfish	Fish	LC50	MOR	MORT	3	d	T	600	SW	Hori, H., M. Tateishi, K. Takayanagi, and H. Yamada	Applicability of Artificial Seawater as a Rearing Seawater for Toxicity Tests of Hazardous Chemicals by Marine Fish Species	Bull.Jpn.Soc.Sci.Fish. (4):614-622 (JPN) (ENG ABS)	1996
1236	Mercury chloride (HgCl2)	Fundulus heteroclitus	Mummichog	Fish	LC50	MOR	MORT	4	d	T	600	SW	Khan, A.T., and J.S. Weis	Effect of Mercuric Chloride on Eggs and Juvenile Viability in Two Populations of Killifish	Mar.Pollut.Bull. 18(9):504-505	1987
1237	Mercury chloride (HgCl2)	Paracentrotus lividus	Sea Urchin, Echinoderm	Invertebrates	NR-LETH	MOR	MORT	3	d	T	601.8	SW	Warnau, M., M. Iaccarino, A. De Biase, A. Temara, M. Jangoux, P. Dubois, and G. Pagano	Spermiotoxicity and Embryotoxicity of Heavy Metals in the Echinoid Paracentrotus lividus	Environ.Toxicol.Chem. 15(11):1931-1936	1996
1238	Mercury chloride (HgCl2)	Liza ramada	Thin-Lipped Grey Mullet	Fish	LC50	MOR	MORT	1	d	T	640	SW	El Nady, F.E.	Toxicity of Mercury to Mugil capito Frys in Presence of EDTA and Copper Sulphate	Bull.Natl.Inst.Oceanogr.Fish. 15(2):163-169	1989
1239	Mercury	Crangon crangon	Common Shrimp, Sand Shrimp	Crustaceans	LC50*	MOR	MORT	2	d	T	650	SW	Portmann, J.E.	Progress Report on a Programme of Insecticide Analysis and Toxicity-Testing in Relation to the Marine Environment	Helgol.Wiss.Meeresunters. 17:247-256 (Author Communication Used)	1968
1240	Mercury chloride (HgCl2)	Fundulus heteroclitus	Mummichog	Fish	LC50	MOR	MORT	4	d	T	650	SW	Khan, A.T., and J.S. Weis	Effects of Embryonic Pre-Exposure to Mercury on Larval Tolerance in Two Populations of Killifish (Fundulus heteroclitus)	Environ.Sci. 2(4):201-207	1994
1241	Mercury chloride (HgCl2)	Oreochromis mossambicus	Mozambique Tilapia	Fish	LC50	MOR	MORT	1	d	T	660	SW	Prakasam, V.R.	Salinity Effect on the Toxicity of HgCl2 in Oreochromis mossambicus	Indian J.Environ.Health 31(4):339-344	1989
1242	Mercury chloride (HgCl2)	Palaemon elegans	Rockpool Prawn	Crustaceans	LC50	MOR	MORT	4	d	T	670	SW	Lorenzon, S., M. Francese, and E.A. Ferrero	Heavy Metal Toxicity and Differential Effects on the Hyperglycemic Stress Response in the Shrimp Palaemon elegans	Arch.Environ.Contam.Toxicol. 39(2):167-176	2000
1243	Mercury chloride (HgCl2)	Nassarius obsoletus	Eastern Mud Snail	Molluscs	LC50	MOR	MORT	7	d	T	700	SW	Eisler, R., and R.J. Hennekey	Acute Toxicities of Cd2+, Cr+6, Hg2+, Ni2+ and Zn2+ to Estuarine Macrofauna	Arch.Environ.Contam.Toxicol. 6(2/3):315-323	1977
1244	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	0.5	d	T	725	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1245	Mercury chloride (HgCl2)	Palaemon elegans	Rockpool Prawn	Crustaceans	LC50	MOR	MORT	1	d	T	730	SW	Lorenzon, S., M. Francese, and E.A. Ferrero	Heavy Metal Toxicity and Differential Effects on the Hyperglycemic Stress Response in the Shrimp Palaemon elegans	Arch.Environ.Contam.Toxicol. 39(2):167-176	2000
1246	Mercury chloride (HgCl2)	Fundulus heteroclitus	Mummichog	Fish	LC50	MOR	MORT	4	d	T	730	SW	Khan, A.T., and J.S. Weis	Effects of Embryonic Pre-Exposure to Mercury on Larval Tolerance in Two Populations of Killifish (Fundulus heteroclitus)	Environ.Sci. 2(4):201-207	1994
1247	Mercury chloride (HgCl2)	Carcinus maenas	Green Or Europeon Shore Crab	Crustaceans	LOEC	ENZ	GSTR	4	d	T	740	SW	Elumalai, M., C. Antunes, and L. Guilhermino	Enzymatic Biomarkers in the Crab Carcinus maenas from the Minho River Estuary (NW Portugal) Exposed to Zinc and Mercury	Chemosphere 66(7):1249-1255	2007
1248	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	1	d	T	745	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1249	Mercury chloride (HgCl2)	Balanus balanoides	Common Barnacle	Crustaceans	LC50*	MOR	MORT	0.25	d	T	750	SW	Pyefinch, K.A., and J.C. Mott	The Sensitivity of Barnacles and Their Larvae to Copper and Mercury	J.Exp.Biol. 25(3):276-298	1948
1250	Mercury chloride (HgCl2)	Balanus balanoides	Common Barnacle	Crustaceans	LC50*	MOR	MORT	0.25	d	T	750	SW	Pyefinch, K.A., and J.C. Mott	The Sensitivity of Barnacles and Their Larvae to Copper and Mercury	J.Exp.Biol. 25(3):276-298	1948
1251	Mercury chloride (HgCl2)	Plumaria elegans	Red Algae	Algae, Moss, Fungi	LD50	MOR	MORT	0.021	d	T	750	SW	Boney, A.D., and E.D.S. Corner	Application of Toxic Agents in the Study of the Ecological Resistance of Intertidal Red Algae	J. Mar. Biol. Assoc. U. K.38(): 267-275	1959
1252	Mercury	Chrysiptera cyanea	Damselfish	Fish	LC50	MOR	MORT	2	d	T	800	SW	Hori, H., M. Tateishi, K. Takayanagi, and H. Yamada	Applicability of Artificial Seawater as a Rearing Seawater for Toxicity Tests of Hazardous Chemicals by Marine Fish Species	Bull.Jpn.Soc.Sci.Fish. (4):614-622 (JPN) (ENG ABS)	1996
1253	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	0.5	d	T	800	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1254	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	1	d	T	800	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1255	Mercury chloride (HgCl2)	Fundulus heteroclitus	Mummichog	Fish	LC50	MOR	MORT	4	d	T	800	SW	Eisler, R., and R.J. Hennekey	Acute Toxicities of Cd2+, Cr+6, Hg2+, Ni2+ and Zn2+ to Estuarine Macrofauna	Arch.Environ.Contam.Toxicol. 6(2/3):315-323	1977
1256	Mercury chloride (HgCl2)	Fundulus heteroclitus	Mummichog	Fish	LC50	MOR	MORT	7	d	T	800	SW	Eisler, R., and R.J. Hennekey	Acute Toxicities of Cd2+, Cr+6, Hg2+, Ni2+ and Zn2+ to Estuarine Macrofauna	Arch.Environ.Contam.Toxicol. 6(2/3):315-323	1977
1257	Mercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	3	d	T	900	SW	Hori, H., M. Tateishi, K. Takayanagi, and H. Yamada	Applicability of Artificial Seawater as a Rearing Seawater for Toxicity Tests of Hazardous Chemicals by Marine Fish Species	Bull.Jpn.Soc.Sci.Fish. (4):614-622 (JPN) (ENG ABS)	1996
1258	Mercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	4	d	T	900	SW	Hori, H., M. Tateishi, K. Takayanagi, and H. Yamada	Applicability of Artificial Seawater as a Rearing Seawater for Toxicity Tests of Hazardous Chemicals by Marine Fish Species	Bull.Jpn.Soc.Sci.Fish. (4):614-622 (JPN) (ENG ABS)	1996
1259	Mercury chloride (HgCl2)	Balanus balanoides	Common Barnacle	Crustaceans	LC50*	MOR	MORT	0.25	d	T	900	SW	Pyefinch, K.A., and J.C. Mott	The Sensitivity of Barnacles and Their Larvae to Copper and Mercury	J.Exp.Biol. 25(3):276-298	1948
1260	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	0.5	d	T	910	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1261	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	0.5	d	T	940	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1262	Mercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	2	d	T	1000	SW	Hori, H., M. Tateishi, K. Takayanagi, and H. Yamada	Applicability of Artificial Seawater as a Rearing Seawater for Toxicity Tests of Hazardous Chemicals by Marine Fish Species	Bull.Jpn.Soc.Sci.Fish. (4):614-622 (JPN) (ENG ABS)	1996

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
1263	Mercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	4	d	T	1000	SW	Hori, H., M. Tateishi, K. Takayanagi, and H. Yamada	Applicability of Artificial Seawater as a Rearing Seawater for Toxicity Tests of Hazardous Chemicals by Marine Fish Species	Bull.Jpn.Soc.Sci.Fish. (4):614-622 (JPN) (ENG ABS)	1996
1264	Mercury chloride (HgCl2)	Balanus crenatus	Acorn Or Rock Barnacle	Crustaceans	LC50*	MOR	MORT	0.25	d	T	1000	SW	Pyefinch, K.A., and J.C. Mott	The Sensitivity of Barnacles and Their Larvae to Copper and Mercury	J.Exp.Biol. 25(3):276-298	1948
1265	Mercury chloride (HgCl2)	Talitrus saltator	Amphipod	Crustaceans	LOEC	BEH	ORNT	0.003	d	T	1000	SW	Ungherese, G., and A. Ugolini	Sandhopper Solar Orientation as a Behavioural Biomarker of Trace Metals Contamination	Environ.Pollut. 157(4):1360-1364	2009
1266	Mercury chloride (HgCl2)	Euplotes mutabilis	Ciliated Protozoan	Invertebrates	LC50	MOR	MORT	0.042	d	T	1000	SW	Al-Rasheid, K.A.S., and M.A. Sleigh	The Effects of Heavy Metals on the Feeding Rate of Euplotes mutabilis (Tuffrau, 1960)	Eur.J.Protistol. 30(3):270-279	1994
1267	Mercury chloride (HgCl2)	Perna viridis	Green Mussel	Molluscs	LC50	MOR	MORT	2	d	T	1000	SW	Mohan, C.V., T.R.C. Gupta, H.P.C. Shetty, and N.R. Menon	Combined Toxicity of Mercury and Cadmium to the Tropical Green Mussel Perna viridis	Dis.Aquat.Org. 2(1):65-72	1986
1268	Mercury chloride	Zostera marina	Eelgrass	Flowers, Trees, Shrubs, Ferns	LOEL	GRO	LGTH	12	d	T	1003	SW	Lyngby, J.E., and H. Brix	The Uptake of Heavy Metals in Eelgrass Zostera marina and Their Effect on Growth	Ecol. Bull.36(): 81-89	1984
1269	Mercury chloride	Zostera marina	Eelgrass	Flowers, Trees, Shrubs, Ferns	LOEL	GRO	LGTH	19	d	T	1003	SW	Lyngby, J.E., and H. Brix	The Uptake of Heavy Metals in Eelgrass Zostera marina and Their Effect on Growth	Ecol. Bull.36(): 81-89	1984
1270	Mercury chloride	Zostera marina	Eelgrass	Flowers, Trees, Shrubs, Ferns	LOEL	GRO	LGTH	2	d	T	1003	SW	Lyngby, J.E., and H. Brix	The Uptake of Heavy Metals in Eelgrass Zostera marina and Their Effect on Growth	Ecol. Bull.36(): 81-89	1984
1271	Mercury chloride	Zostera marina	Eelgrass	Flowers, Trees, Shrubs, Ferns	LOEL	GRO	LGTH	5	d	T	1003	SW	Lyngby, J.E., and H. Brix	The Uptake of Heavy Metals in Eelgrass Zostera marina and Their Effect on Growth	Ecol. Bull.36(): 81-89	1984
1272	Mercury chloride	Zostera marina	Eelgrass	Flowers, Trees, Shrubs, Ferns	LOEL	GRO	LGTH	8	d	T	1003	SW	Lyngby, J.E., and H. Brix	The Uptake of Heavy Metals in Eelgrass Zostera marina and Their Effect on Growth	Ecol. Bull.36(): 81-89	1984
1273	Mercury chloride (HgCl2)	Crepidula fornicata	Slipper Limpet	Molluscs	LC50	MOR	MORT	2	d	T	1100	SW	Harrison, F.L., K. Watness, D.A. Nelson, J.E. Miller, and A. Calabrese	Mercury-Binding Proteins in the Slipper Limpet, Crepidula fornicata, Exposed to Increased Soluble Mercury	Estuaries 10(1):78-83	1987
1274	Mercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	3	d	T	1200	SW	Hori, H., M. Tateishi, K. Takayanagi, and H. Yamada	Applicability of Artificial Seawater as a Rearing Seawater for Toxicity Tests of Hazardous Chemicals by Marine Fish Species	Bull.Jpn.Soc.Sci.Fish. (4):614-622 (JPN) (ENG ABS)	1996
1275	Mercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	4	d	T	1200	SW	Hori, H., M. Tateishi, K. Takayanagi, and H. Yamada	Applicability of Artificial Seawater as a Rearing Seawater for Toxicity Tests of Hazardous Chemicals by Marine Fish Species	Bull.Jpn.Soc.Sci.Fish. (4):614-622 (JPN) (ENG ABS)	1996
1276	Mercury chloride (HgCl2)	Carcinus maenas	Green Or Europeon Shore Crab	Crustaceans	LC50	MOR	MORT	2	d	T	1200	SW	Connor, P.M.	Acute Toxicity of Heavy Metals to Some Marine Larvae	Mar.Pollut.Bull. 3(12):190-192	1972
1277	Mercury	Crangon crangon	Common Shrimp, Sand Shrimp	Crustaceans	LC50*	MOR	MORT	2	d	T	1260	SW	Portmann, J.E.	Progress Report on a Programme of Insecticide Analysis and Toxicity-Testing in Relation to the Marine Environment	Helgol.Wiss.Meeresunters. 17:247-256 (Author Communication Used)	1968
1278	Mercury chloride (HgCl2)	Macrobrachium rosenbergii	Giant River Prawn	Crustaceans	LC50	MOR	MORT	0.5	d	T	1260	SW	Piyan, B.T., A.T. Law, and S.H. Cheah	Toxic Levels of Mercury for Sequential Larval Stages of Macrobrachium rosenbergii (De Man)	Aquaculture 46(4):353-359	1985
1279	Mercury	Crangon crangon	Common Shrimp, Sand Shrimp	Crustaceans	LC50*	MOR	MORT	2	d	T	1300	SW	Portmann, J.E.	Progress Report on a Programme of Insecticide Analysis and Toxicity-Testing in Relation to the Marine Environment	Helgol.Wiss.Meeresunters. 17:247-256 (Author Communication Used)	1968
1280	Mercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	2	d	T	1300	SW	Hori, H., M. Tateishi, K. Takayanagi, and H. Yamada	Applicability of Artificial Seawater as a Rearing Seawater for Toxicity Tests of Hazardous Chemicals by Marine Fish Species	Bull.Jpn.Soc.Sci.Fish. (4):614-622 (JPN) (ENG ABS)	1996
1281	Mercury chloride (HgCl2)	Paralichthys olivaceus	Hirame, Flounder	Fish	LC50*	MOR	MORT	2	d	T	1300	SW	Cui, K., Y. Liu, and L. Hou	Effects of Six Heavy Metals on Hatching Eggs and Survival of Larval of Marine Fish	Oceanol.Limnol.Sin.(Haiyang Yu Huzhao) 18(2):138-144 (CHI) (ENG ABS)	1987
1282	Mercury	Isochrysis galbana	Haptophyte	Algae, Moss, Fungi	LOEC	POP	PGRT	2	d	T	1300	SW	Wilson, W.B., and L.R. Freeburg	Toxicity of Metals to Marine Phytoplankton Cultures	EPA-600/3-80-025, U.S.EPA, Narragansett, RI(): -	1980
1283	Mercury	Chrysiptera cyanea	Damselfish	Fish	LC50	MOR	MORT	1	d	T	1400	SW	Hori, H., M. Tateishi, K. Takayanagi, and H. Yamada	Applicability of Artificial Seawater as a Rearing Seawater for Toxicity Tests of Hazardous Chemicals by Marine Fish Species	Bull.Jpn.Soc.Sci.Fish. (4):614-622 (JPN) (ENG ABS)	1996
1284	Mercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	3	d	T	1400	SW	Hori, H., M. Tateishi, K. Takayanagi, and H. Yamada	Applicability of Artificial Seawater as a Rearing Seawater for Toxicity Tests of Hazardous Chemicals by Marine Fish Species	Bull.Jpn.Soc.Sci.Fish. (4):614-622 (JPN) (ENG ABS)	1996
1285	Mercury chloride (HgCl2)	Dunaliella tertiolecta	Green Algae	Algae, Moss, Fungi	EC50	POP	PSYN	0.042	d	T	1430	SW	McFeters, G.A., P.J. Bond, S.B. Olson, and Y.T. Tchan	A Comparison of Microbial Bioassays for the Detection of Aquatic Toxicants	Water Res.17(12): 1757-1762	1983
1286	Mercury	Chrysiptera cyanea	Damselfish	Fish	LC50	MOR	MORT	1	d	T	1500	SW	Hori, H., M. Tateishi, K. Takayanagi, and H. Yamada	Applicability of Artificial Seawater as a Rearing Seawater for Toxicity Tests of Hazardous Chemicals by Marine Fish Species	Bull.Jpn.Soc.Sci.Fish. (4):614-622 (JPN) (ENG ABS)	1996
1287	Mercury chloride (HgCl2)	Paralichthys olivaceus	Hirame, Flounder	Fish	LC50*	MOR	MORT	4	d	T	1500	SW	Cui, K., Y. Liu, and L. Hou	Effects of Six Heavy Metals on Hatching Eggs and Survival of Larval of Marine Fish	Oceanol.Limnol.Sin.(Haiyang Yu Huzhao) 18(2):138-144 (CHI) (ENG ABS)	1987
1288	Mercury chloride (HgCl2)	Antithamnion plumula	Red Algae	Algae, Moss, Fungi	LD50	MOR	MORT	0.021	d	T	1500	SW	Boney, A.D., and E.D.S. Corner	Application of Toxic Agents in the Study of the Ecological Resistance of Intertidal Red Algae	J. Mar. Biol. Assoc. U. K.38(): 267-275	1959
1289	Mercury chloride (HgCl2)	Fundulus heteroclitus	Mummichog	Fish	LC50	MOR	MORT	0.014	d	T	1600	SW	Khan, A.T., and J.S. Weis	Effect of Mercuric Chloride on Eggs and Juvenile Viability in Two Populations of Killifish	Mar.Pollut.Bull. 18(9):504-505	1987
1290	Mercury	Chrysiptera cyanea	Damselfish	Fish	LC50	MOR	MORT	1	d	T	1700	SW	Hori, H., M. Tateishi, K. Takayanagi, and H. Yamada	Applicability of Artificial Seawater as a Rearing Seawater for Toxicity Tests of Hazardous Chemicals by Marine Fish Species	Bull.Jpn.Soc.Sci.Fish. (4):614-622 (JPN) (ENG ABS)	1996

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
1291	Mercury chloride (HgCl2)	Asterias forbesii	Common Starfish	Invertebrates	LC50	MOR	MORT	1	d	T	1800	SW	Eisler, R., and R.J. Hennekey	Acute Toxicities of Cd2+, Cr+6, Hg2+, Ni2+ and Zn2+ to Estuarine Macrofauna	Arch.Environ.Contam.Toxicol. 6(2/3):315-323	1977
1292	Mercury chloride (HgCl2)	Balanus balanoides	Common Barnacle	Crustaceans	LC50*	MOR	MORT	0.25	d	T	2000	SW	Pyefinch, K.A., and J.C. Mott	The Sensitivity of Barnacles and Their Larvae to Copper and Mercury	J.Exp.Biol. 25(3):276-298	1948
1293	Mercury chloride (HgCl2)	Chlorogonium sp.	Green Algae	Algae, Moss, Fungi	LOEL	CEL	LGTH	0.014	d	T	2006	SW	Khan, S.M.M.K., C. Yoshimura, M. Arikawa, G. Omura, S. Nishiyama, Y. Suetomo, S. Kakuta, and T. Suzaki	Axopodial Degradation in the Heliozoon Raphidiophrys contractilis: A Novel Bioassay System for Detecting Heavy Metal Toxicity in an Aquatic Environment	Environ. Sci.13(4): 193-200	2006
1294	Mercury chloride (HgCl2)	Euglena gracilis	Flagellate Euglenoid	Algae, Moss, Fungi	LOEL	CEL	LGTH	0.014	d	T	2006	SW	Khan, S.M.M.K., C. Yoshimura, M. Arikawa, G. Omura, S. Nishiyama, Y. Suetomo, S. Kakuta, and T. Suzaki	Axopodial Degradation in the Heliozoon Raphidiophrys contractilis: A Novel Bioassay System for Detecting Heavy Metal Toxicity in an Aquatic Environment	Environ. Sci.13(4): 193-200	2006
1295	Mercury chloride (HgCl2)	Balanus balanoides	Common Barnacle	Crustaceans	LC50*	MOR	MORT	0.25	d	T	2100	SW	Pyefinch, K.A., and J.C. Mott	The Sensitivity of Barnacles and Their Larvae to Copper and Mercury	J.Exp.Biol. 25(3):276-298	1948
1296	Mercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	2	d	T	2200	SW	Hori, H., M. Tateishi, K. Takayanagi, and H. Yamada	Applicability of Artificial Seawater as a Rearing Seawater for Toxicity Tests of Hazardous Chemicals by Marine Fish Species	Bull.Jpn.Soc.Sci.Fish. (4):614-622 (JPN) (ENG ABS)	1996
1297	Mercury chloride (HgCl2)	Pagurus longicarpus	Longwrist Hermit Crab	Crustaceans	LC50	MOR	MORT	1	d	T	2200	SW	Eisler, R., and R.J. Hennekey	Acute Toxicities of Cd2+, Cr+6, Hg2+, Ni2+ and Zn2+ to Estuarine Macrofauna	Arch.Environ.Contam.Toxicol. 6(2/3):315-323	1977
1298	Mercury	Monhystera disjuncta	Nematode	Worms	EC50	DVP	GDVP	4	d	T	2300	SW	Vranken, G., C. Tire, and C. Heip	The Toxicity of Paired Metal Mixtures to the Nematode Monhystera disjuncta (Bastian, 1865)	Mar.Environ.Res. 26(3):161-179	1988
1299	Mercury chloride (HgCl2)	Palaemon elegans	Rockpool Prawn	Crustaceans	LC50	MOR	MORT	2	d	T	2400	SW	Lorenzon, S., M. Francese, and E.A. Ferrero	Heavy Metal Toxicity and Differential Effects on the Hyperglycemic Stress Response in the Shrimp Palaemon elegans	Arch.Environ.Contam.Toxicol. 39(2):167-176	2000
1300	Chloromethylmercury	Palaemonetes pugio	Daggerblade Grass Shrimp	Crustaceans	LC50	MOR	MORT	4	d	T	2420	SW	Kraus, M.L., and D.B. Kraus	Differences in the Effects of Mercury on Predator Avoidance in Two Populations of the Grass Shrimp Palaemonetes pugio	Mar.Environ.Res. 18(4):277-289	1986
1301	Chloromethylmercury	Palaemonetes pugio	Daggerblade Grass Shrimp	Crustaceans	LC50	MOR	MORT	4	d	T	2490	SW	Kraus, M.L., and D.B. Kraus	Differences in the Effects of Mercury on Predator Avoidance in Two Populations of the Grass Shrimp Palaemonetes pugio	Mar.Environ.Res. 18(4):277-289	1986
1302	Mercury chloride (HgCl2)	Monhystera disjuncta	Nematode	Worms	EC50	ITX	IMBL	4	d	T	2500	SW	Vranken, G., R. Vanderhaeghen, and C. Heip	Effects of Pollutants on Life-History Parameters of the Marine Nematode Monhystera disjuncta	ICES J.Mar.Sci. 48:325-334	1991
1303	Mercury chloride (HgCl2)	Monhystera disjuncta	Nematode	Worms	LOEC	DVP	GDVP	4	d	T	2500	SW	Vranken, G., R. Vanderhaeghen, and C. Heip	Effects of Pollutants on Life-History Parameters of the Marine Nematode Monhystera disjuncta	ICES J.Mar.Sci. 48:325-334	1991
1304	Mercury chloride (HgCl2)	Monhystera disjuncta	Nematode	Worms	LOEC	MOR	MORT	4	d	T	2500	SW	Vranken, G., R. Vanderhaeghen, and C. Heip	Effects of Pollutants on Life-History Parameters of the Marine Nematode Monhystera disjuncta	ICES J.Mar.Sci. 48:325-334	1991
1305	Mercury chloride (HgCl2)	Monhystera disjuncta	Nematode	Worms	LOEC	REP	GREP	4	d	T	2500	SW	Vranken, G., R. Vanderhaeghen, and C. Heip	Effects of Pollutants on Life-History Parameters of the Marine Nematode Monhystera disjuncta	ICES J.Mar.Sci. 48:325-334	1991
1306	Mercury chloride (HgCl2)	Palaemonetes pugio	Daggerblade Grass Shrimp	Crustaceans	LC50	MOR	MORT	4	d	T	2600	SW	Kraus, M.L., and D.B. Kraus	Differences in the Effects of Mercury on Predator Avoidance in Two Populations of the Grass Shrimp Palaemonetes pugio	Mar.Environ.Res. 18(4):277-289	1986
1307	Mercury chloride (HgCl2)	Balanus balanoides	Common Barnacle	Crustaceans	LC50*	MOR	MORT	0.25	d	T	2700	SW	Pyefinch, K.A., and J.C. Mott	The Sensitivity of Barnacles and Their Larvae to Copper and Mercury	J.Exp.Biol. 25(3):276-298	1948
1308	Mercury chloride (HgCl2)	Balanus balanoides	Common Barnacle	Crustaceans	LC50*	MOR	MORT	0.25	d	T	2700	SW	Pyefinch, K.A., and J.C. Mott	The Sensitivity of Barnacles and Their Larvae to Copper and Mercury	J.Exp.Biol. 25(3):276-298	1948
1309	Mercury chloride (HgCl2)	Balanus balanoides	Common Barnacle	Crustaceans	LC50*	MOR	MORT	0.25	d	T	3000	SW	Pyefinch, K.A., and J.C. Mott	The Sensitivity of Barnacles and Their Larvae to Copper and Mercury	J.Exp.Biol. 25(3):276-298	1948
1310	Mercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	1	d	T	3100	SW	Hori, H., M. Tateishi, K. Takayanagi, and H. Yamada	Applicability of Artificial Seawater as a Rearing Seawater for Toxicity Tests of Hazardous Chemicals by Marine Fish Species	Bull.Jpn.Soc.Sci.Fish. (4):614-622 (JPN) (ENG ABS)	1996
1311	Mercury chloride (HgCl2)	Nereis virens	Polychaete Worm	Worms	LC50	MOR	MORT	1	d	T	3100	SW	Eisler, R., and R.J. Hennekey	Acute Toxicities of Cd2+, Cr+6, Hg2+, Ni2+ and Zn2+ to Estuarine Macrofauna	Arch.Environ.Contam.Toxicol. 6(2/3):315-323	1977
1312	Mercury chloride (HgCl2)	Plumaria elegans	Red Algae	Algae, Moss, Fungi	LD50	MOR	MORT	0.75	d	T	3120	SW	Boney, A.D., E.D.S. Corner, and B.W.P. Sparrow	The Effects of Various Poisons on the Growth and Viability of Sporelings of the Red Alga Plumaria elegans (Bonnem.) Schm.	Biochem. Pharmacol.2(): 37-49	1959
1313	Mercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	1	d	T	3200	SW	Hori, H., M. Tateishi, K. Takayanagi, and H. Yamada	Applicability of Artificial Seawater as a Rearing Seawater for Toxicity Tests of Hazardous Chemicals by Marine Fish Species	Bull.Jpn.Soc.Sci.Fish. (4):614-622 (JPN) (ENG ABS)	1996
1314	Mercury	Platichthys flesus ssp. flesus	Starry Flounder	Fish	LC50	MOR	MORT	2	d	T	3300	SW	Portmann, J.E.	Results of Acute Toxicity Tests with Marine Organisms, Using a Standard Method	In: M.Ruivo (Ed.), Marine Pollution and Sea Life, FAO, Rome, Italy / Fishing News (Books) Ltd., London, England :212-217 (Author Communication Used)	1972
1315	Mercury	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	1	d	T	3400	SW	Hori, H., M. Tateishi, K. Takayanagi, and H. Yamada	Applicability of Artificial Seawater as a Rearing Seawater for Toxicity Tests of Hazardous Chemicals by Marine Fish Species	Bull.Jpn.Soc.Sci.Fish. (4):614-622 (JPN) (ENG ABS)	1996
1316	Mercury chloride (HgCl2)	Palaemon elegans	Rockpool Prawn	Crustaceans	LC50	MOR	MORT	2	d	T	3540	SW	Lorenzon, S., M. Francese, and E.A. Ferrero	Heavy Metal Toxicity and Differential Effects on the Hyperglycemic Stress Response in the Shrimp Palaemon elegans	Arch.Environ.Contam.Toxicol. 39(2):167-176	2000
1317	Mercury chloride (HgCl2)	Ostrea edulis	Flat, Native European Oyster	Molluscs	LC50	MOR	MORT	2	d	T	4200	SW	Connor, P.M.	Acute Toxicity of Heavy Metals to Some Marine Larvae	Mar.Pollut.Bull. 3(12):190-192	1972

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
1318	Mercury chloride (HgCl2)	Balanus balanoides	Common Barnacle	Crustaceans	LC50*	MOR	MORT	0.25	d	T	4700	SW	Pyefinch, K.A., and J.C. Mott	The Sensitivity of Barnacles and Their Larvae to Copper and Mercury	J.Exp.Biol. 25(3):276-298	1948
1319	Mercury chloride (HgCl2)	Antithamnion plumula	Red Algae	Algae, Moss, Fungi	LD50	MOR	MORT	0.021	d	T	5000	SW	Boney, A.D., and E.D.S. Corner	Application of Toxic Agents in the Study of the Ecological Resistance of Intertidal Red Algae	J. Mar. Biol. Assoc. U. K.38(): 267-275	1959
1320	Mercury chloride (HgCl2)	Mya arenaria	Sand Gaper, Soft Shell Clam	Molluscs	LC50	MOR	MORT	1	d	T	5200	SW	Eisler, R., and R.J. Hennekey	Acute Toxicities of Cd2+, Cr+6, Hg2+, Ni2+ and Zn2+ to Estuarine Macrofauna	Arch.Environ.Contam.Toxicol. 6(2/3):315-323	1977
1321	Mercury chloride (HgCl2)	Artemia sp.	Brine Shrimp	Crustaceans	LD50	MOR	MORT	1	d	T	5340	SW	Trieff, N.M.	Toxicity of Heavy Metals, Oils and Other Organics on Artemia	In: G.Persoone, P.Sorgeloos, O.Roels, and E.Jaspers (Eds.), The Brine Shrimp Artemia, Volume 1, Universa Press, Belgium :253-262	1980
1322	Mercury chloride (HgCl2)	Monhystera disjuncta	Nematode	Worms	LC50	MOR	MORT	4	d	T	5600	SW	Vranken, G., R. Vanderhaeghen, and C. Heip	Effects of Pollutants on Life-History Parameters of the Marine Nematode Monhystera disjuncta	ICES J.Mar.Sci. 48:325-334	1991
1323	Mercury chloride (HgCl2)	Crangon crangon	Common Shrimp, Sand Shrimp	Crustaceans	LC50	MOR	MORT	2	d	T	5700	SW	Connor, P.M.	Acute Toxicity of Heavy Metals to Some Marine Larvae	Mar.Pollut.Bull. 3(12):190-192	1972
1324	Mercury chloride (HgCl2)	Scylla serrata	Crab	Crustaceans	LC50	MOR	MORT	4	d	T	5880	SW	Nagabhushanam, R., K. Sambasivarao, and R. Sarojini	Acute Toxicity of Three Heavy Metals to Marine Edible Crab, Scylla serrata	J.Adv.Zool. 7(2):97-99	1986
1325	Mercury chloride (HgCl2)	Plumaria elegans	Red Algae	Algae, Moss, Fungi	LD50	MOR	MORT	0.021	d	T	6500	SW	Boney, A.D., and E.D.S. Corner	Application of Toxic Agents in the Study of the Ecological Resistance of Intertidal Red Algae	J. Mar. Biol. Assoc. U. K.38(): 267-275	1959
1326	Mercury chloride (HgCl2)	Palaemon elegans	Rockpool Prawn	Crustaceans	LC50	MOR	MORT	1	d	T	6650	SW	Lorenzon, S., M. Francese, and E.A. Ferrero	Heavy Metal Toxicity and Differential Effects on the Hyperglycemic Stress Response in the Shrimp Palaemon elegans	Arch.Environ.Contam.Toxicol. 39(2):167-176	2000
1327	Mercury chloride (HgCl2)	Scylla serrata	Crab	Crustaceans	LC50	MOR	MORT	3	d	T	7940	SW	Nagabhushanam, R., K. Sambasivarao, and R. Sarojini	Acute Toxicity of Three Heavy Metals to Marine Edible Crab, Scylla serrata	J.Adv.Zool. 7(2):97-99	1986
1328	Mercury chloride (HgCl2)	Rangia cuneata	Common Rangia Or Clam	Molluscs	LC50*	MOR	MORT	4	d	T	8700	SW	Olson, K.R., and R.C. Harrel	Effect of Salinity on Acute Toxicity of Mercury, Copper, and Chromium for Rangia cuneata (Pelecypoda, Mactridae)	Contrib.Mar.Sci. 17:9-13	1973
1329	Mercury chloride (HgCl2)	Plumaria elegans	Red Algae	Algae, Moss, Fungi	LD50	MOR	MORT	0.021	d	T	9000	SW	Boney, A.D., and E.D.S. Corner	Application of Toxic Agents in the Study of the Ecological Resistance of Intertidal Red Algae	J. Mar. Biol. Assoc. U. K.38(): 267-275	1959
1330	Mercury chloride (HgCl2)	Rangia cuneata	Common Rangia Or Clam	Molluscs	LC50*	MOR	MORT	3	d	T	9500	SW	Olson, K.R., and R.C. Harrel	Effect of Salinity on Acute Toxicity of Mercury, Copper, and Chromium for Rangia cuneata (Pelecypoda, Mactridae)	Contrib.Mar.Sci. 17:9-13	1973
1331	Mercury chloride (HgCl2)	Palaemon elegans	Rockpool Prawn	Crustaceans	LC50	MOR	MORT	1	d	T	9540	SW	Lorenzon, S., M. Francese, and E.A. Ferrero	Heavy Metal Toxicity and Differential Effects on the Hyperglycemic Stress Response in the Shrimp Palaemon elegans	Arch.Environ.Contam.Toxicol. 39(2):167-176	2000
1332	Mercury	Cerastoderma edule	Cockle	Molluscs	LC50*	MOR	MORT	2	d	T	9600	SW	Portmann, J.E.	Progress Report on a Programme of Insecticide Analysis and Toxicity-Testing in Relation to the Marine Environment	Helgol.Wiss.Meeresunters. 17:247-256 (Author Communication Used)	1968
1333	Mercury chloride (HgCl2)	Scylla serrata	Crab	Crustaceans	LC50	MOR	MORT	2	d	T	9970	SW	Nagabhushanam, R., K. Sambasivarao, and R. Sarojini	Acute Toxicity of Three Heavy Metals to Marine Edible Crab, Scylla serrata	J.Adv.Zool. 7(2):97-99	1986
1334	Mercury chloride (HgCl2)	Tachypleus tridentatus	Horseshoe Crab	Miscellaneous	NR-LETH	MOR	MORT	1	d	T	10000	SW	Itow, T., R.E. Loveland, and M.L. Botton	Developmental Abnormalities in Horseshoe Crab Embryos Caused by Exposure to Heavy Metals	Arch.Environ.Contam.Toxicol. 35(1):33-40	1998
1335	Mercury chloride (HgCl2)	Rangia cuneata	Common Rangia Or Clam	Molluscs	LC50*	MOR	MORT	4	d	T	10000	SW	Olson, K.R., and R.C. Harrel	Effect of Salinity on Acute Toxicity of Mercury, Copper, and Chromium for Rangia cuneata (Pelecypoda, Mactridae)	Contrib.Mar.Sci. 17:9-13	1973
1336	Mercury chloride (HgCl2)	Congeria leucophaeta	False Mussel	Molluscs	NR-LETH	MOR	MORT	2	d	T	10000	SW	Dorn, P.	The Effects of Mercuric Chloride upon Respiration in Congeria leucophaeata	Bull.Environ.Contam.Toxicol. 12(1):86-91	1974
1337	Mercury chloride (HgCl2)	Ostrea edulis	Flat, Native European Oyster	Molluscs	LC50	MOR	MORT	1	d	T	10300	SW	Wrench, J.J.	Biochemical Aspects of the Uptake of Mercury and Selenium by the Native British Oyster (Ostrea edulis)	Ph.D.Thesis, Univ.of Southampton, Southampton, U.K :114 p.	1977
1338	Mercury chloride (HgCl2)	Scylla serrata	Crab	Crustaceans	LC50	MOR	MORT	1	d	T	12790	SW	Nagabhushanam, R., K. Sambasivarao, and R. Sarojini	Acute Toxicity of Three Heavy Metals to Marine Edible Crab, Scylla serrata	J.Adv.Zool. 7(2):97-99	1986
1339	Mercuric acetate	Limulus polyphemus	Horseshoe Crab	Miscellaneous	LC50	MOR	MORT	1	d	T	12800	SW	Botton, M.L.	Toxicity of Cadmium and Mercury to Horseshoe Crab (Limulus polyphemus) Embryos and Larvae	Bull.Environ.Contam.Toxicol. 64(1):137-143	2000
1340	Mercury	Cerastoderma edule	Cockle	Molluscs	LC50*	MOR	MORT	2	d	T	15500	SW	Portmann, J.E.	Progress Report on a Programme of Insecticide Analysis and Toxicity-Testing in Relation to the Marine Environment	Helgol.Wiss.Meeresunters. 17:247-256 (Author Communication Used)	1968
1341	Mercury chloride (HgCl2)	Rangia cuneata	Common Rangia Or Clam	Molluscs	LC50*	MOR	MORT	2	d	T	17000	SW	Olson, K.R., and R.C. Harrel	Effect of Salinity on Acute Toxicity of Mercury, Copper, and Chromium for Rangia cuneata (Pelecypoda, Mactridae)	Contrib.Mar.Sci. 17:9-13	1973
1342	Mercury chloride (HgCl2)	Rangia cuneata	Common Rangia Or Clam	Molluscs	LC50*	MOR	MORT	3	d	T	20000	SW	Olson, K.R., and R.C. Harrel	Effect of Salinity on Acute Toxicity of Mercury, Copper, and Chromium for Rangia cuneata (Pelecypoda, Mactridae)	Contrib.Mar.Sci. 17:9-13	1973
1343	Mercury chloride (HgCl2)	Fundulus heteroclitus	Mummichog	Fish	LC50	MOR	MORT	1	d	T	23000	SW	Eisler, R., and R.J. Hennekey	Acute Toxicities of Cd2+, Cr+6, Hg2+, Ni2+ and Zn2+ to Estuarine Macrofauna	Arch.Environ.Contam.Toxicol. 6(2/3):315-323	1977
1344	Mercury chloride (HgCl2)	Enhalus acoroides	Seagrass	Flowers, Trees, Shrubs, Ferns	LOEC	GRO	LGTH	10	d	T	26430	SW	Bonifacio, R.S., and M.N.E. Montano	Inhibitory Effects of Mercury and Cadmium on Seed Germination of Enhalus acoroides (L.f.) Royle	Bull. Environ. Contam. Toxicol.60(): 45-51	1998
1345	Mercury chloride (HgCl2)	Enhalus acoroides	Seagrass	Flowers, Trees, Shrubs, Ferns	ED50	GRO	LGTH	10	d	T	31680	SW	Bonifacio, R.S., and M.N.E. Montano	Inhibitory Effects of Mercury and Cadmium on Seed Germination of Enhalus acoroides (L.f.) Royle	Bull. Environ. Contam. Toxicol.60(): 45-51	1998
1346	Mercury chloride (HgCl2)	Nassarius obsoletus	Eastern Mud Snail	Molluscs	LC50	MOR	MORT	1	d	T	32000	SW	Eisler, R., and R.J. Hennekey	Acute Toxicities of Cd2+, Cr+6, Hg2+, Ni2+ and Zn2+ to Estuarine Macrofauna	Arch.Environ.Contam.Toxicol. 6(2/3):315-323	1977

Appendix D-9, Table 5. ECOTOX effects values for mercury in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
1347	Mercury chloride (HgCl2)	Nassarius obsoletus	Eastern Mud Snail	Molluscs	LC50	MOR	MORT	4	d	T	32000	SW	Eisler, R., and R.J. Hennekey	Acute Toxicities of Cd2+, Cr+6, Hg2+, Ni2+ and Zn2+ to Estuarine Macrofauna	Arch.Environ.Contam.Toxicol. 6(2/3):315-323	1977
1348	Mercury chloride (HgCl2)	Rangia cuneata	Common Rangia Or Clam	Molluscs	LC50*	MOR	MORT	2	d	T	40000	SW	Olson, K.R., and R.C. Harrel	Effect of Salinity on Acute Toxicity of Mercury, Copper, and Chromium for Rangia cuneata (Pelecypoda, Mactridae)	Contrib.Mar.Sci. 17:9-13	1973
1349	Mercuric acetate	Limulus polyphemus	Horseshoe Crab	Miscellaneous	LC50	MOR	MORT	1	d	T	56000	SW	Botton, M.L.	Toxicity of Cadmium and Mercury to Horseshoe Crab (Limulus polyphemus) Embryos and Larvae	Bull.Environ.Contam.Toxicol. 64(1):137-143	2000
1350	Mercuric acetate	Limulus polyphemus	Horseshoe Crab	Miscellaneous	NR-LETH	MOR	MORT	1	d	T	100000	SW	Itow, T., R.E. Loveland, and M.L. Botton	Developmental Abnormalities in Horseshoe Crab Embryos Caused by Exposure to Heavy Metals	Arch.Environ.Contam.Toxicol. 35(1):33-40	1998
1351	Mercuric nitrate	Dinophilus gyrociliatus	Archiannelid	Worms	EC50*	ITX	IMBL	2	d	T	100	SW	Roed, K.H.	The Effects of Interacting Salinity, Cadmium, and Mercury on Population Growth of an Archiannelid, Dinophilus gyrociliatus	Sarsia 64(4):245-252	1979
1352	Mercury chloride (HgCl2)	Palaemonetes vulgaris	Marsh Grass Shrimp	Crustaceans	LC50*	MOR	MORT	2	d	T	11.5	SW	Shealy, M.H.J., and P.A. Sandifer	Effects of Mercury on Survival and Development of the Larval Grass Shrimp Palaemonete vulgaris	Mar.Biol.(Berlin) 33(1):7-16	1975
1353	Mercury chloride (HgCl2)	Palaemonetes vulgaris	Marsh Grass Shrimp	Crustaceans	NR-LETH	MOR	MORT	1	d	T	133	SW	Shealy, M.H.J., and P.A. Sandifer	Effects of Mercury on Survival and Development of the Larval Grass Shrimp Palaemonete vulgaris	Mar.Biol.(Berlin) 33(1):7-16	1975
1354	Mercury chloride (HgCl2)	Cancer magister	Dungeness Or Edible Crab	Crustaceans	LC50	MOR	MORT	2	d	T	15.6	SW	Glickstein, N.	Acute Toxicity of Mercury and Selenium to Crassostrea gigas Embryos and Cancer magister Larvae	Mar.Biol.(Berlin) 49(2):113-117	1978
1355	Chloromethylmercury	Fundulus heteroclitus	Mummichog	Fish	LC50	MOR	MORT	4	d	T	150	SW	Khan, A.T., and J.S. Weis	Effect of Methylmercury on Egg and Juvenile Viability in Two Populations of Killifish Fundulus heteroclitus	Environ.Res. 44:272-278	1987
1356	Mercury chloride (HgCl2)	Fundulus heteroclitus	Mummichog	Fish	LC50*	MOR	MORT	4	d	T	1500	SW	Klaunig, J., S. Koepp, and M. McCormick	Acute Toxicity of a Native Mummichog Population (Fundulus heteroclitus) to Mercury	Bull.Environ.Contam.Toxicol. 14(5):534-536	1975
1357	Mercuric nitrate	Crassostrea gigas	Pacific Oyster	Molluscs	EC50	DVP	GDVP	2	d	T	3.2	SW	Glickstein, N.	Acute Toxicity of Mercury and Selenium to Crassostrea gigas Embryos and Cancer magister Larvae	Mar.Biol.(Berlin) 49(2):113-117	1978
1358	Mercuric acetate	Palaemonetes pugio	Daggerblade Grass Shrimp	Crustaceans	LC50	MOR	MORT	4	d	T	38	SW	Curtis, M.W., T.L. Copeland, and C.H. Ward	Acute Toxicity of 12 Industrial Chemicals to Freshwater and Saltwater Organisms	Water Res. 13(2):137-141	1979
1359	Mercury chloride (HgCl2)	Crassostrea gigas	Pacific Oyster	Molluscs	EC50	DVP	GDVP	2	d	T	4.2	SW	Glickstein, N.	Acute Toxicity of Mercury and Selenium to Crassostrea gigas Embryos and Cancer magister Larvae	Mar.Biol.(Berlin) 49(2):113-117	1978
1360	Mercury chloride (HgCl2)	Cancer magister	Dungeness Or Edible Crab	Crustaceans	LC50	MOR	MORT	4	d	T	4.9	SW	Glickstein, N.	Acute Toxicity of Mercury and Selenium to Crassostrea gigas Embryos and Cancer magister Larvae	Mar.Biol.(Berlin) 49(2):113-117	1978
1361	Mercuric acetate	Palaemonetes pugio	Daggerblade Grass Shrimp	Crustaceans	LC50	MOR	MORT	4	d	T	40	SW	Curtis, M.W., and C.H. Ward	Aquatic Toxicity of Forty Industrial Chemicals: Testing in Support of Hazardous Substance Spill Prevention Regulation	J.Hydrol. 51:359-367(Author Communication Used)	1981
1362	Mercuric acetate	Balanus eburneus	Barnacle	Crustaceans	LC50*	MOR	MORT	3	d	T	490	SW	Taneeva, A.I.	Toxicity of Some Heavy Metals for Hydrobionts	In: V.N.Greze (Ed.), Proc.Mater.Vses.Simp.Izuch.Chern.Sredizemnogo Morei, Ispol'Z Okhr.Ikh.Resur.Kiev, USSR Ser.4 :114-117 (RUS)	1973
1363	Chloromethylmercury	Fundulus heteroclitus	Mummichog	Fish	LC50	MOR	MORT	0.014	d	T	560	SW	Khan, A.T., and J.S. Weis	Effect of Methylmercury on Egg and Juvenile Viability in Two Populations of Killifish Fundulus heteroclitus	Environ.Res. 44:272-278	1987
1364	Mercuric acetate	Artemia salina	Brine Shrimp	Crustaceans	LC50*	MOR	MORT	3	d	T	570	SW	Taneeva, A.I.	Toxicity of Some Heavy Metals for Hydrobionts	In: V.N.Greze (Ed.), Proc.Mater.Vses.Simp.Izuch.Chern.Sredizemnogo Morei, Ispol'Z Okhr.Ikh.Resur.Kiev, USSR Ser.4 :114-117 (RUS)	1973
1365	Mercuric acetate	Mytilus galloprovincialis	Mediterranean Mussel	Molluscs	LC50*	MOR	MORT	3	d	T	630	SW	Taneeva, A.I.	Toxicity of Some Heavy Metals for Hydrobionts	In: V.N.Greze (Ed.), Proc.Mater.Vses.Simp.Izuch.Chern.Sredizemnogo Morei, Ispol'Z Okhr.Ikh.Resur.Kiev, USSR Ser.4 :114-117 (RUS)	1973
1366	Mercury chloride (HgCl2)	Palaemonetes vulgaris	Marsh Grass Shrimp	Crustaceans	LC50*	MOR	MORT	2	d	T	7.39	SW	Shealy, M.H.J., and P.A. Sandifer	Effects of Mercury on Survival and Development of the Larval Grass Shrimp Palaemonete vulgaris	Mar.Biol.(Berlin) 33(1):7-16	1975

Appendix D-9, Table 6. ECOTOX effects values for zinc in marine and fresh waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
1	Zinc	Microcystis aeruginosa	Blue-Green Algae	Algae, Moss, Fungi	LOEL	BCM	NR	NR	d	D	0.654	FW	Gouvea, S.P., G.L. Boyer, and M.R. Twiss	Influence of Ultraviolet Radiation, Copper, and Zinc on Microcystin Content in Microcystis aeruginosa (Cyanobacteria)	Harmful Algae7(2): 194-205	2008
2	Zinc	Microcystis aeruginosa	Blue-Green Algae	Algae, Moss, Fungi	LOEL	BCM	NR	NR	d	D	0.654	FW	Gouvea, S.P., G.L. Boyer, and M.R. Twiss	Influence of Ultraviolet Radiation, Copper, and Zinc on Microcystin Content in Microcystis aeruginosa (Cyanobacteria)	Harmful Algae7(2): 194-205	2008
3	Zinc	Microcystis aeruginosa	Blue-Green Algae	Algae, Moss, Fungi	LOEL	BCM	NR	NR	d	D	0.654	FW	Gouvea, S.P., G.L. Boyer, and M.R. Twiss	Influence of Ultraviolet Radiation, Copper, and Zinc on Microcystin Content in Microcystis aeruginosa (Cyanobacteria)	Harmful Algae7(2): 194-205	2008
4	Zinc	Microcystis aeruginosa	Blue-Green Algae	Algae, Moss, Fungi	LOEL	PHY	NR	NR	d	D	0.654	FW	Gouvea, S.P., G.L. Boyer, and M.R. Twiss	Influence of Ultraviolet Radiation, Copper, and Zinc on Microcystin Content in Microcystis aeruginosa (Cyanobacteria)	Harmful Algae7(2): 194-205	2008
5	Zinc	Microcystis aeruginosa	Blue-Green Algae	Algae, Moss, Fungi	LOEL	PHY	NR	NR	d	D	0.654	FW	Gouvea, S.P., G.L. Boyer, and M.R. Twiss	Influence of Ultraviolet Radiation, Copper, and Zinc on Microcystin Content in Microcystis aeruginosa (Cyanobacteria)	Harmful Algae7(2): 194-205	2008
6	Zinc	Microcystis aeruginosa	Blue-Green Algae	Algae, Moss, Fungi	LOEL	PHY	NR	NR	d	D	0.654	FW	Gouvea, S.P., G.L. Boyer, and M.R. Twiss	Influence of Ultraviolet Radiation, Copper, and Zinc on Microcystin Content in Microcystis aeruginosa (Cyanobacteria)	Harmful Algae7(2): 194-205	2008
7	Zinc	Microcystis aeruginosa	Blue-Green Algae	Algae, Moss, Fungi	LOEL	PHY	NR	NR	d	D	0.654	FW	Gouvea, S.P., G.L. Boyer, and M.R. Twiss	Influence of Ultraviolet Radiation, Copper, and Zinc on Microcystin Content in Microcystis aeruginosa (Cyanobacteria)	Harmful Algae7(2): 194-205	2008
8	Zinc	Microcystis aeruginosa	Blue-Green Algae	Algae, Moss, Fungi	LOEL	POP	NR	NR	d	D	0.654	FW	Gouvea, S.P., G.L. Boyer, and M.R. Twiss	Influence of Ultraviolet Radiation, Copper, and Zinc on Microcystin Content in Microcystis aeruginosa (Cyanobacteria)	Harmful Algae7(2): 194-205	2008
9	Zinc	Microcystis aeruginosa	Blue-Green Algae	Algae, Moss, Fungi	LOEL	POP	NR	NR	d	D	0.654	FW	Gouvea, S.P., G.L. Boyer, and M.R. Twiss	Influence of Ultraviolet Radiation, Copper, and Zinc on Microcystin Content in Microcystis aeruginosa (Cyanobacteria)	Harmful Algae7(2): 194-205	2008
10	Zinc	Microcystis aeruginosa	Blue-Green Algae	Algae, Moss, Fungi	LOEL	POP	NR	NR	d	D	0.654	FW	Gouvea, S.P., G.L. Boyer, and M.R. Twiss	Influence of Ultraviolet Radiation, Copper, and Zinc on Microcystin Content in Microcystis aeruginosa (Cyanobacteria)	Harmful Algae7(2): 194-205	2008
11	Sulfuric acid, Zinc salt (1:1)	Aquatic community	Aquatic Community	Miscellaneous	LOEC	BCM	PPHT	28	d	D	4.2	FW	Katiyar, S.K.	Effects of Zinc on Freshwater Microbial Communities of River Yamuna Around Delhi	Proc.Natl.Acad.Sci.India Sect.B (Biol.Sci.) 67(1):67-72	1997
12	Sulfuric acid, Zinc salt (1:1)	Aquatic community	Aquatic Community	Miscellaneous	LOEC	POP	DBMS	28	d	D	4.2	FW	Katiyar, S.K.	Effects of Zinc on Freshwater Microbial Communities of River Yamuna Around Delhi	Proc.Natl.Acad.Sci.India Sect.B (Biol.Sci.) 67(1):67-72	1997
13	Sulfuric acid, Zinc salt (1:1)	Aquatic community	Aquatic Community	Miscellaneous	LOEC	BCM	WO	28	d	D	4.2	FW	Katiyar, S.K.	Effects of Zinc on Freshwater Microbial Communities of River Yamuna Around Delhi	Proc.Natl.Acad.Sci.India Sect. B (Biol.Sci.)67(1): 67-72	1997
14	Sulfuric acid, Zinc salt (1:1)	Aquatic community	Aquatic Community	Miscellaneous	LOEC	POP	NR	28	d	D	4.2	FW	Katiyar, S.K.	Effects of Zinc on Freshwater Microbial Communities of River Yamuna Around Delhi	Proc.Natl.Acad.Sci.India Sect. B (Biol.Sci.)67(1): 67-72	1997
15	Sulfuric acid, Zinc salt (1:1)	Chlorella sp.	Green Algae	Algae, Moss, Fungi	LOEL	POP	NR	2	d	D	5.9	FW	Wilde, K.L., J.L. Stauber, S.J. Markich, N.M. Franklin, and P.L. Brown	The Effect of pH on the Uptake and Toxicity of Copper and Zinc in a Tropical Freshwater Alga (Chlorella sp.)	Arch. Environ. Contam. Toxicol.51(2): 174-185	2006
16	Sulfuric acid, Zinc salt (1:1)	Aquatic community	Aquatic Community	Miscellaneous	LOEC	POP	BMAS	28	d	D	10.7	FW	Katiyar, S.K.	Effects of Zinc on Freshwater Microbial Communities of River Yamuna Around Delhi	Proc.Natl.Acad.Sci.India Sect.B (Biol.Sci.) 67(1):67-72	1997
17	Sulfuric acid, Zinc salt (1:1)	Aquatic community	Aquatic Community	Miscellaneous	LOEC	POP	NR	28	d	D	10.7	FW	Katiyar, S.K.	Effects of Zinc on Freshwater Microbial Communities of River Yamuna Around Delhi	Proc.Natl.Acad.Sci.India Sect. B (Biol.Sci.)67(1): 67-72	1997
18	Sulfuric acid, Zinc salt (1:1)	Chlorella sp.	Green Algae	Algae, Moss, Fungi	LOEL	POP	NR	2	d	D	16	FW	Wilde, K.L., J.L. Stauber, S.J. Markich, N.M. Franklin, and P.L. Brown	The Effect of pH on the Uptake and Toxicity of Copper and Zinc in a Tropical Freshwater Alga (Chlorella sp.)	Arch. Environ. Contam. Toxicol.51(2): 174-185	2006
19	Zinc	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	LOEL	ACC	WO	2.667	d	D	23	FW	De Schamphelaere, K.A.C., M. Canli, V. Van Lierde, I. Forrez, F. Vanhaecke, and C.R. Janssen	Reproductive Toxicity of Dietary Zinc to Daphnia magna	Aquat. Toxicol.70(3): 233-244	2004
20	Zinc	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	NR	3	d	D	27.3	FW	De Schamphelaere, K.A.C., S. Lofts, and C.R. Janssen	Bioavailability Models for Predicting Acute and Chronic Toxicity of Zinc to Algae, Daphnids, and Fish in Natural Surface Waters	Environ. Toxicol. Chem.24(5): 1190-1197	2005
21	Sulfuric acid, Zinc salt (1:1)	Aquatic community	Aquatic Community	Miscellaneous	LOEC	ENZ	ALPH	28	d	D	29.8	FW	Katiyar, S.K.	Effects of Zinc on Freshwater Microbial Communities of River Yamuna Around Delhi	Proc.Natl.Acad.Sci.India Sect.B (Biol.Sci.) 67(1):67-72	1997
22	Sulfuric acid, Zinc salt (1:1)	Aquatic community	Aquatic Community	Miscellaneous	LOEC	ENZ	WO	28	d	D	29.8	FW	Katiyar, S.K.	Effects of Zinc on Freshwater Microbial Communities of River Yamuna Around Delhi	Proc.Natl.Acad.Sci.India Sect. B (Biol.Sci.)67(1): 67-72	1997
23	Sulfuric acid, Zinc salt (1:1)	Cottus bairdi	Mottled Sculpin	Fish	LC50	MOR	MORT	21	d	D	32	FW	Woodling, J., S. Brinkman, and S. Albeke	Acute and Chronic Toxicity of Zinc to the Mottled Sculpin Cottus bairdi	Environ.Toxicol.Chem. 21(9):1922-1926	2002
24	Sulfuric acid, Zinc salt (1:1)	Cottus bairdi	Mottled Sculpin	Fish	LC50	MOR	MORT	30	d	D	32	FW	Woodling, J., S. Brinkman, and S. Albeke	Acute and Chronic Toxicity of Zinc to the Mottled Sculpin Cottus bairdi	Environ.Toxicol.Chem. 21(9):1922-1926	2002
25	Sulfuric acid, Zinc salt (1:1)	Cottus bairdi	Mottled Sculpin	Fish	LC50	MOR	MORT	13	d	D	33	FW	Woodling, J., S. Brinkman, and S. Albeke	Acute and Chronic Toxicity of Zinc to the Mottled Sculpin Cottus bairdi	Environ.Toxicol.Chem. 21(9):1922-1926	2002
26	Zinc chloride (ZnCl2)	Chlorella vulgaris	Green Algae	Algae, Moss, Fungi	EC50	POP	NR	3	d	D	34	FW	Muyssen, B.T.A., and C.R. Janssen	Zinc Acclimation and Its Effect on the Zinc Tolerance of Raphidocelis subcapitata and Chlorella vulgaris in Laboratory Experiments	Chemosphere45(4-5): 507-514	2001
27	Sulfuric acid, Zinc salt (1:1)	Cottus bairdi	Mottled Sculpin	Fish	LC50	MOR	MORT	13	d	D	38	FW	Woodling, J., S. Brinkman, and S. Albeke	Acute and Chronic Toxicity of Zinc to the Mottled Sculpin Cottus bairdi	Environ.Toxicol.Chem. 21(9):1922-1926	2002

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
28	Sulfuric acid, Zinc salt (1:1)	Cottus bairdi	Mottled Sculpin	Fish	LC50	MOR	MORT	9	d	D	38	FW	Woodling, J., S. Brinkman, and S. Albeke	Acute and Chronic Toxicity of Zinc to the Mottled Sculpin Cottus bairdi	Environ.Toxicol.Chem. 21(9):1922-1926	2002
29	Sulfuric acid, Zinc salt (1:1)	Cottus bairdi	Mottled Sculpin	Fish	LC50	MOR	MORT	9	d	D	38	FW	Woodling, J., S. Brinkman, and S. Albeke	Acute and Chronic Toxicity of Zinc to the Mottled Sculpin Cottus bairdi	Environ.Toxicol.Chem. 21(9):1922-1926	2002
30	Zinc chloride (ZnCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	NR	3	d	D	39	FW	Muyssen, B.T.A., and C.R. Janssen	Zinc Acclimation and Its Effect on the Zinc Tolerance of Raphidocelis subcapitata and Chlorella vulgaris in Laboratory Experiments	Chemosphere45(4-5): 507-514	2001
31	Sulfuric acid, Zinc salt (1:1)	Cottus bairdi	Mottled Sculpin	Fish	LC50	MOR	MORT	8	d	D	41	FW	Woodling, J., S. Brinkman, and S. Albeke	Acute and Chronic Toxicity of Zinc to the Mottled Sculpin Cottus bairdi	Environ.Toxicol.Chem. 21(9):1922-1926	2002
32	Sulfuric acid, Zinc salt (1:1)	Cottus bairdi	Mottled Sculpin	Fish	LC50	MOR	MORT	8	d	D	42	FW	Woodling, J., S. Brinkman, and S. Albeke	Acute and Chronic Toxicity of Zinc to the Mottled Sculpin Cottus bairdi	Environ.Toxicol.Chem. 21(9):1922-1926	2002
33	Sulfuric acid, Zinc salt (1:1)	Cottus bairdi	Mottled Sculpin	Fish	LC50	MOR	MORT	7	d	D	45	FW	Woodling, J., S. Brinkman, and S. Albeke	Acute and Chronic Toxicity of Zinc to the Mottled Sculpin Cottus bairdi	Environ.Toxicol.Chem. 21(9):1922-1926	2002
34	Sulfuric acid, Zinc salt (1:1)	Cottus bairdi	Mottled Sculpin	Fish	LC50	MOR	MORT	7	d	D	48	FW	Woodling, J., S. Brinkman, and S. Albeke	Acute and Chronic Toxicity of Zinc to the Mottled Sculpin Cottus bairdi	Environ.Toxicol.Chem. 21(9):1922-1926	2002
35	Zinc	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	LOEC	POP	NR	3	d	D	52.6	FW	De Schamphelaere, K.A.C., S. Lofts, and C.R. Janssen	Bioavailability Models for Predicting Acute and Chronic Toxicity of Zinc to Algae, Daphnids, and Fish in Natural Surface Waters	Environ. Toxicol. Chem.24(5): 1190-1197	2005
36	Sulfuric acid, Zinc salt (1:1)	Cottus bairdi	Mottled Sculpin	Fish	LC50	MOR	MORT	6	d	D	57	FW	Woodling, J., S. Brinkman, and S. Albeke	Acute and Chronic Toxicity of Zinc to the Mottled Sculpin Cottus bairdi	Environ.Toxicol.Chem. 21(9):1922-1926	2002
37	Sulfuric acid, Zinc salt (1:1)	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	D	60	FW	Erten-Unal, M., B.G. Wixson, N. Gale, and J.L. Pitt	Evaluation of Toxicity, Bioavailability and Speciation of Lead, Zinc and Cadmium in Mine/Mill Wastewaters	Chem.Spec.Bioavail. 10(2):37-46	1998
38	Sulfuric acid, Zinc salt (1:1)	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	D	60	FW	Gale, N.L., B.G. Wixson, and M. Erten	An Evaluation of the Acute Toxicity of Lead, Zinc, and Cadmium in Missouri Ozark Groundwater	Trace Subst.Environ.Health 25:169-183	1992
39	Sulfuric acid, Zinc salt (1:1)	Cottus bairdi	Mottled Sculpin	Fish	LC50	MOR	MORT	6	d	D	62	FW	Woodling, J., S. Brinkman, and S. Albeke	Acute and Chronic Toxicity of Zinc to the Mottled Sculpin Cottus bairdi	Environ.Toxicol.Chem. 21(9):1922-1926	2002
40	Zinc	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	70	FW	Hyne, R.V., F. Pablo, M. Julli, and S.J. Markich	Influence of Water Chemistry on the Acute Toxicity of Copper and Zinc to the Cladoceran Ceriodaphnia cf dubia	Environ.Toxicol.Chem. 24(7):1667-1675	2005
41	Zinc	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	NR	3	d	D	78.5	FW	De Schamphelaere, K.A.C., S. Lofts, and C.R. Janssen	Bioavailability Models for Predicting Acute and Chronic Toxicity of Zinc to Algae, Daphnids, and Fish in Natural Surface Waters	Environ. Toxicol. Chem.24(5): 1190-1197	2005
42	Sulfuric acid, Zinc salt (1:1)	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	4	d	D	84	FW	Finlayson, B.J., and K.M. Verrue	Toxicities of Copper, Zinc, and Cadmium Mixtures to Juvenile Chinook Salmon	Trans.Am.Fish.Soc. 111(5):645-650	1982
43	Zinc chloride (ZnCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	EC10	MOR	SURV	69	d	D	88	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
44	Sulfuric acid, Zinc salt (1:1)	Scenedesmus quadricauda	Green Algae	Algae, Moss, Fungi	LOEC	PHY	WO	0.167	d	D	91.573	FW	Awasthi, M., and L.C. Rai	Toxicity of Nickel, Zinc, and Cadmium to Nitrate Uptake in Free and Immobilized Cells of Scenedesmus quadricauda	Ecotoxicol. Environ. Saf.61(2): 268-272	2005
45	Sulfuric acid, Zinc salt (1:1)	Scenedesmus quadricauda	Green Algae	Algae, Moss, Fungi	LOEC	PHY	WO	0.167	d	D	91.573	FW	Awasthi, M., and L.C. Rai	Toxicity of Nickel, Zinc, and Cadmium to Nitrate Uptake in Free and Immobilized Cells of Scenedesmus quadricauda	Ecotoxicol. Environ. Saf.61(2): 268-272	2005
46	Sulfuric acid, Zinc salt (1:1)	Cottus bairdi	Mottled Sculpin	Fish	LC50	MOR	MORT	5	d	D	92	FW	Woodling, J., S. Brinkman, and S. Albeke	Acute and Chronic Toxicity of Zinc to the Mottled Sculpin Cottus bairdi	Environ.Toxicol.Chem. 21(9):1922-1926	2002
47	Sulfuric acid, Zinc salt (1:1)	Chlorella sp.	Green Algae	Algae, Moss, Fungi	LOEL	POP	NR	2	d	D	93	FW	Wilde, K.L., J.L. Stauber, S.J. Markich, N.M. Franklin, and P.L. Brown	The Effect of pH on the Uptake and Toxicity of Copper and Zinc in a Tropical Freshwater Alga (Chlorella sp.)	Arch. Environ. Contam. Toxicol.51(2): 174-185	2006
48	Sulfuric acid, Zinc salt (1:1)	Cottus bairdi	Mottled Sculpin	Fish	LC50	MOR	MORT	5	d	D	94	FW	Woodling, J., S. Brinkman, and S. Albeke	Acute and Chronic Toxicity of Zinc to the Mottled Sculpin Cottus bairdi	Environ.Toxicol.Chem. 21(9):1922-1926	2002
49	Zinc oxide	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	98	FW	Gale, N.L., B.G. Wixson, and M. Erten	An Evaluation of the Acute Toxicity of Lead, Zinc, and Cadmium in Missouri Ozark Groundwater	Trace Subst.Environ.Health 25:169-183	1992
50	Sulfuric acid, Zinc salt (1:1)	Chlorella sp.	Green Algae	Algae, Moss, Fungi	LOEL	POP	NR	2	d	D	105	FW	Wilde, K.L., J.L. Stauber, S.J. Markich, N.M. Franklin, and P.L. Brown	The Effect of pH on the Uptake and Toxicity of Copper and Zinc in a Tropical Freshwater Alga (Chlorella sp.)	Arch. Environ. Contam. Toxicol.51(2): 174-185	2006
51	Zinc	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	NR	3	d	D	106	FW	De Schamphelaere, K.A.C., S. Lofts, and C.R. Janssen	Bioavailability Models for Predicting Acute and Chronic Toxicity of Zinc to Algae, Daphnids, and Fish in Natural Surface Waters	Environ. Toxicol. Chem.24(5): 1190-1197	2005
52	Zinc	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	NR	3	d	D	109	FW	De Schamphelaere, K.A.C., S. Lofts, and C.R. Janssen	Bioavailability Models for Predicting Acute and Chronic Toxicity of Zinc to Algae, Daphnids, and Fish in Natural Surface Waters	Environ. Toxicol. Chem.24(5): 1190-1197	2005
53	Zinc chloride (ZnCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LOEC	MOR	SURV	69	d	D	117	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
54	Zinc chloride (ZnCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	MATC	MOR	SURV	69	d	D	117	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
55	Zinc	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	NR	3	d	D	136	FW	De Schamphelaere, K.A.C., S. Lofts, and C.R. Janssen	Bioavailability Models for Predicting Acute and Chronic Toxicity of Zinc to Algae, Daphnids, and Fish in Natural Surface Waters	Environ. Toxicol. Chem.24(5): 1190-1197	2005

Appendix D-9, Table 6. ECOTOX effects values for zinc in marine and fresh waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
56	Zinc chloride (ZnCl2)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	NR	3	d	D	138	FW	Muyssen, B.T.A., and C.R. Janssen	Zinc Acclimation and Its Effect on the Zinc Tolerance of Raphidocelis subcapitata and Chlorella vulgaris in Laboratory Experiments	Chemosphere45(4-5): 507-514	2001
57	Zinc chloride (ZnCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	EC10	MOR	SURV	69	d	D	147	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
58	Zinc chloride (ZnCl2)	Chlorella vulgaris	Green Algae	Algae, Moss, Fungi	EC50	POP	NR	3	d	D	153	FW	Muyssen, B.T.A., and C.R. Janssen	Zinc Acclimation and Its Effect on the Zinc Tolerance of Raphidocelis subcapitata and Chlorella vulgaris in Laboratory Experiments	Chemosphere45(4-5): 507-514	2001
59	Zinc	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	155	FW	Hyne, R.V., F. Pablo, M. Julli, and S.J. Markich	Influence of Water Chemistry on the Acute Toxicity of Copper and Zinc to the Cladoceran Ceriodaphnia cf dubia	Environ.Toxicol.Chem. 24(7):1667-1675	2005
60	Sulfuric acid, Zinc salt (1:1)	Cottus bairdi	Mottled Sculpin	Fish	LC50	MOR	MORT	4	d	D	156	FW	Woodling, J., S. Brinkman, and S. Albeke	Acute and Chronic Toxicity of Zinc to the Mottled Sculpin Cottus bairdi	Environ.Toxicol.Chem. 21(9):1922-1926	2002
61	Zinc	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	160	FW	Hyne, R.V., F. Pablo, M. Julli, and S.J. Markich	Influence of Water Chemistry on the Acute Toxicity of Copper and Zinc to the Cladoceran Ceriodaphnia cf dubia	Environ.Toxicol.Chem. 24(7):1667-1675	2005
62	Zinc	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	NR	3	d	D	169	FW	De Schamphelaere, K.A.C., S. Lofts, and C.R. Janssen	Bioavailability Models for Predicting Acute and Chronic Toxicity of Zinc to Algae, Daphnids, and Fish in Natural Surface Waters	Environ. Toxicol. Chem.24(5): 1190-1197	2005
63	Zinc	Oncorhynchus mykiss	Rainbow Trout	Fish	LC10	MOR	MORT	30	d	D	185	FW	De Schamphelaere, K.A.C., S. Lofts, and C.R. Janssen	Bioavailability Models for Predicting Acute and Chronic Toxicity of Zinc to Algae, Daphnids, and Fish in Natural Surface Waters	Environ.Toxicol.Chem. 24(5):1190-1197	2005
64	Zinc chloride (ZnCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	EC10	GRO	WGHT	69	d	D	199	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
65	Zinc	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	200	FW	Hyne, R.V., F. Pablo, M. Julli, and S.J. Markich	Influence of Water Chemistry on the Acute Toxicity of Copper and Zinc to the Cladoceran Ceriodaphnia cf dubia	Environ.Toxicol.Chem. 24(7):1667-1675	2005
66	Zinc chloride (ZnCl2)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	210	FW	Erten-Unal, M., B.G. Wixson, N. Gale, and J.L. Pitt	Evaluation of Toxicity, Bioavailability and Speciation of Lead, Zinc and Cadmium in Mine/Mill Wastewaters	Chem.Spec.Bioavail. 10(2):37-46	1998
67	Zinc chloride (ZnCl2)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	210	FW	Gale, N.L., B.G. Wixson, and M. Erten	An Evaluation of the Acute Toxicity of Lead, Zinc, and Cadmium in Missouri Ozark Groundwater	Trace Subst.Environ.Health 25:169-183	1992
68	Zinc chloride (ZnCl2)	Hyalella azteca	Scud	Crustaceans	LOEC	MOR	MORT	28	d	D	214.542	FW	Borgmann, U., and W.P. Norwood	Toxicity and Accumulation of Zinc and Copper in Hyalella azteca Exposed to Metal-Spiked Sediments	Can.J Fish.Aquat.Sci. 54:1046-1054	1997
69	Zinc chloride (ZnCl2)	Hyalella azteca	Scud	Crustaceans	LC25	MOR	MORT	28	d	D	215.196	FW	Borgmann, U., and W.P. Norwood	Toxicity and Accumulation of Zinc and Copper in Hyalella azteca Exposed to Metal-Spiked Sediments	Can.J Fish.Aquat.Sci. 54:1046-1054	1997
70	Zinc	Oncorhynchus mykiss	Rainbow Trout	Fish	LC10	MOR	MORT	30	d	D	219	FW	De Schamphelaere, K.A.C., S. Lofts, and C.R. Janssen	Bioavailability Models for Predicting Acute and Chronic Toxicity of Zinc to Algae, Daphnids, and Fish in Natural Surface Waters	Environ.Toxicol.Chem. 24(5):1190-1197	2005
71	Zinc	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	NR	3	d	D	246	FW	De Schamphelaere, K.A.C., S. Lofts, and C.R. Janssen	Bioavailability Models for Predicting Acute and Chronic Toxicity of Zinc to Algae, Daphnids, and Fish in Natural Surface Waters	Environ. Toxicol. Chem.24(5): 1190-1197	2005
72	Zinc	Cottus bairdi	Mottled Sculpin	Fish	MATC	MOR	MORT	30	d	D	255	FW	Brinkman, S., and J. Woodling	Zinc Toxicity to the Mottled Sculpin (Cottus bairdi) in High-Hardness Water	Environ.Toxicol.Chem. 24(6):1515-1517	2005
73	Zinc	Oncorhynchus mykiss	Rainbow Trout	Fish	LC10	MOR	MORT	30	d	D	259	FW	De Schamphelaere, K.A.C., S. Lofts, and C.R. Janssen	Bioavailability Models for Predicting Acute and Chronic Toxicity of Zinc to Algae, Daphnids, and Fish in Natural Surface Waters	Environ.Toxicol.Chem. 24(5):1190-1197	2005
74	Zinc	Cottus bairdi	Mottled Sculpin	Fish	LC50	MOR	MORT	13	d	D	266	FW	Brinkman, S., and J. Woodling	Zinc Toxicity to the Mottled Sculpin (Cottus bairdi) in High-Hardness Water	Environ.Toxicol.Chem. 24(6):1515-1517	2005
75	Zinc	Cottus bairdi	Mottled Sculpin	Fish	LC50	MOR	MORT	15	d	D	266	FW	Brinkman, S., and J. Woodling	Zinc Toxicity to the Mottled Sculpin (Cottus bairdi) in High-Hardness Water	Environ.Toxicol.Chem. 24(6):1515-1517	2005
76	Zinc	Cottus bairdi	Mottled Sculpin	Fish	LC50	MOR	MORT	30	d	D	266	FW	Brinkman, S., and J. Woodling	Zinc Toxicity to the Mottled Sculpin (Cottus bairdi) in High-Hardness Water	Environ.Toxicol.Chem. 24(6):1515-1517	2005
77	Zinc	Cottus bairdi	Mottled Sculpin	Fish	LC50	MOR	MORT	9	d	D	273	FW	Brinkman, S., and J. Woodling	Zinc Toxicity to the Mottled Sculpin (Cottus bairdi) in High-Hardness Water	Environ.Toxicol.Chem. 24(6):1515-1517	2005
78	Zinc	Cottus bairdi	Mottled Sculpin	Fish	LC50	MOR	MORT	7	d	D	278	FW	Brinkman, S., and J. Woodling	Zinc Toxicity to the Mottled Sculpin (Cottus bairdi) in High-Hardness Water	Environ.Toxicol.Chem. 24(6):1515-1517	2005
79	Zinc	Cottus bairdi	Mottled Sculpin	Fish	LC50	MOR	MORT	8	d	D	279	FW	Brinkman, S., and J. Woodling	Zinc Toxicity to the Mottled Sculpin (Cottus bairdi) in High-Hardness Water	Environ.Toxicol.Chem. 24(6):1515-1517	2005
80	Zinc chloride (ZnCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	MATC	GRO	LGTH	69	d	D	279	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
81	Zinc chloride (ZnCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	MATC	GRO	WGHT	69	d	D	279	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
82	Zinc	Cottus bairdi	Mottled Sculpin	Fish	LC50	MOR	MORT	6	d	D	283	FW	Brinkman, S., and J. Woodling	Zinc Toxicity to the Mottled Sculpin (Cottus bairdi) in High-Hardness Water	Environ.Toxicol.Chem. 24(6):1515-1517	2005

Appendix D-9, Table 6. ECOTOX effects values for zinc in marine and fresh waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
83	Zinc chloride (ZnCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	EC10	GRO	LGTH	69	d	D	300	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
84	Zinc	Cottus bairdi	Mottled Sculpin	Fish	LC50	MOR	MORT	5	d	D	302	FW	Brinkman, S., and J. Woodling	Zinc Toxicity to the Mottled Sculpin (Cottus bairdi) in High-Hardness Water	Environ.Toxicol.Chem. 24(6):1515-1517	2005
85	Zinc	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	NR	3	d	D	328	FW	De Schamphelaere, K.A.C., S. Lofts, and C.R. Janssen	Bioavailability Models for Predicting Acute and Chronic Toxicity of Zinc to Algae, Daphnids, and Fish in Natural Surface Waters	Environ. Toxicol. Chem.24(5): 1190-1197	2005
86	Zinc	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	30	d	D	337	FW	De Schamphelaere, K.A.C., S. Lofts, and C.R. Janssen	Bioavailability Models for Predicting Acute and Chronic Toxicity of Zinc to Algae, Daphnids, and Fish in Natural Surface Waters	Environ.Toxicol.Chem. 24(5):1190-1197	2005
87	Zinc	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	NR	3	d	D	347	FW	De Schamphelaere, K.A.C., S. Lofts, and C.R. Janssen	Bioavailability Models for Predicting Acute and Chronic Toxicity of Zinc to Algae, Daphnids, and Fish in Natural Surface Waters	Environ. Toxicol. Chem.24(5): 1190-1197	2005
88	Sulfuric acid, Zinc salt (1:1)	Chlorella sp.	Green Algae	Algae, Moss, Fungi	LOEL	POP	NR	2	d	D	350	FW	Wilde, K.L., J.L. Stauber, S.J. Markich, N.M. Franklin, and P.L. Brown	The Effect of pH on the Uptake and Toxicity of Copper and Zinc in a Tropical Freshwater Alga (Chlorella sp.)	Arch. Environ. Contam. Toxicol.51(2): 174-185	2006
89	Zinc	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	354	FW	De Schamphelaere, K.A.C., S. Lofts, and C.R. Janssen	Bioavailability Models for Predicting Acute and Chronic Toxicity of Zinc to Algae, Daphnids, and Fish in Natural Surface Waters	Environ.Toxicol.Chem. 24(5):1190-1197	2005
90	Zinc	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	356	FW	De Schamphelaere, K.A.C., S. Lofts, and C.R. Janssen	Bioavailability Models for Predicting Acute and Chronic Toxicity of Zinc to Algae, Daphnids, and Fish in Natural Surface Waters	Environ.Toxicol.Chem. 24(5):1190-1197	2005
91	Zinc chloride (ZnCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	EC20	GRO	LGTH	69	d	D	362	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
92	Zinc chloride (ZnCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LOEC	GRO	LGTH	69	d	D	365	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
93	Zinc chloride (ZnCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LOEC	GRO	WGHT	69	d	D	365	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
94	Sulfuric acid, Zinc salt (1:1)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	370	FW	Holcombe, G.W., and R.W. Andrew	The Acute Toxicity of Zinc to Rainbow and Brook Trout: Comparisons in Hard and Soft Water	EPA-600/3-78-094, U.S.EPA, Duluth, MN	1978
95	Sulfuric acid, Zinc salt (1:1)	Chlorella sp.	Green Algae	Algae, Moss, Fungi	LOEL	POP	NR	2	d	D	370	FW	Wilde, K.L., J.L. Stauber, S.J. Markich, N.M. Franklin, and P.L. Brown	The Effect of pH on the Uptake and Toxicity of Copper and Zinc in a Tropical Freshwater Alga (Chlorella sp.)	Arch. Environ. Contam. Toxicol.51(2): 174-185	2006
96	Zinc	Daphnia longispina	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	375	FW	Muyssen, B.T.A., B.T.A. Bossuyt, and C.R. Janssen	Inter- and Intra-Species Variation in Acute Zinc Tolerance of Field-Collected Cladoceran Populations	Chemosphere 61(8):1159-1167	2005
97	Zinc	Daphnia longispina	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	375	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
98	Zinc	Cottus bairdi	Mottled Sculpin	Fish	LOEC	MOR	MORT	30	d	D	379	FW	Brinkman, S., and J. Woodling	Zinc Toxicity to the Mottled Sculpin (Cottus bairdi) in High-Hardness Water	Environ.Toxicol.Chem. 24(6):1515-1517	2005
99	Zinc	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	382	FW	Hyne, R.V., F. Pablo, M. Julli, and S.J. Markich	Influence of Water Chemistry on the Acute Toxicity of Copper and Zinc to the Cladoceran Ceriodaphnia cf dubia	Environ.Toxicol.Chem. 24(7):1667-1675	2005
100	Zinc chloride (ZnCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	EC20	GRO	WGHT	69	d	D	387	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
101	Zinc chloride (ZnCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	SURV	69	d	D	387	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
102	Zinc	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	390	FW	Hyne, R.V., F. Pablo, M. Julli, and S.J. Markich	Influence of Water Chemistry on the Acute Toxicity of Copper and Zinc to the Cladoceran Ceriodaphnia cf dubia	Environ.Toxicol.Chem. 24(7):1667-1675	2005
103	Zinc	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	30	d	D	406	FW	De Schamphelaere, K.A.C., S. Lofts, and C.R. Janssen	Bioavailability Models for Predicting Acute and Chronic Toxicity of Zinc to Algae, Daphnids, and Fish in Natural Surface Waters	Environ.Toxicol.Chem. 24(5):1190-1197	2005
104	Zinc	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	413	FW	Hyne, R.V., F. Pablo, M. Julli, and S.J. Markich	Influence of Water Chemistry on the Acute Toxicity of Copper and Zinc to the Cladoceran Ceriodaphnia cf dubia	Environ.Toxicol.Chem. 24(7):1667-1675	2005
105	Zinc	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	416	FW	Muyssen, B.T.A., B.T.A. Bossuyt, and C.R. Janssen	Inter- and Intra-Species Variation in Acute Zinc Tolerance of Field-Collected Cladoceran Populations	Chemosphere 61(8):1159-1167	2005
106	Zinc	Cottus bairdi	Mottled Sculpin	Fish	LC50	MOR	MORT	4	d	D	439	FW	Brinkman, S., and J. Woodling	Zinc Toxicity to the Mottled Sculpin (Cottus bairdi) in High-Hardness Water	Environ.Toxicol.Chem. 24(6):1515-1517	2005
107	Zinc	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	D	451.3221	FW	Bringolf, R.B., B.A. Morris, C.J. Boese, R.C. Santore, H.E. Allen, and J.S. Meyer	Influence of Dissolved Organic Matter on Acute Toxicity of Zinc to Larval Fathead Minnows (Pimephales promelas)	Arch.Environ.Contam.Toxicol. 51(3):438-444	2006

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
108	Zinc chloride (ZnCl2)	Gomphonema parvulum	Diatom	Algae, Moss, Fungi	EC50	PHY	NR	0.208	d	D	498	FW	Ivorra, N., C. Barranguet, M. Jonker, M.H.S. Kraak, and W. Admiraal	Metal-Induced Tolerance in the Freshwater Microbenthic Diatom Gomphonema parvulum	Environ. Pollut.116(1): 147-157	2002
109	Sulfuric acid, Zinc salt (1:1)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	517	FW	Holcombe, G.W., and R.W. Andrew	The Acute Toxicity of Zinc to Rainbow and Brook Trout: Comparisons in Hard and Soft Water	EPA-600/3-78-094, U.S.EPA, Duluth, MN	1978
110	Zinc	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC10	POP	NR	3	d	D	563	FW	De Schamphelaere, K.A.C., S. Lofts, and C.R. Janssen	Bioavailability Models for Predicting Acute and Chronic Toxicity of Zinc to Algae, Daphnids, and Fish in Natural Surface Waters	Environ. Toxicol. Chem.24(5): 1190-1197	2005
111	Zinc chloride (ZnCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	POP	PCCP	21	d	D	570	FW	Enserink, E.L., J.L. Maas-Diepeveen, and C.J. Van Leeuwen	Combined Effects of Metals: An Ecotoxicological Evaluation	Water Res. 25(6):679-687	1991
112	Zinc	Oncorhynchus mykiss	Rainbow Trout	Fish	LC10	MOR	MORT	30	d	D	578	FW	De Schamphelaere, K.A.C., S. Lofts, and C.R. Janssen	Bioavailability Models for Predicting Acute and Chronic Toxicity of Zinc to Algae, Daphnids, and Fish in Natural Surface Waters	Environ.Toxicol.Chem. 24(5):1190-1197	2005
113	Zinc	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	30	d	D	582	FW	De Schamphelaere, K.A.C., S. Lofts, and C.R. Janssen	Bioavailability Models for Predicting Acute and Chronic Toxicity of Zinc to Algae, Daphnids, and Fish in Natural Surface Waters	Environ.Toxicol.Chem. 24(5):1190-1197	2005
114	Sulfuric acid, Zinc salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	620	FW	Erten-Unal, M., B.G. Wixson, N. Gale, and J.L. Pitt	Evaluation of Toxicity, Bioavailability and Speciation of Lead, Zinc and Cadmium in Mine/Mill Wastewaters	Chem.Spec.Bioavail. 10(2):37-46	1998
115	Sulfuric acid, Zinc salt (1:1)	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	620	FW	Gale, N.L., B.G. Wixson, and M. Erten	An Evaluation of the Acute Toxicity of Lead, Zinc, and Cadmium in Missouri Ozark Groundwater	Trace Subst.Environ.Health 25:169-183	1992
116	Zinc	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	D	680.2536	FW	Bringolf, R.B., B.A. Morris, C.J. Boese, R.C. Santore, H.E. Allen, and J.S. Meyer	Influence of Dissolved Organic Matter on Acute Toxicity of Zinc to Larval Fathead Minnows (Pimephales promelas)	Arch.Environ.Contam.Toxicol. 51(3):438-444	2006
117	Zinc	Chlamydomonas variabilis	Green Algae	Algae, Moss, Fungi	LOEL	PHY	NR	7	d	D	680.2536	FW	Bates, S.S., A. Tessier, P.G.C. Campbell, and M. Letourneau	Zinc-Phosphorus Interactions and Variation in Zinc Accumulation During Growth of Chlamydomonas variabilis (Chlorophyceae) in Batch Culture	Can. J. Fish. Aquat. Sci.42(1): 86-94	1985
118	Zinc	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	NR	3	d	D	713	FW	De Schamphelaere, K.A.C., S. Lofts, and C.R. Janssen	Bioavailability Models for Predicting Acute and Chronic Toxicity of Zinc to Algae, Daphnids, and Fish in Natural Surface Waters	Environ. Toxicol. Chem.24(5): 1190-1197	2005
119	Sulfuric acid, Zinc salt (1:1)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	756	FW	Holcombe, G.W., and R.W. Andrew	The Acute Toxicity of Zinc to Rainbow and Brook Trout: Comparisons in Hard and Soft Water	EPA-600/3-78-094, U.S.EPA, Duluth, MN	1978
120	Zinc	Cottus bairdi	Mottled Sculpin	Fish	NR-LETH	MOR	MORT	9	d	D	778	FW	Brinkman, S., and J. Woodling	Zinc Toxicity to the Mottled Sculpin (Cottus bairdi) in High-Hardness Water	Environ.Toxicol.Chem. 24(6):1515-1517	2005
121	Zinc	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	D	837.2352	FW	Bringolf, R.B., B.A. Morris, C.J. Boese, R.C. Santore, H.E. Allen, and J.S. Meyer	Influence of Dissolved Organic Matter on Acute Toxicity of Zinc to Larval Fathead Minnows (Pimephales promelas)	Arch.Environ.Contam.Toxicol. 51(3):438-444	2006
122	Zinc	Simocephalus vetulus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	847	FW	Muyssen, B.T.A., B.T.A. Bossuyt, and C.R. Janssen	Inter- and Intra-Species Variation in Acute Zinc Tolerance of Field-Collected Cladoceran Populations	Chemosphere 61(8):1159-1167	2005
123	Zinc	Simocephalus vetulus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	847	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
124	Zinc	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	D	850.317	FW	Bringolf, R.B., B.A. Morris, C.J. Boese, R.C. Santore, H.E. Allen, and J.S. Meyer	Influence of Dissolved Organic Matter on Acute Toxicity of Zinc to Larval Fathead Minnows (Pimephales promelas)	Arch.Environ.Contam.Toxicol. 51(3):438-444	2006
125	Zinc	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	NR	3	d	D	861	FW	De Schamphelaere, K.A.C., S. Lofts, and C.R. Janssen	Bioavailability Models for Predicting Acute and Chronic Toxicity of Zinc to Algae, Daphnids, and Fish in Natural Surface Waters	Environ. Toxicol. Chem.24(5): 1190-1197	2005
126	Zinc	Oncorhynchus mykiss	Rainbow Trout	Fish	LC10	MOR	MORT	30	d	D	902	FW	De Schamphelaere, K.A.C., S. Lofts, and C.R. Janssen	Bioavailability Models for Predicting Acute and Chronic Toxicity of Zinc to Algae, Daphnids, and Fish in Natural Surface Waters	Environ.Toxicol.Chem. 24(5):1190-1197	2005
127	Zinc	Simocephalus exspinosus	Cladoceran	Crustaceans	EC50	ITX	IMBL	2	d	D	911	FW	Muyssen, B.T.A., B.T.A. Bossuyt, and C.R. Janssen	Inter- and Intra-Species Variation in Acute Zinc Tolerance of Field-Collected Cladoceran Populations	Chemosphere 61(8):1159-1167	2005
128	Zinc	Simocephalus exspinosus	Cladoceran	Crustaceans	EC50	ITX	IMBL	2	d	D	911	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
129	Zinc	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	D	928.8078	FW	Bringolf, R.B., B.A. Morris, C.J. Boese, R.C. Santore, H.E. Allen, and J.S. Meyer	Influence of Dissolved Organic Matter on Acute Toxicity of Zinc to Larval Fathead Minnows (Pimephales promelas)	Arch.Environ.Contam.Toxicol. 51(3):438-444	2006
130	Zinc	Ceriodaphnia reticulata	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	937	FW	Muyssen, B.T.A., B.T.A. Bossuyt, and C.R. Janssen	Inter- and Intra-Species Variation in Acute Zinc Tolerance of Field-Collected Cladoceran Populations	Chemosphere 61(8):1159-1167	2005
131	Zinc	Ceriodaphnia reticulata	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	937	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
132	Zinc	Daphnia galeata	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	1001	FW	Muyssen, B.T.A., B.T.A. Bossuyt, and C.R. Janssen	Inter- and Intra-Species Variation in Acute Zinc Tolerance of Field-Collected Cladoceran Populations	Chemosphere 61(8):1159-1167	2005
133	Zinc	Daphnia galeata	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	1001	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005

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134	Zinc chloride (ZnCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	NR-LETH	MOR	MORT	69	d	D	1005	FW	Mebane, C.A., D.P. Hennessy, and F.S. Dillon	Developing Acute-to-Chronic Toxicity Ratios for Lead, Cadmium, and Zinc Using Rainbow Trout, a Mayfly, and a Midge	Water Air Soil Pollut. :21p. (DOI - 10.1007/s11270-007-9524-8)	2007
135	Zinc	Simocephalus vetulus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	1042	FW	Muyssen, B.T.A., B.T.A. Bossuyt, and C.R. Janssen	Inter- and Intra-Species Variation in Acute Zinc Tolerance of Field-Collected Cladoceran Populations	Chemosphere 61(8):1159-1167	2005
136	Zinc	Simocephalus vetulus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	1042	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
137	Zinc	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	D	1086	FW	Bringolf, R.B., B.A. Morris, C.J. Boese, R.C. Santore, H.E. Allen, and J.S. Meyer	Influence of Dissolved Organic Matter on Acute Toxicity of Zinc to Larval Fathead Minnows (Pimephales promelas)	Arch.Environ.Contam.Toxicol. 51(3):438-444	2006
138	Zinc chloride (ZnCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	1103	FW	Muyssen, B.T.A., and C.R. Janssen	Multigeneration Zinc Acclimation and Tolerance in Daphnia magna: Implications for Water-Quality Guidelines and Ecological Risk Assessment	Environ.Toxicol.Chem. 20(9):2053-2060	2001
139	Zinc	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	D	1118	FW	Bringolf, R.B., B.A. Morris, C.J. Boese, R.C. Santore, H.E. Allen, and J.S. Meyer	Influence of Dissolved Organic Matter on Acute Toxicity of Zinc to Larval Fathead Minnows (Pimephales promelas)	Arch.Environ.Contam.Toxicol. 51(3):438-444	2006
140	Zinc	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	D	1177	FW	Bringolf, R.B., B.A. Morris, C.J. Boese, R.C. Santore, H.E. Allen, and J.S. Meyer	Influence of Dissolved Organic Matter on Acute Toxicity of Zinc to Larval Fathead Minnows (Pimephales promelas)	Arch.Environ.Contam.Toxicol. 51(3):438-444	2006
141	Zinc	Ceriodaphnia dubia	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	1200	FW	Hyne, R.V., F. Pablo, M. Julli, and S.J. Markich	Influence of Water Chemistry on the Acute Toxicity of Copper and Zinc to the Cladoceran Ceriodaphnia cf dubia	Environ.Toxicol.Chem. 24(7):1667-1675	2005
142	Zinc chloride (ZnCl2)	Gomphonema parvulum	Diatom	Algae, Moss, Fungi	EC50	PHY	NR	0.167	d	D	1215	FW	Ivorra, N., C. Barranguet, M. Jonker, M.H.S. Kraak, and W. Admiraal	Metal-Induced Tolerance in the Freshwater Microbenthic Diatom Gomphonema parvulum	Environ. Pollut.116(1): 147-157	2002
143	Zinc	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	D	1262	FW	Bringolf, R.B., B.A. Morris, C.J. Boese, R.C. Santore, H.E. Allen, and J.S. Meyer	Influence of Dissolved Organic Matter on Acute Toxicity of Zinc to Larval Fathead Minnows (Pimephales promelas)	Arch.Environ.Contam.Toxicol. 51(3):438-444	2006
144	Zinc	Ceriodaphnia pulchella	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	1263	FW	Muyssen, B.T.A., B.T.A. Bossuyt, and C.R. Janssen	Inter- and Intra-Species Variation in Acute Zinc Tolerance of Field-Collected Cladoceran Populations	Chemosphere 61(8):1159-1167	2005
145	Zinc	Ceriodaphnia pulchella	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	1263	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
146	Zinc	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	D	1275	FW	Bringolf, R.B., B.A. Morris, C.J. Boese, R.C. Santore, H.E. Allen, and J.S. Meyer	Influence of Dissolved Organic Matter on Acute Toxicity of Zinc to Larval Fathead Minnows (Pimephales promelas)	Arch.Environ.Contam.Toxicol. 51(3):438-444	2006
147	Zinc	Chydorus sphaericus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	1326	FW	Muyssen, B.T.A., B.T.A. Bossuyt, and C.R. Janssen	Inter- and Intra-Species Variation in Acute Zinc Tolerance of Field-Collected Cladoceran Populations	Chemosphere 61(8):1159-1167	2005
148	Zinc	Chydorus sphaericus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	1326	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
149	Sulfuric acid, Zinc salt (1:1)	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	D	1370	FW	Gale, N.L., B.G. Wixson, and M. Erten	An Evaluation of the Acute Toxicity of Lead, Zinc, and Cadmium in Missouri Ozark Groundwater	Trace Subst.Environ.Health 25:169-183	1992
150	Sulfuric acid, Zinc salt (1:1)	Salvelinus fontinalis	Brook Trout	Fish	LC50	MOR	MORT	4	d	D	1440	FW	Holcombe, G.W., and R.W. Andrew	The Acute Toxicity of Zinc to Rainbow and Brook Trout: Comparisons in Hard and Soft Water	EPA-600/3-78-094, U.S.EPA, Duluth, MN	1978
151	Zinc	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	NR	3	d	D	1480	FW	De Schamphelaere, K.A.C., S. Lofts, and C.R. Janssen	Bioavailability Models for Predicting Acute and Chronic Toxicity of Zinc to Algae, Daphnids, and Fish in Natural Surface Waters	Environ. Toxicol. Chem.24(5): 1190-1197	2005
152	Zinc	Simocephalus exspinosus	Cladoceran	Crustaceans	EC50	ITX	IMBL	2	d	D	1504	FW	Muyssen, B.T.A., B.T.A. Bossuyt, and C.R. Janssen	Inter- and Intra-Species Variation in Acute Zinc Tolerance of Field-Collected Cladoceran Populations	Chemosphere 61(8):1159-1167	2005
153	Zinc	Simocephalus exspinosus	Cladoceran	Crustaceans	EC50	ITX	IMBL	2	d	D	1504	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
154	Sulfuric acid, Zinc salt (1:1)	Salvelinus fontinalis	Brook Trout	Fish	LC50	MOR	MORT	4	d	D	1550	FW	Holcombe, G.W., and R.W. Andrew	The Acute Toxicity of Zinc to Rainbow and Brook Trout: Comparisons in Hard and Soft Water	EPA-600/3-78-094, U.S.EPA, Duluth, MN	1978
155	Zinc	Acroperus elongatus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	1614	FW	Muyssen, B.T.A., B.T.A. Bossuyt, and C.R. Janssen	Inter- and Intra-Species Variation in Acute Zinc Tolerance of Field-Collected Cladoceran Populations	Chemosphere 61(8):1159-1167	2005
156	Zinc	Acroperus elongatus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	1614	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
157	Zinc	Chydorus ovalis	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	1627	FW	Muyssen, B.T.A., B.T.A. Bossuyt, and C.R. Janssen	Inter- and Intra-Species Variation in Acute Zinc Tolerance of Field-Collected Cladoceran Populations	Chemosphere 61(8):1159-1167	2005
158	Zinc	Chydorus ovalis	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	1627	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
159	Zinc chloride (ZnCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	1639	FW	Muyssen, B.T.A., and C.R. Janssen	Multigeneration Zinc Acclimation and Tolerance in Daphnia magna: Implications for Water-Quality Guidelines and Ecological Risk Assessment	Environ.Toxicol.Chem. 20(9):2053-2060	2001

Appendix D-9, Table 6. ECOTOX effects values for zinc in marine and fresh waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
160	Zinc	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	1670	FW	De Schamphelaere, K.A.C., S. Lofts, and C.R. Janssen	Bioavailability Models for Predicting Acute and Chronic Toxicity of Zinc to Algae, Daphnids, and Fish in Natural Surface Waters	Environ.Toxicol.Chem. 24(5):1190-1197	2005
161	Zinc	Daphnia longispina	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	1718	FW	Muyssen, B.T.A., B.T.A. Bossuyt, and C.R. Janssen	Inter- and Intra-Species Variation in Acute Zinc Tolerance of Field-Collected Cladoceran Populations	Chemosphere 61(8):1159-1167	2005
162	Zinc	Daphnia longispina	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	1718	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
163	Zinc	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	1833	FW	Muyssen, B.T.A., B.T.A. Bossuyt, and C.R. Janssen	Inter- and Intra-Species Variation in Acute Zinc Tolerance of Field-Collected Cladoceran Populations	Chemosphere 61(8):1159-1167	2005
164	Zinc	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	30	d	D	1850	FW	De Schamphelaere, K.A.C., S. Lofts, and C.R. Janssen	Bioavailability Models for Predicting Acute and Chronic Toxicity of Zinc to Algae, Daphnids, and Fish in Natural Surface Waters	Environ.Toxicol.Chem. 24(5):1190-1197	2005
165	Sulfuric acid, Zinc salt (1:1)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	1910	FW	Holcombe, G.W., and R.W. Andrew	The Acute Toxicity of Zinc to Rainbow and Brook Trout: Comparisons in Hard and Soft Water	EPA-600/3-78-094, U.S.EPA, Duluth, MN	1978
166	Zinc	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	30	d	D	1970	FW	De Schamphelaere, K.A.C., S. Lofts, and C.R. Janssen	Bioavailability Models for Predicting Acute and Chronic Toxicity of Zinc to Algae, Daphnids, and Fish in Natural Surface Waters	Environ.Toxicol.Chem. 24(5):1190-1197	2005
167	Zinc	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	NR	3	d	D	2050	FW	De Schamphelaere, K.A.C., S. Lofts, and C.R. Janssen	Bioavailability Models for Predicting Acute and Chronic Toxicity of Zinc to Algae, Daphnids, and Fish in Natural Surface Waters	Environ. Toxicol. Chem.24(5): 1190-1197	2005
168	Zinc	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	2140	FW	De Schamphelaere, K.A.C., S. Lofts, and C.R. Janssen	Bioavailability Models for Predicting Acute and Chronic Toxicity of Zinc to Algae, Daphnids, and Fish in Natural Surface Waters	Environ.Toxicol.Chem. 24(5):1190-1197	2005
169	Zinc	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	2260	FW	De Schamphelaere, K.A.C., S. Lofts, and C.R. Janssen	Bioavailability Models for Predicting Acute and Chronic Toxicity of Zinc to Algae, Daphnids, and Fish in Natural Surface Waters	Environ.Toxicol.Chem. 24(5):1190-1197	2005
170	Zinc	Ceriodaphnia pulchella	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	2261	FW	Muyssen, B.T.A., B.T.A. Bossuyt, and C.R. Janssen	Inter- and Intra-Species Variation in Acute Zinc Tolerance of Field-Collected Cladoceran Populations	Chemosphere 61(8):1159-1167	2005
171	Zinc	Ceriodaphnia pulchella	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	2261	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
172	Sulfuric acid, Zinc salt (1:1)	Salvelinus fontinalis	Brook Trout	Fish	LC50	MOR	MORT	4	d	D	2420	FW	Holcombe, G.W., and R.W. Andrew	The Acute Toxicity of Zinc to Rainbow and Brook Trout: Comparisons in Hard and Soft Water	EPA-600/3-78-094, U.S.EPA, Duluth, MN	1978
173	Sulfuric acid, Zinc salt (1:1)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	2510	FW	Holcombe, G.W., and R.W. Andrew	The Acute Toxicity of Zinc to Rainbow and Brook Trout: Comparisons in Hard and Soft Water	EPA-600/3-78-094, U.S.EPA, Duluth, MN	1978
174	Zinc	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	2580	FW	De Schamphelaere, K.A.C., S. Lofts, and C.R. Janssen	Bioavailability Models for Predicting Acute and Chronic Toxicity of Zinc to Algae, Daphnids, and Fish in Natural Surface Waters	Environ.Toxicol.Chem. 24(5):1190-1197	2005
175	Zinc chloride (ZnCl2)	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	D	2580	FW	Erten-Unal, M., B.G. Wixson, N. Gale, and J.L. Pitt	Evaluation of Toxicity, Bioavailability and Speciation of Lead, Zinc and Cadmium in Mine/Mill Wastewaters	Chem.Spec.Bioavail. 10(2):37-46	1998
176	Zinc chloride (ZnCl2)	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	D	2580	FW	Gale, N.L., B.G. Wixson, and M. Erten	An Evaluation of the Acute Toxicity of Lead, Zinc, and Cadmium in Missouri Ozark Groundwater	Trace Subst.Environ.Health 25:169-183	1992
177	Zinc	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	2650	FW	Muyssen, B.T.A., B.T.A. Bossuyt, and C.R. Janssen	Inter- and Intra-Species Variation in Acute Zinc Tolerance of Field-Collected Cladoceran Populations	Chemosphere 61(8):1159-1167	2005
178	Zinc	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	2650	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
179	Zinc	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	2909	FW	Muyssen, B.T.A., B.T.A. Bossuyt, and C.R. Janssen	Inter- and Intra-Species Variation in Acute Zinc Tolerance of Field-Collected Cladoceran Populations	Chemosphere 61(8):1159-1167	2005
180	Zinc	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	2909	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
181	Zinc	Chydorus sphaericus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	2925	FW	Muyssen, B.T.A., B.T.A. Bossuyt, and C.R. Janssen	Inter- and Intra-Species Variation in Acute Zinc Tolerance of Field-Collected Cladoceran Populations	Chemosphere 61(8):1159-1167	2005
182	Zinc	Chydorus sphaericus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	2925	FW	Bossuyt, B.T.A., B.T.A. Muyssen, and C.R. Janssen	Relevance of Generic and Site-Specific Species Sensitivity Distributions in the Current Risk Assessment Procedures for Copper and Zinc	Environ.Toxicol.Chem. 24(2):470-478	2005
183	Sulfuric acid, Zinc salt (1:1)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	2960	FW	Holcombe, G.W., and R.W. Andrew	The Acute Toxicity of Zinc to Rainbow and Brook Trout: Comparisons in Hard and Soft Water	EPA-600/3-78-094, U.S.EPA, Duluth, MN	1978
184	Zinc	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	3290	FW	De Schamphelaere, K.A.C., S. Lofts, and C.R. Janssen	Bioavailability Models for Predicting Acute and Chronic Toxicity of Zinc to Algae, Daphnids, and Fish in Natural Surface Waters	Environ.Toxicol.Chem. 24(5):1190-1197	2005
185	Zinc chloride (ZnCl2)	Gomphonema parvulum	Diatom	Algae, Moss, Fungi	EC50	PHY	NR	0.208	d	D	3638	FW	Ivorra, N., C. Barranguet, M. Jonker, M.H.S. Kraak, and W. Admiraal	Metal-Induced Tolerance in the Freshwater Microbenthic Diatom Gomphonema parvulum	Environ. Pollut.116(1): 147-157	2002
186	Zinc chloride (ZnCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	6	d	D	3960	FW	Bradley, R.W., C. Duquesnay, and J.B. Sprague	Acclimation of Rainbow Trout, Salmo gairdneri Richardson, to Zinc: Kinetics and Mechanism of Enhanced Tolerance Induction	J.Fish Biol. 27(4):367-369	1985

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
187	Zinc chloride (ZnCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	6	d	D	4200	FW	Bradley, R.W., C. Duquesnay, and J.B. Sprague	Acclimation of Rainbow Trout, Salmo gairdneri Richardson, to Zinc: Kinetics and Mechanism of Enhanced Tolerance Induction	J.Fish Biol. 27(4):367-369	1985
188	Zinc	Chydorus sphaericus	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	4314	FW	Muyssen, B.T.A., B.T.A. Bossuyt, and C.R. Janssen	Inter- and Intra-Species Variation in Acute Zinc Tolerance of Field-Collected Cladoceran Populations	Chemosphere 61(8):1159-1167	2005
189	Zinc chloride (ZnCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	6	d	D	4850	FW	Bradley, R.W., C. Duquesnay, and J.B. Sprague	Acclimation of Rainbow Trout, Salmo gairdneri Richardson, to Zinc: Kinetics and Mechanism of Enhanced Tolerance Induction	J.Fish Biol. 27(4):367-369	1985
190	Zinc chloride (ZnCl2)	Gomphonema parvulum	Diatom	Algae, Moss, Fungi	EC50	PHY	NR	0.208	d	D	4851	FW	Ivorra, N., C. Barranguet, M. Jonker, M.H.S. Kraak, and W. Admiraal	Metal-Induced Tolerance in the Freshwater Microbenthic Diatom Gomphonema parvulum	Environ. Pollut.116(1): 147-157	2002
191	Sulfuric acid, Zinc salt (1:1)	Salvelinus fontinalis	Brook Trout	Fish	LC50	MOR	MORT	4	d	D	4980	FW	Holcombe, G.W., and R.W. Andrew	The Acute Toxicity of Zinc to Rainbow and Brook Trout: Comparisons in Hard and Soft Water	EPA-600/3-78-094, U.S.EPA, Duluth, MN	1978
192	Zinc chloride (ZnCl2)	Gomphonema parvulum	Diatom	Algae, Moss, Fungi	EC50	PHY	NR	0.083	d	D	5241	FW	Ivorra, N., C. Barranguet, M. Jonker, M.H.S. Kraak, and W. Admiraal	Metal-Induced Tolerance in the Freshwater Microbenthic Diatom Gomphonema parvulum	Environ. Pollut.116(1): 147-157	2002
193	Zinc chloride (ZnCl2)	Gomphonema parvulum	Diatom	Algae, Moss, Fungi	EC50	PHY	NR	0.167	d	D	5272	FW	Ivorra, N., C. Barranguet, M. Jonker, M.H.S. Kraak, and W. Admiraal	Metal-Induced Tolerance in the Freshwater Microbenthic Diatom Gomphonema parvulum	Environ. Pollut.116(1): 147-157	2002
194	Zinc chloride (ZnCl2)	Gomphonema parvulum	Diatom	Algae, Moss, Fungi	EC50	PHY	NR	0.167	d	D	5530	FW	Ivorra, N., C. Barranguet, M. Jonker, M.H.S. Kraak, and W. Admiraal	Metal-Induced Tolerance in the Freshwater Microbenthic Diatom Gomphonema parvulum	Environ. Pollut.116(1): 147-157	2002
195	Sulfuric acid, Zinc salt (1:1)	Salvelinus fontinalis	Brook Trout	Fish	LC50	MOR	MORT	4	d	D	6140	FW	Holcombe, G.W., and R.W. Andrew	The Acute Toxicity of Zinc to Rainbow and Brook Trout: Comparisons in Hard and Soft Water	EPA-600/3-78-094, U.S.EPA, Duluth, MN	1978
196	Zinc chloride (ZnCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	6	d	D	6230	FW	Bradley, R.W., C. Duquesnay, and J.B. Sprague	Acclimation of Rainbow Trout, Salmo gairdneri Richardson, to Zinc: Kinetics and Mechanism of Enhanced Tolerance Induction	J.Fish Biol. 27(4):367-369	1985
197	Zinc chloride (ZnCl2)	Scenedesmus acutus var. acutus	Green Algae	Algae, Moss, Fungi	LOEL	PHY	NR	0.5	d	D	6541	FW	Mallick, N., and F.H. Mohn	Use of Chlorophyll Fluorescence in Metal-Stress Research: A Case Study with the Green Microalga Scenedesmus	Ecotoxicol. Environ. Saf.55(1): 64-69	2003
198	Zinc chloride (ZnCl2)	Gomphonema parvulum	Diatom	Algae, Moss, Fungi	EC50	PHY	NR	0.083	d	D	6549	FW	Ivorra, N., C. Barranguet, M. Jonker, M.H.S. Kraak, and W. Admiraal	Metal-Induced Tolerance in the Freshwater Microbenthic Diatom Gomphonema parvulum	Environ. Pollut.116(1): 147-157	2002
199	Zinc chloride (ZnCl2)	Heliscus submersus	Fungus	Algae, Moss, Fungi	EC50	POP	NR	8	d	D	6737	FW	Azevedo, M.M., A. Carvalho, C. Pascoal, F. Rodrigues, and F. Cassio	Responses of Antioxidant Defenses to Cu and Zn Stress in Two Aquatic Fungi	Sci. Total Environ.377(2-3): 233-243	2007
200	Sulfuric acid, Zinc salt (1:1)	Salvelinus fontinalis	Brook Trout	Fish	LC50	MOR	MORT	4	d	D	6980	FW	Holcombe, G.W., and R.W. Andrew	The Acute Toxicity of Zinc to Rainbow and Brook Trout: Comparisons in Hard and Soft Water	EPA-600/3-78-094, U.S.EPA, Duluth, MN	1978
201	Zinc chloride (ZnCl2)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	6	d	D	7260	FW	Bradley, R.W., C. Duquesnay, and J.B. Sprague	Acclimation of Rainbow Trout, Salmo gairdneri Richardson, to Zinc: Kinetics and Mechanism of Enhanced Tolerance Induction	J.Fish Biol. 27(4):367-369	1985
202	Zinc chloride (ZnCl2)	Gomphonema parvulum	Diatom	Algae, Moss, Fungi	EC50	PHY	NR	0.083	d	D	8498	FW	Ivorra, N., C. Barranguet, M. Jonker, M.H.S. Kraak, and W. Admiraal	Metal-Induced Tolerance in the Freshwater Microbenthic Diatom Gomphonema parvulum	Environ. Pollut.116(1): 147-157	2002
203	Sulfuric acid, Zinc salt (1:1)	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	14	d	D	8600	FW	Reed, P., D. Richey, and D. Roseboom	Acute Toxicity of Zinc to Some Fishes in high Alkalinity Water	Ill.State Water Surv.Circ. 142:1-21	1980
204	Zinc chloride (ZnCl2)	Varicosporium elodeae	Fungi	Algae, Moss, Fungi	EC50	POP	NR	8	d	D	9942	FW	Azevedo, M.M., A. Carvalho, C. Pascoal, F. Rodrigues, and F. Cassio	Responses of Antioxidant Defenses to Cu and Zn Stress in Two Aquatic Fungi	Sci. Total Environ.377(2-3): 233-243	2007
205	Zinc chloride (ZnCl2)	Varicosporium elodeae	Fungi	Algae, Moss, Fungi	LOEL	ENZ	WO	8	d	D	9942	FW	Azevedo, M.M., A. Carvalho, C. Pascoal, F. Rodrigues, and F. Cassio	Responses of Antioxidant Defenses to Cu and Zn Stress in Two Aquatic Fungi	Sci. Total Environ.377(2-3): 233-243	2007
206	Zinc chloride (ZnCl2)	Varicosporium elodeae	Fungi	Algae, Moss, Fungi	EC80	POP	NR	8	d	D	12362	FW	Azevedo, M.M., A. Carvalho, C. Pascoal, F. Rodrigues, and F. Cassio	Responses of Antioxidant Defenses to Cu and Zn Stress in Two Aquatic Fungi	Sci. Total Environ.377(2-3): 233-243	2007
207	Zinc chloride (ZnCl2)	Heliscus submersus	Fungus	Algae, Moss, Fungi	EC80	POP	NR	8	d	D	17464	FW	Azevedo, M.M., A. Carvalho, C. Pascoal, F. Rodrigues, and F. Cassio	Responses of Antioxidant Defenses to Cu and Zn Stress in Two Aquatic Fungi	Sci. Total Environ.377(2-3): 233-243	2007
208	Zinc chloride (ZnCl2)	Heliscus submersus	Fungus	Algae, Moss, Fungi	LOEL	ENZ	WO	0.583	d	D	17464	FW	Azevedo, M.M., A. Carvalho, C. Pascoal, F. Rodrigues, and F. Cassio	Responses of Antioxidant Defenses to Cu and Zn Stress in Two Aquatic Fungi	Sci. Total Environ.377(2-3): 233-243	2007
209	Zinc chloride (ZnCl2)	Chironomus riparius	Midge	Insects/Spiders	LC50	MOR	MORT	1	d	D	25000	FW	Bechard, K.M., P.L. Gillis, and C.M. Wood	Acute Toxicity of Waterborne Cd, Cu, Pb, Ni, and Zn to First-Instar Chironomus riparius Larvae	Arch.Environ.Contam.Toxicol. 54(3):454-459	2008
210	Zinc chloride (ZnCl2)	Scenedesmus acutus var. acutus	Green Algae	Algae, Moss, Fungi	LOEL	PHY	NR	0.042	d	D	32705	FW	Mallick, N., and F.H. Mohn	Use of Chlorophyll Fluorescence in Metal-Stress Research: A Case Study with the Green Microalga Scenedesmus	Ecotoxicol. Environ. Saf.55(1): 64-69	2003
211	Zinc chloride (ZnCl2)	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	D	38100	FW	Gale, N.L., B.G. Wixson, and M. Erten	An Evaluation of the Acute Toxicity of Lead, Zinc, and Cadmium in Missouri Ozark Groundwater	Trace Subst.Environ.Health 25:169-183	1992
212	Zinc	Anabaena doliolum	Blue-Green Algae	Algae, Moss, Fungi	LD50	MOR	NR	12	d	D	50000	FW	Kaur, M., A.S. Ahluwalia, and S. Chaudhary	Effect of Bimetallic Combinations of Heavy Metals on Growth and Development of a Cyanobacterium Anabaena doliolum	Phykos41(1-2): 27-34	2002
213	Zinc chloride (ZnCl2)	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	D	50200	FW	Gale, N.L., B.G. Wixson, and M. Erten	An Evaluation of the Acute Toxicity of Lead, Zinc, and Cadmium in Missouri Ozark Groundwater	Trace Subst.Environ.Health 25:169-183	1992
214	Zinc chloride (ZnCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	MOR	MORT	2	d	D	261636	FW	Heijerick, D.G., K.A.C. De Schamphelaere, and C.R. Janssen	Predicting Acute Zinc Toxicity for Daphnia magna as a Function of Key Water Chemistry Characteristics: Development and Validation of a Biotic Ligand Model	Environ.Toxicol.Chem. 21(6):1309-1315	2002
215	Zinc chloride (ZnCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	MOR	MORT	2	d	D	327045	FW	Heijerick, D.G., K.A.C. De Schamphelaere, and C.R. Janssen	Predicting Acute Zinc Toxicity for Daphnia magna as a Function of Key Water Chemistry Characteristics: Development and Validation of a Biotic Ligand Model	Environ.Toxicol.Chem. 21(6):1309-1315	2002

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
216	Zinc chloride (ZnCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	MOR	MORT	2	d	D	392454	FW	Heijerick, D.G., K.A.C. De Schamphelaere, and C.R. Janssen	Predicting Acute Zinc Toxicity for Daphnia magna as a Function of Key Water Chemistry Characteristics: Development and Validation of a Biotic Ligand Model	Environ.Toxicol.Chem. 21(6):1309-1315	2002
217	Zinc chloride (ZnCl2)	Daphnia magna	Water Flea	Crustaceans	EC50	MOR	MORT	2	d	D	654090	FW	Heijerick, D.G., K.A.C. De Schamphelaere, and C.R. Janssen	Predicting Acute Zinc Toxicity for Daphnia magna as a Function of Key Water Chemistry Characteristics: Development and Validation of a Biotic Ligand Model	Environ.Toxicol.Chem. 21(6):1309-1315	2002
218	Zinc chloride (ZnCl2)	Plankton sp.	Plankton	Miscellaneous	LOEL	BCM	NO3-	8	d	D	0.088	SW	Crawford, D.W., M.S. Lipsen, D.A. Purdie, M.C. Lohan, P.J. Statham, F.A. Whitney, J.N. Putland, W.K. Johnson, N. Sutherl	Influence of Zinc and Iron Enrichments on Phytoplankton Growth in the Northeastern Subarctic Pacific	Limnol.Oceanogr. 48(4):1583-1600	2003
219	Zinc chloride (ZnCl2)	Plankton sp.	Plankton	Miscellaneous	LOEL	BCM	PPHT	8	d	D	0.088	SW	Crawford, D.W., M.S. Lipsen, D.A. Purdie, M.C. Lohan, P.J. Statham, F.A. Whitney, J.N. Putland, W.K. Johnson, N. Sutherl	Influence of Zinc and Iron Enrichments on Phytoplankton Growth in the Northeastern Subarctic Pacific	Limnol.Oceanogr. 48(4):1583-1600	2003
220	Zinc chloride (ZnCl2)	Plankton sp.	Plankton	Miscellaneous	LOEL	BCM	NR	8	d	D	0.088	SW	Crawford, D.W., M.S. Lipsen, D.A. Purdie, M.C. Lohan, P.J. Statham, F.A. Whitney, J.N. Putland, W.K. Johnson, N. Sutherl	Influence of Zinc and Iron Enrichments on Phytoplankton Growth in the Northeastern Subarctic Pacific	Limnol. Oceanogr.48(4): 1583-1600	2003
221	Zinc chloride (ZnCl2)	Plankton sp.	Plankton	Miscellaneous	LOEL	BCM	NR	8	d	D	0.088	SW	Crawford, D.W., M.S. Lipsen, D.A. Purdie, M.C. Lohan, P.J. Statham, F.A. Whitney, J.N. Putland, W.K. Johnson, N. Sutherl	Influence of Zinc and Iron Enrichments on Phytoplankton Growth in the Northeastern Subarctic Pacific	Limnol. Oceanogr.48(4): 1583-1600	2003
222	Zinc chloride (ZnCl2)	Plankton sp.	Plankton	Miscellaneous	LOEL	BCM	PPHT	4	d	D	0.654	SW	Crawford, D.W., M.S. Lipsen, D.A. Purdie, M.C. Lohan, P.J. Statham, F.A. Whitney, J.N. Putland, W.K. Johnson, N. Sutherl	Influence of Zinc and Iron Enrichments on Phytoplankton Growth in the Northeastern Subarctic Pacific	Limnol.Oceanogr. 48(4):1583-1600	2003
223	Zinc chloride (ZnCl2)	Plankton sp.	Plankton	Miscellaneous	LOEL	POP	CHLO	4	d	D	0.654	SW	Crawford, D.W., M.S. Lipsen, D.A. Purdie, M.C. Lohan, P.J. Statham, F.A. Whitney, J.N. Putland, W.K. Johnson, N. Sutherl	Influence of Zinc and Iron Enrichments on Phytoplankton Growth in the Northeastern Subarctic Pacific	Limnol.Oceanogr. 48(4):1583-1600	2003
224	Zinc chloride (ZnCl2)	Plankton sp.	Plankton	Miscellaneous	LOEL	BCM	NR	4	d	D	0.654	SW	Crawford, D.W., M.S. Lipsen, D.A. Purdie, M.C. Lohan, P.J. Statham, F.A. Whitney, J.N. Putland, W.K. Johnson, N. Sutherl	Influence of Zinc and Iron Enrichments on Phytoplankton Growth in the Northeastern Subarctic Pacific	Limnol. Oceanogr.48(4): 1583-1600	2003
225	Zinc chloride (ZnCl2)	Plankton sp.	Plankton	Miscellaneous	LOEL	POP	NR	4	d	D	0.654	SW	Crawford, D.W., M.S. Lipsen, D.A. Purdie, M.C. Lohan, P.J. Statham, F.A. Whitney, J.N. Putland, W.K. Johnson, N. Sutherl	Influence of Zinc and Iron Enrichments on Phytoplankton Growth in the Northeastern Subarctic Pacific	Limnol. Oceanogr.48(4): 1583-1600	2003
226	Sulfuric acid, Zinc salt (1:1)	Mytilus trossulus	Pacific Mussel	Molluscs	EC20	DVP	ABNM	2	d	D	63.5	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
227	Sulfuric acid, Zinc salt (1:1)	Allorchestes compressa	Scud, Amphipod	Crustaceans	LOEC	MOR	SURV	40	d	D	99	SW	Ahsanullah, M., and A.R. Williams	Sublethal Effects and Bioaccumulation of Cadmium, Chromium, Copper, and Zinc in the Marine Amphipod Allorchestes compressa	Mar.Biol.(Berlin) 108:59-65	1991
228	Sulfuric acid, Zinc salt (1:1)	Mytilus trossulus	Pacific Mussel	Molluscs	EC50	DVP	ABNM	2	d	D	99	SW	Nadella, S.R., J.L. Fitzpatrick, N. Franklin, C. Bucking, S. Smith, and C.M. Wood	Toxicity of Dissolved Cu, Zn, Ni and Cd to Developing Embryos of the Blue Mussel (Mytilus trossolus) and the Protective Effect of Dissolved Organic Carbon	Comp.Biochem.Physiol.C 149(3):340-348	2009
229	Sulfuric acid, Zinc salt (1:1)	Allorchestes compressa	Scud, Amphipod	Crustaceans	LOEC	POP	BMAS	40	d	D	142	SW	Ahsanullah, M., and A.R. Williams	Sublethal Effects and Bioaccumulation of Cadmium, Chromium, Copper, and Zinc in the Marine Amphipod Allorchestes compressa	Mar.Biol.(Berlin) 108:59-65	1991
230	Sulfuric acid, Zinc salt (1:1)	Allorchestes compressa	Scud, Amphipod	Crustaceans	LOEC	GRO	WGHT	40	d	D	148	SW	Ahsanullah, M., and A.R. Williams	Sublethal Effects and Bioaccumulation of Cadmium, Chromium, Copper, and Zinc in the Marine Amphipod Allorchestes compressa	Mar.Biol.(Berlin) 108:59-65	1991
231	Zinc chloride (ZnCl2)	Melita matilda	Amphipod	Crustaceans	LOEC	MOR	MORT	4	d	D	240	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
232	Zinc chloride (ZnCl2)	Perna viridis	Green Mussel	Molluscs	LOEL	ACC	RSDE	7	d	D	250	SW	Blackmore, G., and W.X. Wang	Uptake and Efflux of Cd and Zn by the Green Mussel Perna viridis After Metal Preexposure	Environ.Sci.Technol. 36(5):989-995	2002
233	Zinc chloride (ZnCl2)	Melita matilda	Amphipod	Crustaceans	LOEC	MOR	MORT	10	d	D	470	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
234	Sulfuric acid, Zinc salt (1:1)	Melita sp.	Amphipod	Crustaceans	LOEC	MOR	SURV	4	d	D	500	SW	King, C.K., S.A. Gale, and J.L. Stauber	Acute Toxicity and Bioaccumulation of Aqueous and Sediment-Bound Metals in the Estuarine Amphipod Melita plumulosa	Environ.Toxicol. 21(5):489-504	2006
235	Zinc chloride (ZnCl2)	Hyale longicornis	Amphipod	Crustaceans	LC50	MOR	MORT	4	d	D	500	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
236	Zinc chloride (ZnCl2)	Hyale longicornis	Amphipod	Crustaceans	LOEC	MOR	MORT	4	d	D	500	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
237	Zinc chloride (ZnCl2)	Melita plumulosa	Amphipod	Crustaceans	LOEC	MOR	MORT	4	d	D	500	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
238	Sulfuric acid, Zinc salt (1:1)	Melita sp.	Amphipod	Crustaceans	LOEC	MOR	SURV	10	d	D	520	SW	King, C.K., S.A. Gale, and J.L. Stauber	Acute Toxicity and Bioaccumulation of Aqueous and Sediment-Bound Metals in the Estuarine Amphipod Melita plumulosa	Environ.Toxicol. 21(5):489-504	2006
239	Zinc chloride (ZnCl2)	Melita plumulosa	Amphipod	Crustaceans	LOEC	MOR	MORT	10	d	D	520	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
240	Sulfuric acid, Zinc salt (1:1)	Melita sp.	Amphipod	Crustaceans	LC50	MOR	MORT	4	d	D	640	SW	King, C.K., S.A. Gale, and J.L. Stauber	Acute Toxicity and Bioaccumulation of Aqueous and Sediment-Bound Metals in the Estuarine Amphipod Melita plumulosa	Environ.Toxicol. 21(5):489-504	2006
241	Zinc chloride (ZnCl2)	Melita plumulosa	Amphipod	Crustaceans	LC50	MOR	MORT	4	d	D	640	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
242	Zinc chloride (ZnCl2)	Melita matilda	Amphipod	Crustaceans	LC50	MOR	MORT	4	d	D	650	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
243	Zinc chloride (ZnCl2)	Melita awa	Amphipod	Crustaceans	LOEC	MOR	MORT	4	d	D	650	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
244	Zinc chloride (ZnCl2)	Melita awa	Amphipod	Crustaceans	LC50	MOR	MORT	10	d	D	710	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
245	Zinc chloride (ZnCl2)	Melita awa	Amphipod	Crustaceans	LC50	MOR	MORT	4	d	D	710	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
246	Zinc chloride (ZnCl2)	Melita matilda	Amphipod	Crustaceans	LC50	MOR	MORT	10	d	D	730	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
247	Zinc chloride (ZnCl2)	Chaetocorophium lucasi	Amphipod	Crustaceans	LOEC	MOR	MORT	4	d	D	760	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
248	Sulfuric acid, Zinc salt (1:1)	Melita sp.	Amphipod	Crustaceans	LC50	MOR	MORT	10	d	D	900	SW	King, C.K., S.A. Gale, and J.L. Stauber	Acute Toxicity and Bioaccumulation of Aqueous and Sediment-Bound Metals in the Estuarine Amphipod Melita plumulosa	Environ.Toxicol. 21(5):489-504	2006
249	Zinc chloride (ZnCl2)	Melita plumulosa	Amphipod	Crustaceans	LC50	MOR	MORT	10	d	D	900	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
250	Sulfuric acid, Zinc salt (1:1)	Tellina deltoidalis	Bivalve	Molluscs	LC50	MOR	MORT	4	d	D	970	SW	King, C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley	An Assessment of Five Australian Polychaetes and Bivalves for Use in Whole-Sediment Toxicity Tests: Toxicity and Accumulation of Copper and Zinc from Water and Sediment	Arch.Environ.Contam.Toxicol. 47(3):314-323	2004
251	Sulfuric acid, Zinc salt (1:1)	Tellina deltoidalis	Bivalve	Molluscs	LOEC	MOR	MORT	4	d	D	970	SW	King, C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley	An Assessment of Five Australian Polychaetes and Bivalves for Use in Whole-Sediment Toxicity Tests: Toxicity and Accumulation of Copper and Zinc from Water and Sediment	Arch.Environ.Contam.Toxicol. 47(3):314-323	2004
252	Zinc chloride (ZnCl2)	Chaetocorophium lucasi	Amphipod	Crustaceans	LC50	MOR	MORT	4	d	D	1130	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
253	Zinc chloride (ZnCl2)	Grandidierella japonica	Scud	Crustaceans	LOEC	MOR	MORT	4	d	D	1280	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
254	Zinc chloride (ZnCl2)	Americamysis bahia	Opossum Shrimp	Crustaceans	LC50	MOR	MORT	2	d	D	1380	SW	PBS&J Environmental Toxicology Laboratory	Copper and Zinc Water-Effect Ratio Determinations with Simulated Downstream (Outfall 001 in Receiving Water) and Laboratory Synthetic Seawater. Project Summary 1998 and 1999	PBS&J Job.No.20026, Environ.Toxicol.Lab., Houston, TX :20 p.	1999
255	Zinc chloride (ZnCl2)	Grandidierella japonica	Scud	Crustaceans	LC50	MOR	MORT	4	d	D	1560	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
256	Zinc chloride (ZnCl2)	Americamysis bahia	Opossum Shrimp	Crustaceans	LC50	MOR	MORT	2	d	D	1779	SW	PBS&J Environmental Toxicology Laboratory	Copper and Zinc Water-Effect Ratio Determinations with Simulated Downstream (Outfall 001 in Receiving Water) and Laboratory Synthetic Seawater. Project Summary 1998 and 1999	PBS&J Job.No.20026, Environ.Toxicol.Lab., Houston, TX :20 p.	1999

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257	Zinc chloride (ZnCl2)	Americamysis bahia	Opossum Shrimp	Crustaceans	LC50	MOR	MORT	2	d	D	1862	SW	PBS&J Environmental Toxicology Laboratory	Copper and Zinc Water-Effect Ratio Determinations with Simulated Downstream (Outfall 001 in Receiving Water) and Laboratory Synthetic Seawater. Project Summary 1998 and 1999	PBS&J Job.No.20026, Environ.Toxicol.Lab., Houston, TX :20 p.	1999
258	Zinc chloride (ZnCl2)	Americamysis bahia	Opossum Shrimp	Crustaceans	LC50	MOR	MORT	2	d	D	1890	SW	PBS&J Environmental Toxicology Laboratory	Copper and Zinc Water-Effect Ratio Determinations with Simulated Downstream (Outfall 001 in Receiving Water) and Laboratory Synthetic Seawater. Project Summary 1998 and 1999	PBS&J Job.No.20026, Environ.Toxicol.Lab., Houston, TX :20 p.	1999
259	Sulfuric acid, Zinc salt (1:1)	Mysella anomala	Bivalve	Molluscs	LOEC	MOR	MORT	4	d	D	1900	SW	King, C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley	An Assessment of Five Australian Polychaetes and Bivalves for Use in Whole-Sediment Toxicity Tests: Toxicity and Accumulation of Copper and Zinc from Water and Sediment	Arch.Environ.Contam.Toxicol. 47(3):314-323	2004
260	Zinc chloride (ZnCl2)	Hyale longicornis	Amphipod	Crustaceans	LC50	MOR	MORT	10	d	D	1940	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
261	Zinc chloride (ZnCl2)	Hyale longicornis	Amphipod	Crustaceans	LOEC	MOR	MORT	10	d	D	1940	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
262	Sulfuric acid, Zinc salt (1:1)	Mysella anomala	Bivalve	Molluscs	LOEC	MOR	MORT	4	d	D	2000	SW	King, C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley	An Assessment of Five Australian Polychaetes and Bivalves for Use in Whole-Sediment Toxicity Tests: Toxicity and Accumulation of Copper and Zinc from Water and Sediment	Arch.Environ.Contam.Toxicol. 47(3):314-323	2004
263	Zinc chloride (ZnCl2)	Americamysis bahia	Opossum Shrimp	Crustaceans	LC50	MOR	MORT	2	d	D	2031	SW	PBS&J Environmental Toxicology Laboratory	Copper and Zinc Water-Effect Ratio Determinations with Simulated Downstream (Outfall 001 in Receiving Water) and Laboratory Synthetic Seawater. Project Summary 1998 and 1999	PBS&J Job.No.20026, Environ.Toxicol.Lab., Houston, TX :20 p.	1999
264	Zinc chloride (ZnCl2)	Americamysis bahia	Opossum Shrimp	Crustaceans	LC50	MOR	MORT	2	d	D	2032	SW	PBS&J Environmental Toxicology Laboratory	Copper and Zinc Water-Effect Ratio Determinations with Simulated Downstream (Outfall 001 in Receiving Water) and Laboratory Synthetic Seawater. Project Summary 1998 and 1999	PBS&J Job.No.20026, Environ.Toxicol.Lab., Houston, TX :20 p.	1999
265	Sulfuric acid, Zinc salt (1:1)	Melita sp.	Amphipod	Crustaceans	LOEC	MOR	SURV	4	d	D	2070	SW	King, C.K., S.A. Gale, and J.L. Stauber	Acute Toxicity and Bioaccumulation of Aqueous and Sediment-Bound Metals in the Estuarine Amphipod Melita plumulosa	Environ.Toxicol. 21(5):489-504	2006
266	Sulfuric acid, Zinc salt (1:1)	Soletellina alba	Sunset Clam	Molluscs	LOEC	MOR	MORT	4	d	D	2300	SW	King, C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley	An Assessment of Five Australian Polychaetes and Bivalves for Use in Whole-Sediment Toxicity Tests: Toxicity and Accumulation of Copper and Zinc from Water and Sediment	Arch.Environ.Contam.Toxicol. 47(3):314-323	2004
267	Zinc chloride (ZnCl2)	Americamysis bahia	Opossum Shrimp	Crustaceans	LC50	MOR	MORT	2	d	D	2428	SW	PBS&J Environmental Toxicology Laboratory	Copper and Zinc Water-Effect Ratio Determinations with Simulated Downstream (Outfall 001 in Receiving Water) and Laboratory Synthetic Seawater. Project Summary 1998 and 1999	PBS&J Job.No.20026, Environ.Toxicol.Lab., Houston, TX :20 p.	1999
268	Sulfuric acid, Zinc salt (1:1)	Soletellina alba	Sunset Clam	Molluscs	LC50	MOR	MORT	4	d	D	2900	SW	King, C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley	An Assessment of Five Australian Polychaetes and Bivalves for Use in Whole-Sediment Toxicity Tests: Toxicity and Accumulation of Copper and Zinc from Water and Sediment	Arch.Environ.Contam.Toxicol. 47(3):314-323	2004
269	Sulfuric acid, Zinc salt (1:1)	Soletellina alba	Sunset Clam	Molluscs	LOEC	MOR	MORT	4	d	D	3100	SW	King, C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley	An Assessment of Five Australian Polychaetes and Bivalves for Use in Whole-Sediment Toxicity Tests: Toxicity and Accumulation of Copper and Zinc from Water and Sediment	Arch.Environ.Contam.Toxicol. 47(3):314-323	2004
270	Zinc chloride (ZnCl2)	Mytilus galloprovincialis	Mediterranean Mussel	Molluscs	LOEC	ENZ	MAPK	0.010	d	D	3270	SW	Kefaloyianni, E., E. Gourgou, V. Ferle, E. Kotsakis, C. Gaitanaki, and I. Beis	Acute Thermal Stress and Various Heavy Metals Induce Tissue-Specific Pro- or Anti-Apoptotic Events via the p38-MAPK Signal Transduction Pathway in Mytilus galloprovincialis (Lam.)	J.Exp.Biol. 208(23):4427-4436	2005
271	Zinc chloride (ZnCl2)	Mytilus galloprovincialis	Mediterranean Mussel	Molluscs	LOEC	ENZ	MAPK	0.021	d	D	3270	SW	Kefaloyianni, E., E. Gourgou, V. Ferle, E. Kotsakis, C. Gaitanaki, and I. Beis	Acute Thermal Stress and Various Heavy Metals Induce Tissue-Specific Pro- or Anti-Apoptotic Events via the p38-MAPK Signal Transduction Pathway in Mytilus galloprovincialis (Lam.)	J.Exp.Biol. 208(23):4427-4436	2005
272	Zinc chloride (ZnCl2)	Mytilus galloprovincialis	Mediterranean Mussel	Molluscs	LOEC	ENZ	MAPK	0.042	d	D	3270	SW	Kefaloyianni, E., E. Gourgou, V. Ferle, E. Kotsakis, C. Gaitanaki, and I. Beis	Acute Thermal Stress and Various Heavy Metals Induce Tissue-Specific Pro- or Anti-Apoptotic Events via the p38-MAPK Signal Transduction Pathway in Mytilus galloprovincialis (Lam.)	J.Exp.Biol. 208(23):4427-4436	2005
273	Zinc chloride (ZnCl2)	Mytilus galloprovincialis	Mediterranean Mussel	Molluscs	LOEC	ENZ	MAPK	0.083	d	D	3270	SW	Kefaloyianni, E., E. Gourgou, V. Ferle, E. Kotsakis, C. Gaitanaki, and I. Beis	Acute Thermal Stress and Various Heavy Metals Induce Tissue-Specific Pro- or Anti-Apoptotic Events via the p38-MAPK Signal Transduction Pathway in Mytilus galloprovincialis (Lam.)	J.Exp.Biol. 208(23):4427-4436	2005

Appendix D-9, Table 6. ECOTOX effects values for zinc in marine and fresh waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
274	Zinc chloride (ZnCl2)	Mytilus galloprovincialis	Mediterranean Mussel	Molluscs	LOEC	ENZ	MAPK	0.010	d	D	3270	SW	Kefaloyianni, E., E. Gourgou, V. Ferle, E. Kotsakis, C. Gaitanaki, and I. Beis	Acute Thermal Stress and Various Heavy Metals Induce Tissue-Specific Pro- or Anti-Apoptotic Events via the p38-MAPK Signal Transduction Pathway in Mytilus galloprovincialis (Lam.)	J.Exp.Biol. 208(23):4427-4436	2005
275	Zinc chloride (ZnCl2)	Mytilus galloprovincialis	Mediterranean Mussel	Molluscs	LOEC	ENZ	MAPK	0.021	d	D	3270	SW	Kefaloyianni, E., E. Gourgou, V. Ferle, E. Kotsakis, C. Gaitanaki, and I. Beis	Acute Thermal Stress and Various Heavy Metals Induce Tissue-Specific Pro- or Anti-Apoptotic Events via the p38-MAPK Signal Transduction Pathway in Mytilus galloprovincialis (Lam.)	J.Exp.Biol. 208(23):4427-4436	2005
276	Sulfuric acid, Zinc salt (1:1)	Melita sp.	Amphipod	Crustaceans	LC50	MOR	MORT	4	d	D	3530	SW	King, C.K., S.A. Gale, and J.L. Stauber	Acute Toxicity and Bioaccumulation of Aqueous and Sediment-Bound Metals in the Estuarine Amphipod Melita plumulosa	Environ.Toxicol. 21(5):489-504	2006
277	Zinc chloride (ZnCl2)	Americamysis bahia	Opossum Shrimp	Crustaceans	LC50	MOR	MORT	2	d	D	4200	SW	PBS&J Environmental Toxicology Laboratory	Copper and Zinc Water-Effect Ratio Determinations with Simulated Downstream (Outfall 001 in Receiving Water) and Laboratory Synthetic Seawater. Project Summary 1998 and 1999	PBS&J Job.No.20026, Environ.Toxicol.Lab., Houston, TX :20 p.	1999
278	Sulfuric acid, Zinc salt (1:1)	Mysella anomala	Bivalve	Molluscs	LC50	MOR	MORT	4	d	D	4400	SW	King, C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley	An Assessment of Five Australian Polychaetes and Bivalves for Use in Whole-Sediment Toxicity Tests: Toxicity and Accumulation of Copper and Zinc from Water and Sediment	Arch.Environ.Contam.Toxicol. 47(3):314-323	2004
279	Sulfuric acid, Zinc salt (1:1)	Mysella anomala	Bivalve	Molluscs	LC50	MOR	MORT	4	d	D	4500	SW	King, C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley	An Assessment of Five Australian Polychaetes and Bivalves for Use in Whole-Sediment Toxicity Tests: Toxicity and Accumulation of Copper and Zinc from Water and Sediment	Arch.Environ.Contam.Toxicol. 47(3):314-323	2004
280	Zinc chloride (ZnCl2)	Corophium colo	Amphipod	Crustaceans	LC50	MOR	MORT	4	d	D	4500	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
281	Zinc chloride (ZnCl2)	Corophium colo	Amphipod	Crustaceans	LOEC	MOR	MORT	4	d	D	4500	SW	King, C.K., S.A. Gale, R.V. Hyne, J.L. Stauber, S.L. Simpson, and C.W. Hickey	Sensitivities of Australian and New Zealand Amphipods to Copper and Zinc in Waters and Metal-Spiked Sediments	Chemosphere 63(9):1466-1476	2006
282	Zinc chloride (ZnCl2)	Americamysis bahia	Opossum Shrimp	Crustaceans	NR-LETH	MOR	MORT	2	d	D	4530	SW	PBS&J Environmental Toxicology Laboratory	Copper and Zinc Water-Effect Ratio Determinations with Simulated Downstream (Outfall 001 in Receiving Water) and Laboratory Synthetic Seawater. Project Summary 1998 and 1999	PBS&J Job.No.20026, Environ.Toxicol.Lab., Houston, TX :20 p.	1999
283	Sulfuric acid, Zinc salt (1:1)	Soletellina alba	Sunset Clam	Molluscs	LC50	MOR	MORT	4	d	D	4900	SW	King, C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley	An Assessment of Five Australian Polychaetes and Bivalves for Use in Whole-Sediment Toxicity Tests: Toxicity and Accumulation of Copper and Zinc from Water and Sediment	Arch.Environ.Contam.Toxicol. 47(3):314-323	2004
284	Zinc chloride (ZnCl2)	Americamysis bahia	Opossum Shrimp	Crustaceans	NR-LETH	MOR	MORT	2	d	D	5200	SW	PBS&J Environmental Toxicology Laboratory	Copper and Zinc Water-Effect Ratio Determinations with Simulated Downstream (Outfall 001 in Receiving Water) and Laboratory Synthetic Seawater. Project Summary 1998 and 1999	PBS&J Job.No.20026, Environ.Toxicol.Lab., Houston, TX :20 p.	1999
285	Sulfuric acid, Zinc salt (1:1)	Nephtys australiensis	Annelid	Worms	LC50	MOR	MORT	4	d	D	5800	SW	King, C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley	An Assessment of Five Australian Polychaetes and Bivalves for Use in Whole-Sediment Toxicity Tests: Toxicity and Accumulation of Copper and Zinc from Water and Sediment	Arch.Environ.Contam.Toxicol. 47(3):314-323	2004
286	Sulfuric acid, Zinc salt (1:1)	Nephtys australiensis	Annelid	Worms	LOEC	MOR	MORT	4	d	D	5800	SW	King, C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley	An Assessment of Five Australian Polychaetes and Bivalves for Use in Whole-Sediment Toxicity Tests: Toxicity and Accumulation of Copper and Zinc from Water and Sediment	Arch.Environ.Contam.Toxicol. 47(3):314-323	2004
287	Sulfuric acid, Zinc salt (1:1)	Nephtys australiensis	Annelid	Worms	LC50	MOR	MORT	4	d	D	5900	SW	King, C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley	An Assessment of Five Australian Polychaetes and Bivalves for Use in Whole-Sediment Toxicity Tests: Toxicity and Accumulation of Copper and Zinc from Water and Sediment	Arch.Environ.Contam.Toxicol. 47(3):314-323	2004
288	Sulfuric acid, Zinc salt (1:1)	Nephtys australiensis	Annelid	Worms	LOEC	MOR	MORT	4	d	D	5900	SW	King, C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley	An Assessment of Five Australian Polychaetes and Bivalves for Use in Whole-Sediment Toxicity Tests: Toxicity and Accumulation of Copper and Zinc from Water and Sediment	Arch.Environ.Contam.Toxicol. 47(3):314-323	2004
289	Sulfuric acid, Zinc salt (1:1)	Tellina deltoidalis	Bivalve	Molluscs	LC50	MOR	MORT	4	d	D	7900	SW	King, C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley	An Assessment of Five Australian Polychaetes and Bivalves for Use in Whole-Sediment Toxicity Tests: Toxicity and Accumulation of Copper and Zinc from Water and Sediment	Arch.Environ.Contam.Toxicol. 47(3):314-323	2004
290	Sulfuric acid, Zinc salt (1:1)	Tellina deltoidalis	Bivalve	Molluscs	LOEC	MOR	MORT	4	d	D	7900	SW	King, C.K., M.C. Dowse, S.L. Simpson, and D.F. Jolley	An Assessment of Five Australian Polychaetes and Bivalves for Use in Whole-Sediment Toxicity Tests: Toxicity and Accumulation of Copper and Zinc from Water and Sediment	Arch.Environ.Contam.Toxicol. 47(3):314-323	2004

Appendix D-9, Table 7. ECOTOX effect values for PCBs in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
309	3,3',4,4',5-Pentachloro-1,1'-biphenyl	Fundulus heteroclitus	Mummichog	Fish	EC50	ENZ	d	F	0.074	SW	Nacci, D., L. Coiro, A. Kuhn, D. Champlin, W. Munns Jr., J. Specker, and K. Cooper	Nondestructive Indicator of Ethoxyresorufin-O-Deethylase Activity in Embryonic Fish	Environ.Toxicol.Chem. 17(12):2481-2486	1998
310	Tetrachloro-1,1'-biphenyl	Lytechinus pictus	Sea Urchin	Invertebrates	LOEC	ACC	d	A	2.5	SW	Schweitzer, L.	Bioavailability and Toxicity of Polychlorinated Biphenyls to Sea Urchins	Ph.D.Thesis, Univ.of California, Los Angeles, CA :148 p.	1998
311	PCB 1254	Cyprinodon variegatus	Sheepshead Minnow	Fish	NR-LETH	MOR	d	A	5.6	SW	Hansen, D.J., S.C. Schimmel, and J. Forester	Aroclor 1254 in Eggs of Sheepshead Minnows: Effect on Fertilization Success and Survival of Embryos and Fry	Proc.27th.Annu.Conf.Southeast.Assoc.Game Fish Comm. 27:420-426 (Author Correspondance Used)	1973
312	PCB 1254	Palaemonetes pugio	Daggerblade Grass Shrimp	Crustaceans	LC50	MOR	d	A	6.1	SW	Roesijadi, G., S.R. Petrocelli, J.W. Anderson, C.S. Giam, and G.E. Neff	Toxicity of Polychlorinated Biphenyls (Aroclor 1254) to Adult, Juvenile, and Larval Stages of the Shrimp Palaemonetes pugio	Bull.Environ.Contam.Toxicol. 15(3):297-304	1976
313	Tetrachloro-1,1'-biphenyl	Lytechinus pictus	Sea Urchin	Invertebrates	LOEC	ACC	d	A	6.2	SW	Schweitzer, L.	Bioavailability and Toxicity of Polychlorinated Biphenyls to Sea Urchins	Ph.D.Thesis, Univ.of California, Los Angeles, CA :148 p.	1998
314	PCB 1242	Algae	Algae	Algae, Moss, Fungi	LC50	MOR	d	F	6.5	SW	Moore, S.A., and R.C. Harris	Effects of Polychlorinated Biphenyl on Marine Phytoplankton Communities	Nature (Lond.)240(5380): 356-358	1972
315	PCB 1254	Palaemonetes pugio	Daggerblade Grass Shrimp	Crustaceans	LC50	MOR	d	A	7.8	SW	Roesijadi, G., S.R. Petrocelli, J.W. Anderson, C.S. Giam, and G.E. Neff	Toxicity of Polychlorinated Biphenyls (Aroclor 1254) to Adult, Juvenile, and Larval Stages of the Shrimp Palaemonetes pugio	Bull.Environ.Contam.Toxicol. 15(3):297-304	1976
316	PCB 1254	Palaemonetes pugio	Daggerblade Grass Shrimp	Crustaceans	LC50	MOR	d	A	7.8	SW	Roesijadi, G., S.R. Petrocelli, J.W. Anderson, C.S. Giam, and G.E. Neff	Toxicity of Polychlorinated Biphenyls (Aroclor 1254) to Adult, Juvenile, and Larval Stages of the Shrimp Palaemonetes pugio	Bull.Environ.Contam.Toxicol. 15(3):297-304	1976
317	PCB 1254	Palaemonetes pugio	Daggerblade Grass Shrimp	Crustaceans	LC50	MOR	d	A	7.8	SW	Roesijadi, G., S.R. Petrocelli, J.W. Anderson, C.S. Giam, and G.E. Neff	Toxicity of Polychlorinated Biphenyls (Aroclor 1254) to Adult, Juvenile, and Larval Stages of the Shrimp Palaemonetes pugio	Bull.Environ.Contam.Toxicol. 15(3):297-304	1976
318	PCB 1254	Palaemonetes pugio	Daggerblade Grass Shrimp	Crustaceans	LC50	MOR	d	A	7.8	SW	Roesijadi, G., S.R. Petrocelli, J.W. Anderson, C.S. Giam, and G.E. Neff	Toxicity of Polychlorinated Biphenyls (Aroclor 1254) to Adult, Juvenile, and Larval Stages of the Shrimp Palaemonetes pugio	Bull.Environ.Contam.Toxicol. 15(3):297-304	1976
319	Aroclor 1016	Palaemonetes pugio	Daggerblade Grass Shrimp	Crustaceans	LC50*	MOR	d	F	9.1	SW	Parrish, P.R., D.J. Hansen, J.N. Couch, J.M. Patrick Jr., and G.H. Cook	Effects of the Polychlorinated Biphenyl, Aroclor 1016, on Estuarine Animals	ASB (Assoc.Southeast.Biol.) Bull. 21(2):74	1974
320	Aroclor 1016	Penaeus aztecus	Brown Shrimp	Crustaceans	LC50*	MOR	d	F	10	SW	Parrish, P.R., D.J. Hansen, J.N. Couch, J.M. Patrick Jr., and G.H. Cook	Effects of the Polychlorinated Biphenyl, Aroclor 1016, on Estuarine Animals	ASB (Assoc.Southeast.Biol.) Bull. 21(2):74	1974
321	Aroclor 1016	Crassostrea virginica	American Or Virginia Oyster	Molluscs	EC50	GRO	d	F	10.2	SW	Hansen, D.J., P.R. Parrish, and J. Forester	Aroclor 1016: Toxicity to and Uptake by Estuarine Animals	Environ.Res. 7(3):363-373	1974
322	Aroclor 1016	Crassostrea virginica	American Or Virginia Oyster	Molluscs	LC50*	MOR	d	F	10.2	SW	Parrish, P.R., D.J. Hansen, J.N. Couch, J.M. Patrick Jr., and G.H. Cook	Effects of the Polychlorinated Biphenyl, Aroclor 1016, on Estuarine Animals	ASB (Assoc.Southeast.Biol.) Bull. 21(2):74	1974
323	Aroclor 1016	Penaeus aztecus	Brown Shrimp	Crustaceans	LC50	MOR	d	F	10.5	SW	Hansen, D.J., P.R. Parrish, and J. Forester	Aroclor 1016: Toxicity to and Uptake by Estuarine Animals	Environ.Res. 7(3):363-373	1974
324	Aroclor 1016	Palaemonetes pugio	Daggerblade Grass Shrimp	Crustaceans	LC50	MOR	d	F	12.5	SW	Hansen, D.J., P.R. Parrish, and J. Forester	Aroclor 1016: Toxicity to and Uptake by Estuarine Animals	Environ.Res. 7(3):363-373	1974
325	PCB 1242	Algae	Algae	Algae, Moss, Fungi	EC50	PHY	d	F	13	SW	Moore, S.A.J.	Impact of Pesticides on Phytoplankton in Everglades Estuaries	Ecol.Rep.No.DI-SFEP-74-15 / South Florida Environ.Project, Natl.Park Serv., Atlanta, GA: 92 p.	1973
326	PCB 1254	Algae	Algae	Algae, Moss, Fungi	LC50	MOR	d	F	15	SW	Moore, S.A., and R.C. Harris	Effects of Polychlorinated Biphenyl on Marine Phytoplankton Communities	Nature (Lond.)240(5380): 356-358	1972
327	PCB 1254	Penaeus duorarum	Northern Pink Shrimp	Crustaceans	NR-LETH	MOR	d	F	19	SW	Nimmo, D.R., R.R. Blackman, A.J. Wilson Jr., and J. Forester	Toxicity and Distribution of Aroclor 1254 in the Pink Shrimp Penaeus duorarum	Mar.Biol.(Berlin) 11:191-197	1971
328	Aroclor 1016	Cyprinodon variegatus	Sheepshead Minnow	Fish	LC50	MOR	d	F	19	SW	Hansen, D.J., S.C. Schimmel, and J. Forester	Effects of Aroclor 1016 on Embryos, Fry, Juveniles, and Adults of Sheepshead Minnows (Cyprinodon variegatus)	Trans.Am.Fish.Soc. 104(3):584-588	1975
329	Aroclor 1016	Cyprinodon variegatus	Sheepshead Minnow	Fish	LC50	MOR	d	F	20	SW	Hansen, D.J., S.C. Schimmel, and J. Forester	Effects of Aroclor 1016 on Embryos, Fry, Juveniles, and Adults of Sheepshead Minnows (Cyprinodon variegatus)	Trans.Am.Fish.Soc. 104(3):584-588	1975
330	Aroclor 1248	Thalassiosira rotula	Diatom	Algae, Moss, Fungi	EC50*	GRO	d	F	20	SW	Reiriz, M.J.F., J.M.F. Soler, and M.A.M. Garcia	Response of a Marine Diatom Thalassiosira rotula (Meunier, 1910) to PCBs - Methodological Implications	Invest. Pesq.47(3): 419-434	1983
331	Aroclor 1016	Cyprinodon variegatus	Sheepshead Minnow	Fish	LC50	MOR	d	F	21	SW	Hansen, D.J., S.C. Schimmel, and J. Forester	Effects of Aroclor 1016 on Embryos, Fry, Juveniles, and Adults of Sheepshead Minnows (Cyprinodon variegatus)	Trans.Am.Fish.Soc. 104(3):584-588	1975
332	Aroclor 1242	Ampelisca abdita	Amphipod	Crustaceans	LC50	MOR	d	A	21	SW	Ho, K.T., R.A. McKinney, A. Kuhn, M.C. Pelletier, and R.M. Burgess	Identification of Acute Toxicants in New Bedford Harbor Sediments	Environ.Toxicol.Chem. 16(3):551-558	1997
333	Aroclor 1016	Cyprinodon variegatus	Sheepshead Minnow	Fish	LC50	MOR	d	F	22	SW	Hansen, D.J., S.C. Schimmel, and J. Forester	Effects of Aroclor 1016 on Embryos, Fry, Juveniles, and Adults of Sheepshead Minnows (Cyprinodon variegatus)	Trans.Am.Fish.Soc. 104(3):584-588	1975
334	Aroclor 1016	Cyprinodon variegatus	Sheepshead Minnow	Fish	LC50	MOR	d	F	24	SW	Hansen, D.J., S.C. Schimmel, and J. Forester	Effects of Aroclor 1016 on Embryos, Fry, Juveniles, and Adults of Sheepshead Minnows (Cyprinodon variegatus)	Trans.Am.Fish.Soc. 104(3):584-588	1975
335	Aroclor 1016	Cyprinodon variegatus	Sheepshead Minnow	Fish	LC50	MOR	d	F	28	SW	Hansen, D.J., S.C. Schimmel, and J. Forester	Effects of Aroclor 1016 on Embryos, Fry, Juveniles, and Adults of Sheepshead Minnows (Cyprinodon variegatus)	Trans.Am.Fish.Soc. 104(3):584-588	1975
336	Aroclor 1016	Cyprinodon variegatus	Sheepshead Minnow	Fish	LC50	MOR	d	F	31	SW	Hansen, D.J., S.C. Schimmel, and J. Forester	Effects of Aroclor 1016 on Embryos, Fry, Juveniles, and Adults of Sheepshead Minnows (Cyprinodon variegatus)	Trans.Am.Fish.Soc. 104(3):584-588	1975
337	Aroclor 1242	Americamysis bahia	Opossum Shrimp	Crustaceans	LC50	MOR	d	A	33	SW	Ho, K.T., R.A. McKinney, A. Kuhn, M.C. Pelletier, and R.M. Burgess	Identification of Acute Toxicants in New Bedford Harbor Sediments	Environ.Toxicol.Chem. 16(3):551-558	1997
338	PCB 1254	Palaemonetes pugio	Daggerblade Grass Shrimp	Crustaceans	LC50	MOR	d	A	41	SW	Roesijadi, G., S.R. Petrocelli, J.W. Anderson, C.S. Giam, and G.E. Neff	Toxicity of Polychlorinated Biphenyls (Aroclor 1254) to Adult, Juvenile, and Larval Stages of the Shrimp Palaemonetes pugio	Bull.Environ.Contam.Toxicol. 15(3):297-304	1976

Appendix D-9, Table 7. ECOTOX effect values for PCBs in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
339	Aroclor 1016	Cyprinodon variegatus	Sheepshead Minnow	Fish	LC50	MOR	d	F	42	SW	Hansen, D.J., S.C. Schimmel, and J. Forester	Effects of Aroclor 1016 on Embryos, Fry, Juveniles, and Adults of Sheepshead Minnows (Cyprinodon variegatus)	Trans.Am.Fish.Soc. 104(3):584-588	1975
340	PCB 1242	Algae	Algae	Algae, Moss, Fungi	EC50	PHY	d	F	43	SW	Moore, S.A.J.	Impact of Pesticides on Phytoplankton in Everglades Estuaries	Ecol.Rep.No.DI-SFEP-74-15 / South Florida Environ.Project, Natl.Park Serv., Atlanta, GA: 92 p.	1973
341	Aroclor 1016	Cyprinodon variegatus	Sheepshead Minnow	Fish	LC50	MOR	d	F	47	SW	Hansen, D.J., S.C. Schimmel, and J. Forester	Effects of Aroclor 1016 on Embryos, Fry, Juveniles, and Adults of Sheepshead Minnows (Cyprinodon variegatus)	Trans.Am.Fish.Soc. 104(3):584-588	1975
342	PCB 1254	Algae	Algae	Algae, Moss, Fungi	EC50	PHY	d	F	50	SW	Moore, S.A.J.	Impact of Pesticides on Phytoplankton in Everglades Estuaries	Ecol.Rep.No.DI-SFEP-74-15 / South Florida Environ.Project, Natl.Park Serv., Atlanta, GA: 92 p.	1973
343	PCB 1242	Algae	Algae	Algae, Moss, Fungi	EC50	PHY	d	F	50	SW	Moore, S.A.J.	Impact of Pesticides on Phytoplankton in Everglades Estuaries	Ecol.Rep.No.DI-SFEP-74-15 / South Florida Environ.Project, Natl.Park Serv., Atlanta, GA: 92 p.	1973
344	PCB 1254	Palaemonetes pugio	Daggerblade Grass Shrimp	Crustaceans	LC50	MOR	d	A	64	SW	Roesijadi, G., S.R. Petrocelli, J.W. Anderson, C.S. Giam, and G.E. Neff	Toxicity of Polychlorinated Biphenyls (Aroclor 1254) to Adult, Juvenile, and Larval Stages of the Shrimp Palaemonetes pugio	Bull.Environ.Contam.Toxicol. 15(3):297-304	1976
345	PCB 1254	Algae	Algae	Algae, Moss, Fungi	EC50	PHY	d	F	65	SW	Moore, S.A.J.	Impact of Pesticides on Phytoplankton in Everglades Estuaries	Ecol.Rep.No.DI-SFEP-74-15 / South Florida Environ.Project, Natl.Park Serv., Atlanta, GA: 92 p.	1973
346	Aroclor 1232	Thalassiosira rotula	Diatom	Algae, Moss, Fungi	EC50*	GRO	d	F	71	SW	Reiriz, M.J.F., J.M.F. Soler, and M.A.M. Garcia	Response of a Marine Diatom Thalassiosira rotula (Meunier, 1910) to PCBs - Methodological Implications	Invest. Pesq.47(3): 419-434	1983
347	PCB 1254	Palaemonetes pugio	Daggerblade Grass Shrimp	Crustaceans	LC50	MOR	d	A	86	SW	Roesijadi, G., S.R. Petrocelli, J.W. Anderson, C.S. Giam, and G.E. Neff	Toxicity of Polychlorinated Biphenyls (Aroclor 1254) to Adult, Juvenile, and Larval Stages of the Shrimp Palaemonetes pugio	Bull.Environ.Contam.Toxicol. 15(3):297-304	1976
348	PCB 1254	Ampelisca abdita	Amphipod	Crustaceans	LC50	MOR	d	A	98	SW	Ho, K.T., R.A. McKinney, A. Kuhn, M.C. Pelletier, and R.M. Burgess	Identification of Acute Toxicants in New Bedford Harbor Sediments	Environ.Toxicol.Chem. 16(3):551-558	1997
349	PCB 1254	Penaeus duorarum	Northern Pink Shrimp	Crustaceans	NR-LETH	MOR	d	F	100	SW	Duke, T.W., J.I. Lowe, and A.J. Wilson Jr.	A Polychlorinated Biphenyl (Aroclor 1254) in the Water, Sediment, and Biota of Escambia Bay, Florida	Bull.Environ.Contam.Toxicol. 5(2):171-180	1970
350	Aroclor 1016	Cyprinodon variegatus	Sheepshead Minnow	Fish	LC50	MOR	d	F	100	SW	Hansen, D.J., S.C. Schimmel, and J. Forester	Effects of Aroclor 1016 on Embryos, Fry, Juveniles, and Adults of Sheepshead Minnows (Cyprinodon variegatus)	Trans.Am.Fish.Soc. 104(3):584-588	1975
351	Aroclor 1016	Cyprinodon variegatus	Sheepshead Minnow	Fish	LC50	MOR	d	F	100	SW	Hansen, D.J., S.C. Schimmel, and J. Forester	Effects of Aroclor 1016 on Embryos, Fry, Juveniles, and Adults of Sheepshead Minnows (Cyprinodon variegatus)	Trans.Am.Fish.Soc. 104(3):584-588	1975
352	Aroclor 1016	Cyprinodon variegatus	Sheepshead Minnow	Fish	LC50	MOR	d	F	100	SW	Hansen, D.J., S.C. Schimmel, and J. Forester	Effects of Aroclor 1016 on Embryos, Fry, Juveniles, and Adults of Sheepshead Minnows (Cyprinodon variegatus)	Trans.Am.Fish.Soc. 104(3):584-588	1975
353	PCB 1254	Americamysis bahia	Opossum Shrimp	Crustaceans	LC50	MOR	d	A	109	SW	Ho, K.T., R.A. McKinney, A. Kuhn, M.C. Pelletier, and R.M. Burgess	Identification of Acute Toxicants in New Bedford Harbor Sediments	Environ.Toxicol.Chem. 16(3):551-558	1997
354	4-Chloro-1,1'-biphenyl	Cyprinodon variegatus	Sheepshead Minnow	Fish	LC50	MOR	d	F	680	SW	Dill, D.C., M.A. Mayes, C.G. Mendoza, G.U. Boggs, and J.A. Emmitte	Comparison of the Toxicities of Biphenyl, Monochlorobiphenyl, and 2,2',4,4'-Tetrachlorobiphenyl to Fish and Daphnids	In: J.G.Pearson, R.B.Foster, and W.E.Bishop (Eds.), Aquatic Toxicology and Hazard Assessment, 5th Conference, ASTM STP 766, Philadelphia, PA :245-256	1982
355	Aroclor 1242	Mytilus edulis	Common Bay Mussel,Blue Mussel	Molluscs	EC50	BEH	d	F	900	SW	Roberts, D.	The Effect of Pesticides on Byssus Formation in the Common Mussel, Mytilus edulis	Environ.Pollut. 8(4):241-254	1975
356	PCB 1254	Capitella capitata	Polychaete Worm	Worms	LC50	MOR	d	F	1000	SW	Reish, D.J., and J.A. Lemay	Toxicity and Bioconcentration of Metals and Organic Compounds by Polychaeta	Ophelia 5(Suppl.):653-660	1991
357	PCB 1254	Neanthes arenaceodentata	Polychaete Worm	Worms	LC50	MOR	d	F	1000	SW	Reish, D.J., and J.A. Lemay	Toxicity and Bioconcentration of Metals and Organic Compounds by Polychaeta	Ophelia 5(Suppl.):653-660	1991
358	PCB 1254	Neanthes grubei	Polychaete	Worms	LC50	MOR	d	F	1000	SW	Reish, D.J., and J.A. Lemay	Toxicity and Bioconcentration of Metals and Organic Compounds by Polychaeta	Ophelia 5(Suppl.):653-660	1991
359	PCB 1254	Ophryotrocha labronica	Polychaete	Worms	LC50	MOR	d	F	1000	SW	Reish, D.J., and J.A. Lemay	Toxicity and Bioconcentration of Metals and Organic Compounds by Polychaeta	Ophelia 5(Suppl.):653-660	1991
360	Aroclor 1242	Mytilus edulis	Common Bay Mussel,Blue Mussel	Molluscs	EC50	BEH	d	F	1000	SW	Roberts, D.	The Effect of Pesticides on Byssus Formation in the Common Mussel, Mytilus edulis	Environ.Pollut. 8(4):241-254	1975
361	PCB 1254	Mytilus edulis	Common Bay Mussel,Blue Mussel	Molluscs	EC50	BEH	d	F	2200	SW	Roberts, D.	The Effect of Pesticides on Byssus Formation in the Common Mussel, Mytilus edulis	Environ.Pollut. 8(4):241-254	1975
362	PCB 1254	Mytilus edulis	Common Bay Mussel,Blue Mussel	Molluscs	EC50	BEH	d	F	3000	SW	Roberts, D.	The Effect of Pesticides on Byssus Formation in the Common Mussel, Mytilus edulis	Environ.Pollut. 8(4):241-254	1975
363	2-Chlorobiphenyl	Cyprinodon variegatus	Sheepshead Minnow	Fish	LC50	MOR	d	F	4100	SW	Dill, D.C., M.A. Mayes, C.G. Mendoza, G.U. Boggs, and J.A. Emmitte	Comparison of the Toxicities of Biphenyl, Monochlorobiphenyl, and 2,2',4,4'-Tetrachlorobiphenyl to Fish and Daphnids	In: J.G.Pearson, R.B.Foster, and W.E.Bishop (Eds.), Aquatic Toxicology and Hazard Assessment, 5th Conference, ASTM STP 766, Philadelphia, PA :245-256	1982
364	PCB 1254	Cyprinodon variegatus	Sheepshead Minnow	Fish	LC50	MOR	d	F	6100	SW	Hansen, D.J., S.C. Schimmel, and J. Forester	Aroclor 1254 in Eggs of Sheepshead Minnows: Effect on Fertilization Success and Survival of Embryos and Fry	Proc.27th.Annu.Conf.Southeast.Assoc.Game Fish Comm. 27:420-426 (Author Correspondance Used)	1973
365	PCB 1260	Crangon crangon	Common Shrimp, Sand Shrimp	Crustaceans	LC50	MOR	d	F	10000	SW	Portmann, J.E.	Results of Acute Toxicity Tests with Marine Organisms, Using a Standard Method	In: M.Ruivo (Ed.), Marine Pollution and Sea Life, FAO, Rome, Italy / Fishing News (Books) Ltd., London, England :212-217 (Author Communication Used)	1972

Appendix D-9, Table 7. ECOTOX effect values for PCBs in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
366	PCB 1260	Agonus cataphractus	Hooknose	Fish	LC50	MOR	d	F	10000	SW	Portmann, J.E.	Results of Acute Toxicity Tests with Marine Organisms, Using a Standard Method	In: M.Ruivo (Ed.), Marine Pollution and Sea Life, FAO, Rome, Italy / Fishing News (Books) Ltd., London, England :212-217 (Author Communication Used)	1972
367	PCB 1260	Cerastoderma edule	Cockle	Molluscs	LC50	MOR	d	F	10000	SW	Portmann, J.E.	Results of Acute Toxicity Tests with Marine Organisms, Using a Standard Method	In: M.Ruivo (Ed.), Marine Pollution and Sea Life, FAO, Rome, Italy / Fishing News (Books) Ltd., London, England :212-217 (Author Communication Used)	1972
368	PCB 1254	Agonus cataphractus	Hooknose	Fish	LC50	MOR	d	F	10000	SW	Portmann, J.E.	Results of Acute Toxicity Tests with Marine Organisms, Using a Standard Method	In: M.Ruivo (Ed.), Marine Pollution and Sea Life, FAO, Rome, Italy / Fishing News (Books) Ltd., London, England :212-217 (Author Communication Used)	1972
369	PCB 1254	Cerastoderma edule	Cockle	Molluscs	LC50	MOR	d	F	10000	SW	Portmann, J.E.	Results of Acute Toxicity Tests with Marine Organisms, Using a Standard Method	In: M.Ruivo (Ed.), Marine Pollution and Sea Life, FAO, Rome, Italy / Fishing News (Books) Ltd., London, England :212-217 (Author Communication Used)	1972
370	Aroclor 1248	Agonus cataphractus	Hooknose	Fish	LC50	MOR	d	F	10000	SW	Portmann, J.E.	Results of Acute Toxicity Tests with Marine Organisms, Using a Standard Method	In: M.Ruivo (Ed.), Marine Pollution and Sea Life, FAO, Rome, Italy / Fishing News (Books) Ltd., London, England :212-217 (Author Communication Used)	1972
371	Aroclor 1248	Cerastoderma edule	Cockle	Molluscs	LC50	MOR	d	F	10000	SW	Portmann, J.E.	Results of Acute Toxicity Tests with Marine Organisms, Using a Standard Method	In: M.Ruivo (Ed.), Marine Pollution and Sea Life, FAO, Rome, Italy / Fishing News (Books) Ltd., London, England :212-217 (Author Communication Used)	1972

Appendix D-9. Table 8. ECOTOX effects values for dioxins in freshwater.

Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Concentration (ug/L)	Media Type	Author	Title	Source	Publication Year
2,3,7,8-Tetrachlorodibenzo[b,e][1,4]dioxin	Oryzias latipes	Medaka, High-Eyes	Fish	EC50	PHY	SBNF	3	dph	0.0056	FW	Kim, Y., and K.R. Cooper	Toxicity of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (TCDD) and Polychlorinated Biphenyls (PCBs) in the Embryos and Newly Hatched Larvae of the Japanese Medaka (Oryzias latipes)	Chemosphere 39(3):527-538	1999
2,3,7,8-Tetrachlorodibenzo[b,e][1,4]dioxin	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	NR	d	0.0057	FW	Metcalfe, C.D., T.L. Metcalfe, J.A. Cormier, S.Y. Huestis, and A.J. Niimi	Early Life-Stage Mortalities of Japanese Medaka (Oryzias latipes) Exposed to Polychlorinated Diphenyl Ethers	Environ.Toxicol.Chem. 16(8):1749-1754	1997
2,3,7,8-Tetrachlorodibenzo[b,e][1,4]dioxin	Oryzias latipes	Medaka, High-Eyes	Fish	EC50	HIS	LESI	NR	ht	0.006	FW	Wisk, J.D., and K.R. Cooper	Comparison of the Toxicity of Several Polychlorinated Dibenzo-p-Dioxins and 2,3,7,8-Tetrachlorodibenzofuran in Embryos of the Japanese Medaka (Oryzias latipes)	Chemosphere 20(3/4):361-377	1990
2,3,7,8-Tetrachlorodibenzo[b,e][1,4]dioxin	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	3	dph	0.0081	FW	Kim, Y., and K.R. Cooper	Toxicity of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (TCDD) and Polychlorinated Biphenyls (PCBs) in the Embryos and Newly Hatched Larvae of the Japanese Medaka (Oryzias latipes)	Chemosphere 39(3):527-538	1999
2,3,7,8-Tetrachlorodibenzo[b,e][1,4]dioxin	Oryzias latipes	Medaka, High-Eyes	Fish	EC50	HIS	LESI	3	dph	0.0101	FW	Kim, Y., and K.R. Cooper	Toxicity of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (TCDD) and Polychlorinated Biphenyls (PCBs) in the Embryos and Newly Hatched Larvae of the Japanese Medaka (Oryzias latipes)	Chemosphere 39(3):527-538	1999
2,3,7,8-Tetrachlorodibenzo[b,e][1,4]dioxin	Oryzias latipes	Medaka, High-Eyes	Fish	EC50	PHY	SBNF	NR	d	0.012	FW	Harris, G.E., Y. Kiparissis, and C.D. Metcalfe	Assessment of the Toxic Potential of PCB Congener 81 (3,4,4'5-Tetrachlorobiphenyl) to Fish in Relation to Other Non-Ortho-Substituted PCB Congeners	Environ.Toxicol.Chem. 13(9):1405-1413	1994
2,3,7,8-Tetrachlorodibenzo[b,e][1,4]dioxin	Oryzias latipes	Medaka, High-Eyes	Fish	NR-LETH	MOR	MORT	3	dph	0.0123	FW	Kim, Y., and K.R. Cooper	Toxicity of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (TCDD) and Polychlorinated Biphenyls (PCBs) in the Embryos and Newly Hatched Larvae of the Japanese Medaka (Oryzias latipes)	Chemosphere 39(3):527-538	1999
2,3,7,8-Tetrachlorodibenzo[b,e][1,4]dioxin	Oryzias latipes	Medaka, High-Eyes	Fish	EC50	MOR	HTCH	3	dph	0.0125	FW	Kim, Y., and K.R. Cooper	Toxicity of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin (TCDD) and Polychlorinated Biphenyls (PCBs) in the Embryos and Newly Hatched Larvae of the Japanese Medaka (Oryzias latipes)	Chemosphere 39(3):527-538	1999
1,2,3,7,8-Pentachlorodibenzo[b,e][1,4]dioxin	Oryzias latipes	Medaka, High-Eyes	Fish	EC50	HIS	LESI	NR	ht	0.013	FW	Wisk, J.D., and K.R. Cooper	Comparison of the Toxicity of Several Polychlorinated Dibenzo-p-Dioxins and 2,3,7,8-Tetrachlorodibenzofuran in Embryos of the Japanese Medaka (Oryzias latipes)	Chemosphere 20(3/4):361-377	1990
2,3,7,8-Tetrachlorodibenzo[b,e][1,4]dioxin	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	3	dph	0.013	FW	Wisk, J.D., and K.R. Cooper	Comparison of the Toxicity of Several Polychlorinated Dibenzo-p-Dioxins and 2,3,7,8-Tetrachlorodibenzofuran in Embryos of the Japanese Medaka (Oryzias latipes)	Chemosphere 20(3/4):361-377	1990
2,3,7,8-Tetrachlorodibenzo[b,e][1,4]dioxin	Oryzias latipes	Medaka, High-Eyes	Fish	EC50	HIS	LESI	NR	ht	0.015	FW	Wisk, J.D., and K.R. Cooper	Comparison of the Toxicity of Several Polychlorinated Dibenzo-p-Dioxins and 2,3,7,8-Tetrachlorodibenzofuran in Embryos of the Japanese Medaka (Oryzias latipes)	Chemosphere 20(3/4):361-377	1990
2,3,7,8-Tetrachlorodibenzo[b,e][1,4]dioxin	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	17	d	0.02	FW	Harris, G.E., Y. Kiparissis, and C.D. Metcalfe	Assessment of the Toxic Potential of PCB Congener 81 (3,4,4'5-Tetrachlorobiphenyl) to Fish in Relation to Other Non-Ortho-Substituted PCB Congeners	Environ.Toxicol.Chem. 13(9):1405-1413	1994
1,2,3,7,8-Pentachlorodibenzo[b,e][1,4]dioxin	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	3	dph	0.027	FW	Wisk, J.D., and K.R. Cooper	Comparison of the Toxicity of Several Polychlorinated Dibenzo-p-Dioxins and 2,3,7,8-Tetrachlorodibenzofuran in Embryos of the Japanese Medaka (Oryzias latipes)	Chemosphere 20(3/4):361-377	1990
1,2,3,7,8-Pentachlorodibenzo[b,e][1,4]dioxin	Oryzias latipes	Medaka, High-Eyes	Fish	EC50	HIS	LESI	NR	ht	0.032	FW	Wisk, J.D., and K.R. Cooper	Comparison of the Toxicity of Several Polychlorinated Dibenzo-p-Dioxins and 2,3,7,8-Tetrachlorodibenzofuran in Embryos of the Japanese Medaka (Oryzias latipes)	Chemosphere 20(3/4):361-377	1990
2,3,7,8-Tetrachlorodibenzo[b,e][1,4]dioxin	Oryzias latipes	Medaka, High-Eyes	Fish	NR-LETH	MOR	MORT	3	dph	0.04	FW	Wisk, J.D., and K.R. Cooper	Comparison of the Toxicity of Several Polychlorinated Dibenzo-p-Dioxins and 2,3,7,8-Tetrachlorodibenzofuran in Embryos of the Japanese Medaka (Oryzias latipes)	Chemosphere 20(3/4):361-377	1990
1,2,3,4,7,8-Hexachlorodibenzo[b,e][1,4]dioxin	Oryzias latipes	Medaka, High-Eyes	Fish	EC50	HIS	LESI	NR	ht	0.2	FW	Wisk, J.D., and K.R. Cooper	Comparison of the Toxicity of Several Polychlorinated Dibenzo-p-Dioxins and 2,3,7,8-Tetrachlorodibenzofuran in Embryos of the Japanese Medaka (Oryzias latipes)	Chemosphere 20(3/4):361-377	1990
1,2,3,4,7,8-Hexachlorodibenzo[b,e][1,4]dioxin	Oryzias latipes	Medaka, High-Eyes	Fish	EC50	HIS	LESI	NR	ht	1.1	FW	Wisk, J.D., and K.R. Cooper	Comparison of the Toxicity of Several Polychlorinated Dibenzo-p-Dioxins and 2,3,7,8-Tetrachlorodibenzofuran in Embryos of the Japanese Medaka (Oryzias latipes)	Chemosphere 20(3/4):361-377	1990
2,3,7,8-Tetrachlorodibenzo[b,e][1,4]dioxin	Danio rerio	Zebra Danio	Fish	ED50	DVP	DFRM	10	d	1.9	FW	Henry, T.R., J.M. Spitsbergen, M.W. Hornung, C.C. Abnet, and R.E. Peterson	Early Life Stage Toxicity of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin in Zebrafish (Danio rerio)	Toxicol.Appl.Pharmacol. 142:56-68	1997
2,3,7,8-Tetrachlorodibenzo[b,e][1,4]dioxin	Danio rerio	Zebra Danio	Fish	ED50	HIS	EDMA	10	d	2.1	FW	Henry, T.R., J.M. Spitsbergen, M.W. Hornung, C.C. Abnet, and R.E. Peterson	Early Life Stage Toxicity of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin in Zebrafish (Danio rerio)	Toxicol.Appl.Pharmacol. 142:56-68	1997
2,3,7,8-Tetrachlorodibenzo[b,e][1,4]dioxin	Danio rerio	Zebra Danio	Fish	ED50	HIS	EDMA	10	d	2.2	FW	Henry, T.R., J.M. Spitsbergen, M.W. Hornung, C.C. Abnet, and R.E. Peterson	Early Life Stage Toxicity of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin in Zebrafish (Danio rerio)	Toxicol.Appl.Pharmacol. 142:56-68	1997
2,3,7,8-Tetrachlorodibenzo[b,e][1,4]dioxin	Danio rerio	Zebra Danio	Fish	LD50	MOR	MORT	0.04	d	2.5	FW	Henry, T.R., J.M. Spitsbergen, M.W. Hornung, C.C. Abnet, and R.E. Peterson	Early Life Stage Toxicity of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin in Zebrafish (Danio rerio)	Toxicol.Appl.Pharmacol. 142:56-68	1997
1,2,3,4,7,8-Hexachlorodibenzo[b,e][1,4]dioxin	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	3	dph	2.9	FW	Wisk, J.D., and K.R. Cooper	Comparison of the Toxicity of Several Polychlorinated Dibenzo-p-Dioxins and 2,3,7,8-Tetrachlorodibenzofuran in Embryos of the Japanese Medaka (Oryzias latipes)	Chemosphere 20(3/4):361-377	1990
2,3,7,8-Tetrachlorodibenzo[b,e][1,4]dioxin	Oryzias latipes	Medaka, High-Eyes	Fish	EC50	GRO	ABNM	3	d	3500	FW	Wisk, J.D., and K.R. Cooper	The Stage Specific Toxicity of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin in Embryos of the Japanese Medaka (Oryzias latipes)	Environ.Toxicol.Chem. 9(9):1159-1169	1990
2,3,7,8-Tetrachlorodibenzo[b,e][1,4]dioxin	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	6	d	9000	FW	Wisk, J.D., and K.R. Cooper	The Stage Specific Toxicity of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin in Embryos of the Japanese Medaka (Oryzias latipes)	Environ.Toxicol.Chem. 9(9):1159-1169	1990
2,3,7,8-Tetrachlorodibenzo[b,e][1,4]dioxin	Oryzias latipes	Medaka, High-Eyes	Fish	EC50	GRO	ABNM	3	d	14000	FW	Wisk, J.D., and K.R. Cooper	The Stage Specific Toxicity of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin in Embryos of the Japanese Medaka (Oryzias latipes)	Environ.Toxicol.Chem. 9(9):1159-1169	1990

Appendix D-9. Table 8. ECOTOX effects values for dioxins in freshwater.

Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Concentration (ug/L)	Media Type	Author	Title	Source	Publication Year
2,3,7,8-Tetrachlorodibenzo[b,e][1,4]dioxin	Oryzias latipes	Medaka, High-Eyes	Fish	EC50	MOR	HTCH	3	d	14000	FW	Wisk, J.D., and K.R. Cooper	The Stage Specific Toxicity of 2,3,7,8-Tetrachlorodibenzo-p-Dioxin in Embryos of the Japanese Medaka (Oryzias latipes)	Environ.Toxicol.Chem. 9(9):1159-1169	1990

Appendix D-9, Table 9. ECOTOX values for DDTs in freshwaters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
1	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Anabaena variabilis	Blue-Green Algae	Algae, Moss, Fungi	LC50	POP	PGRT	14	d	22000	FW	Bednarz, T.	The Effect of Pesticides on the Growth of Green and Blue-Green Algae Cultures	Acta Hydrobiol.23(2): 155-172	1981
2	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ankistrodesmus sp.	Green Algae	Algae, Moss, Fungi	LC50	POP	PGRT	14	d	55000	FW	Bednarz, T.	The Effect of Pesticides on the Growth of Green and Blue-Green Algae Cultures	Acta Hydrobiol.23(2): 155-172	1981
3	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Chlorella pyrenoidosa	Green Algae	Algae, Moss, Fungi	LC50	POP	PGRT	14	d	85000	FW	Bednarz, T.	The Effect of Pesticides on the Growth of Green and Blue-Green Algae Cultures	Acta Hydrobiol.23(2): 155-172	1981
4	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Chlorella sp.	Green Algae	Algae, Moss, Fungi	LC50	POP	PGRT	14	d	100000	FW	Bednarz, T.	The Effect of Pesticides on the Growth of Green and Blue-Green Algae Cultures	Acta Hydrobiol.23(2): 155-172	1981
5	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Chlorococcum sp.	Green Algae	Algae, Moss, Fungi	LC50	POP	PGRT	14	d	50000	FW	Bednarz, T.	The Effect of Pesticides on the Growth of Green and Blue-Green Algae Cultures	Acta Hydrobiol.23(2): 155-172	1981
6	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Dictyosphaerium pulchellum	Green Algae	Algae, Moss, Fungi	LC50	POP	PGRT	14	d	5000	FW	Bednarz, T.	The Effect of Pesticides on the Growth of Green and Blue-Green Algae Cultures	Acta Hydrobiol.23(2): 155-172	1981
7	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hormidium flaccidum	Algae	Algae, Moss, Fungi	LC50	POP	PGRT	14	d	20000	FW	Bednarz, T.	The Effect of Pesticides on the Growth of Green and Blue-Green Algae Cultures	Acta Hydrobiol.23(2): 155-172	1981
8	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oscillatoria sp.	Blue-Green Algae	Algae, Moss, Fungi	LC50	POP	PGRT	14	d	100000	FW	Bednarz, T.	The Effect of Pesticides on the Growth of Green and Blue-Green Algae Cultures	Acta Hydrobiol.23(2): 155-172	1981
9	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Scenedesmus acutus	Green Algae	Algae, Moss, Fungi	LC50	POP	PGRT	14	d	8500	FW	Bednarz, T.	The Effect of Pesticides on the Growth of Green and Blue-Green Algae Cultures	Acta Hydrobiol.23(2): 155-172	1981
10	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Scenedesmus quadricauda	Green Algae	Algae, Moss, Fungi	LC50	POP	PGRT	14	d	100000	FW	Bednarz, T.	The Effect of Pesticides on the Growth of Green and Blue-Green Algae Cultures	Acta Hydrobiol.23(2): 155-172	1981
11	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Spirulina platensis	Blue-Green Algae	Algae, Moss, Fungi	LC50	POP	PGRT	14	d	900	FW	Bednarz, T.	The Effect of Pesticides on the Growth of Green and Blue-Green Algae Cultures	Acta Hydrobiol.23(2): 155-172	1981
12	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Stichococcus sp.	Green Algae	Algae, Moss, Fungi	LC50	POP	PGRT	14	d	15500	FW	Bednarz, T.	The Effect of Pesticides on the Growth of Green and Blue-Green Algae Cultures	Acta Hydrobiol.23(2): 155-172	1981
13	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Anabaena cylindrica	Blue-Green Algae	Algae, Moss, Fungi	LD100	POP	PGRT	7	d	15000	FW	Vance, B.D., and W. Drummond	Biological Concentration of Pesticides by Algae	J. Am. Water Works Assoc.61: 360-362	1969
14	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Microcystis aeruginosa	Blue-Green Algae	Algae, Moss, Fungi	LD100	POP	PGRT	7	d	20000	FW	Vance, B.D., and W. Drummond	Biological Concentration of Pesticides by Algae	J. Am. Water Works Assoc.61: 360-362	1969
15	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oedogonium sp.	Filamentous Green Algae	Algae, Moss, Fungi	LD100	POP	PGRT	7	d	20000	FW	Vance, B.D., and W. Drummond	Biological Concentration of Pesticides by Algae	J. Am. Water Works Assoc.61: 360-362	1969
16	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Scenedesmus quadricauda	Green Algae	Algae, Moss, Fungi	LD100	POP	PGRT	7	d	20000	FW	Vance, B.D., and W. Drummond	Biological Concentration of Pesticides by Algae	J. Am. Water Works Assoc.61: 360-362	1969
17	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Spirogyra cylindrica	Green Algae	Algae, Moss, Fungi	LOEC	POP	BMAS	60.88	d	20000	FW	Awasthi, A.K., and S. Singh	Effects of DDT and BHC on Green Algae Spirogyra cylindrica	Environ. Ecol.5(4): 814-815	1987
18	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Scenedesmus acutus	Green Algae	Algae, Moss, Fungi	NR-LETH	MOR	MORT	5	d	100000	FW	Krishnakumari, M.K.	Sensitivity of the Alga Scenedesmus acutus to Some Pesticides	Life Sci.20: 1525-1532	1977
19	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Rana cyanophlyctis	Skipping Frog	Amphibians	LC100	MOR	MORT	1	d	200000	FW	Jabbar Khan, M.A.	Susceptibility of Some Important Fresh Water Fauna (Chordates) to Synthetic Insecticides and Indigenous Vegetable Oils Used as Mosquito Larvicide	Agric.Pak. 26(3):393-400	1975

Appendix D-9, Table 9. ECOTOX values for DDTs in freshwaters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
20	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Bufo woodhousei ssp. fowleri	Fowler'S Toad	Amphibians	LC50*	MOR	MORT	2	d	1500	FW	Sanders, H.O.	Pesticide Toxicities to Tadpoles of the Western Chorus Frog Pseudacris triseriata and Fowler's Toad Bufo woodhousii fowleri	Copeia 2:246-251 (Author Communication Used) (Publ in Part As 6797)	1970
21	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pseudacris triseriata ssp. triseria	Western Chorus Frog	Amphibians	LC50*	MOR	MORT	1	d	1400	FW	Sanders, H.O.	Pesticide Toxicities to Tadpoles of the Western Chorus Frog Pseudacris triseriata and Fowler's Toad Bufo woodhousii fowleri	Copeia 2:246-251 (Author Communication Used) (Publ in Part As 6797)	1970
22	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pseudacris triseriata ssp. triseria	Western Chorus Frog	Amphibians	LC50*	MOR	MORT	2	d	900	FW	Sanders, H.O.	Pesticide Toxicities to Tadpoles of the Western Chorus Frog Pseudacris triseriata and Fowler's Toad Bufo woodhousii fowleri	Copeia 2:246-251 (Author Communication Used) (Publ in Part As 6797)	1970
23	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pseudacris triseriata ssp. triseria	Western Chorus Frog	Amphibians	LC50*	MOR	MORT	4	d	800	FW	Sanders, H.O.	Pesticide Toxicities to Tadpoles of the Western Chorus Frog Pseudacris triseriata and Fowler's Toad Bufo woodhousii fowleri	Copeia 2:246-251 (Author Communication Used) (Publ in Part As 6797)	1970
24	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Bosmina longirostris	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	0.63	FW	May Passino, D.R.M., and A.J. Novak	Toxicity of Arsenate and DDT to the Cladoceran Bosmina longirostris	Bull.Environ.Contam.Toxicol. 33(3):325-329	1984
25	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Bosmina longirostris	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	1.72	FW	May Passino, D.R.M., and A.J. Novak	Toxicity of Arsenate and DDT to the Cladoceran Bosmina longirostris	Bull.Environ.Contam.Toxicol. 33(3):325-329	1984
26	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Daphnia carinata	Water Flea	Crustaceans	EC50	ITX	IMBL	1	d	23	FW	Santharam, K.R., B. Thayumanavan, and S. Krishnaswamy	Toxicity of Some Insecticides to Daphnia carinata King, an Important Link in the Food Chain in the Freshwater Ecosystems	Indian J.Ecol. 3(1):70-73 (OECDG Data File)	1976
27	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Daphnia carinata	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	12	FW	Santharam, K.R., B. Thayumanavan, and S. Krishnaswamy	Toxicity of Some Insecticides to Daphnia carinata King, an Important Link in the Food Chain in the Freshwater Ecosystems	Indian J.Ecol. 3(1):70-73 (OECDG Data File)	1976
28	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	1	d	6.5	FW	Rawash, I.A., I.A. Gaaboub, F.M. El-Gayar, and A.Y. El-Shazli	Standard Curves for Nuvacron, Malathion, Sevin, DDT and Kelthane Tested Against the Mosquito Culex pipiens L. and the Microcrustacean Daphnia magna Straus	Toxicology 4(2):133-144 (Author Communication Used)	1975
29	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	1	d	0.5	FW	Berglind, R., and G. Dave	Acute Toxicity of Chromate, DDT, PCP, TPBS, and Zinc to Daphnia magna Cultured in Hard and Soft Water	Bull.Environ.Contam.Toxicol. 33(1):63-68	1984
30	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	1	d	0.99	FW	Berglind, R., and G. Dave	Acute Toxicity of Chromate, DDT, PCP, TPBS, and Zinc to Daphnia magna Cultured in Hard and Soft Water	Bull.Environ.Contam.Toxicol. 33(1):63-68	1984
31	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	1	d	1.3	FW	Berglind, R., and G. Dave	Acute Toxicity of Chromate, DDT, PCP, TPBS, and Zinc to Daphnia magna Cultured in Hard and Soft Water	Bull.Environ.Contam.Toxicol. 33(1):63-68	1984
32	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	1	d	42	FW	Berglind, R., and G. Dave	Acute Toxicity of Chromate, DDT, PCP, TPBS, and Zinc to Daphnia magna Cultured in Hard and Soft Water	Bull.Environ.Contam.Toxicol. 33(1):63-68	1984
33	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	1	d	510	FW	Berglind, R., and G. Dave	Acute Toxicity of Chromate, DDT, PCP, TPBS, and Zinc to Daphnia magna Cultured in Hard and Soft Water	Bull.Environ.Contam.Toxicol. 33(1):63-68	1984
34	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	1	d	71	FW	Berglind, R., and G. Dave	Acute Toxicity of Chromate, DDT, PCP, TPBS, and Zinc to Daphnia magna Cultured in Hard and Soft Water	Bull.Environ.Contam.Toxicol. 33(1):63-68	1984
35	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	1	d	98	FW	Berglind, R., and G. Dave	Acute Toxicity of Chromate, DDT, PCP, TPBS, and Zinc to Daphnia magna Cultured in Hard and Soft Water	Bull.Environ.Contam.Toxicol. 33(1):63-68	1984
36	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	1.08	d	1.44	FW	Boyd, J.E.	The Use of Daphnia magna in the Microbioassay of Insecticides	Ph.D.Thesis, Penn.State University, University Park, PA :194 p.	1957
37	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	1.08	d	195	FW	Crosby, D.G., R.K. Tucker, and N. Aharonson	The Detection of Acute Toxicity with Daphnia magna	Food Cosmet.Toxicol. 4:503-514	1966
38	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	1.08	d	5.5	FW	Crosby, D.G., R.K. Tucker, and N. Aharonson	The Detection of Acute Toxicity with Daphnia magna	Food Cosmet.Toxicol. 4:503-514	1966

Appendix D-9, Table 9. ECOTOX values for DDTs in freshwaters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
39	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	0.68	FW	Berglind, R., and G. Dave	Acute Toxicity of Chromate, DDT, PCP, TPBS, and Zinc to Daphnia magna Cultured in Hard and Soft Water	Bull.Environ.Contam.Toxicol. 33(1):63-68	1984
40	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	1.1	FW	Berglind, R., and G. Dave	Acute Toxicity of Chromate, DDT, PCP, TPBS, and Zinc to Daphnia magna Cultured in Hard and Soft Water	Bull.Environ.Contam.Toxicol. 33(1):63-68	1984
41	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	1.1	FW	Randall, W.F., W.H. Dennis, and M.C. Warner	Acute Toxicity of Dechlorinated DDT, Chlordane and Lindane to Bluegill (Lepomis macrochirus) and Daphnia magna	Bull.Environ.Contam.Toxicol. 21(6):849-854	1979
42	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	1.7	FW	Randall, W.F., W.H. Dennis, and M.C. Warner	Acute Toxicity of Dechlorinated DDT, Chlordane and Lindane to Bluegill (Lepomis macrochirus) and Daphnia magna	Bull.Environ.Contam.Toxicol. 21(6):849-854	1979
43	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Daphnia magna	Water Flea	Crustaceans	EC50*	ITX	IMBL	2	d	1.08	FW	Stratton, G.W., and J. Giles	Importance of Bioassay Volume in Toxicity Tests Using Algae and Aquatic Invertebrates	Bull.Environ.Contam.Toxicol. 44(2):420-427	1990
44	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Daphnia magna	Water Flea	Crustaceans	EC50*	ITX	IMBL	2	d	1.13	FW	Stratton, G.W., and J. Giles	Importance of Bioassay Volume in Toxicity Tests Using Algae and Aquatic Invertebrates	Bull.Environ.Contam.Toxicol. 44(2):420-427	1990
45	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Daphnia magna	Water Flea	Crustaceans	EC50*	ITX	IMBL	2	d	1.2	FW	Stratton, G.W., and J. Giles	Importance of Bioassay Volume in Toxicity Tests Using Algae and Aquatic Invertebrates	Bull.Environ.Contam.Toxicol. 44(2):420-427	1990
46	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Daphnia magna	Water Flea	Crustaceans	EC50*	ITX	IMBL	2	d	1.23	FW	Stratton, G.W., and J. Giles	Importance of Bioassay Volume in Toxicity Tests Using Algae and Aquatic Invertebrates	Bull.Environ.Contam.Toxicol. 44(2):420-427	1990
47	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Daphnia magna	Water Flea	Crustaceans	EC50*	ITX	IMBL	2	d	1.51	FW	Stratton, G.W., and J. Giles	Importance of Bioassay Volume in Toxicity Tests Using Algae and Aquatic Invertebrates	Bull.Environ.Contam.Toxicol. 44(2):420-427	1990
48	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Daphnia pulex	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	2.67	FW	May Passino, D.R.M., and A.J. Novak	Toxicity of Arsenate and DDT to the Cladoceran Bosmina longirostris	Bull.Environ.Contam.Toxicol. 33(3):325-329	1984
49	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Daphnia pulex	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	1.1	FW	Passino, D.R.M., and S.B. Smith	Acute Bioassays and Hazard Evaluation of Representative Contaminants Detected in Great Lakes Fish	Environ.Toxicol.Chem. 6(11):901-907	1987
50	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Daphnia pulex	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	1.1	FW	Smith, S.B., J.F. Savino, and M.A. Blouin	Acute Toxicity to Daphnia pulex of Six Classes of Chemical Compounds Potentially Hazardous to Great Lakes Aquatic Biota	J.Great Lakes Res.14(4):394-404 / Aquat.Sci.Fish.Abstr. 17(2):139	1988
51	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Procambarus acutus ssp. acutus	White River Crayfish	Crustaceans	EC50	ITX	IMBL	2	d	3	FW	Albaugh, D.W.	Insecticide Tolerances of Two Crayfish Populations (Procambarus acutus) in South-Central Texas	Bull.Environ.Contam.Toxicol. 8(6):334-338	1972
52	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Simocephalus sp.	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	5.8	FW	Mittal, P.K., H.C. Agarwal, and M.K.K. Pillai	Tolerance, Uptake and Metabolism of DDT by the Freshwater Flea Simocephalus sp. (Cladocera)	Indian J.Exp.Biol. 18(11):1326-1329	1980
53	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Barytelphusa cunicularis	Crab	Crustaceans	LC50	MOR	MORT	1	d	2020	FW	Rao, K.S., and R. Nagabhushanam	Toxicity of DDT and Malathion to the Freshwater Crab Barytelphusa cunicularis	Aquat.Sci.Fish.Abstr.17(8, Pt.1):11842-1Q17 / Environ.Ecol. 5(1):203-204	1987
54	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Barytelphusa cunicularis	Crab	Crustaceans	LC50	MOR	MORT	2	d	1540	FW	Rao, K.S., and R. Nagabhushanam	Toxicity of DDT and Malathion to the Freshwater Crab Barytelphusa cunicularis	Aquat.Sci.Fish.Abstr.17(8, Pt.1):11842-1Q17 / Environ.Ecol. 5(1):203-204	1987
55	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Barytelphusa cunicularis	Crab	Crustaceans	LC50	MOR	MORT	3	d	980	FW	Rao, K.S., and R. Nagabhushanam	Toxicity of DDT and Malathion to the Freshwater Crab Barytelphusa cunicularis	Aquat.Sci.Fish.Abstr.17(8, Pt.1):11842-1Q17 / Environ.Ecol. 5(1):203-204	1987
56	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Barytelphusa cunicularis	Crab	Crustaceans	LC50	MOR	MORT	4	d	560	FW	Rao, K.S., and R. Nagabhushanam	Toxicity of DDT and Malathion to the Freshwater Crab Barytelphusa cunicularis	Aquat.Sci.Fish.Abstr.17(8, Pt.1):11842-1Q17 / Environ.Ecol. 5(1):203-204	1987
57	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	1	d	190	FW	Gaaboub, I.A., I.A. Rawash, H.K. Badawy, and N.A. Bayomi	Comparison Between the Use of Gambusia affinis Baird and Girard, Mosquito Larvae of Culex pipiens L. and the Microcrustacean Daphnia magna Straus	Proc.4th Arab Pestic.Conf.Tanta Univ. 1:213-227	1981

Appendix D-9, Table 9. ECOTOX values for DDTs in freshwaters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
58	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	1	d	9	FW	Gaaboub, I.A., F.M. El-Gayar, and E.M. Helal	Comparative Bioassay Studies on Larvae of Culex pipiens and the Microcrustacean Daphnia magna	Bull.Entomol.Soc.Egypt Econ.Ser. 9:77-84	1975
59	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	2.66	FW	Union Carbide Environmental Services	The Acute Toxicity of Hexachlorocyclopentadiene to the Water Flea, Daphnia magna Straus	Prepared for Velsicol Chemical Corporation, Chicago, Illinois :7 p.	1977
60	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	2.66	FW	Vilkas, A.	Acute Toxicity of Diazinon Technical to the Water Flea, Daphnia magna Straus	U.S.EPA-OPP Registration Standard	1976
61	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	3	FW	Ziegenfuss, P.S., W.J. Renaudette, and W.J. Adams	Methodology for Assessing the Acute Toxicity of Chemicals Sorbed to Sediments: Testing the Equilibrium Partitioning Theory	In: T.M.Poston and R.Purdy (Eds.), Aquatic Toxicology and Environmental Fate, 9th Volume, ASTM STP 921, Philadelphia, PA :479-493	1986
62	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Daphnia pulex	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	1.48	FW	Priester, L.E.Jr.	The Accumulation and Metabolism of DDT, Parathion, and Endrin by Aquatic Food-Chain Organisms	Ph.D.Thesis, Clemson University, Clemson, SC :74 p.	1965
63	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Daphnia pulex	Water Flea	Crustaceans	LC50*	MOR	MORT	0.125	d	3500	FW	Nishiuchi, Y., and Y. Hashimoto	Toxicity of Pesticides to Some Fresh Water Organisms	Rev.Plant Prot.Res. 2:137-139	1969
64	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gammarus fasciatus	Scud	Crustaceans	LC50	MOR	MORT	1	d	1.1	FW	Sanders, H.O.	Toxicity of Some Insecticides to Four Species of Malacostracan Crustaceans	Tech.Pap.No.66, Bur.Sports Fish.Wildl., Fish Wildl.Serv., U.S.D.I., Washington, D.C. :19 p. (Publ in Part As 6797)	1972
65	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gammarus fasciatus	Scud	Crustaceans	LC50	MOR	MORT	1	d	15	FW	Sanders, H.O.	Toxicity of Some Insecticides to Four Species of Malacostracan Crustaceans	Tech.Pap.No.66, Bur.Sports Fish.Wildl., Fish Wildl.Serv., U.S.D.I., Washington, D.C. :19 p. (Publ in Part As 6797)	1972
66	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gammarus fasciatus	Scud	Crustaceans	LC50	MOR	MORT	1	d	4.2	FW	Sanders, H.O.	Toxicity of Some Insecticides to Four Species of Malacostracan Crustaceans	Tech.Pap.No.66, Bur.Sports Fish.Wildl., Fish Wildl.Serv., U.S.D.I., Washington, D.C. :19 p. (Publ in Part As 6797)	1972
67	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gammarus fasciatus	Scud	Crustaceans	LC50	MOR	MORT	2	d	1	FW	Sanders, H.O.	Toxicity of Some Insecticides to Four Species of Malacostracan Crustaceans	Tech.Pap.No.66, Bur.Sports Fish.Wildl., Fish Wildl.Serv., U.S.D.I., Washington, D.C. :19 p. (Publ in Part As 6797)	1972
68	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gammarus fasciatus	Scud	Crustaceans	LC50	MOR	MORT	2	d	3.1	FW	Sanders, H.O.	Toxicity of Some Insecticides to Four Species of Malacostracan Crustaceans	Tech.Pap.No.66, Bur.Sports Fish.Wildl., Fish Wildl.Serv., U.S.D.I., Washington, D.C. :19 p. (Publ in Part As 6797)	1972
69	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gammarus fasciatus	Scud	Crustaceans	LC50	MOR	MORT	4	d	0.8	FW	Sanders, H.O.	Toxicity of Some Insecticides to Four Species of Malacostracan Crustaceans	Tech.Pap.No.66, Bur.Sports Fish.Wildl., Fish Wildl.Serv., U.S.D.I., Washington, D.C. :19 p. (Publ in Part As 6797)	1972
70	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gammarus fasciatus	Scud	Crustaceans	LC50	MOR	MORT	4	d	3.2	FW	Stalling, D.L., and F.L. Mayer Jr.	Toxicities of PCBs to Fish and Environmental Residues	Environ.Health Perspect. 1:159-164	1972
71	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gammarus fasciatus	Scud	Crustaceans	LC50	MOR	MORT	4	d	3.2	FW	Schoettger, R.A.	Fish-Pesticide Research Laboratory	In: Publ.No.106, U.S.Dep.Interior, Bur.Sport Fish.Wildl.Res., :2-40 (Publ in Part As 6797)	1970
72	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gammarus fasciatus	Scud	Crustaceans	LC50	MOR	MORT	4	d	1.8	FW	Sanders, H.O.	Toxicity of Some Insecticides to Four Species of Malacostracan Crustaceans	Tech.Pap.No.66, Bur.Sports Fish.Wildl., Fish Wildl.Serv., U.S.D.I., Washington, D.C. :19 p. (Publ in Part As 6797)	1972
73	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gammarus fasciatus	Scud	Crustaceans	LC50	MOR	MORT	4	d	3.2	FW	Sanders, H.O.	Toxicity of Some Insecticides to Four Species of Malacostracan Crustaceans	Tech.Pap.No.66, Bur.Sports Fish.Wildl., Fish Wildl.Serv., U.S.D.I., Washington, D.C. :19 p. (Publ in Part As 6797)	1972

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
74	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gammarus fasciatus	Scud	Crustaceans	LC50	MOR	MORT	5	d	0.6	FW	Stalling, D.L., and F.L. Mayer Jr.	Toxicities of PCBs to Fish and Environmental Residues	Environ.Health Perspect. 1:159-164	1972
75	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gammarus fasciatus	Scud	Crustaceans	LC50	MOR	MORT	5	d	0.6	FW	Schoettger, R.A.	Fish-Pesticide Research Laboratory	In: Publ.No.106, U.S.Dep.Interior, Bur.Sport Fish.Wildl.Res., :2-40 (Publ in Part As 6797)	1970
76	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gammarus fasciatus	Scud	Crustaceans	LC50	MOR	MORT	5	d	0.6	FW	Sanders, H.O.	Toxicity of Some Insecticides to Four Species of Malacostracan Crustaceans	Tech.Pap.No.66, Bur.Sports Fish.Wildl., Fish Wildl.Serv., U.S.D.I., Washington, D.C. :19 p. (Publ in Part As 6797)	1972
77	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gammarus fasciatus	Scud	Crustaceans	LC50	MOR	MORT	5	d	0.32	FW	Sanders, H.O.	Toxicity of Some Insecticides to Four Species of Malacostracan Crustaceans	Tech.Pap.No.66, Bur.Sports Fish.Wildl., Fish Wildl.Serv., U.S.D.I., Washington, D.C. :19 p. (Publ in Part As 6797)	1972
78	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gammarus lacustris	Scud	Crustaceans	LC50	MOR	MORT	1	d	1.4	FW	Sanders, H.O.	Toxicity of Pesticides to the Crustacean Gammarus lacustris	Tech.Pap.No.25, U.S.D.I., Bur.Sports Fish.Wildl., Fish Wildl.Serv., Washington, DC :18 p. (Author Communication Used) (Used with Reference 732) (Publ in Part As 6797)	1969
79	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gammarus lacustris	Scud	Crustaceans	LC50	MOR	MORT	1	d	12	FW	Sanders, H.O.	Toxicity of Pesticides to the Crustacean Gammarus lacustris	Tech.Pap.No.25, U.S.D.I., Bur.Sports Fish.Wildl., Fish Wildl.Serv., Washington, DC :18 p. (Author Communication Used) (Used with Reference 732) (Publ in Part As 6797)	1969
80	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gammarus lacustris	Scud	Crustaceans	LC50	MOR	MORT	1	d	5.6	FW	Sanders, H.O.	Toxicity of Pesticides to the Crustacean Gammarus lacustris	Tech.Pap.No.25, U.S.D.I., Bur.Sports Fish.Wildl., Fish Wildl.Serv., Washington, DC :18 p. (Author Communication Used) (Used with Reference 732) (Publ in Part As 6797)	1969
81	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gammarus lacustris	Scud	Crustaceans	LC50	MOR	MORT	1	d	7.6	FW	Sanders, H.O.	Toxicity of Pesticides to the Crustacean Gammarus lacustris	Tech.Pap.No.25, U.S.D.I., Bur.Sports Fish.Wildl., Fish Wildl.Serv., Washington, DC :18 p. (Author Communication Used) (Used with Reference 732) (Publ in Part As 6797)	1969
82	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gammarus lacustris	Scud	Crustaceans	LC50	MOR	MORT	1	d	8	FW	Sanders, H.O.	Toxicity of Pesticides to the Crustacean Gammarus lacustris	Tech.Pap.No.25, U.S.D.I., Bur.Sports Fish.Wildl., Fish Wildl.Serv., Washington, DC :18 p. (Author Communication Used) (Used with Reference 732) (Publ in Part As 6797)	1969
83	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gammarus lacustris	Scud	Crustaceans	LC50	MOR	MORT	2	d	2.1	FW	Sanders, H.O.	Toxicity of Pesticides to the Crustacean Gammarus lacustris	Tech.Pap.No.25, U.S.D.I., Bur.Sports Fish.Wildl., Fish Wildl.Serv., Washington, DC :18 p. (Author Communication Used) (Used with Reference 732) (Publ in Part As 6797)	1969
84	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gammarus lacustris	Scud	Crustaceans	LC50	MOR	MORT	4	d	9	FW	Gaufin, A.R., L.D. Jensen, A.V. Nebeker, T. Nelson, and R.W. Teel	Toxicity of Ten Organic Insecticides to Various Aquatic Invertebrates	Water Sewage Works 12:276-279	1965
85	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gammarus lacustris	Scud	Crustaceans	LC50*	MOR	MORT	4	d	9	FW	Nebeker, A.V., and A.R. Gaufin	Bioassays to Determine Pesticide Toxicity to the Amphipod Crustacean, Gammarus lacustris	Proc.Utah Acad.Sci. 4(1):64-67	1964
86	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hyalella azteca	Scud	Crustaceans	LC50	MOR	MORT	10	d	0.07	FW	Hoke, R.A., G.T. Ankley, A.M. Cotter, T. Goldenstein, P.A. Kosian, G.L. Phipps, and F.M. Vandermeiden	Evaluation of Equilibrium Partitioning Theory for Predicting Acute Toxicity of Field-Collected Sediments Contaminated with DDT, DDE and DDD to the	Environ.Toxicol.Chem. 13:157-166	1994
87	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hyalella azteca	Scud	Crustaceans	LC50	MOR	MORT	10	d	0.07	FW	Phipps, G.L., V.R. Mattson, and G.T. Ankley	Relative Sensitivity of Three Freshwater Benthic Macroinvertebrates to Ten Contaminants	Arch.Environ.Contam.Toxicol. 28(3):281-286	1995

Appendix D-9, Table 9. ECOTOX values for DDTs in freshwaters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
88	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Macrobrachium kistnensis	Shrimp	Crustaceans	LC50	MOR	MORT	1	d	48	FW	Fawade, M.M., P.R. Machale, U.H. Mane, and R. Nagabhushanam	DDT Toxicity and Mixed Function Oxidases in the Freshwater Prawn, Macrobrachium kistensis	J.Environ.Biol. 4(2):81-90	1983
89	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Moina macrocopa	Water Flea	Crustaceans	LC50*	MOR	MORT	0.125	d	4800	FW	Nishiuchi, Y., and Y. Hashimoto	Toxicity of Pesticides to Some Fresh Water Organisms	Rev.Plant Prot.Res. 2:137-139	1969
90	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Orconectes nais	Crayfish	Crustaceans	LC50	MOR	MORT	1	d	50	FW	Sanders, H.O.	Toxicity of Some Insecticides to Four Species of Malacostracan Crustaceans	Tech.Pap.No.66, Bur.Sports Fish.Wildl., Fish Wildl.Serv., U.S.D.I., Washington, D.C. :19 p. (Publ in Part As 6797)	1972
91	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Orconectes nais	Crayfish	Crustaceans	LC50	MOR	MORT	4	d	100	FW	Stalling, D.L., and F.L. Mayer Jr.	Toxicities of PCBs to Fish and Environmental Residues	Environ.Health Perspect. 1:159-164	1972
92	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Orconectes nais	Crayfish	Crustaceans	LC50	MOR	MORT	4	d	30	FW	Sanders, H.O.	Toxicity of Some Insecticides to Four Species of Malacostracan Crustaceans	Tech.Pap.No.66, Bur.Sports Fish.Wildl., Fish Wildl.Serv., U.S.D.I., Washington, D.C. :19 p. (Publ in Part As 6797)	1972
93	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Palaemonetes kadiakensis	Grass Shrimp,Freshwater Prawn	Crustaceans	LC50	MOR	MORT	2	d	7.7	FW	Sanders, H.O.	Toxicity of Some Insecticides to Four Species of Malacostracan Crustaceans	Tech.Pap.No.66, Bur.Sports Fish.Wildl., Fish Wildl.Serv., U.S.D.I., Washington, D.C. :19 p. (Publ in Part As 6797)	1972
94	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Palaemonetes kadiakensis	Grass Shrimp,Freshwater Prawn	Crustaceans	LC50	MOR	MORT	2	d	4.7	FW	Sanders, H.O.	Toxicity of Some Insecticides to Four Species of Malacostracan Crustaceans	Tech.Pap.No.66, Bur.Sports Fish.Wildl., Fish Wildl.Serv., U.S.D.I., Washington, D.C. :19 p. (Publ in Part As 6797)	1972
95	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Palaemonetes kadiakensis	Grass Shrimp,Freshwater Prawn	Crustaceans	LC50	MOR	MORT	5	d	1.3	FW	Stalling, D.L., and F.L. Mayer Jr.	Toxicities of PCBs to Fish and Environmental Residues	Environ.Health Perspect. 1:159-164	1972
96	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Palaemonetes kadiakensis	Grass Shrimp,Freshwater Prawn	Crustaceans	LC50	MOR	MORT	5	d	1.3	FW	Schoettger, R.A.	Fish-Pesticide Research Laboratory	In: Publ.No.106, U.S.Dep.Interior, Bur.Sport Fish.Wildl.Res., :2-40 (Publ in Part As 6797)	1970
97	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Palaemonetes kadiakensis	Grass Shrimp,Freshwater Prawn	Crustaceans	LC50	MOR	MORT	5	d	1.3	FW	Sanders, H.O.	Toxicity of Some Insecticides to Four Species of Malacostracan Crustaceans	Tech.Pap.No.66, Bur.Sports Fish.Wildl., Fish Wildl.Serv., U.S.D.I., Washington, D.C. :19 p. (Publ in Part As 6797)	1972
98	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Palaemonetes kadiakensis	Grass Shrimp,Freshwater Prawn	Crustaceans	LC50	MOR	MORT	5	d	1	FW	Stalling, D.L., and F.L. Mayer Jr.	Toxicities of PCBs to Fish and Environmental Residues	Environ.Health Perspect. 1:159-164	1972
99	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Palaemonetes kadiakensis	Grass Shrimp,Freshwater Prawn	Crustaceans	LC50	MOR	MORT	5	d	1	FW	Schoettger, R.A.	Fish-Pesticide Research Laboratory	In: Publ.No.106, U.S.Dep.Interior, Bur.Sport Fish.Wildl.Res., :2-40 (Publ in Part As 6797)	1970
100	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Palaemonetes kadiakensis	Grass Shrimp,Freshwater Prawn	Crustaceans	LC50	MOR	MORT	5	d	1	FW	Sanders, H.O.	Toxicity of Some Insecticides to Four Species of Malacostracan Crustaceans	Tech.Pap.No.66, Bur.Sports Fish.Wildl., Fish Wildl.Serv., U.S.D.I., Washington, D.C. :19 p. (Publ in Part As 6797)	1972
101	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Palaemonetes kadiakensis	Grass Shrimp,Freshwater Prawn	Crustaceans	LC50*	MOR	MORT	1	d	2.6	FW	Naqvi, S.M., and D.E. Ferguson	Levels of Insecticide Resistance in Fresh-Water Shrimp, Palaemonetes kadiakensis	Trans.Am.Fish.Soc. 99(4):696-699	1970
102	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Palaemonetes kadiakensis	Grass Shrimp,Freshwater Prawn	Crustaceans	LC50*	MOR	MORT	1	d	3.7	FW	Naqvi, S.M., and D.E. Ferguson	Levels of Insecticide Resistance in Fresh-Water Shrimp, Palaemonetes kadiakensis	Trans.Am.Fish.Soc. 99(4):696-699	1970
103	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Palaemonetes kadiakensis	Grass Shrimp,Freshwater Prawn	Crustaceans	LC50*	MOR	MORT	1	d	5.7	FW	Naqvi, S.M., and D.E. Ferguson	Levels of Insecticide Resistance in Fresh-Water Shrimp, Palaemonetes kadiakensis	Trans.Am.Fish.Soc. 99(4):696-699	1970
104	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Palaemonetes kadiakensis	Grass Shrimp,Freshwater Prawn	Crustaceans	LC50*	MOR	MORT	1	d	6.8	FW	Naqvi, S.M., and D.E. Ferguson	Levels of Insecticide Resistance in Fresh-Water Shrimp, Palaemonetes kadiakensis	Trans.Am.Fish.Soc. 99(4):696-699	1970

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
105	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Palaemonetes kadiakensis	Grass Shrimp,Freshwater Prawn	Crustaceans	LC50*	MOR	MORT	1.5	d	10	FW	Ferguson, D.E., D.D. Culley, and W.D. Cotton	Tolerances of Two Populations of Fresh Water Shrimp to Five Chlorinated Hydrocarbon Insecticides	J.Miss.Acad.Sci. 11:235-237	1965
106	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Palaemonetes kadiakensis	Grass Shrimp,Freshwater Prawn	Crustaceans	LC50*	MOR	MORT	1.5	d	4.5	FW	Ferguson, D.E., D.D. Culley, and W.D. Cotton	Tolerances of Two Populations of Fresh Water Shrimp to Five Chlorinated Hydrocarbon Insecticides	J.Miss.Acad.Sci. 11:235-237	1965
107	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Paratelphusa jacquemontii	Crab	Crustaceans	LC50	MOR	MORT	1	d	116.43	FW	Patil, P.S., M.P. Gadkari, and K.M. Kulkarni	Toxicity of Organochlorine Pesticides to the Crab Paratelphusa jacquemontii (Rathbun)	Environ.Ecol. 9(3):804-806	1991
108	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Procambarus acutus ssp. acutus	White River Crayfish	Crustaceans	LC50	MOR	MORT	4	d	28	FW	Carter, F.L., and J.B. Graves	Measuring Effects of Insecticides on Aquatic Animals	La.Agric. 16(2):14-15	1972
109	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Procambarus clarkii	Red Swamp Crayfish	Crustaceans	LC50*	MOR	MORT	1	d	600	FW	Muncy, R.J., and A.D. Oliver Jr.	Toxicity of Ten Insecticides to the Red Crayfish, Procambarus clarki (Girard)	Trans.Am.Fish.Soc. 92(4):428-431	1963
110	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Procambarus clarkii	Red Swamp Crayfish	Crustaceans	LC50*	MOR	MORT	2	d	600	FW	Muncy, R.J., and A.D. Oliver Jr.	Toxicity of Ten Insecticides to the Red Crayfish, Procambarus clarki (Girard)	Trans.Am.Fish.Soc. 92(4):428-431	1963
111	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Procambarus clarkii	Red Swamp Crayfish	Crustaceans	LC50*	MOR	MORT	3	d	600	FW	Muncy, R.J., and A.D. Oliver Jr.	Toxicity of Ten Insecticides to the Red Crayfish, Procambarus clarki (Girard)	Trans.Am.Fish.Soc. 92(4):428-431	1963
112	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Spicodiaptomus chilospinus	Calanoid Copepod	Crustaceans	LC50*	MOR	MORT	1	d	32	FW	Kader, H.A., B. Thayumanavan, and S. Krishnaswamy	The Relative Toxicities of Ten Biocides on Spicodiaptomus chelospinus Rajendran (1973) [Copepoda: Calanoida]	Comp.Physiol.Ecol. 1(3):78-82	1976
113	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Spicodiaptomus chilospinus	Calanoid Copepod	Crustaceans	LC50*	MOR	MORT	2	d	24	FW	Kader, H.A., B. Thayumanavan, and S. Krishnaswamy	The Relative Toxicities of Ten Biocides on Spicodiaptomus chelospinus Rajendran (1973) [Copepoda: Calanoida]	Comp.Physiol.Ecol. 1(3):78-82	1976
114	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Heterocypris incongruens	Ostracod	Crustaceans	NR-LETH	MOR	MORT	2	d	5000	FW	Khudairi, S.Y.A.D., and E. Ruber	Survival and Reproduction of Ostracods as Affected by Pesticides and Temperature	J.Econ.Entomol. 67(1):22-24	1974
115	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Colisa fasciata	Giant Gourami	Fish	EC50*	ITX	IMBL	0.25	d	162	FW	Verma, S.R., S.P. Gupta, R.C. Dalela, and M.P. Tyagi	Studies on the Toxicity of DDT on Fresh Water Teleost Fishes Part I. TLM Measurments and Accumulation of DDT in Liver and Intestine of Colisa	Gegenbaurs Morphol.Jahrb. 120(3):439-449	1974
116	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Colisa fasciata	Giant Gourami	Fish	EC50*	ITX	IMBL	1	d	150	FW	Verma, S.R., S.P. Gupta, R.C. Dalela, and M.P. Tyagi	Studies on the Toxicity of DDT on Fresh Water Teleost Fishes Part I. TLM Measurments and Accumulation of DDT in Liver and Intestine of Colisa	Gegenbaurs Morphol.Jahrb. 120(3):439-449	1974
117	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Colisa fasciata	Giant Gourami	Fish	EC50*	ITX	IMBL	2	d	132	FW	Verma, S.R., S.P. Gupta, R.C. Dalela, and M.P. Tyagi	Studies on the Toxicity of DDT on Fresh Water Teleost Fishes Part I. TLM Measurments and Accumulation of DDT in Liver and Intestine of Colisa	Gegenbaurs Morphol.Jahrb. 120(3):439-449	1974
118	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Colisa fasciata	Giant Gourami	Fish	EC50*	ITX	IMBL	4	d	126	FW	Verma, S.R., S.P. Gupta, R.C. Dalela, and M.P. Tyagi	Studies on the Toxicity of DDT on Fresh Water Teleost Fishes Part I. TLM Measurments and Accumulation of DDT in Liver and Intestine of Colisa	Gegenbaurs Morphol.Jahrb. 120(3):439-449	1974
119	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Notopterus notopterus	Asiatic Knifefish	Fish	EC50*	ITX	IMBL	0.25	d	92	FW	Verma, S.R., S.P. Gupta, R.C. Dalela, and M.P. Tyagi	Studies on the Toxicity of DDT on Fresh Water Teleost Fishes Part I. TLM Measurments and Accumulation of DDT in Liver and Intestine of Colisa	Gegenbaurs Morphol.Jahrb. 120(3):439-449	1974
120	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Notopterus notopterus	Asiatic Knifefish	Fish	EC50*	ITX	IMBL	1	d	84	FW	Verma, S.R., S.P. Gupta, R.C. Dalela, and M.P. Tyagi	Studies on the Toxicity of DDT on Fresh Water Teleost Fishes Part I. TLM Measurments and Accumulation of DDT in Liver and Intestine of Colisa	Gegenbaurs Morphol.Jahrb. 120(3):439-449	1974
121	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Notopterus notopterus	Asiatic Knifefish	Fish	EC50*	ITX	IMBL	2	d	62	FW	Verma, S.R., S.P. Gupta, R.C. Dalela, and M.P. Tyagi	Studies on the Toxicity of DDT on Fresh Water Teleost Fishes Part I. TLM Measurments and Accumulation of DDT in Liver and Intestine of Colisa	Gegenbaurs Morphol.Jahrb. 120(3):439-449	1974

Appendix D-9, Table 9. ECOTOX values for DDTs in freshwaters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
122	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Notopterus notopterus	Asiatic Knifefish	Fish	EC50*	ITX	IMBL	4	d	43	FW	Verma, S.R., S.P. Gupta, R.C. Dalela, and M.P. Tyagi	Studies on the Toxicity of DDT on Fresh Water Teleost Fishes Part I. TLM Measurments and Accumulation of DDT in Liver and Intestine of Colisa	Gegenbaurs Morphol.Jahrb. 120(3):439-449	1974
123	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Poecilia reticulata	Guppy	Fish	EC50	FDB	GFDB	1	d	12	FW	Rongsriyam, Y., S. Prownebon, and S. Hirakoso	Effects of Insecticides on the Feeding Activity of the Guppy, a Mosquito-Eating Fish, in Thailand	Bull.W.H.O. 39:977-980	1968
124	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Aplocheilus melanostigma	Kuddian	Fish	LC100	MOR	MORT	1	d	200000*	FW	Jabbar Khan, M.A.	Susceptibility of Some Important Fresh Water Fauna (Chordates) to Synthetic Insecticides and Indigenous Vegetable Oils Used as Mosquito Larvicide	Agric.Pak. 26(3):393-400	1975
125	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Channa marulius	Snake-Head Catfish	Fish	LC100	MOR	MORT	1	d	200000*	FW	Jabbar Khan, M.A.	Susceptibility of Some Important Fresh Water Fauna (Chordates) to Synthetic Insecticides and Indigenous Vegetable Oils Used as Mosquito Larvicide	Agric.Pak. 26(3):393-400	1975
126	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Colisa lalia	Dwarf Gourami, Kungee	Fish	LC100	MOR	MORT	1	d	180000*	FW	Jabbar Khan, M.A.	Susceptibility of Some Important Fresh Water Fauna (Chordates) to Synthetic Insecticides and Indigenous Vegetable Oils Used as Mosquito Larvicide	Agric.Pak. 26(3):393-400	1975
127	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Heteropneustes fossilis	Indian Catfish	Fish	LC100	MOR	MORT	1	d	200000	FW	Jabbar Khan, M.A.	Susceptibility of Some Important Fresh Water Fauna (Chordates) to Synthetic Insecticides and Indigenous Vegetable Oils Used as Mosquito Larvicide	Agric.Pak. 26(3):393-400	1975
128	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Notopterus notopterus	Asiatic Knifefish	Fish	LC100	MOR	MORT	1	d	200000*	FW	Jabbar Khan, M.A.	Susceptibility of Some Important Fresh Water Fauna (Chordates) to Synthetic Insecticides and Indigenous Vegetable Oils Used as Mosquito Larvicide	Agric.Pak. 26(3):393-400	1975
129	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC100	MOR	MORT	1.88	d	100000	FW	State of Washington Dep.of Fisheries	Toxic Effects of Organic and Inorganic Pollutants on Young Salmon and Trout	Res.Bull.No.5 :1-161	1960
130	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ameiurus melas	Black Bullhead	Fish	LC50	MOR	MORT	2	d	80	FW	Bathe, R., K. Sachsse, L. Ullmann, W.D. Hormann, F. Zak, and R. Hess	The Evaluation of Fish Toxicity in the Laboratory	Proc.Eur.Soc.Toxicol. 16:113-124	1975
131	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ameiurus melas	Black Bullhead	Fish	LC50	MOR	MORT	4	d	17	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
132	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ameiurus melas	Black Bullhead	Fish	LC50	MOR	MORT	4	d	20	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
133	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ameiurus melas	Black Bullhead	Fish	LC50	MOR	MORT	4	d	23.5	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
134	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ameiurus melas	Black Bullhead	Fish	LC50	MOR	MORT	4	d	42	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
135	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ameiurus melas	Black Bullhead	Fish	LC50*	MOR	MORT	1.5	d	185	FW	Ferguson, D.E., W.D. Cotton, D.T. Gardner, and D.D. Culley	Tolerances to Five Chlorinated Hydrocarbon Insecticides in Two Species of Fish From a Transect of the Lower Mississippi River	J.Miss.Acad.Sci. 11:239-245	1965
136	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ameiurus melas	Black Bullhead	Fish	LC50*	MOR	MORT	1.5	d	275	FW	Ferguson, D.E., W.D. Cotton, D.T. Gardner, and D.D. Culley	Tolerances to Five Chlorinated Hydrocarbon Insecticides in Two Species of Fish From a Transect of the Lower Mississippi River	J.Miss.Acad.Sci. 11:239-245	1965
137	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ameiurus melas	Black Bullhead	Fish	LC50*	MOR	MORT	1.5	d	30	FW	Ferguson, D.E., W.D. Cotton, D.T. Gardner, and D.D. Culley	Tolerances to Five Chlorinated Hydrocarbon Insecticides in Two Species of Fish From a Transect of the Lower Mississippi River	J.Miss.Acad.Sci. 11:239-245	1965

Appendix D-9, Table 9. ECOTOX values for DDTs in freshwaters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
138	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ameiurus melas	Black Bullhead	Fish	LC50*	MOR	MORT	1.5	d	9	FW	Ferguson, D.E., W.D. Cotton, D.T. Gardner, and D.D. Culley	Tolerances to Five Chlorinated Hydrocarbon Insecticides in Two Species of Fish From a Transect of the Lower Mississippi River	J.Miss.Acad.Sci. 11:239-245	1965
139	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Aplocheilus lineatus	Killifish	Fish	LC50	MOR	MORT	1	d	148.9	FW	Jacob, S.S., N.B. Nair, and N.K. Balasubramanian	Toxicity of Certain Pesticides Found in the Habitat to the Larvivorous Fishes Aplocheilus lineatus (Cuv. & Val.) and Macropodus cupanus (Cuv. & Val.)	Proc.Indian Acad.Sci.Anim.Sci. 91(3):323-328	1982
140	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Aplocheilus lineatus	Killifish	Fish	LC50	MOR	MORT	2	d	122.8	FW	Jacob, S.S., N.B. Nair, and N.K. Balasubramanian	Toxicity of Certain Pesticides Found in the Habitat to the Larvivorous Fishes Aplocheilus lineatus (Cuv. & Val.) and Macropodus cupanus (Cuv. & Val.)	Proc.Indian Acad.Sci.Anim.Sci. 91(3):323-328	1982
141	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Aplodinotus grunniens	Freshwater Drum	Fish	LC50	MOR	MORT	4	d	10	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
142	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Barbus dorsalis	Two Spot African Barb	Fish	LC50*	MOR	MORT	1	d	86	FW	Rao, T.S., S. Dutt, and K. Mangaiah	TLM Values of Some Modern Pesticides to the Freshwater Fish - Puntius puckelli	Environ.Health (Nagpur) 9:103-109	1967
143	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Barbus dorsalis	Two Spot African Barb	Fish	LC50*	MOR	MORT	2	d	86	FW	Rao, T.S., S. Dutt, and K. Mangaiah	TLM Values of Some Modern Pesticides to the Freshwater Fish - Puntius puckelli	Environ.Health (Nagpur) 9:103-109	1967
144	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Barbus dorsalis	Two Spot African Barb	Fish	LC50*	MOR	MORT	4	d	48	FW	Rao, T.S., S. Dutt, and K. Mangaiah	TLM Values of Some Modern Pesticides to the Freshwater Fish - Puntius puckelli	Environ.Health (Nagpur) 9:103-109	1967
145	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius auratus	Goldfish	Fish	LC50	MOR	MORT	1	d	160	FW	Beliles, R.	Diazinon Safety Evaluation on Fish and Wildlife: Bobwhite Quail, Goldfish, Sunfish, and Rainbow Trout	U.S.EPA-OPP Registration Standard	1965
146	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius auratus	Goldfish	Fish	LC50	MOR	MORT	2	d	32	FW	Beliles, R.	Diazinon Safety Evaluation on Fish and Wildlife: Bobwhite Quail, Goldfish, Sunfish, and Rainbow Trout	U.S.EPA-OPP Registration Standard	1965
147	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius auratus	Goldfish	Fish	LC50	MOR	MORT	3	d	18	FW	Beliles, R.	Diazinon Safety Evaluation on Fish and Wildlife: Bobwhite Quail, Goldfish, Sunfish, and Rainbow Trout	U.S.EPA-OPP Registration Standard	1965
148	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius auratus	Goldfish	Fish	LC50	MOR	MORT	4	d	13	FW	Beliles, R.	Diazinon Safety Evaluation on Fish and Wildlife: Bobwhite Quail, Goldfish, Sunfish, and Rainbow Trout	U.S.EPA-OPP Registration Standard	1965
149	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius auratus	Goldfish	Fish	LC50	MOR	MORT	4	d	180	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
150	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius auratus	Goldfish	Fish	LC50	MOR	MORT	4	d	21	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
151	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius auratus	Goldfish	Fish	LC50	MOR	MORT	4	d	27	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
152	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius auratus	Goldfish	Fish	LC50	MOR	MORT	4	d	32	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
153	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius auratus	Goldfish	Fish	LC50	MOR	MORT	4	d	35	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
154	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius auratus	Goldfish	Fish	LC50	MOR	MORT	4	d	40	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
155	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius auratus	Goldfish	Fish	LC50	MOR	MORT	4	d	76	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
156	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius auratus	Goldfish	Fish	LC50	MOR	MORT	4	d	9.8	FW	Ingham, B., and M.A. Gallo	Effects of Asulam in Wildlife Species Acute Toxicity to Birds and Fish	Bull.Environ.Contam.Toxicol. 13(2):194-199	1975
157	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius auratus	Goldfish	Fish	LC50*	MOR	MORT	1	d	180	FW	Henderson, C., Q.H. Pickering, and C.M. Tarzwell	Relative Toxicity of Ten Chlorinated Hydrocarbon Insecticides to Four Species of Fish	Trans.Am.Fish.Soc. 88(1):23-32	1959
158	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius auratus	Goldfish	Fish	LC50*	MOR	MORT	2	d	110	FW	Haynes, H.L., H.H. Moorefield, A.J. Borash, and J.W. Keays	The Toxicity of Sevin to Goldfish	J.Econ.Entomol. 51(4):540	1958
159	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius auratus	Goldfish	Fish	LC50*	MOR	MORT	2	d	47	FW	Henderson, C., Q.H. Pickering, and C.M. Tarzwell	Relative Toxicity of Ten Chlorinated Hydrocarbon Insecticides to Four Species of Fish	Trans.Am.Fish.Soc. 88(1):23-32	1959
160	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius auratus	Goldfish	Fish	LC50*	MOR	MORT	2	d	68	FW	Nishiuchi, Y., and Y. Hashimoto	Toxicity of Pesticides to Some Fresh Water Organisms	Rev.Plant Prot.Res. 2:137-139	1969
161	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius auratus	Goldfish	Fish	LC50*	MOR	MORT	3	d	100	FW	Odum, E.P., and W.T. Sumerford	Comparative Toxicity of DDT and Four Analogues to Goldfish, Gambusia, and Culex Larvae	Science 104(2708):480-482	1946
162	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius auratus	Goldfish	Fish	LC50*	MOR	MORT	4	d	21	FW	Macek, K.J., and W.A. McAllister	Insecticide Susceptibility of Some Common Fish Family Representatives	Trans.Am.Fish.Soc. 99(1):20-27 (Publ in Part As 6797)	1970
163	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius auratus	Goldfish	Fish	LC50*	MOR	MORT	4	d	36	FW	Henderson, C., Q.H. Pickering, and C.M. Tarzwell	Relative Toxicity of Ten Chlorinated Hydrocarbon Insecticides to Four Species of Fish	Trans.Am.Fish.Soc. 88(1):23-32	1959
164	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius carassius	Crucian Carp	Fish	LC50	MOR	MORT	2	d	30	FW	Bathe, R., K. Sachsse, L. Ullmann, W.D. Hormann, F. Zak, and R. Hess	The Evaluation of Fish Toxicity in the Laboratory	Proc.Eur.Soc.Toxicol. 16:113-124	1975
165	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius carassius	Crucian Carp	Fish	LC50	MOR	MORT	4	d	80	FW	Bathe, R., L. Ullman, K. Sachsse, and R. Hess	Relationship between Toxicity to Fish and to Mammals: A Comparative Study Under Defined Laboratory Conditions	U.S.EPA-OPP Registration Standard :1 p. (CBI Data)	1975
166	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Catla catla	Catla	Fish	LC50	MOR	MORT	4	d	6800	FW	Kulshrestha, S.K., N. Arora, and S. Sharma	Toxicity of Four Pesticides on the Fingerlings of Indian Major Carps Labeo rohita, Catla catla, and Cirrhinus mrigala	Ecotoxicol.Environ.Saf. 12(2):114-119	1986
167	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Channa punctata	Snake-Head Catfish	Fish	LC50	MOR	MORT	1	d	83	FW	Javaid, M.Y., and A. Waiz	Acute Toxicity of Five Chlorinated Hydrocarbon Insecticides to the Fish, Channa punctatuts	Pak.J.Sci.Ind.Res. 15(4-5):291-293	1972
168	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Channa punctata	Snake-Head Catfish	Fish	LC50	MOR	MORT	4	d	121	FW	Chari, M.S.	A Rapid Bioassay Procedure to Determine the Toxicity of Pesticides to Channa punctatus Bloch	J.Inl.Fish.Soc.India 24(2):88-90	1992
169	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Cirrhinus mrigala	Carp, Hawk Fish	Fish	LC50	MOR	MORT	4	d	6400	FW	Kulshrestha, S.K., N. Arora, and S. Sharma	Toxicity of Four Pesticides on the Fingerlings of Indian Major Carps Labeo rohita, Catla catla, and Cirrhinus mrigala	Ecotoxicol.Environ.Saf. 12(2):114-119	1986
170	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Clarias batrachus	Walking Catfish	Fish	LC50	MOR	MORT	1	d	18	FW	Kudesia, V.P., and N.P. Bali	Study of Pesticides in Kalinadi River and Evaluation of Toxicity of Some Pesticides on Fish Clarias batrachus	Acta Cienc.Indica 10(4):245-254	1984
171	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Clarias batrachus	Walking Catfish	Fish	LC50	MOR	MORT	2	d	8.5	FW	Kudesia, V.P., and N.P. Bali	Study of Pesticides in Kalinadi River and Evaluation of Toxicity of Some Pesticides on Fish Clarias batrachus	Acta Cienc.Indica 10(4):245-254	1984

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
172	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Clarias batrachus	Walking Catfish	Fish	LC50	MOR	MORT	3	d	4.2	FW	Kudesia, V.P., and N.P. Bali	Study of Pesticides in Kalinadi River and Evaluation of Toxicity of Some Pesticides on Fish Clarias batrachus	Acta Cienc.Indica 10(4):245-254	1984
173	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Clarias batrachus	Walking Catfish	Fish	LC50	MOR	MORT	4	d	1.75	FW	Kudesia, V.P., and N.P. Bali	Study of Pesticides in Kalinadi River and Evaluation of Toxicity of Some Pesticides on Fish Clarias batrachus	Acta Cienc.Indica 10(4):245-254	1984
174	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Colisa fasciata	Giant Gourami	Fish	LC50*	MOR	MORT	1	d	230	FW	Panwar, R.S., D. Kapoor, H.C. Joshi, and R.A. Gupta	Toxicity of Some Insecticides to the Weed Fish, Trichogaster fasciatus (Bloch and Schneider)	J.Inl.Fish.Soc.India 8:129-130	1976
175	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Colisa fasciata	Giant Gourami	Fish	LC50*	MOR	MORT	4	d	120	FW	Panwar, R.S., D. Kapoor, H.C. Joshi, and R.A. Gupta	Toxicity of Some Insecticides to the Weed Fish, Trichogaster fasciatus (Bloch and Schneider)	J.Inl.Fish.Soc.India 8:129-130	1976
176	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Culaea inconstans	Brook Stickleback	Fish	LC50	MOR	MORT	4	d	67	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
177	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Cyprinus carpio	Common Carp	Fish	LC50	MOR	MORT	4	d	11.3	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
178	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Cyprinus carpio	Common Carp	Fish	LC50	MOR	MORT	4	d	12	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
179	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Cyprinus carpio	Common Carp	Fish	LC50	MOR	MORT	4	d	4	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
180	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Cyprinus carpio	Common Carp	Fish	LC50	MOR	MORT	4	d	6	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
181	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Cyprinus carpio	Common Carp	Fish	LC50	MOR	MORT	4	d	6.9	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
182	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Cyprinus carpio	Common Carp	Fish	LC50	MOR	MORT	4	d	9.2	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
183	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Cyprinus carpio	Common Carp	Fish	LC50*	MOR	MORT	2	d	110	FW	Nishiuchi, Y., and Y. Hashimoto	Toxicity of Pesticides to Some Fresh Water Organisms	Rev.Plant Prot.Res. 2:137-139	1969
184	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Esox lucius	Northern Pike	Fish	LC50	MOR	MORT	4	d	1.7	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
185	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	7	d	95	FW	Mittal, P.K., T. Adak, and V.P. Sharma	Acute Toxicity of Certain Organochlorine, Organophosphorus, Synthetic Pyrethroid and Microbial Insecticides to the Mosquito Fish Gambusia affinis (Baird and Girard)	Indian J.Malariol. 28(3):167-170	1991
186	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	1	d	560	FW	Nunogawa, J.H., N.C. Burbank Jr., R.H.F. Young, and L.S. Lau	Relative Toxicities of Selected Chemicals to Several Species of Tropical Fish	Water Resour.Res.Ctr., Univ.of Hawaii, Honolulu, HI :38 p. (NTIS/PB-196312)	1970
187	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	1	d	70	FW	Joshi, A.G., and M.S. Rege	Acute Toxicity of Some Pesticides & a Few Inorganic Salts to the Mosquito Fish Gambusia affinis (Baird & Girard)	Indian J.Exp.Biol. 18:435-437	1980

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
188	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	1	d	1400	FW	Gaaboub, I.A., I.A. Rawash, H.K. Badawy, and N.A. Bayomi	Comparison Between the Use of Gambusia affinis Baird and Girard, Mosquito Larvae of Culex pipiens L. and the Microcrustacean Daphnia magna Straus	Proc.4th Arab Pestic.Conf.Tanta Univ. 1:213-227	1981
189	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	1	d	180	FW	Krieger, R.I., and P.W. Lee	Inhibition of In Vivo and In Vitro Epoxidation of Aldrin, and Potentiation of Toxicity of Various Insecticide Chemicals by Diquat in Two Species of Fish	Arch.Environ.Contam.Toxicol. 1(2):112-121 (Used 2775 As Ref.)	1973
190	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	1	d	22.74	FW	El Sebae, A.H., M.A. El Amayem, I. Sharaf, and M. Massod	Factors Affecting Acute and Chronic Toxicity of Chlorinated Pesticides and Their Biomagnification in Alexandria Region	In: Papers Presented at the FAO/UNEP Meeting on the Toxicity and Bioaccumulation of Selected Substances in Marine Organisms, Rovinj, Yugoslavia, 5-9 Nov., 1984, FAO Fish.Rep.No.334 (Suppl.):73-79	1986
191	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	1	d	42	FW	Hansen, D.J., E. Matthews, S.L. Nall, and D.P. Dumas	Avoidance of Pesticides by Untrained Mosquitofish, Gambusia affinis	Bull.Environ.Contam.Toxicol. 8(1):46-51	1972
192	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	1	d	58.58	FW	El Sebae, A.H., M.A. El Amayem, I. Sharaf, and M. Massod	Factors Affecting Acute and Chronic Toxicity of Chlorinated Pesticides and Their Biomagnification in Alexandria Region	In: Papers Presented at the FAO/UNEP Meeting on the Toxicity and Bioaccumulation of Selected Substances in Marine Organisms, Rovinj, Yugoslavia, 5-9 Nov., 1984, FAO Fish.Rep.No.334 (Suppl.):73-79	1986
193	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	1	d	8510	FW	Mohsen, Z.H., N.A. Ouda, and H.H. Zaiya	Predatory Efficiency and Tolerance of Gambusia affinis to Mosquito Larvicides	J.Biol.Sci.Res. 20(3):528-536	1989
194	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	2	d	60	FW	Joshi, A.G., and M.S. Rege	Acute Toxicity of Some Pesticides & a Few Inorganic Salts to the Mosquito Fish Gambusia affinis (Baird & Girard)	Indian J.Exp.Biol. 18:435-437	1980
195	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	2	d	313	FW	Dziuk, L.J., and F.W. Plapp	Insecticide Resistance in Mosquitofish From Texas	Bull.Environ.Contam.Toxicol. 9(1):15-19	1973
196	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	2	d	43	FW	Dziuk, L.J., and F.W. Plapp	Insecticide Resistance in Mosquitofish From Texas	Bull.Environ.Contam.Toxicol. 9(1):15-19	1973
197	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	2	d	528	FW	Dziuk, L.J., and F.W. Plapp	Insecticide Resistance in Mosquitofish From Texas	Bull.Environ.Contam.Toxicol. 9(1):15-19	1973
198	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	3	d	55	FW	Joshi, A.G., and M.S. Rege	Acute Toxicity of Some Pesticides & a Few Inorganic Salts to the Mosquito Fish Gambusia affinis (Baird & Girard)	Indian J.Exp.Biol. 18:435-437	1980
199	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	4	d	40	FW	Joshi, A.G., and M.S. Rege	Acute Toxicity of Some Pesticides & a Few Inorganic Salts to the Mosquito Fish Gambusia affinis (Baird & Girard)	Indian J.Exp.Biol. 18:435-437	1980
200	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	4	d	27	FW	Carter, F.L., and J.B. Graves	Measuring Effects of Insecticides on Aquatic Animals	La.Agric. 16(2):14-15	1972
201	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	4	d	27.69	FW	El Sebae, A.H., M.A. El Amayem, I. Sharaf, and M. Massod	Factors Affecting Acute and Chronic Toxicity of Chlorinated Pesticides and Their Biomagnification in Alexandria Region	In: Papers Presented at the FAO/UNEP Meeting on the Toxicity and Bioaccumulation of Selected Substances in Marine Organisms, Rovinj, Yugoslavia, 5-9 Nov., 1984, FAO Fish.Rep.No.334 (Suppl.):73-79	1986

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202	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	4	d	9.87	FW	El Sebae, A.H., M.A. El Amayem, I. Sharaf, and M. Massod	Factors Affecting Acute and Chronic Toxicity of Chlorinated Pesticides and Their Biomagnification in Alexandria Region	In: Papers Presented at the FAO/UNEP Meeting on the Toxicity and Bioaccumulation of Selected Substances in Marine Organisms, Rovinj, Yugoslavia, 5-9 Nov., 1984, FAO Fish.Rep.No.334 (Suppl.):73-79	1986
203	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gambusia affinis	Western Mosquitofish	Fish	LC50*	MOR	MORT	1.5	d	20	FW	Ferguson, D.E., W.D. Cotton, D.T. Gardner, and D.D. Culley	Tolerances to Five Chlorinated Hydrocarbon Insecticides in Two Species of Fish From a Transect of the Lower Mississippi River	J.Miss.Acad.Sci. 11:239-245	1965
204	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gambusia affinis	Western Mosquitofish	Fish	LC50*	MOR	MORT	1.5	d	200	FW	Ferguson, D.E., W.D. Cotton, D.T. Gardner, and D.D. Culley	Tolerances to Five Chlorinated Hydrocarbon Insecticides in Two Species of Fish From a Transect of the Lower Mississippi River	J.Miss.Acad.Sci. 11:239-245	1965
205	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gambusia affinis	Western Mosquitofish	Fish	LC50*	MOR	MORT	1.5	d	22.5	FW	Ferguson, D.E., W.D. Cotton, D.T. Gardner, and D.D. Culley	Tolerances to Five Chlorinated Hydrocarbon Insecticides in Two Species of Fish From a Transect of the Lower Mississippi River	J.Miss.Acad.Sci. 11:239-245	1965
206	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gambusia affinis	Western Mosquitofish	Fish	LC50*	MOR	MORT	1.5	d	25	FW	Ferguson, D.E., W.D. Cotton, D.T. Gardner, and D.D. Culley	Tolerances to Five Chlorinated Hydrocarbon Insecticides in Two Species of Fish From a Transect of the Lower Mississippi River	J.Miss.Acad.Sci. 11:239-245	1965
207	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gambusia affinis	Western Mosquitofish	Fish	LC50*	MOR	MORT	1.5	d	30	FW	Ferguson, D.E., W.D. Cotton, D.T. Gardner, and D.D. Culley	Tolerances to Five Chlorinated Hydrocarbon Insecticides in Two Species of Fish From a Transect of the Lower Mississippi River	J.Miss.Acad.Sci. 11:239-245	1965
208	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gambusia affinis	Western Mosquitofish	Fish	LC50*	MOR	MORT	1.5	d	35	FW	Ferguson, D.E., W.D. Cotton, D.T. Gardner, and D.D. Culley	Tolerances to Five Chlorinated Hydrocarbon Insecticides in Two Species of Fish From a Transect of the Lower Mississippi River	J.Miss.Acad.Sci. 11:239-245	1965
209	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gambusia affinis	Western Mosquitofish	Fish	LC50*	MOR	MORT	1.5	d	7.5	FW	Ferguson, D.E., W.D. Cotton, D.T. Gardner, and D.D. Culley	Tolerances to Five Chlorinated Hydrocarbon Insecticides in Two Species of Fish From a Transect of the Lower Mississippi River	J.Miss.Acad.Sci. 11:239-245	1965
210	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gambusia affinis	Western Mosquitofish	Fish	LC50*	MOR	MORT	3	d	10	FW	Odum, E.P., and W.T. Sumerford	Comparative Toxicity of DDT and Four Analogues to Goldfish, Gambusia, and Culex Larvae	Science 104(2708):480-482	1946
211	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	1	d	34	FW	Carter, F.L., and J.B. Graves	Measuring Effects of Insecticides on Aquatic Animals	La.Agric. 16(2):14-15	1972
212	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	1	d	4.9	FW	Bridges, W.R., and O.B. Cope	The Relative Toxicities of Similar Formulations of Pyrethrum and Rotenone to Fish and Immature Stoneflies	Pyrethrum Post 8(1):3-5	1965
213	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	2	d	4.1	FW	Bridges, W.R., and O.B. Cope	The Relative Toxicities of Similar Formulations of Pyrethrum and Rotenone to Fish and Immature Stoneflies	Pyrethrum Post 8(1):3-5	1965
214	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	4	d	13.5	FW	Ingham, B., and M.A. Gallo	Effects of Asulam in Wildlife Species Acute Toxicity to Birds and Fish	Bull.Environ.Contam.Toxicol. 13(2):194-199	1975
215	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	4	d	17.5	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
216	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	4	d	17.5	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
217	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	4	d	3.3	FW	Bridges, W.R., and O.B. Cope	The Relative Toxicities of Similar Formulations of Pyrethrum and Rotenone to Fish and Immature Stoneflies	Pyrethrum Post 8(1):3-5	1965
218	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	4	d	15	FW	Keplinger, M.L., O.E. Fancher, F.L. Lyman, and J.C. Calandra	Toxicologic Studies of Four Fluorescent Whitening Agents	Toxicol.Appl.Pharmacol. 27(3):494-506	1974

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219	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ictalurus punctatus	Channel Catfish	Fish	LC50*	MOR	MORT	4	d	16	FW	Macek, K.J., and W.A. McAllister	Insecticide Susceptibility of Some Common Fish Family Representatives	Trans.Am.Fish.Soc. 99(1):20-27 (Publ in Part As 6797)	1970
220	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	0.04	d	2000	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
221	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	0.08	d	2000	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
222	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	0.17	d	2000	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
223	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	0.33	d	2000	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
224	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	1	d	2000	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
225	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	2	d	2000	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
226	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	3	d	2000	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
227	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	4	d	2000	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
228	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Labeo rohita	Rohu	Fish	LC50	MOR	MORT	4	d	6400	FW	Kulshrestha, S.K., N. Arora, and S. Sharma	Toxicity of Four Pesticides on the Fingerlings of Indian Major Carps Labeo rohita, Catla catla, and Cirrhinus mrigala	Ecotoxicol.Environ.Saf. 12(2):114-119	1986
229	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis cyanellus	Green Sunfish	Fish	LC50	MOR	MORT	1.5	d	22	FW	Ferguson, D.E., D.D. Culley, W.D. Cotton, and R.P. Dodds	Resistance to Chlorinated Hydrocarbon Insecticides in Three Species of Freshwater Fish	Bioscience 14(1):43-44	1964
230	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis cyanellus	Green Sunfish	Fish	LC50	MOR	MORT	1.5	d	25	FW	Ferguson, D.E., D.D. Culley, W.D. Cotton, and R.P. Dodds	Resistance to Chlorinated Hydrocarbon Insecticides in Three Species of Freshwater Fish	Bioscience 14(1):43-44	1964
231	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis cyanellus	Green Sunfish	Fish	LC50	MOR	MORT	4	d	2.8	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
232	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis cyanellus	Green Sunfish	Fish	LC50	MOR	MORT	4	d	3	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
233	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis cyanellus	Green Sunfish	Fish	LC50	MOR	MORT	4	d	3.6	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
234	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis cyanellus	Green Sunfish	Fish	LC50	MOR	MORT	4	d	3.9	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
235	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis cyanellus	Green Sunfish	Fish	LC50	MOR	MORT	4	d	4.4	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966

Appendix D-9, Table 9. ECOTOX values for DDTs in freshwaters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
236	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis cyanellus	Green Sunfish	Fish	LC50	MOR	MORT	4	d	5	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
237	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis cyanellus	Green Sunfish	Fish	LC50	MOR	MORT	4	d	6.4	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
238	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis cyanellus	Green Sunfish	Fish	LC50	MOR	MORT	4	d	6.7	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
239	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis gibbosus	Pumpkinseed	Fish	LC50	MOR	MORT	4	d	1.8	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
240	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis gibbosus	Pumpkinseed	Fish	LC50	MOR	MORT	4	d	2.8	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
241	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis gibbosus	Pumpkinseed	Fish	LC50	MOR	MORT	4	d	3.6	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
242	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis gibbosus	Pumpkinseed	Fish	LC50	MOR	MORT	4	d	6.7	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
243	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis gibbosus	Pumpkinseed	Fish	LC50	MOR	MORT	4	d	7.5	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
244	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	1	d	10	FW	Beliles, R.	Diazinon Safety Evaluation on Fish and Wildlife: Bobwhite Quail, Goldfish, Sunfish, and Rainbow Trout	U.S.EPA-OPP Registration Standard	1965
245	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	1	d	16.5	FW	Owen, G., F.J. Meyer, and Blankenbeher	The Acute Toxicity of a Bacteriostat and Algaecide, Dearcide - (R) #713, to the Bluegill Sunfish, Lepomis macrochirus	U.S.EPA-OPP Registration Standard	1971
246	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	1	d	8.4	FW	Bridges, W.R., and O.B. Cope	The Relative Toxicities of Similar Formulations of Pyrethrum and Rotenone to Fish and Immature Stoneflies	Pyrethrum Post 8(1):3-5	1965
247	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	1.5	d	25	FW	Ferguson, D.E., D.D. Culley, W.D. Cotton, and R.P. Dodds	Resistance to Chlorinated Hydrocarbon Insecticides in Three Species of Freshwater Fish	Bioscience 14(1):43-44	1964
248	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	1.5	d	33	FW	Ferguson, D.E., D.D. Culley, W.D. Cotton, and R.P. Dodds	Resistance to Chlorinated Hydrocarbon Insecticides in Three Species of Freshwater Fish	Bioscience 14(1):43-44	1964
249	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	2	d	3.3	FW	Beliles, R.	Diazinon Safety Evaluation on Fish and Wildlife: Bobwhite Quail, Goldfish, Sunfish, and Rainbow Trout	U.S.EPA-OPP Registration Standard	1965
250	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	2	d	13.5	FW	Owen, G., F.J. Meyer, and Blankenbeher	The Acute Toxicity of a Bacteriostat and Algaecide, Dearcide - (R) #713, to the Bluegill Sunfish, Lepomis macrochirus	U.S.EPA-OPP Registration Standard	1971
251	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	2	d	6	FW	Bridges, W.R., and O.B. Cope	The Relative Toxicities of Similar Formulations of Pyrethrum and Rotenone to Fish and Immature Stoneflies	Pyrethrum Post 8(1):3-5	1965

Appendix D-9, Table 9. ECOTOX values for DDTs in freshwaters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
252	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	3	d	3	FW	Beliles, R.	Diazinon Safety Evaluation on Fish and Wildlife: Bobwhite Quail, Goldfish, Sunfish, and Rainbow Trout	U.S.EPA-OPP Registration Standard	1965
253	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	4	d	2.7	FW	Beliles, R.	Diazinon Safety Evaluation on Fish and Wildlife: Bobwhite Quail, Goldfish, Sunfish, and Rainbow Trout	U.S.EPA-OPP Registration Standard	1965
254	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	4	d	1.2	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
255	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	4	d	1.7	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
256	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	4	d	12.5	FW	Owen, G., F.J. Meyer, and Blankenbeher	The Acute Toxicity of a Bacteriostat and Algaecide, Dearcide - (R) #713, to the Bluegill Sunfish, Lepomis macrochirus	U.S.EPA-OPP Registration Standard	1971
257	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	4	d	16	FW	Henderson, C., Q.H. Pickering, and C.M. Tarzwell	The Toxicity of Organic Phosphorus and Chlorinated Hydrocarbon Insecticides to Fish	In: C.M.Tarzwell (Ed.), Biological Problems in WAter Pollution, Trans.2nd Seminar, April 20-24, 1959, Tech.Rep.W60-3, U.S.Public Health Service, R.A.Taft Sanitary Engineering Center, Cincinnati, OH :76-88	1960
258	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	4	d	2.2	FW	Ingham, B., and M.A. Gallo	Effects of Asulam in Wildlife Species Acute Toxicity to Birds and Fish	Bull.Environ.Contam.Toxicol. 13(2):194-199	1975
259	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	4	d	2.8	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
260	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	4	d	2.9	FW	Fink, R.	Acute LC50--Bluegill Sunfish and Rainbow Trout: Magna 4141: Project No. 766-100, 766-101	U.S.EPA-OPP Registration Standard	1972
261	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	4	d	3	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
262	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	4	d	3.4	FW	Randall, W.F., W.H. Dennis, and M.C. Warner	Acute Toxicity of Dechlorinated DDT, Chlordane and Lindane to Bluegill (Lepomis macrochirus) and Daphnia magna	Bull.Environ.Contam.Toxicol. 21(6):849-854	1979
263	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	4	d	3.6	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
264	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	4	d	4.3	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
265	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	4	d	4.6	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
266	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	4	d	4.7	FW	Bridges, W.R., and O.B. Cope	The Relative Toxicities of Similar Formulations of Pyrethrum and Rotenone to Fish and Immature Stoneflies	Pyrethrum Post 8(1):3-5	1965

Appendix D-9, Table 9. ECOTOX values for DDTs in freshwaters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
267	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	4	d	6.4	FW	Henderson, C., Q.H. Pickering, and C.M. Tarzwell	The Toxicity of Organic Phosphorus and Chlorinated Hydrocarbon Insecticides to Fish	In: C.M.Tarzwell (Ed.), Biological Problems in WAter Pollution, Trans.2nd Seminar, April 20-24, 1959, Tech.Rep.W60-3, U.S.Public Health Service, R.A.Taft Sanitary Engineering Center, Cincinnati, OH :76-88	1960
268	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	4	d	7	FW	Carter, F.L., and J.B. Graves	Measuring Effects of Insecticides on Aquatic Animals	La.Agric. 16(2):14-15	1972
269	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	4	d	7	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
270	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	4	d	7	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
271	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	4	d	8.8	FW	Henderson, C., Q.H. Pickering, and C.M. Tarzwell	The Toxicity of Organic Phosphorus and Chlorinated Hydrocarbon Insecticides to Fish	In: C.M.Tarzwell (Ed.), Biological Problems in WAter Pollution, Trans.2nd Seminar, April 20-24, 1959, Tech.Rep.W60-3, U.S.Public Health Service, R.A.Taft Sanitary Engineering Center, Cincinnati, OH :76-88	1960
272	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	4	d	9	FW	Randall, W.F., W.H. Dennis, and M.C. Warner	Acute Toxicity of Dechlorinated DDT, Chlordane and Lindane to Bluegill (Lepomis macrochirus) and Daphnia magna	Bull.Environ.Contam.Toxicol. 21(6):849-854	1979
273	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	4	d	9.4	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
274	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50*	MOR	MORT	1	d	26	FW	Henderson, C., Q.H. Pickering, and C.M. Tarzwell	Relative Toxicity of Ten Chlorinated Hydrocarbon Insecticides to Four Species of Fish	Trans.Am.Fish.Soc. 88(1):23-32	1959
275	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50*	MOR	MORT	2	d	21	FW	Henderson, C., Q.H. Pickering, and C.M. Tarzwell	Relative Toxicity of Ten Chlorinated Hydrocarbon Insecticides to Four Species of Fish	Trans.Am.Fish.Soc. 88(1):23-32	1959
276	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LC50*	MOR	MORT	4	d	21	FW	Henderson, C., Q.H. Pickering, and C.M. Tarzwell	Relative Toxicity of Ten Chlorinated Hydrocarbon Insecticides to Four Species of Fish	Trans.Am.Fish.Soc. 88(1):23-32	1959
277	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis megalotis	Longear Sunfish	Fish	LC50	MOR	MORT	4	d	12.5	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
278	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis megalotis	Longear Sunfish	Fish	LC50	MOR	MORT	4	d	4.9	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
279	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis microlophus	Redear Sunfish	Fish	LC50*	MOR	MORT	4	d	5	FW	Macek, K.J., and W.A. McAllister	Insecticide Susceptibility of Some Common Fish Family Representatives	Trans.Am.Fish.Soc. 99(1):20-27 (Publ in Part As 6797)	1970
280	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Macropodus cupanus	Paradise Fish	Fish	LC50	MOR	MORT	1	d	2813	FW	Jacob, S.S., N.B. Nair, and N.K. Balasubramanian	Toxicity of Certain Pesticides Found in the Habitat to the Larvivorous Fishes Aplocheilus lineatus (Cuv. & Val.) and Macropodus cupanus (Cuv. & Val.)	Proc.Indian Acad.Sci.Anim.Sci. 91(3):323-328	1982
281	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Macropodus cupanus	Paradise Fish	Fish	LC50	MOR	MORT	2	d	2277	FW	Jacob, S.S., N.B. Nair, and N.K. Balasubramanian	Toxicity of Certain Pesticides Found in the Habitat to the Larvivorous Fishes Aplocheilus lineatus (Cuv. & Val.) and Macropodus cupanus (Cuv. & Val.)	Proc.Indian Acad.Sci.Anim.Sci. 91(3):323-328	1982

Appendix D-9, Table 9. ECOTOX values for DDTs in freshwaters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
282	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Micropterus salmoides	Largemouth Bass	Fish	LC50	MOR	MORT	4	d	0.8	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
283	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Notemigonus crysoleucas	Golden Shiner	Fish	LC50	MOR	MORT	1.5	d	28	FW	Ferguson, D.E., D.D. Culley, W.D. Cotton, and R.P. Dodds	Resistance to Chlorinated Hydrocarbon Insecticides in Three Species of Freshwater Fish	Bioscience 14(1):43-44	1964
284	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Notemigonus crysoleucas	Golden Shiner	Fish	LC50	MOR	MORT	1.5	d	32	FW	Ferguson, D.E., D.D. Culley, W.D. Cotton, and R.P. Dodds	Resistance to Chlorinated Hydrocarbon Insecticides in Three Species of Freshwater Fish	Bioscience 14(1):43-44	1964
285	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus clarki	Cutthroat Trout	Fish	LC50	MOR	MORT	2	d	1.63	FW	Post, G., and T.R. Schroeder	The Toxicity of Four Insecticides to Four Salmonid Species	Bull.Environ.Contam.Toxicol. 6(2):144-155	1971
286	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus clarki	Cutthroat Trout	Fish	LC50	MOR	MORT	4	d	0.85	FW	Post, G., and T.R. Schroeder	The Toxicity of Four Insecticides to Four Salmonid Species	Bull.Environ.Contam.Toxicol. 6(2):144-155	1971
287	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus clarki	Cutthroat Trout	Fish	LC50	MOR	MORT	4	d	1.37	FW	Post, G., and T.R. Schroeder	The Toxicity of Four Insecticides to Four Salmonid Species	Bull.Environ.Contam.Toxicol. 6(2):144-155	1971
288	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	1	d	66	FW	Katz, M.	Acute Toxicity of Some Organic Insecticides to Three Species of Salmonids and to the Threespine Stickleback	Trans.Am.Fish.Soc. 90(3):264-268	1961
289	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	1	d	25	FW	Post, G., and T.R. Schroeder	The Toxicity of Four Insecticides to Four Salmonid Species	Bull.Environ.Contam.Toxicol. 6(2):144-155	1971
290	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	2	d	46	FW	Katz, M.	Acute Toxicity of Some Organic Insecticides to Three Species of Salmonids and to the Threespine Stickleback	Trans.Am.Fish.Soc. 90(3):264-268	1961
291	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	2	d	12.5	FW	Post, G., and T.R. Schroeder	The Toxicity of Four Insecticides to Four Salmonid Species	Bull.Environ.Contam.Toxicol. 6(2):144-155	1971
292	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	2	d	30	FW	Post, G., and T.R. Schroeder	The Toxicity of Four Insecticides to Four Salmonid Species	Bull.Environ.Contam.Toxicol. 6(2):144-155	1971
293	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	3	d	44	FW	Katz, M.	Acute Toxicity of Some Organic Insecticides to Three Species of Salmonids and to the Threespine Stickleback	Trans.Am.Fish.Soc. 90(3):264-268	1961
294	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	3	d	11.7	FW	Post, G., and T.R. Schroeder	The Toxicity of Four Insecticides to Four Salmonid Species	Bull.Environ.Contam.Toxicol. 6(2):144-155	1971
295	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	3	d	24	FW	Post, G., and T.R. Schroeder	The Toxicity of Four Insecticides to Four Salmonid Species	Bull.Environ.Contam.Toxicol. 6(2):144-155	1971
296	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	4	d	44	FW	Katz, M.	Acute Toxicity of Some Organic Insecticides to Three Species of Salmonids and to the Threespine Stickleback	Trans.Am.Fish.Soc. 90(3):264-268	1961
297	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	4	d	11.3	FW	Post, G., and T.R. Schroeder	The Toxicity of Four Insecticides to Four Salmonid Species	Bull.Environ.Contam.Toxicol. 6(2):144-155	1971
298	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	4	d	18.5	FW	Post, G., and T.R. Schroeder	The Toxicity of Four Insecticides to Four Salmonid Species	Bull.Environ.Contam.Toxicol. 6(2):144-155	1971
299	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50*	MOR	MORT	2	d	24	FW	Schaumburg, F.D., T.E. Howard, and C.C. Walden	A Method to Evaluate the Effects of Water Pollutants on Fish Respiration	Water Res. 1:731-737	1967
300	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50*	MOR	MORT	4	d	13	FW	Schaumburg, F.D., T.E. Howard, and C.C. Walden	A Method to Evaluate the Effects of Water Pollutants on Fish Respiration	Water Res. 1:731-737	1967

Appendix D-9, Table 9. ECOTOX values for DDTs in freshwaters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
301	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	1	d	103	FW	Tooby, T.E., P.A. Hursey, and J.S. Alabaster	Acute Toxicity of 102 Pesticides and Miscellaneous Substances to Fish	Chem.Ind.(Lond.) 21:523-526	1975
302	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	1	d	42	FW	Katz, M.	Acute Toxicity of Some Organic Insecticides to Three Species of Salmonids and to the Threespine Stickleback	Trans.Am.Fish.Soc. 90(3):264-268	1961
303	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	1	d	4.2	FW	Schoettger, R.A.	Fish-Pesticide Research Laboratory	In: Publ.No.106, U.S.Dep.Interior, Bur.Sport Fish.Wildl.Res., :2-40 (Publ in Part As 6797)	1970
304	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	1	d	5.6	FW	Beliles, R.	Diazinon Safety Evaluation on Fish and Wildlife: Bobwhite Quail, Goldfish, Sunfish, and Rainbow Trout	U.S.EPA-OPP Registration Standard	1965
305	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	1	d	17.8	FW	Owen, G., and F. Meyer	The Acute Toxicity of a Bacteriostat and Algaecide--Dearcide 713--to the Bluegill Sunfish (Lepomis macrochirus)	U.S.EPA-OPP Registration Standard	1972
306	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	1	d	3	FW	Bridges, W.R., and O.B. Cope	The Relative Toxicities of Similar Formulations of Pyrethrum and Rotenone to Fish and Immature Stoneflies	Pyrethrum Post 8(1):3-5	1965
307	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	1	d	6.9	FW	Post, G., and T.R. Schroeder	The Toxicity of Four Insecticides to Four Salmonid Species	Bull.Environ.Contam.Toxicol. 6(2):144-155	1971
308	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	10	d	0.87	FW	Stalling, D.L., and F.L. Mayer Jr.	Toxicities of PCBs to Fish and Environmental Residues	Environ.Health Perspect. 1:159-164	1972
309	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	10	d	0.87	FW	Schoettger, R.A.	Fish-Pesticide Research Laboratory	In: Publ.No.106, U.S.Dep.Interior, Bur.Sport Fish.Wildl.Res., :2-40 (Publ in Part As 6797)	1970
310	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	15	d	0.26	FW	Stalling, D.L., and F.L. Mayer Jr.	Toxicities of PCBs to Fish and Environmental Residues	Environ.Health Perspect. 1:159-164	1972
311	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	15	d	0.26	FW	Schoettger, R.A.	Fish-Pesticide Research Laboratory	In: Publ.No.106, U.S.Dep.Interior, Bur.Sport Fish.Wildl.Res., :2-40 (Publ in Part As 6797)	1970
312	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	2	d	5.8	FW	Tooby, T.E., P.A. Hursey, and J.S. Alabaster	Acute Toxicity of 102 Pesticides and Miscellaneous Substances to Fish	Chem.Ind.(Lond.) 21:523-526	1975
313	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	2	d	42	FW	Katz, M.	Acute Toxicity of Some Organic Insecticides to Three Species of Salmonids and to the Threespine Stickleback	Trans.Am.Fish.Soc. 90(3):264-268	1961
314	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	2	d	5.6	FW	Beliles, R.	Diazinon Safety Evaluation on Fish and Wildlife: Bobwhite Quail, Goldfish, Sunfish, and Rainbow Trout	U.S.EPA-OPP Registration Standard	1965
315	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	2	d	16.7	FW	Owen, G., and F. Meyer	The Acute Toxicity of a Bacteriostat and Algaecide--Dearcide 713--to the Bluegill Sunfish (Lepomis macrochirus)	U.S.EPA-OPP Registration Standard	1972
316	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	2	d	2	FW	Bridges, W.R., and O.B. Cope	The Relative Toxicities of Similar Formulations of Pyrethrum and Rotenone to Fish and Immature Stoneflies	Pyrethrum Post 8(1):3-5	1965
317	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	2	d	3.05	FW	Post, G., and T.R. Schroeder	The Toxicity of Four Insecticides to Four Salmonid Species	Bull.Environ.Contam.Toxicol. 6(2):144-155	1971
318	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	2	d	30	FW	Bathe, R., K. Sachsse, L. Ullmann, W.D. Hormann, F. Zak, and R. Hess	The Evaluation of Fish Toxicity in the Laboratory	Proc.Eur.Soc.Toxicol. 16:113-124	1975
319	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	3	d	42	FW	Katz, M.	Acute Toxicity of Some Organic Insecticides to Three Species of Salmonids and to the Threespine Stickleback	Trans.Am.Fish.Soc. 90(3):264-268	1961

Appendix D-9, Table 9. ECOTOX values for DDTs in freshwaters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
320	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	3	d	5.6	FW	Beliles, R.	Diazinon Safety Evaluation on Fish and Wildlife: Bobwhite Quail, Goldfish, Sunfish, and Rainbow Trout	U.S.EPA-OPP Registration Standard	1965
321	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	3	d	2.25	FW	Post, G., and T.R. Schroeder	The Toxicity of Four Insecticides to Four Salmonid Species	Bull.Environ.Contam.Toxicol. 6(2):144-155	1971
322	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	2.4	FW	Tooby, T.E., P.A. Hursey, and J.S. Alabaster	Acute Toxicity of 102 Pesticides and Miscellaneous Substances to Fish	Chem.Ind.(Lond.) 21:523-526	1975
323	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	42	FW	Katz, M.	Acute Toxicity of Some Organic Insecticides to Three Species of Salmonids and to the Threespine Stickleback	Trans.Am.Fish.Soc. 90(3):264-268	1961
324	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	2.14	FW	Schoettger, R.A.	Fish-Pesticide Research Laboratory	In: Publ.No.106, U.S.Dep.Interior, Bur.Sport Fish.Wildl.Res., :2-40 (Publ in Part As 6797)	1970
325	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	3.4	FW	Beliles, R.	Diazinon Safety Evaluation on Fish and Wildlife: Bobwhite Quail, Goldfish, Sunfish, and Rainbow Trout	U.S.EPA-OPP Registration Standard	1965
326	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	1.5	FW	Bridges, W.R., and O.B. Cope	The Relative Toxicities of Similar Formulations of Pyrethrum and Rotenone to Fish and Immature Stoneflies	Pyrethrum Post 8(1):3-5	1965
327	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	1.72	FW	Post, G., and T.R. Schroeder	The Toxicity of Four Insecticides to Four Salmonid Species	Bull.Environ.Contam.Toxicol. 6(2):144-155	1971
328	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	1.9	FW	Fink, R.	Acute LC50--Bluegill Sunfish and Rainbow Trout: Magna 4141: Project No. 766-100, 766-101	U.S.EPA-OPP Registration Standard	1972
329	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	12	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
330	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	13	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
331	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	14	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
332	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	15	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
333	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	17	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
334	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	18	FW	Owen, G., and F. Meyer	The Acute Toxicity of a Bacteriostat and Algaecide--Dearcide 713--to the Bluegill Sunfish (Lepomis macrochirus)	U.S.EPA-OPP Registration Standard	1972
335	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	2.4	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
336	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	3.8	FW	Ingham, B., and M.A. Gallo	Effects of Asulam in Wildlife Species Acute Toxicity to Birds and Fish	Bull.Environ.Contam.Toxicol. 13(2):194-199	1975

Appendix D-9, Table 9. ECOTOX values for DDTs in freshwaters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
337	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	4.6	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
338	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	60	FW	Bathe, R., L. Ullman, K. Sachsse, and R. Hess	Relationship between Toxicity to Fish and to Mammals: A Comparative Study Under Defined Laboratory Conditions	U.S.EPA-OPP Registration Standard :1 p. (CBI Data)	1975
339	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	7.2	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
340	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	8	FW	Keplinger, M.L., O.E. Fancher, F.L. Lyman, and J.C. Calandra	Toxicologic Studies of Four Fluorescent Whitening Agents	Toxicol.Appl.Pharmacol. 27(3):494-506	1974
341	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	5	d	2.26	FW	Stalling, D.L., and F.L. Mayer Jr.	Toxicities of PCBs to Fish and Environmental Residues	Environ.Health Perspect. 1:159-164	1972
342	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	5	d	2.26	FW	Schoettger, R.A.	Fish-Pesticide Research Laboratory	In: Publ.No.106, U.S.Dep.Interior, Bur.Sport Fish.Wildl.Res., :2-40 (Publ in Part As 6797)	1970
343	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50*	MOR	MORT	4	d	7	FW	Macek, K.J., and W.A. McAllister	Insecticide Susceptibility of Some Common Fish Family Representatives	Trans.Am.Fish.Soc. 99(1):20-27 (Publ in Part As 6797)	1970
344	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	1	d	38	FW	Katz, M.	Acute Toxicity of Some Organic Insecticides to Three Species of Salmonids and to the Threespine Stickleback	Trans.Am.Fish.Soc. 90(3):264-268	1961
345	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	2	d	17	FW	Katz, M.	Acute Toxicity of Some Organic Insecticides to Three Species of Salmonids and to the Threespine Stickleback	Trans.Am.Fish.Soc. 90(3):264-268	1961
346	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	3	d	14	FW	Katz, M.	Acute Toxicity of Some Organic Insecticides to Three Species of Salmonids and to the Threespine Stickleback	Trans.Am.Fish.Soc. 90(3):264-268	1961
347	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	4	d	11.5	FW	Katz, M.	Acute Toxicity of Some Organic Insecticides to Three Species of Salmonids and to the Threespine Stickleback	Trans.Am.Fish.Soc. 90(3):264-268	1961
348	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	4	d	4.66	FW	Schoettger, R.A.	Fish-Pesticide Research Laboratory	In: Publ.No.106, U.S.Dep.Interior, Bur.Sport Fish.Wildl.Res., :2-40 (Publ in Part As 6797)	1970
349	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oreochromis mossambicus	Mozambique Tilapia	Fish	LC50	MOR	MORT	1	d	20	FW	Nunogawa, J.H., N.C. Burbank Jr., R.H.F. Young, and L.S. Lau	Relative Toxicities of Selected Chemicals to Several Species of Tropical Fish	Water Resour.Res.Ctr., Univ.of Hawaii, Honolulu, HI :38 p. (NTIS/PB-196312)	1970
350	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oreochromis mossambicus	Mozambique Tilapia	Fish	LC50	MOR	MORT	2	d	2800	FW	Ravindran, K., and K.S. Swami	Effect of DDT Exposure on Some Physical Parameters of the Body and on Tissue Cations of the Fish Tilapia mossambica	Environ.Ecol./C.A.Sel.-Environ.Pollut. 5(4):651-654	1987
351	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	1	d	210	FW	Shim, J.C., and L.S. Self	Toxicity of Agricultural Chemicals to Larvivorous Fish in Korean Rice Fields	Trop.Med. 15(3):123-130	1973
352	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	1	d	10000	FW	Tsuji, S., Y. Tonogai, Y. Ito, and S. Kanoh	The Influence of Rearing Temperatures on the Toxicity of Various Environmental Pollutants for Killifish (Oryzias latipes)	J.Hyg.Chem.(Eisei Kagaku) 32(1):46-53 (JPN) (ENG ABS)	1986
353	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	1	d	380	FW	Tsuji, S., Y. Tonogai, Y. Ito, and S. Kanoh	The Influence of Rearing Temperatures on the Toxicity of Various Environmental Pollutants for Killifish (Oryzias latipes)	J.Hyg.Chem.(Eisei Kagaku) 32(1):46-53 (JPN) (ENG ABS)	1986
354	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	1	d	490	FW	Tsuji, S., Y. Tonogai, Y. Ito, and S. Kanoh	The Influence of Rearing Temperatures on the Toxicity of Various Environmental Pollutants for Killifish (Oryzias latipes)	J.Hyg.Chem.(Eisei Kagaku) 32(1):46-53 (JPN) (ENG ABS)	1986

Appendix D-9, Table 9. ECOTOX values for DDTs in freshwaters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
355	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	2	d	290	FW	Tsuji, S., Y. Tonogai, Y. Ito, and S. Kanoh	The Influence of Rearing Temperatures on the Toxicity of Various Environmental Pollutants for Killifish (Oryzias latipes)	J.Hyg.Chem.(Eisei Kagaku) 32(1):46-53 (JPN) (ENG ABS)	1986
356	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	2	d	450	FW	Tsuji, S., Y. Tonogai, Y. Ito, and S. Kanoh	The Influence of Rearing Temperatures on the Toxicity of Various Environmental Pollutants for Killifish (Oryzias latipes)	J.Hyg.Chem.(Eisei Kagaku) 32(1):46-53 (JPN) (ENG ABS)	1986
357	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	2	d	540	FW	Tsuji, S., Y. Tonogai, Y. Ito, and S. Kanoh	The Influence of Rearing Temperatures on the Toxicity of Various Environmental Pollutants for Killifish (Oryzias latipes)	J.Hyg.Chem.(Eisei Kagaku) 32(1):46-53 (JPN) (ENG ABS)	1986
358	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	4	d	14	FW	Takimoto, Y., S. Hagino, H. Yamada, and J. Miyamoto	The Acute Toxicity of Fenitrothion to Killifish (Oryzias latipes) at Twelve Different Stages of its Life History	J.Pestic.Sci. 9(3):463-470	1984
359	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	4	d	31.6	FW	Takimoto, Y., S. Hagino, H. Yamada, and J. Miyamoto	The Acute Toxicity of Fenitrothion to Killifish (Oryzias latipes) at Twelve Different Stages of its Life History	J.Pestic.Sci. 9(3):463-470	1984
360	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	4	d	35.6	FW	Takimoto, Y., S. Hagino, H. Yamada, and J. Miyamoto	The Acute Toxicity of Fenitrothion to Killifish (Oryzias latipes) at Twelve Different Stages of its Life History	J.Pestic.Sci. 9(3):463-470	1984
361	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	4	d	4.9	FW	Takimoto, Y., S. Hagino, H. Yamada, and J. Miyamoto	The Acute Toxicity of Fenitrothion to Killifish (Oryzias latipes) at Twelve Different Stages of its Life History	J.Pestic.Sci. 9(3):463-470	1984
362	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	4	d	43.7	FW	Takimoto, Y., S. Hagino, H. Yamada, and J. Miyamoto	The Acute Toxicity of Fenitrothion to Killifish (Oryzias latipes) at Twelve Different Stages of its Life History	J.Pestic.Sci. 9(3):463-470	1984
363	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	4	d	48.7	FW	Takimoto, Y., S. Hagino, H. Yamada, and J. Miyamoto	The Acute Toxicity of Fenitrothion to Killifish (Oryzias latipes) at Twelve Different Stages of its Life History	J.Pestic.Sci. 9(3):463-470	1984
364	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oryzias latipes	Medaka, High-Eyes	Fish	LC50*	MOR	MORT	2	d	12	FW	Nishiuchi, Y., and Y. Hashimoto	Toxicity of Pesticides to Some Fresh Water Organisms	Rev.Plant Prot.Res. 2:137-139	1969
365	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Perca flavescens	Yellow Perch	Fish	LC50	MOR	MORT	4	d	0.6	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
366	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Perca flavescens	Yellow Perch	Fish	LC50	MOR	MORT	4	d	0.8	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
367	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Perca flavescens	Yellow Perch	Fish	LC50	MOR	MORT	4	d	1.5	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
368	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Perca sp.	Perch	Fish	LC50	MOR	MORT	2	d	30	FW	Bathe, R., K. Sachsse, L. Ullmann, W.D. Hormann, F. Zak, and R. Hess	The Evaluation of Fish Toxicity in the Laboratory	Proc.Eur.Soc.Toxicol. 16:113-124	1975
369	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Perca sp.	Perch	Fish	LC50	MOR	MORT	4	d	15	FW	Bathe, R., K. Sachsse, L. Ullmann, W.D. Hormann, F. Zak, and R. Hess	The Evaluation of Fish Toxicity in the Laboratory	Proc.Eur.Soc.Toxicol. 16:113-124	1975
370	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Phoxinus eos	Northern Redbelly Dace	Fish	LC50	MOR	MORT	4	d	68	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
371	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	2	d	40	FW	Lincer, J.L., J.M. Solon, and J.H. Nair III	DDT and Endrin Fish Toxicity Under Static Versus Dynamic Bioassay Conditions	Trans.Am.Fish.Soc. 99(1):13-19	1970
372	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	2	d	7.4	FW	Lincer, J.L., J.M. Solon, and J.H. Nair III	DDT and Endrin Fish Toxicity Under Static Versus Dynamic Bioassay Conditions	Trans.Am.Fish.Soc. 99(1):13-19	1970

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
373	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	58	FW	Priester, L.E.Jr.	The Accumulation and Metabolism of DDT, Parathion, and Endrin by Aquatic Food-Chain Organisms	Ph.D.Thesis, Clemson University, Clemson, SC :74 p.	1965
374	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pimephales promelas	Fathead Minnow	Fish	LC50*	MOR	MORT	1	d	29	FW	Henderson, C., Q.H. Pickering, and C.M. Tarzwell	Relative Toxicity of Ten Chlorinated Hydrocarbon Insecticides to Four Species of Fish	Trans.Am.Fish.Soc. 88(1):23-32	1959
375	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pimephales promelas	Fathead Minnow	Fish	LC50*	MOR	MORT	1	d	32	FW	Henderson, C., Q.H. Pickering, and C.M. Tarzwell	Relative Toxicity of Ten Chlorinated Hydrocarbon Insecticides to Four Species of Fish	Trans.Am.Fish.Soc. 88(1):23-32	1959
376	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pimephales promelas	Fathead Minnow	Fish	LC50*	MOR	MORT	1	d	56	FW	Henderson, C., Q.H. Pickering, and C.M. Tarzwell	Relative Toxicity of Ten Chlorinated Hydrocarbon Insecticides to Four Species of Fish	Trans.Am.Fish.Soc. 88(1):23-32	1959
377	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pimephales promelas	Fathead Minnow	Fish	LC50*	MOR	MORT	1	d	78	FW	Henderson, C., Q.H. Pickering, and C.M. Tarzwell	Relative Toxicity of Ten Chlorinated Hydrocarbon Insecticides to Four Species of Fish	Trans.Am.Fish.Soc. 88(1):23-32	1959
378	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pimephales promelas	Fathead Minnow	Fish	LC50*	MOR	MORT	2	d	16.7	FW	Solon, J.M., J.L. Lincer, and J.H. Nair III	The Effect of Sublethal Concentration of LAS on the Acute Toxicity of Various Insecticides to the Fathead Minnow (Pimephales promelas Rafinesque)	Water Res. 3(10):767-775	1969
379	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pimephales promelas	Fathead Minnow	Fish	LC50*	MOR	MORT	2	d	18.5	FW	Solon, J.M., J.L. Lincer, and J.H. Nair III	The Effect of Sublethal Concentration of LAS on the Acute Toxicity of Various Insecticides to the Fathead Minnow (Pimephales promelas Rafinesque)	Water Res. 3(10):767-775	1969
380	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pimephales promelas	Fathead Minnow	Fish	LC50*	MOR	MORT	2	d	19	FW	Solon, J.M., J.L. Lincer, and J.H. Nair III	The Effect of Sublethal Concentration of LAS on the Acute Toxicity of Various Insecticides to the Fathead Minnow (Pimephales promelas Rafinesque)	Water Res. 3(10):767-775	1969
381	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pimephales promelas	Fathead Minnow	Fish	LC50*	MOR	MORT	2	d	26	FW	Henderson, C., Q.H. Pickering, and C.M. Tarzwell	Relative Toxicity of Ten Chlorinated Hydrocarbon Insecticides to Four Species of Fish	Trans.Am.Fish.Soc. 88(1):23-32	1959
382	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pimephales promelas	Fathead Minnow	Fish	LC50*	MOR	MORT	2	d	27	FW	Henderson, C., Q.H. Pickering, and C.M. Tarzwell	Relative Toxicity of Ten Chlorinated Hydrocarbon Insecticides to Four Species of Fish	Trans.Am.Fish.Soc. 88(1):23-32	1959
383	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pimephales promelas	Fathead Minnow	Fish	LC50*	MOR	MORT	2	d	45	FW	Henderson, C., Q.H. Pickering, and C.M. Tarzwell	Relative Toxicity of Ten Chlorinated Hydrocarbon Insecticides to Four Species of Fish	Trans.Am.Fish.Soc. 88(1):23-32	1959
384	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pimephales promelas	Fathead Minnow	Fish	LC50*	MOR	MORT	2	d	68	FW	Henderson, C., Q.H. Pickering, and C.M. Tarzwell	Relative Toxicity of Ten Chlorinated Hydrocarbon Insecticides to Four Species of Fish	Trans.Am.Fish.Soc. 88(1):23-32	1959
385	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pimephales promelas	Fathead Minnow	Fish	LC50*	MOR	MORT	4	d	15.5	FW	Solon, J.M., J.L. Lincer, and J.H. Nair III	The Effect of Sublethal Concentration of LAS on the Acute Toxicity of Various Insecticides to the Fathead Minnow (Pimephales promelas Rafinesque)	Water Res. 3(10):767-775	1969
386	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pimephales promelas	Fathead Minnow	Fish	LC50*	MOR	MORT	4	d	17.6	FW	Solon, J.M., J.L. Lincer, and J.H. Nair III	The Effect of Sublethal Concentration of LAS on the Acute Toxicity of Various Insecticides to the Fathead Minnow (Pimephales promelas Rafinesque)	Water Res. 3(10):767-775	1969
387	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pimephales promelas	Fathead Minnow	Fish	LC50*	MOR	MORT	4	d	8.5	FW	Solon, J.M., J.L. Lincer, and J.H. Nair III	The Effect of Sublethal Concentration of LAS on the Acute Toxicity of Various Insecticides to the Fathead Minnow (Pimephales promelas Rafinesque)	Water Res. 3(10):767-775	1969
388	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pimephales promelas	Fathead Minnow	Fish	LC50*	MOR	MORT	4	d	19	FW	Macek, K.J., and W.A. McAllister	Insecticide Susceptibility of Some Common Fish Family Representatives	Trans.Am.Fish.Soc. 99(1):20-27 (Publ in Part As 6797)	1970
389	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pimephales promelas	Fathead Minnow	Fish	LC50*	MOR	MORT	4	d	26	FW	Henderson, C., Q.H. Pickering, and C.M. Tarzwell	Relative Toxicity of Ten Chlorinated Hydrocarbon Insecticides to Four Species of Fish	Trans.Am.Fish.Soc. 88(1):23-32	1959

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
390	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pimephales promelas	Fathead Minnow	Fish	LC50*	MOR	MORT	4	d	26	FW	Henderson, C., Q.H. Pickering, and C.M. Tarzwell	Relative Toxicity of Ten Chlorinated Hydrocarbon Insecticides to Four Species of Fish	Trans.Am.Fish.Soc. 88(1):23-32	1959
391	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pimephales promelas	Fathead Minnow	Fish	LC50*	MOR	MORT	4	d	42	FW	Henderson, C., Q.H. Pickering, and C.M. Tarzwell	Relative Toxicity of Ten Chlorinated Hydrocarbon Insecticides to Four Species of Fish	Trans.Am.Fish.Soc. 88(1):23-32	1959
392	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pimephales promelas	Fathead Minnow	Fish	LC50*	MOR	MORT	4	d	45	FW	Henderson, C., Q.H. Pickering, and C.M. Tarzwell	Relative Toxicity of Ten Chlorinated Hydrocarbon Insecticides to Four Species of Fish	Trans.Am.Fish.Soc. 88(1):23-32	1959
393	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Poecilia reticulata	Guppy	Fish	LC50	MOR	MORT	1	d	20	FW	Nunogawa, J.H., N.C. Burbank Jr., R.H.F. Young, and L.S. Lau	Relative Toxicities of Selected Chemicals to Several Species of Tropical Fish	Water Resour.Res.Ctr., Univ.of Hawaii, Honolulu, HI :38 p. (NTIS/PB-196312)	1970
394	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Poecilia reticulata	Guppy	Fish	LC50	MOR	MORT	1	d	200	FW	Chen, P.S., Y.N. Lin, and C.L. Chung	Laboratory Studies on the Susceptibility of Mosquito-Eating Fish, Lebistes reticulatus and the Larvae of Culex pipiens fatigans to Insecticides	Res.Rep.Taiwan Sugar Exp.Stn. 70(1):28-35	1971
395	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Poecilia reticulata	Guppy	Fish	LC50	MOR	MORT	1	d	50	FW	Chen, P.S., Y.N. Lin, and C.L. Chung	Laboratory Studies on the Susceptibility of Mosquito-Eating Fish, Lebistes reticulatus and the Larvae of Culex pipiens fatigans to Insecticides	Res.Rep.Taiwan Sugar Exp.Stn. 70(1):28-35	1971
396	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Poecilia reticulata	Guppy	Fish	LC50	MOR	MORT	2	d	40	FW	Bathe, R., K. Sachsse, L. Ullmann, W.D. Hormann, F. Zak, and R. Hess	The Evaluation of Fish Toxicity in the Laboratory	Proc.Eur.Soc.Toxicol. 16:113-124	1975
397	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Poecilia reticulata	Guppy	Fish	LC50*	MOR	MORT	1	d	135	FW	Henderson, C., Q.H. Pickering, and C.M. Tarzwell	Relative Toxicity of Ten Chlorinated Hydrocarbon Insecticides to Four Species of Fish	Trans.Am.Fish.Soc. 88(1):23-32	1959
398	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Poecilia reticulata	Guppy	Fish	LC50*	MOR	MORT	2	d	72	FW	Henderson, C., Q.H. Pickering, and C.M. Tarzwell	Relative Toxicity of Ten Chlorinated Hydrocarbon Insecticides to Four Species of Fish	Trans.Am.Fish.Soc. 88(1):23-32	1959
399	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Poecilia reticulata	Guppy	Fish	LC50*	MOR	MORT	4	d	56	FW	Henderson, C., Q.H. Pickering, and C.M. Tarzwell	Relative Toxicity of Ten Chlorinated Hydrocarbon Insecticides to Four Species of Fish	Trans.Am.Fish.Soc. 88(1):23-32	1959
400	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Poecilia reticulata	Guppy	Fish	LC50	MOR	MORT	1	d	15.8	FW	King, S.F.	Some Effects of DDT on the Guppy and the Brown Trout	Spec.Sci.Rep.- Fish.No.399, U.S.Fish Wildl.Serv., U.S.D.I., Washington, D.C. :22 p.	1962
401	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Poecilia reticulata	Guppy	Fish	LC50	MOR	MORT	14	d	32	FW	King, S.F.	Some Effects of DDT on the Guppy and the Brown Trout	Spec.Sci.Rep.- Fish.No.399, U.S.Fish Wildl.Serv., U.S.D.I., Washington, D.C. :22 p.	1962
402	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Poecilia reticulata	Guppy	Fish	LC50	MOR	MORT	14	d	18	FW	King, S.F.	Some Effects of DDT on the Guppy and the Brown Trout	Spec.Sci.Rep.- Fish.No.399, U.S.Fish Wildl.Serv., U.S.D.I., Washington, D.C. :22 p.	1962
403	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Poecilia reticulata	Guppy	Fish	LC50	MOR	MORT	14	d	2.4	FW	King, S.F.	Some Effects of DDT on the Guppy and the Brown Trout	Spec.Sci.Rep.- Fish.No.399, U.S.Fish Wildl.Serv., U.S.D.I., Washington, D.C. :22 p.	1962
404	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Poecilia reticulata	Guppy	Fish	LC50	MOR	MORT	2	d	27	FW	King, S.F.	Some Effects of DDT on the Guppy and the Brown Trout	Spec.Sci.Rep.- Fish.No.399, U.S.Fish Wildl.Serv., U.S.D.I., Washington, D.C. :22 p.	1962
405	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Poecilia reticulata	Guppy	Fish	LC50	MOR	MORT	4	d	19.5	FW	King, S.F.	Some Effects of DDT on the Guppy and the Brown Trout	Spec.Sci.Rep.- Fish.No.399, U.S.Fish Wildl.Serv., U.S.D.I., Washington, D.C. :22 p.	1962
406	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Poecilia reticulata	Guppy	Fish	LC50	MOR	MORT	4	d	7.5	FW	King, S.F.	Some Effects of DDT on the Guppy and the Brown Trout	Spec.Sci.Rep.- Fish.No.399, U.S.Fish Wildl.Serv., U.S.D.I., Washington, D.C. :22 p.	1962
407	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Poecilia reticulata	Guppy	Fish	LC50	MOR	MORT	7	d	19.5	FW	King, S.F.	Some Effects of DDT on the Guppy and the Brown Trout	Spec.Sci.Rep.- Fish.No.399, U.S.Fish Wildl.Serv., U.S.D.I., Washington, D.C. :22 p.	1962
408	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Poecilia reticulata	Guppy	Fish	LC50	MOR	MORT	7	d	2.9	FW	King, S.F.	Some Effects of DDT on the Guppy and the Brown Trout	Spec.Sci.Rep.- Fish.No.399, U.S.Fish Wildl.Serv., U.S.D.I., Washington, D.C. :22 p.	1962

Appendix D-9, Table 9. ECOTOX values for DDTs in freshwaters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
409	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Salmo trutta	Brown Trout	Fish	LC50	MOR	MORT	4	d	10.9	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
410	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Salmo trutta	Brown Trout	Fish	LC50	MOR	MORT	1	d	3200	FW	King, S.F.	Some Effects of DDT on the Guppy and the Brown Trout	Spec.Sci.Rep.- Fish.No.399, U.S.Fish Wildl.Serv., U.S.D.I., Washington, D.C. :22 p.	1962
411	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Salmo trutta	Brown Trout	Fish	LC50	MOR	MORT	1	d	18	FW	King, S.F.	Some Effects of DDT on the Guppy and the Brown Trout	Spec.Sci.Rep.- Fish.No.399, U.S.Fish Wildl.Serv., U.S.D.I., Washington, D.C. :22 p.	1962
412	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Salmo trutta	Brown Trout	Fish	LC50	MOR	MORT	1	d	5.7	FW	King, S.F.	Some Effects of DDT on the Guppy and the Brown Trout	Spec.Sci.Rep.- Fish.No.399, U.S.Fish Wildl.Serv., U.S.D.I., Washington, D.C. :22 p.	1962
413	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Salmo trutta	Brown Trout	Fish	LC50	MOR	MORT	14	d	280	FW	King, S.F.	Some Effects of DDT on the Guppy and the Brown Trout	Spec.Sci.Rep.- Fish.No.399, U.S.Fish Wildl.Serv., U.S.D.I., Washington, D.C. :22 p.	1962
414	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Salmo trutta	Brown Trout	Fish	LC50	MOR	MORT	14	d	0.56	FW	King, S.F.	Some Effects of DDT on the Guppy and the Brown Trout	Spec.Sci.Rep.- Fish.No.399, U.S.Fish Wildl.Serv., U.S.D.I., Washington, D.C. :22 p.	1962
415	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Salmo trutta	Brown Trout	Fish	LC50	MOR	MORT	14	d	14	FW	King, S.F.	Some Effects of DDT on the Guppy and the Brown Trout	Spec.Sci.Rep.- Fish.No.399, U.S.Fish Wildl.Serv., U.S.D.I., Washington, D.C. :22 p.	1962
416	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Salmo trutta	Brown Trout	Fish	LC50	MOR	MORT	4	d	3200	FW	King, S.F.	Some Effects of DDT on the Guppy and the Brown Trout	Spec.Sci.Rep.- Fish.No.399, U.S.Fish Wildl.Serv., U.S.D.I., Washington, D.C. :22 p.	1962
417	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Salmo trutta	Brown Trout	Fish	LC50	MOR	MORT	4	d	17.5	FW	King, S.F.	Some Effects of DDT on the Guppy and the Brown Trout	Spec.Sci.Rep.- Fish.No.399, U.S.Fish Wildl.Serv., U.S.D.I., Washington, D.C. :22 p.	1962
418	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Salmo trutta	Brown Trout	Fish	LC50	MOR	MORT	7	d	1.95	FW	King, S.F.	Some Effects of DDT on the Guppy and the Brown Trout	Spec.Sci.Rep.- Fish.No.399, U.S.Fish Wildl.Serv., U.S.D.I., Washington, D.C. :22 p.	1962
419	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Salmo trutta	Brown Trout	Fish	LC50	MOR	MORT	7	d	14	FW	King, S.F.	Some Effects of DDT on the Guppy and the Brown Trout	Spec.Sci.Rep.- Fish.No.399, U.S.Fish Wildl.Serv., U.S.D.I., Washington, D.C. :22 p.	1962
420	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Salmo trutta	Brown Trout	Fish	LC50	MOR	MORT	7	d	2400	FW	King, S.F.	Some Effects of DDT on the Guppy and the Brown Trout	Spec.Sci.Rep.- Fish.No.399, U.S.Fish Wildl.Serv., U.S.D.I., Washington, D.C. :22 p.	1962
421	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Salvelinus fontinalis	Brook Trout	Fish	LC50	MOR	MORT	1	d	23.1	FW	Post, G., and T.R. Schroeder	The Toxicity of Four Insecticides to Four Salmonid Species	Bull.Environ.Contam.Toxicol. 6(2):144-155	1971
422	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Salvelinus fontinalis	Brook Trout	Fish	LC50	MOR	MORT	1	d	30	FW	Gardner, D.R.	The Effect of Some DDT and Methoxychlor Analogs on Temperature Selection and Lethality in Brook Trout Fingerlings	Pestic.Biochem.Physiol. 2:437-446	1973
423	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Salvelinus fontinalis	Brook Trout	Fish	LC50	MOR	MORT	2	d	12.75	FW	Post, G., and T.R. Schroeder	The Toxicity of Four Insecticides to Four Salmonid Species	Bull.Environ.Contam.Toxicol. 6(2):144-155	1971
424	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Salvelinus fontinalis	Brook Trout	Fish	LC50	MOR	MORT	2	d	7.35	FW	Post, G., and T.R. Schroeder	The Toxicity of Four Insecticides to Four Salmonid Species	Bull.Environ.Contam.Toxicol. 6(2):144-155	1971
425	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Salvelinus fontinalis	Brook Trout	Fish	LC50	MOR	MORT	3	d	11.9	FW	Post, G., and T.R. Schroeder	The Toxicity of Four Insecticides to Four Salmonid Species	Bull.Environ.Contam.Toxicol. 6(2):144-155	1971
426	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Salvelinus fontinalis	Brook Trout	Fish	LC50	MOR	MORT	3	d	7.4	FW	Post, G., and T.R. Schroeder	The Toxicity of Four Insecticides to Four Salmonid Species	Bull.Environ.Contam.Toxicol. 6(2):144-155	1971

Appendix D-9, Table 9. ECOTOX values for DDTs in freshwaters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
427	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Salvelinus fontinalis	Brook Trout	Fish	LC50	MOR	MORT	4	d	1.8	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
428	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Salvelinus fontinalis	Brook Trout	Fish	LC50	MOR	MORT	4	d	11.9	FW	Post, G., and T.R. Schroeder	The Toxicity of Four Insecticides to Four Salmonid Species	Bull.Environ.Contam.Toxicol. 6(2):144-155	1971
429	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Salvelinus fontinalis	Brook Trout	Fish	LC50	MOR	MORT	4	d	17	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
430	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Salvelinus fontinalis	Brook Trout	Fish	LC50	MOR	MORT	4	d	20	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
431	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Salvelinus fontinalis	Brook Trout	Fish	LC50	MOR	MORT	4	d	7.2	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
432	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Salvelinus fontinalis	Brook Trout	Fish	LC50	MOR	MORT	4	d	7.4	FW	Post, G., and T.R. Schroeder	The Toxicity of Four Insecticides to Four Salmonid Species	Bull.Environ.Contam.Toxicol. 6(2):144-155	1971
433	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Salvelinus fontinalis	Brook Trout	Fish	LC50*	MOR	MORT	1	d	54	FW	Miller, D.L., and D.M. Ogilvie	Temperature Selection in Brook Trout (Salvelinus fontinalis) Following Exposure to DDT, PCB or Phenol	Bull.Environ.Contam.Toxicol. 14(5):545-551	1975
434	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Salvelinus namaycush	Lake Trout, Siscowet	Fish	LC50	MOR	MORT	4	d	9.1	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
435	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Salvelinus namaycush	Lake Trout, Siscowet	Fish	LC50	MOR	MORT	4	d	9.5	FW	Marking, L.L.	Evaluation of p,p'-DDT as a Reference Toxicant in Bioassays	Invest.Fish Control No.10, Resourc.Publ.No.14, Fish Wildl.Serv., Bur.Sport Fish Wildl., USDI, Washington, DC :10 p.	1966
436	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Tilapia zillii	Tilapia	Fish	LC50	MOR	MORT	1	d	12.78	FW	El Sebae, A.H., M.A. El Amayem, I. Sharaf, and M. Massod	Factors Affecting Acute and Chronic Toxicity of Chlorinated Pesticides and Their Biomagnification in Alexandria Region	In: Papers Presented at the FAO/UNEP Meeting on the Toxicity and Bioaccumulation of Selected Substances in Marine Organisms, Rovinj, Yugoslavia, 5-9 Nov., 1984, FAO Fish.Rep.No.334 (Suppl.):73-79	1986
437	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Tilapia zillii	Tilapia	Fish	LC50	MOR	MORT	1	d	21.81	FW	El Sebae, A.H., M.A. El Amayem, I. Sharaf, and M. Massod	Factors Affecting Acute and Chronic Toxicity of Chlorinated Pesticides and Their Biomagnification in Alexandria Region	In: Papers Presented at the FAO/UNEP Meeting on the Toxicity and Bioaccumulation of Selected Substances in Marine Organisms, Rovinj, Yugoslavia, 5-9 Nov., 1984, FAO Fish.Rep.No.334 (Suppl.):73-79	1986
438	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Tilapia zillii	Tilapia	Fish	LC50	MOR	MORT	1	d	27.5	FW	El Sebae, A.H., M.A. El Amayem, I. Sharaf, and M. Massod	Factors Affecting Acute and Chronic Toxicity of Chlorinated Pesticides and Their Biomagnification in Alexandria Region	In: Papers Presented at the FAO/UNEP Meeting on the Toxicity and Bioaccumulation of Selected Substances in Marine Organisms, Rovinj, Yugoslavia, 5-9 Nov., 1984, FAO Fish.Rep.No.334 (Suppl.):73-79	1986
439	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Tilapia zillii	Tilapia	Fish	LC50	MOR	MORT	1	d	63	FW	El Sebae, A.H., M.A. El Amayem, I. Sharaf, and M. Massod	Factors Affecting Acute and Chronic Toxicity of Chlorinated Pesticides and Their Biomagnification in Alexandria Region	In: Papers Presented at the FAO/UNEP Meeting on the Toxicity and Bioaccumulation of Selected Substances in Marine Organisms, Rovinj, Yugoslavia, 5-9 Nov., 1984, FAO Fish.Rep.No.334 (Suppl.):73-79	1986

Appendix D-9, Table 9. ECOTOX values for DDTs in freshwaters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
440	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Tilapia zillii	Tilapia	Fish	LC50	MOR	MORT	4	d	15.5	FW	El Sebae, A.H., M.A. El Amayem, I. Sharaf, and M. Massod	Factors Affecting Acute and Chronic Toxicity of Chlorinated Pesticides and Their Biomagnification in Alexandria Region	In: Papers Presented at the FAO/UNEP Meeting on the Toxicity and Bioaccumulation of Selected Substances in Marine Organisms, Rovinj, Yugoslavia, 5-9 Nov., 1984, FAO Fish.Rep.No.334 (Suppl.):73-79	1986
441	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Tilapia zillii	Tilapia	Fish	LC50	MOR	MORT	4	d	42	FW	El Sebae, A.H., M.A. El Amayem, I. Sharaf, and M. Massod	Factors Affecting Acute and Chronic Toxicity of Chlorinated Pesticides and Their Biomagnification in Alexandria Region	In: Papers Presented at the FAO/UNEP Meeting on the Toxicity and Bioaccumulation of Selected Substances in Marine Organisms, Rovinj, Yugoslavia, 5-9 Nov., 1984, FAO Fish.Rep.No.334 (Suppl.):73-79	1986
442	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Tilapia zillii	Tilapia	Fish	LC50	MOR	MORT	4	d	9.5	FW	El Sebae, A.H., M.A. El Amayem, I. Sharaf, and M. Massod	Factors Affecting Acute and Chronic Toxicity of Chlorinated Pesticides and Their Biomagnification in Alexandria Region	In: Papers Presented at the FAO/UNEP Meeting on the Toxicity and Bioaccumulation of Selected Substances in Marine Organisms, Rovinj, Yugoslavia, 5-9 Nov., 1984, FAO Fish.Rep.No.334 (Suppl.):73-79	1986
443	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Tilapia zillii	Tilapia	Fish	LC50	MOR	MORT	4	d	9.52	FW	El Sebae, A.H., M.A. El Amayem, I. Sharaf, and M. Massod	Factors Affecting Acute and Chronic Toxicity of Chlorinated Pesticides and Their Biomagnification in Alexandria Region	In: Papers Presented at the FAO/UNEP Meeting on the Toxicity and Bioaccumulation of Selected Substances in Marine Organisms, Rovinj, Yugoslavia, 5-9 Nov., 1984, FAO Fish.Rep.No.334 (Suppl.):73-79	1986
444	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Zacco platypus	Oikawa	Fish	LC50	MOR	MORT	1	d	350	FW	Shim, J.C., and L.S. Self	Toxicity of Agricultural Chemicals to Larvivorous Fish in Korean Rice Fields	Trop.Med. 15(3):123-130	1973
445	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gambusia affinis	Western Mosquitofish	Fish	LC90	MOR	MORT	7	d	205	FW	Mittal, P.K., T. Adak, and V.P. Sharma	Acute Toxicity of Certain Organochlorine, Organophosphorus, Synthetic Pyrethroid and Microbial Insecticides to the Mosquito Fish Gambusia affinis (Baird and Girard)	Indian J.Malariol. 28(3):167-170	1991
446	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lepomis macrochirus	Bluegill	Fish	LD50	MOR	MORT	4	d	21	FW	Whitten, B.K., and C.J. Goodnight	Toxicity of Some Common Insecticides to Tubificids	J.Water Pollut.Control Fed. 38(2):227-235	1966
447	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pimephales promelas	Fathead Minnow	Fish	LD50	MOR	MORT	4	d	34	FW	Whitten, B.K., and C.J. Goodnight	Toxicity of Some Common Insecticides to Tubificids	J.Water Pollut.Control Fed. 38(2):227-235	1966
448	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gambusia affinis	Western Mosquitofish	Fish	LOEC	AVO	CHEM	0.04	d	100	FW	Hansen, D.J., E. Matthews, S.L. Nall, and D.P. Dumas	Avoidance of Pesticides by Untrained Mosquitofish, Gambusia affinis	Bull.Environ.Contam.Toxicol. 8(1):46-51	1972
449	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	LOEC	MOR	MORT	3	d	150000	FW	Holland, G.A., J.E. Lasater, E.D. Neumann, and W.E. Eldridge	Toxic Effects of Organic and Inorganic Pollutants on Young Salmon and Trout	Res.Bull.No.5, State of Washington Dept.Fish., Seattle, WA :263 p.	1960
450	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LOEC	MOR	MORT	3	d	56300	FW	Holland, G.A., J.E. Lasater, E.D. Neumann, and W.E. Eldridge	Toxic Effects of Organic and Inorganic Pollutants on Young Salmon and Trout	Res.Bull.No.5, State of Washington Dept.Fish., Seattle, WA :263 p.	1960
451	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius auratus	Goldfish	Fish	NR-LETH	MOR	MORT	1	d	100	FW	Keffler, L.R.	A Study of the Influence of Calcium on the Effects of DDT on Fishes	Ph.D.Thesis, University of Mississippi, University, MS :125 p.	1972
452	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius auratus	Goldfish	Fish	NR-LETH	MOR	MORT	1	d	50	FW	Keffler, L.R.	A Study of the Influence of Calcium on the Effects of DDT on Fishes	Ph.D.Thesis, University of Mississippi, University, MS :125 p.	1972
453	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius auratus	Goldfish	Fish	NR-LETH	MOR	MORT	2	d	20	FW	Keffler, L.R.	A Study of the Influence of Calcium on the Effects of DDT on Fishes	Ph.D.Thesis, University of Mississippi, University, MS :125 p.	1972
454	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius auratus	Goldfish	Fish	NR-LETH	MOR	MORT	2	d	50	FW	Keffler, L.R.	A Study of the Influence of Calcium on the Effects of DDT on Fishes	Ph.D.Thesis, University of Mississippi, University, MS :125 p.	1972

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
455	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius auratus	Goldfish	Fish	NR-LETH	MOR	MORT	2	d	50	FW	Keffler, L.R.	A Study of the Influence of Calcium on the Effects of DDT on Fishes	Ph.D.Thesis, University of Mississippi, University, MS :125 p.	1972
456	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius auratus	Goldfish	Fish	NR-LETH	MOR	MORT	2	d	50	FW	Keffler, L.R.	A Study of the Influence of Calcium on the Effects of DDT on Fishes	Ph.D.Thesis, University of Mississippi, University, MS :125 p.	1972
457	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius auratus	Goldfish	Fish	NR-LETH	MOR	MORT	2	d	50	FW	Keffler, L.R.	A Study of the Influence of Calcium on the Effects of DDT on Fishes	Ph.D.Thesis, University of Mississippi, University, MS :125 p.	1972
458	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius auratus	Goldfish	Fish	NR-LETH	MOR	MORT	2	d	50	FW	Keffler, L.R.	A Study of the Influence of Calcium on the Effects of DDT on Fishes	Ph.D.Thesis, University of Mississippi, University, MS :125 p.	1972
459	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius auratus	Goldfish	Fish	NR-LETH	MOR	MORT	2	d	50	FW	Keffler, L.R.	A Study of the Influence of Calcium on the Effects of DDT on Fishes	Ph.D.Thesis, University of Mississippi, University, MS :125 p.	1972
460	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius auratus	Goldfish	Fish	NR-LETH	MOR	MORT	2	d	500	FW	Haynes, H.L., H.H. Moorefield, A.J. Borash, and J.W. Keays	The Toxicity of Sevin to Goldfish	J.Econ.Entomol. 51(4):540	1958
461	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius auratus	Goldfish	Fish	NR-LETH	MOR	MORT	4	d	250	FW	Ginsburg, J.M.	Comparative Toxicity of DDT Isomers and Related Compounds to Mosquito Larvae and Fish	Science 105:233-234	1947
462	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius auratus	Goldfish	Fish	NR-LETH	MOR	MORT	4	d	250	FW	Ginsburg, J.M.	Comparative Toxicity of DDT Isomers and Related Compounds to Mosquito Larvae and Fish	Science 105:233-234	1947
463	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Carassius auratus	Goldfish	Fish	NR-LETH	MOR	MORT	4	d	250	FW	Ginsburg, J.M.	Tests with New Toxicants, in Comparison with DDT, on Mosquito Larvae and Fish	Proc.N.J.Mosq.Exterm.Assoc. 34:132-135	1947
464	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Gambusia affinis	Western Mosquitofish	Fish	NR-LETH	MOR	MORT	0.29	d	100	FW	Odum, E.P., and W.T. Sumerford	Comparative Toxicity of DDT and Four Analogues to Goldfish, Gambusia, and Culex Larvae	Science 104(2708):480-482	1946
465	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Notemigonus crysoleucas	Golden Shiner	Fish	NR-LETH	MOR	MORT	1	d	100	FW	Keffler, L.R.	A Study of the Influence of Calcium on the Effects of DDT on Fishes	Ph.D.Thesis, University of Mississippi, University, MS :125 p.	1972
466	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Notemigonus crysoleucas	Golden Shiner	Fish	NR-LETH	MOR	MORT	1	d	100	FW	Keffler, L.R.	A Study of the Influence of Calcium on the Effects of DDT on Fishes	Ph.D.Thesis, University of Mississippi, University, MS :125 p.	1972
467	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Notemigonus crysoleucas	Golden Shiner	Fish	NR-LETH	MOR	MORT	2	d	100	FW	Keffler, L.R.	A Study of the Influence of Calcium on the Effects of DDT on Fishes	Ph.D.Thesis, University of Mississippi, University, MS :125 p.	1972
468	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Notemigonus crysoleucas	Golden Shiner	Fish	NR-LETH	MOR	MORT	2	d	100	FW	Keffler, L.R.	A Study of the Influence of Calcium on the Effects of DDT on Fishes	Ph.D.Thesis, University of Mississippi, University, MS :125 p.	1972
469	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Notemigonus crysoleucas	Golden Shiner	Fish	NR-LETH	MOR	MORT	2	d	100	FW	Keffler, L.R.	A Study of the Influence of Calcium on the Effects of DDT on Fishes	Ph.D.Thesis, University of Mississippi, University, MS :125 p.	1972
470	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Notemigonus crysoleucas	Golden Shiner	Fish	NR-LETH	MOR	MORT	2	d	100	FW	Keffler, L.R.	A Study of the Influence of Calcium on the Effects of DDT on Fishes	Ph.D.Thesis, University of Mississippi, University, MS :125 p.	1972
471	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Notemigonus crysoleucas	Golden Shiner	Fish	NR-LETH	MOR	MORT	2	d	20	FW	Keffler, L.R.	A Study of the Influence of Calcium on the Effects of DDT on Fishes	Ph.D.Thesis, University of Mississippi, University, MS :125 p.	1972
472	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Notemigonus crysoleucas	Golden Shiner	Fish	NR-LETH	MOR	MORT	2	d	50	FW	Keffler, L.R.	A Study of the Influence of Calcium on the Effects of DDT on Fishes	Ph.D.Thesis, University of Mississippi, University, MS :125 p.	1972
473	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	NR-LETH	MOR	MORT	0.29	d	350	FW	Schaumburg, F.D., T.E. Howard, and C.C. Walden	A Method to Evaluate the Effects of Water Pollutants on Fish Respiration	Water Res. 1:731-737	1967

Appendix D-9, Table 9. ECOTOX values for DDTs in freshwaters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
474	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	NR-LETH	MOR	MORT	0.5	d	200	FW	Schaumburg, F.D., T.E. Howard, and C.C. Walden	A Method to Evaluate the Effects of Water Pollutants on Fish Respiration	Water Res. 1:731-737	1967
475	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	NR-LETH	MOR	MORT	1.25	d	50	FW	Schaumburg, F.D., T.E. Howard, and C.C. Walden	A Method to Evaluate the Effects of Water Pollutants on Fish Respiration	Water Res. 1:731-737	1967
476	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	NR-LETH	MOR	MORT	4	d	50	FW	Schaumburg, F.D., T.E. Howard, and C.C. Walden	A Method to Evaluate the Effects of Water Pollutants on Fish Respiration	Water Res. 1:731-737	1967
477	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	NR-LETH	MOR	MORT	0.67	d	1000	FW	Mayhew, J.	Toxicity of Seven Different Insecticides to Rainbow Trout Salmo gairdnerii (Richardson)	Proc.Iowa J.Acad.Sci. 62:599-606	1955
478	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	NR-LETH	MOR	MORT	1	d	1000	FW	Mayhew, J.	Toxicity of Seven Different Insecticides to Rainbow Trout Salmo gairdnerii (Richardson)	Proc.Iowa J.Acad.Sci. 62:599-606	1955
479	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus mykiss	Rainbow Trout	Fish	NR-LETH	MOR	MORT	1	d	500	FW	Mayhew, J.	Toxicity of Seven Different Insecticides to Rainbow Trout Salmo gairdnerii (Richardson)	Proc.Iowa J.Acad.Sci. 62:599-606	1955
480	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Oncorhynchus tshawytscha	Chinook Salmon	Fish	NR-LETH	MOR	MORT	1.88	d	100000	FW	Holland, G.A., J.E. Lasater, E.D. Neumann, and W.E. Eldridge	Toxic Effects of Organic and Inorganic Pollutants on Young Salmon and Trout	Res.Bull.No.5, State of Washington Dept.Fish., Seattle, WA :263 p.	1960
481	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pimephales promelas	Fathead Minnow	Fish	NR-LETH	MOR	MORT	5	d	1.53	FW	Jarvinen, A.W., M.J. Hoffman, and T.W. Thorslund	Long-Term Toxic Effects of DDT Food and Water Exposure on Fathead Minnows (Pimephales promelas)	J.Fish.Res.Board Can. 34(11):2089-2103 (Author Communication Used)	1977
482	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	EC50*	ITX	IMBL	1	d	22	FW	Shamaan, N.A., R. Hamidah, J. Jeffries, A.J. Hashim, and W.Z. Wan Ngah	Insecticide Toxicity, Glutathione Transferases and Carboxylesterase Activities in the Larva of the Aedes Mosquito	Comp.Biochem.Physiol.C 104(1):107-110	1993
483	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	EC50*	ITX	IMBL	1	d	83	FW	Shamaan, N.A., R. Hamidah, J. Jeffries, A.J. Hashim, and W.Z. Wan Ngah	Insecticide Toxicity, Glutathione Transferases and Carboxylesterase Activities in the Larva of the Aedes Mosquito	Comp.Biochem.Physiol.C 104(1):107-110	1993
484	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ceratopsyche morosa	Caddisfly	Insects/Spiders	EC50*	ITX	IMBL	0.25	d	30	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
485	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Chironomus plumosus	Midge	Insects/Spiders	EC50	ITX	IMBL	2	d	23	FW	Streufert, J.M.	Some Effects of Two Phthalic Acid Esters on the Life Cycle of the Midge (Chironomus plumosus)	M.S.Thesis, Univ.of Missouri, Columbia, MO	1977
486	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Chironomus plumosus	Midge	Insects/Spiders	EC50	ITX	IMBL	2	d	23	FW	Streufert, J.M., J.R. Jones, and H.O. Sanders	Toxicity and Biological Effects of Phthalate Esters on Midges (Chironomus plumosus)	Trans.Mo.Acad.Sci. 14:33-40	1980
487	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Chironomus riparius	Midge	Insects/Spiders	EC50	ITX	IMBL	1	d	25	FW	Lydy, M.J., K.A. Bruner, D.M. Fry, and S.W. Fisher	Effects of Sediment and the Route of Exposure on the Toxicity and Accumulation of Neutral Lipophilic and Moderately Water-Soluble Metabolizable Compounds in the Midge, Chironomus riparius	In: W.G.Landis and W.H.Van der Schalie (Eds.), Aquatic Toxicology and Risk Assessment, Vol.13, ASTM STP 1096, Philadelphia, PA :140-164	1990
488	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Chironomus riparius	Midge	Insects/Spiders	EC50	ITX	IMBL	1	d	50	FW	Lydy, M.J., K.A. Bruner, D.M. Fry, and S.W. Fisher	Effects of Sediment and the Route of Exposure on the Toxicity and Accumulation of Neutral Lipophilic and Moderately Water-Soluble Metabolizable Compounds in the Midge, Chironomus riparius	In: W.G.Landis and W.H.Van der Schalie (Eds.), Aquatic Toxicology and Risk Assessment, Vol.13, ASTM STP 1096, Philadelphia, PA :140-164	1990
489	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Chironomus riparius	Midge	Insects/Spiders	EC50	ITX	IMBL	1	d	1	FW	Lydy, M.J., K.A. Bruner, D.M. Fry, and S.W. Fisher	Effects of Sediment and the Route of Exposure on the Toxicity and Accumulation of Neutral Lipophilic and Moderately Water-Soluble Metabolizable Compounds in the Midge, Chironomus riparius	In: W.G.Landis and W.H.Van der Schalie (Eds.), Aquatic Toxicology and Risk Assessment, Vol.13, ASTM STP 1096, Philadelphia, PA :140-164	1990

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
490	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Chironomus riparius	Midge	Insects/Spiders	EC50*	ITX	IMBL	1	d	4.7	FW	Estenik, J.F., and W.J. Collins	In Vivo and In Vitro Studies of Mixed-Function Oxidase in an Aquatic Insect, Chironomus riparius	In: M.A.Q.Khan, J.J.Lech, and J.J.Menn (Eds.), Pesticide and Xenobiotic Metabolism in Aquatic Organisms, ACS (Am.Chem.Soc.) Symp.Ser.99, Chapter 21 :349-370 (Author Communication Used)	1979
491	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Chironomus tentans	Midge	Insects/Spiders	EC50	ITX	IMBL	1	d	19.5	FW	Karnak, R.E., and W.J. Collins	The Susceptibility to Selected Insecticides and Acetylcholinesterase Activity in a Laboratory Colony of Midge Larvae, Chironomus tentans (Diptera: Chironomidae)	Bull.Environ.Contam.Toxicol. 12(1):62-69	1974
492	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Chironomus yoshimatsui	Midge	Insects/Spiders	EC50	BEH	GBHV	1	d	23	FW	Sato, H., and M. Yasuno	Test on Chironomidae Larvae Susceptibility to Various Insecticides	Jpn.J.Sanit.Zool. 30(4):361-366 (JPN) (ENG ABS)	1979
493	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Paratanytarsus parthenogeneticus	Midge	Insects/Spiders	EC50	BEH	GBHV	1	d	1.4	FW	Sato, H., and M. Yasuno	Test on Chironomidae Larvae Susceptibility to Various Insecticides	Jpn.J.Sanit.Zool. 30(4):361-366 (JPN) (ENG ABS)	1979
494	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Polypedilum nubifer	Midge	Insects/Spiders	EC50	BEH	GBHV	1	d	15	FW	Sato, H., and M. Yasuno	Test on Chironomidae Larvae Susceptibility to Various Insecticides	Jpn.J.Sanit.Zool. 30(4):361-366 (JPN) (ENG ABS)	1979
495	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Procladius sp.	Midge	Insects/Spiders	EC50	BEH	GBHV	1	d	3.8	FW	Sato, H., and M. Yasuno	Test on Chironomidae Larvae Susceptibility to Various Insecticides	Jpn.J.Sanit.Zool. 30(4):361-366 (JPN) (ENG ABS)	1979
496	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Psectrocladius sp.	Midge	Insects/Spiders	EC50	BEH	GBHV	1	d	57	FW	Sato, H., and M. Yasuno	Test on Chironomidae Larvae Susceptibility to Various Insecticides	Jpn.J.Sanit.Zool. 30(4):361-366 (JPN) (ENG ABS)	1979
497	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Culex pipiens ssp. molestus	Mosquito	Insects/Spiders	LC100	MOR	MORT	3	d	50	FW	Rettich, F.	Laboratory and Field Investigations in Czechoslovakia with Fenitrothion, Pirimiphos-Methyl, Temephos and Other Organophosphorous Larvicides	Mosq.News 39(2):320-328 (Author Communication Used)	1979
498	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Culex pipiens ssp. molestus	Mosquito	Insects/Spiders	LC100	MOR	MORT	3	d	50	FW	Rettich, F.	Laboratory and Field Investigations in Czechoslovakia with Fenitrothion, Pirimiphos-Methyl, Temephos and Other Organophosphorous Larvicides	Mosq.News 39(2):320-328 (Author Communication Used)	1979
499	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	16710	FW	Kumar, S., A. Thomas, and M.K.K. Pillai	Involvement of Mono-Oxygenases as a Major Mechanism of Deltamethrin-Resistance in Larvae of Three Species of Mosquitoes	Indian J.Exp.Biol. 29(4):379-384	1991
500	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	33	FW	Kumar-Das, V.G., L.Y. Kuan, K.I. Sudderuddin, C.K. Chang, V. Thomas, C.K. Yap, M.K. Lo, G.C. Ong, W.K. Ng, and Y. Hoi-Se	The Toxic Effects of Triorganotin (IV) Compounds on the Culicine Mosquito, Aedes aegypti (L)	Toxicology 32(1):57-66	1984
501	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	LC50	MOR	MORT	2	d	116	FW	Beard, C.B., K.O. Kloter, M.K. Carroll, L.J. Magnuson, and H. Trapido	Response of Domestic and Peridomestic Strains of Aedes aegypti (Diptera: Culicidae) in new Orleans, Louisiana, USA, to Organophosphate, Organochlorine, and Pyrethroid Insecticides	J.Med.Entomol. 22(3):276-280	1985
502	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	LC50	MOR	MORT	2	d	1261	FW	Beard, C.B., K.O. Kloter, M.K. Carroll, L.J. Magnuson, and H. Trapido	Response of Domestic and Peridomestic Strains of Aedes aegypti (Diptera: Culicidae) in new Orleans, Louisiana, USA, to Organophosphate, Organochlorine, and Pyrethroid Insecticides	J.Med.Entomol. 22(3):276-280	1985
503	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	LC50	MOR	MORT	2	d	14.7	FW	Beard, C.B., K.O. Kloter, M.K. Carroll, L.J. Magnuson, and H. Trapido	Response of Domestic and Peridomestic Strains of Aedes aegypti (Diptera: Culicidae) in new Orleans, Louisiana, USA, to Organophosphate, Organochlorine, and Pyrethroid Insecticides	J.Med.Entomol. 22(3):276-280	1985
504	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	LC50	MOR	MORT	2	d	267	FW	Beard, C.B., K.O. Kloter, M.K. Carroll, L.J. Magnuson, and H. Trapido	Response of Domestic and Peridomestic Strains of Aedes aegypti (Diptera: Culicidae) in new Orleans, Louisiana, USA, to Organophosphate, Organochlorine, and Pyrethroid Insecticides	J.Med.Entomol. 22(3):276-280	1985

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
505	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	LC50	MOR	MORT	2	d	577.1	FW	Beard, C.B., K.O. Kloter, M.K. Carroll, L.J. Magnuson, and H. Trapido	Response of Domestic and Peridomestic Strains of Aedes aegypti (Diptera: Culicidae) in new Orleans, Louisiana, USA, to Organophosphate, Organochlorine, and Pyrethroid Insecticides	J.Med.Entomol. 22(3):276-280	1985
506	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	LC50	MOR	MORT	2	d	8	FW	Beard, C.B., K.O. Kloter, M.K. Carroll, L.J. Magnuson, and H. Trapido	Response of Domestic and Peridomestic Strains of Aedes aegypti (Diptera: Culicidae) in new Orleans, Louisiana, USA, to Organophosphate, Organochlorine, and Pyrethroid Insecticides	J.Med.Entomol. 22(3):276-280	1985
507	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Aedes cantans	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	5	FW	Rettich, F.	Laboratory and Field Investigations in Czechoslovakia with Fenitrothion, Pirimiphos-Methyl, Temephos and Other Organophosphorous Larvicides	Mosq.News 39(2):320-328 (Author Communication Used)	1979
508	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Aedes cantans	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	10.2	FW	Rettich, F.	The Susceptibility of Mosquito Larvae to Eighteen Insecticides in Czechoslovakia	Mosq.News 37(2):252-257	1977
509	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Aedes cantans	Mosquito	Insects/Spiders	LC50	MOR	MORT	2	d	4.2	FW	Rettich, F.	Laboratory and Field Investigations in Czechoslovakia with Fenitrothion, Pirimiphos-Methyl, Temephos and Other Organophosphorous Larvicides	Mosq.News 39(2):320-328 (Author Communication Used)	1979
510	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Aedes communis	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	9	FW	Rettich, F.	The Susceptibility of Mosquito Larvae to Eighteen Insecticides in Czechoslovakia	Mosq.News 37(2):252-257	1977
511	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Aedes excrucians	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	6.3	FW	Rettich, F.	The Susceptibility of Mosquito Larvae to Eighteen Insecticides in Czechoslovakia	Mosq.News 37(2):252-257	1977
512	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Aedes nigromaculis	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	650	FW	Mulla, M.S., R.L. Metcalf, and G. Kats	Evaluation of New Mosquito Larvicides, with Notes on Resistant Strains	Mosq.News 24(3):312-319	1964
513	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Aedes punctor	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	28	FW	Rettich, F.	The Susceptibility of Mosquito Larvae to Eighteen Insecticides in Czechoslovakia	Mosq.News 37(2):252-257	1977
514	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Aedes sticticus	Floodwater Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	2.6	FW	Rettich, F.	The Susceptibility of Mosquito Larvae to Eighteen Insecticides in Czechoslovakia	Mosq.News 37(2):252-257	1977
515	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Aedes vexans	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	1.9	FW	Rettich, F.	The Susceptibility of Mosquito Larvae to Eighteen Insecticides in Czechoslovakia	Mosq.News 37(2):252-257	1977
516	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Anopheles stephensi	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	11547.8	FW	Kumar, S., A. Thomas, A. Sahgal, A. Verma, T. Samuel, and M.K.K. Pillai	Variations in the Insecticide-Resistance Spectrum of Anopheles stephensi After Selection with Deltamethrin or a Deltamethrin-Piperonyl-Butoxide Combination	Ann.Trop.Med.Parasitol. 98(8):861-871	2004
517	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Anopheles stephensi	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	13091.9	FW	Kumar, S., A. Thomas, A. Sahgal, A. Verma, T. Samuel, and M.K.K. Pillai	Variations in the Insecticide-Resistance Spectrum of Anopheles stephensi After Selection with Deltamethrin or a Deltamethrin-Piperonyl-Butoxide Combination	Ann.Trop.Med.Parasitol. 98(8):861-871	2004
518	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Anopheles stephensi	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	13749.8	FW	Kumar, S., A. Thomas, A. Sahgal, A. Verma, T. Samuel, and M.K.K. Pillai	Variations in the Insecticide-Resistance Spectrum of Anopheles stephensi After Selection with Deltamethrin or a Deltamethrin-Piperonyl-Butoxide Combination	Ann.Trop.Med.Parasitol. 98(8):861-871	2004
519	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Anopheles stephensi	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	16639	FW	Kumar, S., A. Thomas, A. Sahgal, A. Verma, T. Samuel, and M.K.K. Pillai	Variations in the Insecticide-Resistance Spectrum of Anopheles stephensi After Selection with Deltamethrin or a Deltamethrin-Piperonyl-Butoxide Combination	Ann.Trop.Med.Parasitol. 98(8):861-871	2004
520	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Anopheles stephensi	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	186.2	FW	Kumar, S., A. Thomas, A. Sahgal, A. Verma, T. Samuel, and M.K.K. Pillai	Variations in the Insecticide-Resistance Spectrum of Anopheles stephensi After Selection with Deltamethrin or a Deltamethrin-Piperonyl-Butoxide Combination	Ann.Trop.Med.Parasitol. 98(8):861-871	2004

Appendix D-9, Table 9. ECOTOX values for DDTs in freshwaters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
521	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Anopheles stephensi	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	23560	FW	Kumar, S., A. Thomas, and M.K.K. Pillai	Involvement of Mono-Oxygenases as a Major Mechanism of Deltamethrin-Resistance in Larvae of Three Species of Mosquitoes	Indian J.Exp.Biol. 29(4):379-384	1991
522	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Anopheles stephensi	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	23565.5	FW	Kumar, S., A. Thomas, A. Sahgal, A. Verma, T. Samuel, and M.K.K. Pillai	Variations in the Insecticide-Resistance Spectrum of Anopheles stephensi After Selection with Deltamethrin or a Deltamethrin-Piperonyl-Butoxide Combination	Ann.Trop.Med.Parasitol. 98(8):861-871	2004
523	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Anopheles stephensi	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	3179.1	FW	Kumar, S., A. Thomas, A. Sahgal, A. Verma, T. Samuel, and M.K.K. Pillai	Variations in the Insecticide-Resistance Spectrum of Anopheles stephensi After Selection with Deltamethrin or a Deltamethrin-Piperonyl-Butoxide Combination	Ann.Trop.Med.Parasitol. 98(8):861-871	2004
524	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Anopheles stephensi	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	175	FW	Chitra, S., and M.K.K. Pillai	Development of Organophosphorus and Carbamate-Resistance in Indian Strains of Anopheles stephensi Liston	Proc.Indian Acad.Sci.Anim.Sci. 93(3):159-170	1984
525	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Anopheles stephensi	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	282	FW	Chitra, S., and M.K.K. Pillai	Development of Organophosphorus and Carbamate-Resistance in Indian Strains of Anopheles stephensi Liston	Proc.Indian Acad.Sci.Anim.Sci. 93(3):159-170	1984
526	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Arctopsyche grandis	Caddisfly	Insects/Spiders	LC50	MOR	MORT	4	d	175	FW	Gaufin, A.R., L.D. Jensen, A.V. Nebeker, T. Nelson, and R.W. Teel	Toxicity of Ten Organic Insecticides to Various Aquatic Invertebrates	Water Sewage Works 12:276-279	1965
527	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Arctopsyche grandis	Caddisfly	Insects/Spiders	LC50*	MOR	MORT	4	d	175	FW	Gaufin, A.R., L. Jensen, and T. Nelson	Bioassays to Determine Pesticide Toxicity to Aquatic Invertebrates	Water Sewage Works 108:355-359	1961
528	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ceratopsyche morosa	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.125	d	200	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
529	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ceratopsyche morosa	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.125	d	400	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
530	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ceratopsyche morosa	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.125	d	500	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
531	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ceratopsyche morosa	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.125	d	70	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
532	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ceratopsyche morosa	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.125	d	90	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
533	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ceratopsyche morosa	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.125	d	90	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
534	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ceratopsyche morosa	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.25	d	250	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
535	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ceratopsyche morosa	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.25	d	50	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
536	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ceratopsyche morosa	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.25	d	50	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
537	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ceratopsyche morosa	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.25	d	50	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
538	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ceratopsyche morosa	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.25	d	80	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972

Appendix D-9, Table 9. ECOTOX values for DDTs in freshwaters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
539	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Chironomidae	Midge Family	Insects/Spiders	LC50	MOR	MORT	1	d	74.65	FW	Joshi, H.C., D. Kapoor, R.S. Panwar, and R.A. Gupta	Toxicity of Some Insecticides to Chironomid Larvae	Indian J.Environ.Health 17(3):238-241	1975
540	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Chironomus dilutus	Midge	Insects/Spiders	LC50	MOR	MORT	4	d	3.88	FW	Harwood, A.D., J. You, and M.J. Lydy	Temperature as a Toxicity Identification Evaluation Tool for Pyrethroid Insecticides: Toxicokinetic Confirmation	Environ.Toxicol.Chem. 28(5):1051-1058	2009
541	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Chironomus dilutus	Midge	Insects/Spiders	LC50	MOR	MORT	4	d	6.26	FW	Harwood, A.D., J. You, and M.J. Lydy	Temperature as a Toxicity Identification Evaluation Tool for Pyrethroid Insecticides: Toxicokinetic Confirmation	Environ.Toxicol.Chem. 28(5):1051-1058	2009
542	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Chironomus plumosus	Midge	Insects/Spiders	LC50	MOR	MORT	2	d	100	FW	Streufert, J.M.	Some Effects of Two Phthalic Acid Esters on the Life Cycle of the Midge (Chironomus plumosus)	M.S.Thesis, Univ.of Missouri, Columbia, MO	1977
543	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Chironomus riparius	Midge	Insects/Spiders	LC50	MOR	MORT	1	d	3.3	FW	Hoffman, E.R., and S.W. Fisher	Comparison of a Field and Laboratory-Derived Population of Chironomus riparius (Diptera: Chironomidae): Biochemical and Fitness Evidence for Population Divergence	J.Econ.Entomol. 87(2):318-325	1994
544	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Chironomus riparius	Midge	Insects/Spiders	LC50	MOR	MORT	1	d	43.3	FW	Hoffman, E.R., and S.W. Fisher	Comparison of a Field and Laboratory-Derived Population of Chironomus riparius (Diptera: Chironomidae): Biochemical and Fitness Evidence for Population Divergence	J.Econ.Entomol. 87(2):318-325	1994
545	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Chironomus tentans	Midge	Insects/Spiders	LC50	MOR	MORT	10	d	1.23	FW	Phipps, G.L., V.R. Mattson, and G.T. Ankley	Relative Sensitivity of Three Freshwater Benthic Macroinvertebrates to Ten Contaminants	Arch.Environ.Contam.Toxicol. 28(3):281-286	1995
546	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Chironomus tentans	Midge	Insects/Spiders	LC50	MOR	MORT	2	d	1	FW	Ziegenfuss, P.S., W.J. Renaudette, and W.J. Adams	Methodology for Assessing the Acute Toxicity of Chemicals Sorbed to Sediments: Testing the Equilibrium Partitioning Theory	In: T.M.Poston and R.Purdy (Eds.), Aquatic Toxicology and Environmental Fate, 9th Volume, ASTM STP 921, Philadelphia, PA :479-493	1986
547	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Claassenia sabulosa	Stonefly	Insects/Spiders	LC50	MOR	MORT	2	d	6.4	FW	Sanders, H.O., and O.B. Cope	The Relative Toxicities of Several Pesticides to Naiads of Three Species of Stoneflies	Limnol.Oceanogr. 13(1):112-117 (Author Communication Used) (Publ in Part As 6797)	1968
548	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Culex alpicalis	Mosquito	Insects/Spiders	LC50*	MOR	MORT	3	d	1	FW	Odum, E.P., and W.T. Sumerford	Comparative Toxicity of DDT and Four Analogues to Goldfish, Gambusia, and Culex Larvae	Science 104(2708):480-482	1946
549	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Culex fatigans	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	400	FW	Bajpai, V.N., and S.L. Perti	Resistance to Malathion	Pesticides 3(10):43-45	1969
550	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Culex fatigans	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	500	FW	Bajpai, V.N., and S.L. Perti	Resistance to Malathion	Pesticides 3(10):43-45	1969
551	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Culex fatigans	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	540	FW	Bajpai, V.N., and S.L. Perti	Resistance to Malathion	Pesticides 3(10):43-45	1969
552	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Culex fatigans	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	580	FW	Bajpai, V.N., and S.L. Perti	Resistance to Malathion	Pesticides 3(10):43-45	1969
553	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Culex fatigans	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	580	FW	Bajpai, V.N., and S.L. Perti	Resistance to Malathion	Pesticides 3(10):43-45	1969
554	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Culex fatigans	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	68	FW	Bajpai, V.N., and S.L. Perti	Resistance to Malathion	Pesticides 3(10):43-45	1969
555	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Culex pipiens ssp. molestus	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	8.6	FW	Rettich, F.	Laboratory and Field Investigations in Czechoslovakia with Fenitrothion, Pirimiphos-Methyl, Temephos and Other Organophosphorous Larvicides	Mosq.News 39(2):320-328 (Author Communication Used)	1979
556	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Culex pipiens ssp. molestus	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	6.1	FW	Rettich, F.	The Susceptibility of Mosquito Larvae to Eighteen Insecticides in Czechoslovakia	Mosq.News 37(2):252-257	1977

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
557	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Culex pipiens ssp. molestus	Mosquito	Insects/Spiders	LC50	MOR	MORT	2	d	7.2	FW	Rettich, F.	Laboratory and Field Investigations in Czechoslovakia with Fenitrothion, Pirimiphos-Methyl, Temephos and Other Organophosphorous Larvicides	Mosq.News 39(2):320-328 (Author Communication Used)	1979
558	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Culex pipiens ssp. pipiens	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	5.7	FW	Rettich, F.	The Susceptibility of Mosquito Larvae to Eighteen Insecticides in Czechoslovakia	Mosq.News 37(2):252-257	1977
559	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Culex pipiens ssp. quinquefasciata	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	35	FW	Mulla, M.S., R.L. Metcalf, and G. Kats	Evaluation of New Mosquito Larvicides, with Notes on Resistant Strains	Mosq.News 24(3):312-319	1964
560	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Culex pipiens ssp. quinquefasciata	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	35	FW	Mulla, M.S., R.L. Metcalf, and L.W. Isaak	Some New and Highly Effective Mosquito Larvicides	Mosq.News 22(3):231-238	1962
561	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Culex pipiens ssp. quinquefasciata	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	100	FW	Chen, P.S., Y.N. Lin, and C.L. Chung	Laboratory Studies on the Susceptibility of Mosquito-Eating Fish, Lebistes reticulatus and the Larvae of Culex pipiens fatigans to Insecticides	Res.Rep.Taiwan Sugar Exp.Stn. 70(1):28-35	1971
562	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Culex pipiens ssp. quinquefasciata	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	80	FW	Chen, P.S., Y.N. Lin, and C.L. Chung	Laboratory Studies on the Susceptibility of Mosquito-Eating Fish, Lebistes reticulatus and the Larvae of Culex pipiens fatigans to Insecticides	Res.Rep.Taiwan Sugar Exp.Stn. 70(1):28-35	1971
563	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Culex quinquefasciatus	Southern House Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	28230	FW	Kumar, S., A. Thomas, and M.K.K. Pillai	Involvement of Mono-Oxygenases as a Major Mechanism of Deltamethrin-Resistance in Larvae of Three Species of Mosquitoes	Indian J.Exp.Biol. 29(4):379-384	1991
564	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Culex quinquefasciatus	Southern House Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	189	FW	Halliday, W.R., and G.P. Georghiou	Inheritance of Resistance to Permethrin and DDT in the Southern House Mosquito (Diptera: Culicidae)	J.Econ.Entomol. 78:762-767	1985
565	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Culex quinquefasciatus	Southern House Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	2.1	FW	Magnin, M., E. Marboutin, and N. Pasteur	Insecticide Resistance in Culex quinquefasciatus (Diptera: Culicidae) in West Africa	J.Med.Entomol. 25(2):99-104	1988
566	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Culex quinquefasciatus	Southern House Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	22	FW	El-Khatib, Z.I., and G.P. Georghiou	Geographic Variation of Resistance to Organophosphates, Propoxur and DDT in the Southern House Mosquito, Culex quinquefasciatis, in California	J.Am.Mosq.Control Assoc. 1(3):279-283	1985
567	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Culex quinquefasciatus	Southern House Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	39	FW	Halliday, W.R., and G.P. Georghiou	Inheritance of Resistance to Permethrin and DDT in the Southern House Mosquito (Diptera: Culicidae)	J.Econ.Entomol. 78:762-767	1985
568	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Culex quinquefasciatus	Southern House Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	50	FW	Halliday, W.R., and G.P. Georghiou	Inheritance of Resistance to Permethrin and DDT in the Southern House Mosquito (Diptera: Culicidae)	J.Econ.Entomol. 78:762-767	1985
569	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Culex tarsalis	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	300	FW	Mulla, M.S., R.L. Metcalf, and G. Kats	Evaluation of New Mosquito Larvicides, with Notes on Resistant Strains	Mosq.News 24(3):312-319	1964
570	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Culex tritaeniorhynchus	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	160	FW	Shim, J.C., and L.S. Self	Toxicity of Agricultural Chemicals to Larvivorous Fish in Korean Rice Fields	Trop.Med. 15(3):123-130	1973
571	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Culiseta annulata	Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	20.6	FW	Rettich, F.	The Susceptibility of Mosquito Larvae to Eighteen Insecticides in Czechoslovakia	Mosq.News 37(2):252-257	1977
572	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Drunella grandis	Mayfly	Insects/Spiders	LC50	MOR	MORT	4	d	25	FW	Gaufin, A.R., L.D. Jensen, A.V. Nebeker, T. Nelson, and R.W. Teel	Toxicity of Ten Organic Insecticides to Various Aquatic Invertebrates	Water Sewage Works 12:276-279	1965
573	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Eretes sticticus	Beetle	Insects/Spiders	LC50	MOR	MORT	1	d	35	FW	Jeyasingam, D.N.T., B. Thayumanavan, and S. Krishnaswamy	The Relative Toxicities of Insecticides on Aquatic Insect Eretes sticticus (Linn.) (Coleoptera: Dytiscidae)	J.Madurai Univ. 7(1):85-87	1978
574	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Eretes sticticus	Beetle	Insects/Spiders	LC50	MOR	MORT	2	d	21.5	FW	Jeyasingam, D.N.T., B. Thayumanavan, and S. Krishnaswamy	The Relative Toxicities of Insecticides on Aquatic Insect Eretes sticticus (Linn.) (Coleoptera: Dytiscidae)	J.Madurai Univ. 7(1):85-87	1978

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
575	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hesperoperla pacifica	Golden Stonefly, Willow Fly	Insects/Spiders	LC50	MOR	MORT	4	d	320	FW	Gaufin, A.R., L.D. Jensen, A.V. Nebeker, T. Nelson, and R.W. Teel	Toxicity of Ten Organic Insecticides to Various Aquatic Invertebrates	Water Sewage Works 12:276-279	1965
576	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hesperoperla pacifica	Golden Stonefly, Willow Fly	Insects/Spiders	LC50*	MOR	MORT	10	d	440	FW	Jensen, L.D., and A.R. Gaufin	Long-Term Effects of Organic Insecticides on Two Species of Stonefly Naiads	Trans.Am.Fish.Soc. 93(4):357-363	1964
577	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hesperoperla pacifica	Golden Stonefly, Willow Fly	Insects/Spiders	LC50*	MOR	MORT	15	d	240	FW	Jensen, L.D., and A.R. Gaufin	Long-Term Effects of Organic Insecticides on Two Species of Stonefly Naiads	Trans.Am.Fish.Soc. 93(4):357-363	1964
578	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hesperoperla pacifica	Golden Stonefly, Willow Fly	Insects/Spiders	LC50*	MOR	MORT	2	d	2200	FW	Jensen, L.D., and A.R. Gaufin	Effects of Ten Organic Insecticides on Two Species of Stonefly Naiads	Trans.Am.Fish.Soc. 93(1):27-34	1964
579	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hesperoperla pacifica	Golden Stonefly, Willow Fly	Insects/Spiders	LC50*	MOR	MORT	20	d	84	FW	Jensen, L.D., and A.R. Gaufin	Long-Term Effects of Organic Insecticides on Two Species of Stonefly Naiads	Trans.Am.Fish.Soc. 93(4):357-363	1964
580	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hesperoperla pacifica	Golden Stonefly, Willow Fly	Insects/Spiders	LC50*	MOR	MORT	25	d	76	FW	Jensen, L.D., and A.R. Gaufin	Long-Term Effects of Organic Insecticides on Two Species of Stonefly Naiads	Trans.Am.Fish.Soc. 93(4):357-363	1964
581	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hesperoperla pacifica	Golden Stonefly, Willow Fly	Insects/Spiders	LC50*	MOR	MORT	3	d	320	FW	Jensen, L.D., and A.R. Gaufin	Effects of Ten Organic Insecticides on Two Species of Stonefly Naiads	Trans.Am.Fish.Soc. 93(1):27-34	1964
582	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hesperoperla pacifica	Golden Stonefly, Willow Fly	Insects/Spiders	LC50*	MOR	MORT	30	d	72	FW	Jensen, L.D., and A.R. Gaufin	Long-Term Effects of Organic Insecticides on Two Species of Stonefly Naiads	Trans.Am.Fish.Soc. 93(4):357-363	1964
583	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hesperoperla pacifica	Golden Stonefly, Willow Fly	Insects/Spiders	LC50*	MOR	MORT	4	d	320	FW	Jensen, L.D., and A.R. Gaufin	Effects of Ten Organic Insecticides on Two Species of Stonefly Naiads	Trans.Am.Fish.Soc. 93(1):27-34	1964
584	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hesperoperla pacifica	Golden Stonefly, Willow Fly	Insects/Spiders	LC50*	MOR	MORT	4	d	410	FW	Gaufin, A.R., L. Jensen, and T. Nelson	Bioassays to Determine Pesticide Toxicity to Aquatic Invertebrates	Water Sewage Works 108:355-359	1961
585	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hesperoperla pacifica	Golden Stonefly, Willow Fly	Insects/Spiders	LC50*	MOR	MORT	5	d	2150	FW	Jensen, L.D., and A.R. Gaufin	Long-Term Effects of Organic Insecticides on Two Species of Stonefly Naiads	Trans.Am.Fish.Soc. 93(4):357-363	1964
586	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hydropsyche californica	Caddisfly	Insects/Spiders	LC50	MOR	MORT	4	d	48	FW	Gaufin, A.R., L.D. Jensen, A.V. Nebeker, T. Nelson, and R.W. Teel	Toxicity of Ten Organic Insecticides to Various Aquatic Invertebrates	Water Sewage Works 12:276-279	1965
587	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hydropsyche californica	Caddisfly	Insects/Spiders	LC50*	MOR	MORT	4	d	48	FW	Gaufin, A.R., L. Jensen, and T. Nelson	Bioassays to Determine Pesticide Toxicity to Aquatic Invertebrates	Water Sewage Works 108:355-359	1961
588	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hydropsyche recurvata	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.125	d	2500	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
589	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hydropsyche recurvata	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.125	d	100	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
590	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hydropsyche recurvata	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.125	d	100	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
591	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hydropsyche recurvata	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.125	d	1000	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
592	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hydropsyche recurvata	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.125	d	1000	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
593	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hydropsyche recurvata	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.125	d	500	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972

Appendix D-9, Table 9. ECOTOX values for DDTs in freshwaters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
594	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hydropsyche recurvata	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.125	d	90	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
595	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hydropsyche recurvata	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.25	d	150	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
596	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hydropsyche recurvata	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.25	d	150	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
597	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hydropsyche recurvata	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.25	d	2500	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
598	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hydropsyche recurvata	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.25	d	30	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
599	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hydropsyche recurvata	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.25	d	300	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
600	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hydropsyche recurvata	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.25	d	500	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
601	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hydropsyche recurvata	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.25	d	60	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
602	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hydropsyche recurvata	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.25	d	60	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
603	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hydropsyche sp.	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.25	d	20	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
604	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hydropsyche sp.	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.25	d	20	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
605	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hydropsyche sp.	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.25	d	20	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
606	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hydropsyche sp.	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.25	d	30	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
607	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hydropsyche sp.	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.25	d	40	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
608	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hydropsyche sp.	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.25	d	60	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
609	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ischnura verticalis	Damselfly	Insects/Spiders	LC50	MOR	MORT	4	d	56	FW	Stalling, D.L., and F.L. Mayer Jr.	Toxicities of PCBs to Fish and Environmental Residues	Environ.Health Perspect. 1:159-164	1972
610	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Ischnura verticalis	Damselfly	Insects/Spiders	LC50	MOR	MORT	4	d	56	FW	Schoettger, R.A.	Fish-Pesticide Research Laboratory	In: Publ.No.106, U.S.Dep.Interior, Bur.Sport Fish.Wildl.Res., :2-40 (Publ in Part As 6797)	1970
611	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lestes congener	Damselfly	Insects/Spiders	LC50	MOR	MORT	1	d	580	FW	Federle, P.F., and W.J. Collins	Insecticide Toxicity to Three Insects from Ohio Ponds	Ohio J.Sci. 76(1):19-24	1976
612	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lestes congener	Damselfly	Insects/Spiders	LC50	MOR	MORT	2	d	250	FW	Federle, P.F., and W.J. Collins	Insecticide Toxicity to Three Insects from Ohio Ponds	Ohio J.Sci. 76(1):19-24	1976

Appendix D-9, Table 9. ECOTOX values for DDTs in freshwaters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
613	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lestes congener	Damselfly	Insects/Spiders	LC50	MOR	MORT	3	d	160	FW	Federle, P.F., and W.J. Collins	Insecticide Toxicity to Three Insects from Ohio Ponds	Ohio J.Sci. 76(1):19-24	1976
614	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lestes congener	Damselfly	Insects/Spiders	LC50	MOR	MORT	4	d	100	FW	Federle, P.F., and W.J. Collins	Insecticide Toxicity to Three Insects from Ohio Ponds	Ohio J.Sci. 76(1):19-24	1976
615	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Notonecta undulata	Backswimmer	Insects/Spiders	LC50	MOR	MORT	1	d	70	FW	Federle, P.F., and W.J. Collins	Insecticide Toxicity to Three Insects from Ohio Ponds	Ohio J.Sci. 76(1):19-24	1976
616	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Notonecta undulata	Backswimmer	Insects/Spiders	LC50	MOR	MORT	2	d	20	FW	Federle, P.F., and W.J. Collins	Insecticide Toxicity to Three Insects from Ohio Ponds	Ohio J.Sci. 76(1):19-24	1976
617	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Notonecta undulata	Backswimmer	Insects/Spiders	LC50	MOR	MORT	3	d	20	FW	Federle, P.F., and W.J. Collins	Insecticide Toxicity to Three Insects from Ohio Ponds	Ohio J.Sci. 76(1):19-24	1976
618	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Notonecta undulata	Backswimmer	Insects/Spiders	LC50	MOR	MORT	4	d	20	FW	Federle, P.F., and W.J. Collins	Insecticide Toxicity to Three Insects from Ohio Ponds	Ohio J.Sci. 76(1):19-24	1976
619	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Peltodytes sp.	Beetle	Insects/Spiders	LC50	MOR	MORT	1	d	7	FW	Federle, P.F., and W.J. Collins	Insecticide Toxicity to Three Insects from Ohio Ponds	Ohio J.Sci. 76(1):19-24	1976
620	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Peltodytes sp.	Beetle	Insects/Spiders	LC50	MOR	MORT	2	d	4	FW	Federle, P.F., and W.J. Collins	Insecticide Toxicity to Three Insects from Ohio Ponds	Ohio J.Sci. 76(1):19-24	1976
621	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Peltodytes sp.	Beetle	Insects/Spiders	LC50	MOR	MORT	3	d	2	FW	Federle, P.F., and W.J. Collins	Insecticide Toxicity to Three Insects from Ohio Ponds	Ohio J.Sci. 76(1):19-24	1976
622	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Peltodytes sp.	Beetle	Insects/Spiders	LC50	MOR	MORT	4	d	1	FW	Federle, P.F., and W.J. Collins	Insecticide Toxicity to Three Insects from Ohio Ponds	Ohio J.Sci. 76(1):19-24	1976
623	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Procladius sp.	Midge	Insects/Spiders	LC50	MOR	MORT	1	d	3.6	FW	Sato, H., and M. Yasuno	Test on Chironomidae Larvae Susceptibility to Various Insecticides	Jpn.J.Sanit.Zool. 30(4):361-366 (JPN) (ENG ABS)	1979
624	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Procladius sp.	Midge	Insects/Spiders	LC50	MOR	MORT	2	d	1	FW	Sato, H., and M. Yasuno	Test on Chironomidae Larvae Susceptibility to Various Insecticides	Jpn.J.Sanit.Zool. 30(4):361-366 (JPN) (ENG ABS)	1979
625	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pteronarcella badia	Stonefly	Insects/Spiders	LC50	MOR	MORT	2	d	9	FW	Sanders, H.O., and O.B. Cope	The Relative Toxicities of Several Pesticides to Naiads of Three Species of Stoneflies	Limnol.Oceanogr. 13(1):112-117 (Author Communication Used) (Publ in Part As 6797)	1968
626	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pteronarcys californica	Stonefly	Insects/Spiders	LC50	MOR	MORT	1	d	41	FW	Bridges, W.R., and O.B. Cope	The Relative Toxicities of Similar Formulations of Pyrethrum and Rotenone to Fish and Immature Stoneflies	Pyrethrum Post 8(1):3-5	1965
627	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pteronarcys californica	Stonefly	Insects/Spiders	LC50	MOR	MORT	2	d	19	FW	Sanders, H.O., and O.B. Cope	The Relative Toxicities of Several Pesticides to Naiads of Three Species of Stoneflies	Limnol.Oceanogr. 13(1):112-117 (Author Communication Used) (Publ in Part As 6797)	1968
628	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pteronarcys californica	Stonefly	Insects/Spiders	LC50	MOR	MORT	2	d	19	FW	Bridges, W.R., and O.B. Cope	The Relative Toxicities of Similar Formulations of Pyrethrum and Rotenone to Fish and Immature Stoneflies	Pyrethrum Post 8(1):3-5	1965
629	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pteronarcys californica	Stonefly	Insects/Spiders	LC50	MOR	MORT	4	d	1800	FW	Gaufin, A.R., L.D. Jensen, A.V. Nebeker, T. Nelson, and R.W. Teel	Toxicity of Ten Organic Insecticides to Various Aquatic Invertebrates	Water Sewage Works 12:276-279	1965
630	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pteronarcys californica	Stonefly	Insects/Spiders	LC50	MOR	MORT	4	d	7	FW	Bridges, W.R., and O.B. Cope	The Relative Toxicities of Similar Formulations of Pyrethrum and Rotenone to Fish and Immature Stoneflies	Pyrethrum Post 8(1):3-5	1965
631	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pteronarcys californica	Stonefly	Insects/Spiders	LC50*	MOR	MORT	10	d	1100	FW	Jensen, L.D., and A.R. Gaufin	Long-Term Effects of Organic Insecticides on Two Species of Stonefly Naiads	Trans.Am.Fish.Soc. 93(4):357-363	1964

Appendix D-9, Table 9. ECOTOX values for DDTs in freshwaters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
632	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pteronarcys californica	Stonefly	Insects/Spiders	LC50*	MOR	MORT	15	d	510	FW	Jensen, L.D., and A.R. Gaufin	Long-Term Effects of Organic Insecticides on Two Species of Stonefly Naiads	Trans.Am.Fish.Soc. 93(4):357-363	1964
633	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pteronarcys californica	Stonefly	Insects/Spiders	LC50*	MOR	MORT	2	d	2450	FW	Jensen, L.D., and A.R. Gaufin	Effects of Ten Organic Insecticides on Two Species of Stonefly Naiads	Trans.Am.Fish.Soc. 93(1):27-34	1964
634	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pteronarcys californica	Stonefly	Insects/Spiders	LC50*	MOR	MORT	20	d	365	FW	Jensen, L.D., and A.R. Gaufin	Long-Term Effects of Organic Insecticides on Two Species of Stonefly Naiads	Trans.Am.Fish.Soc. 93(4):357-363	1964
635	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pteronarcys californica	Stonefly	Insects/Spiders	LC50*	MOR	MORT	25	d	290	FW	Jensen, L.D., and A.R. Gaufin	Long-Term Effects of Organic Insecticides on Two Species of Stonefly Naiads	Trans.Am.Fish.Soc. 93(4):357-363	1964
636	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pteronarcys californica	Stonefly	Insects/Spiders	LC50*	MOR	MORT	3	d	2450	FW	Jensen, L.D., and A.R. Gaufin	Effects of Ten Organic Insecticides on Two Species of Stonefly Naiads	Trans.Am.Fish.Soc. 93(1):27-34	1964
637	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pteronarcys californica	Stonefly	Insects/Spiders	LC50*	MOR	MORT	30	d	265	FW	Jensen, L.D., and A.R. Gaufin	Long-Term Effects of Organic Insecticides on Two Species of Stonefly Naiads	Trans.Am.Fish.Soc. 93(4):357-363	1964
638	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pteronarcys californica	Stonefly	Insects/Spiders	LC50*	MOR	MORT	4	d	3800	FW	Jensen, L.D., and A.R. Gaufin	Long-Term Effects of Organic Insecticides on Two Species of Stonefly Naiads	Trans.Am.Fish.Soc. 93(4):357-363	1964
639	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pteronarcys californica	Stonefly	Insects/Spiders	LC50*	MOR	MORT	4	d	1800	FW	Jensen, L.D., and A.R. Gaufin	Effects of Ten Organic Insecticides on Two Species of Stonefly Naiads	Trans.Am.Fish.Soc. 93(1):27-34	1964
640	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pteronarcys californica	Stonefly	Insects/Spiders	LC50*	MOR	MORT	4	d	560	FW	Gaufin, A.R., L. Jensen, and T. Nelson	Bioassays to Determine Pesticide Toxicity to Aquatic Invertebrates	Water Sewage Works 108:355-359	1961
641	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Pteronarcys californica	Stonefly	Insects/Spiders	LC50*	MOR	MORT	5	d	3000	FW	Jensen, L.D., and A.R. Gaufin	Long-Term Effects of Organic Insecticides on Two Species of Stonefly Naiads	Trans.Am.Fish.Soc. 93(4):357-363	1964
642	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Simulium damnosum	Blackfly	Insects/Spiders	LC50	MOR	MORT	0.125	d	4	FW	Muro, A.I.S., and R.M. Ali	Control of Onchocerciasis: Baseline Susceptibility Levels of Simulium damnosum Kisiwani Cytotype to Temephos, DDT and Chlorphoxim in Tanga, North	Ann.Med.Entomol. 1(1):7-10	1992
643	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Aedes cantans	Mosquito	Insects/Spiders	LC90	MOR	MORT	1	d	13.5	FW	Rettich, F.	Laboratory and Field Investigations in Czechoslovakia with Fenitrothion, Pirimiphos-Methyl, Temephos and Other Organophosphorous Larvicides	Mosq.News 39(2):320-328 (Author Communication Used)	1979
644	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Aedes cantans	Mosquito	Insects/Spiders	LC90	MOR	MORT	2	d	10.2	FW	Rettich, F.	Laboratory and Field Investigations in Czechoslovakia with Fenitrothion, Pirimiphos-Methyl, Temephos and Other Organophosphorous Larvicides	Mosq.News 39(2):320-328 (Author Communication Used)	1979
645	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Culex pipiens ssp. molestus	Mosquito	Insects/Spiders	LC90	MOR	MORT	1	d	28.2	FW	Rettich, F.	Laboratory and Field Investigations in Czechoslovakia with Fenitrothion, Pirimiphos-Methyl, Temephos and Other Organophosphorous Larvicides	Mosq.News 39(2):320-328 (Author Communication Used)	1979
646	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Culex pipiens ssp. molestus	Mosquito	Insects/Spiders	LC90	MOR	MORT	2	d	19	FW	Rettich, F.	Laboratory and Field Investigations in Czechoslovakia with Fenitrothion, Pirimiphos-Methyl, Temephos and Other Organophosphorous Larvicides	Mosq.News 39(2):320-328 (Author Communication Used)	1979
647	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	NR-LETH	MOR	MORT	1	d	100	FW	Mitsuhashi, J., T.D.C. Grace, and D.F. Waterhouse	Effects of Insecticides on Cultures of Insect Cells	Entomol.Exp.Appl. 13:327-341	1970
648	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	NR-LETH	MOR	MORT	2	d	50	FW	Ginsburg, J.M.	Comparative Toxicity of DDT Isomers and Related Compounds to Mosquito Larvae and Fish	Science 105:233-234	1947

Appendix D-9, Table 9. ECOTOX values for DDTs in freshwaters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
649	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	NR-LETH	MOR	MORT	2	d	50	FW	Ginsburg, J.M.	Comparative Toxicity of DDT Isomers and Related Compounds to Mosquito Larvae and Fish	Science 105:233-234	1947
650	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	NR-LETH	MOR	MORT	2	d	50	FW	Ginsburg, J.M.	Tests with New Toxicants, in Comparison with DDT, on Mosquito Larvae and Fish	Proc.N.J.Mosq.Exterm.Assoc. 34:132-135	1947
651	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Brachionus calyciflorus	Rotifer	Invertebrates	EC10	REP	PROG	2	d	6.8	FW	Radix, P., M. Leonard, C. Papantoniou, G. Roman, E. Saouter, S. Gallotti-Schmitt, H. Thiebaud, and P. Vasseur	Comparison of Brachionus calyciflorus 2-D and Microtox Chronic 22-H Tests with Daphnia magna 21-D Test for the Chronic Toxicity Assessment of Chemicals	Environ.Toxicol.Chem. 18(10):2178-2185	1999
652	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Brachionus calyciflorus	Rotifer	Invertebrates	EC20	REP	PROG	2	d	13	FW	Radix, P., M. Leonard, C. Papantoniou, G. Roman, E. Saouter, S. Gallotti-Schmitt, H. Thiebaud, and P. Vasseur	Comparison of Brachionus calyciflorus 2-D and Microtox Chronic 22-H Tests with Daphnia magna 21-D Test for the Chronic Toxicity Assessment of Chemicals	Environ.Toxicol.Chem. 18(10):2178-2185	1999
653	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Brachionus calyciflorus	Rotifer	Invertebrates	EC50	REP	PROG	2	d	42	FW	Radix, P., M. Leonard, C. Papantoniou, G. Roman, E. Saouter, S. Gallotti-Schmitt, H. Thiebaud, and P. Vasseur	Comparison of Brachionus calyciflorus 2-D and Microtox Chronic 22-H Tests with Daphnia magna 21-D Test for the Chronic Toxicity Assessment of Chemicals	Environ.Toxicol.Chem. 18(10):2178-2185	1999
654	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Paramecium caudatum	Ciliate	Invertebrates	NR-LETH	MOR	SURV	0.08	d	500000	FW	Zdybiewska, M., and K. Kluczycka	Comparative Studies on the Determination of Toxicity of Some Pesticides	Pol.Arch.Hydrobiol. 21(1):179-190	1974
655	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Viviparus bengalensis	Snail	Molluscs	LC50	MOR	MORT	1	d	2265	FW	Panwar, R.S., R.A. Gupta, H.C. Joshi, and D. Kapoor	Toxicity of Some Chlorinated Hydrocarbon and Organophosphorus Insecticides to Gastropod, Viviparus bengalensis Swainson	J.Environ.Biol. 3(1):31-36	1982
656	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Viviparus bengalensis	Snail	Molluscs	LC50	MOR	MORT	2	d	1775	FW	Panwar, R.S., R.A. Gupta, H.C. Joshi, and D. Kapoor	Toxicity of Some Chlorinated Hydrocarbon and Organophosphorus Insecticides to Gastropod, Viviparus bengalensis Swainson	J.Environ.Biol. 3(1):31-36	1982
657	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Viviparus bengalensis	Snail	Molluscs	LC50	MOR	MORT	4	d	1390	FW	Panwar, R.S., R.A. Gupta, H.C. Joshi, and D. Kapoor	Toxicity of Some Chlorinated Hydrocarbon and Organophosphorus Insecticides to Gastropod, Viviparus bengalensis Swainson	J.Environ.Biol. 3(1):31-36	1982
658	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hirudo nipponia	Asian Leech	Worms	EC50*	ITX	IMBL	1	d	100000	FW	Kimura, T., and H.L. Keegan	Toxicity of Some Insecticides and Molluscicides for the Asian Blood Sucking Leech, Hirudo nipponia Whitman	Am.J.Trop.Med.Hyg. 15(1):113-115	1966
659	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hirudo nipponia	Asian Leech	Worms	EC50*	ITX	IMBL	1	d	100000	FW	Kimura, T., and H.L. Keegan	Toxicity of Some Insecticides and Molluscicides for the Asian Blood Sucking Leech, Hirudo nipponia Whitman	Am.J.Trop.Med.Hyg. 15(1):113-115	1966
660	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hirudo nipponia	Asian Leech	Worms	EC50*	ITX	IMBL	2	d	100000	FW	Kimura, T., and H.L. Keegan	Toxicity of Some Insecticides and Molluscicides for the Asian Blood Sucking Leech, Hirudo nipponia Whitman	Am.J.Trop.Med.Hyg. 15(1):113-115	1966
661	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Hirudo nipponia	Asian Leech	Worms	EC50*	ITX	IMBL	2	d	90000	FW	Kimura, T., and H.L. Keegan	Toxicity of Some Insecticides and Molluscicides for the Asian Blood Sucking Leech, Hirudo nipponia Whitman	Am.J.Trop.Med.Hyg. 15(1):113-115	1966
662	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lumbriculus variegatus	Oligochaete, Worm	Worms	LC50	MOR	MORT	2	d	130	FW	Bailey, H.C., and D.H.W. Liu	Lumbriculus variegatus, a Benthic Oligochaete, as a Bioassay Organism	In: J.C.Eaton, P.R.Parrish, and A.C.Hendricks (Eds.), Aquatic Toxicology and Hazard Assessment, 3rd Symposium, ASTM STP 707, Philadelphia, PA :205-215	1980
663	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Lumbriculus variegatus	Oligochaete, Worm	Worms	LC50	MOR	MORT	4	d	130	FW	Bailey, H.C., and D.H.W. Liu	Lumbriculus variegatus, a Benthic Oligochaete, as a Bioassay Organism	In: J.C.Eaton, P.R.Parrish, and A.C.Hendricks (Eds.), Aquatic Toxicology and Hazard Assessment, 3rd Symposium, ASTM STP 707, Philadelphia, PA :205-215	1980
664	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Polycelis felina	Turbellarian	Worms	LC50	MOR	MORT	4	d	1230	FW	Kouyoumjian, H.H., and R.F. Uglow	Some Aspects of the Toxicity of p,p'-DDT, p-p'-DDE and p,p'-DDD to the Freshwater Planarian Polycelis felina (Tricladida)	Environ.Pollut. 7:103-109	1974

Appendix D-9, Table 9. ECOTOX values for DDTs in freshwaters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
665	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Tubificidae	Oligochaete Family	Worms	LC50*	MOR	MORT	1	d	500000	FW	Whitten, B.K., and C.J. Goodnight	Toxicity of Some Common Insecticides to Tubificids	J.Water Pollut.Control Fed. 38(2):227-235	1966
666	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Tubificidae	Oligochaete Family	Worms	LC50*	MOR	MORT	2	d	100000	FW	Whitten, B.K., and C.J. Goodnight	Toxicity of Some Common Insecticides to Tubificids	J.Water Pollut.Control Fed. 38(2):227-235	1966
667	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Tubificidae	Oligochaete Family	Worms	LC50*	MOR	MORT	4	d	100000	FW	Whitten, B.K., and C.J. Goodnight	Toxicity of Some Common Insecticides to Tubificids	J.Water Pollut.Control Fed. 38(2):227-235	1966
668	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Polycelis felina	Turbellarian	Worms	LOEC	BEH	RRSP	1	d	250	FW	Kouyoumjian, H.H., and R.F. Uglow	Some Aspects of the Toxicity of p,p'-DDT, p-p'-DDE and p,p'-DDD to the Freshwater Planarian Polycelis felina (Tricladida)	Environ.Pollut. 7:103-109	1974
669	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Polycelis felina	Turbellarian	Worms	LOEC	BEH	RRSP	4	d	250	FW	Kouyoumjian, H.H., and R.F. Uglow	Some Aspects of the Toxicity of p,p'-DDT, p-p'-DDE and p,p'-DDD to the Freshwater Planarian Polycelis felina (Tricladida)	Environ.Pollut. 7:103-109	1974
670	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Polycelis felina	Turbellarian	Worms	LOEC	BEH	RRSP	5	d	250	FW	Kouyoumjian, H.H., and R.F. Uglow	Some Aspects of the Toxicity of p,p'-DDT, p-p'-DDE and p,p'-DDD to the Freshwater Planarian Polycelis felina (Tricladida)	Environ.Pollut. 7:103-109	1974
671	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Branchiura sowerbyi	Oligochaete	Worms	NR-LETH	MOR	MORT	3	d	4000	FW	Naqvi, S.M.Z.	Toxicity of Twenty-Three Insecticides to a Tubificid Worm Branchiura sowerbyi from the Mississippi Delta	J.Econ.Entomol. 66(1):70-74	1973
672	1,1'-(2,2,2-Trichloroethylidene)bis[4-chlorobenzene]	Branchiura sowerbyi	Oligochaete	Worms	NR-LETH	MOR	MORT	3	d	4000	FW	Naqvi, S.M.Z.	Toxicity of Twenty-Three Insecticides to a Tubificid Worm Branchiura sowerbyi from the Mississippi Delta	J.Econ.Entomol. 66(1):70-74	1973
673	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Bufo woodhousei ssp. fowleri	Fowler'S Toad	Amphibians	LC50*	MOR	MORT	2	d	320	FW	Sanders, H.O.	Pesticide Toxicities to Tadpoles of the Western Chorus Frog Pseudacris triseriata and Fowler's Toad Bufo woodhousii fowleri	Copeia 2:246-251 (Author Communication Used) (Publ in Part As 6797)	1970
674	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Pseudacris triseriata ssp. triseria	Western Chorus Frog	Amphibians	LC50*	MOR	MORT	1	d	610	FW	Sanders, H.O.	Pesticide Toxicities to Tadpoles of the Western Chorus Frog Pseudacris triseriata and Fowler's Toad Bufo woodhousii fowleri	Copeia 2:246-251 (Author Communication Used) (Publ in Part As 6797)	1970
675	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Pseudacris triseriata ssp. triseria	Western Chorus Frog	Amphibians	LC50*	MOR	MORT	2	d	500	FW	Sanders, H.O.	Pesticide Toxicities to Tadpoles of the Western Chorus Frog Pseudacris triseriata and Fowler's Toad Bufo woodhousii fowleri	Copeia 2:246-251 (Author Communication Used) (Publ in Part As 6797)	1970
676	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Pseudacris triseriata ssp. triseria	Western Chorus Frog	Amphibians	LC50*	MOR	MORT	4	d	400	FW	Sanders, H.O.	Pesticide Toxicities to Tadpoles of the Western Chorus Frog Pseudacris triseriata and Fowler's Toad Bufo woodhousii fowleri	Copeia 2:246-251 (Author Communication Used) (Publ in Part As 6797)	1970
677	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Gammarus lacustris	Scud	Crustaceans	LC50	MOR	MORT	1	d	5.6	FW	Sanders, H.O.	Toxicity of Pesticides to the Crustacean Gammarus lacustris	Tech.Pap.No.25, U.S.D.I., Bur.Sports Fish.Wildl., Fish Wildl.Serv., Washington, DC :18 p. (Author Communication Used) (Used with Reference 732) (Publ in Part As 6797)	1969
678	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Gammarus lacustris	Scud	Crustaceans	LC50	MOR	MORT	2	d	1.8	FW	Sanders, H.O.	Toxicity of Pesticides to the Crustacean Gammarus lacustris	Tech.Pap.No.25, U.S.D.I., Bur.Sports Fish.Wildl., Fish Wildl.Serv., Washington, DC :18 p. (Author Communication Used) (Used with Reference 732) (Publ in Part As 6797)	1969
679	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Gammarus lacustris	Scud	Crustaceans	LC50	MOR	MORT	4	d	0.64	FW	Sanders, H.O.	Toxicity of Pesticides to the Crustacean Gammarus lacustris	Tech.Pap.No.25, U.S.D.I., Bur.Sports Fish.Wildl., Fish Wildl.Serv., Washington, DC :18 p. (Author Communication Used) (Used with Reference 732) (Publ in Part As 6797)	1969
680	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Hyalella azteca	Scud	Crustaceans	LC50	MOR	MORT	10	d	0.19	FW	Hoke, R.A., G.T. Ankley, A.M. Cotter, T. Goldenstein, P.A. Kosian, G.L. Phipps, and F.M. Vandermeiden	Evaluation of Equilibrium Partitioning Theory for Predicting Acute Toxicity of Field-Collected Sediments Contaminated with DDT, DDE and DDD to the	Environ.Toxicol.Chem. 13:157-166	1994

Appendix D-9, Table 9. ECOTOX values for DDTs in freshwaters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
681	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Hyalella azteca	Scud	Crustaceans	LC50	MOR	MORT	10	d	0.19	FW	Phipps, G.L., V.R. Mattson, and G.T. Ankley	Relative Sensitivity of Three Freshwater Benthic Macroinvertebrates to Ten Contaminants	Arch.Environ.Contam.Toxicol. 28(3):281-286	1995
682	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Gambusia affinis ssp. affinis	Mosquitofish	Fish	LC50*	MOR	MORT	1.5	d	460	FW	Boyd, C.E., and D.E. Ferguson	Susceptibility and Resistance of Mosquito Fish to Several Insecticides	J.Econ.Entomol. 57(4):430-431	1964
683	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	0.04	d	40000	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
684	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	0.04	d	149000	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
685	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	0.08	d	40000	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
686	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	0.08	d	86500	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
687	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	0.17	d	40000	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
688	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	0.17	d	53400	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
689	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	0.33	d	40000	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
690	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	0.33	d	33900	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
691	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	1	d	2600	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
692	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	1	d	12400	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
693	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	2	d	2600	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
694	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	2	d	9000	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
695	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	3	d	2600	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
696	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	3	d	9000	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
697	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	4	d	2600	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
698	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Ictalurus punctatus	Channel Catfish	Fish	LC50	MOR	MORT	4	d	9000	FW	Clemens, H.P., and K.E. Sneed	Lethal Doses of Several Commercial Chemicals for Fingerling Channel Catfish	U.S.Fish.Wildl.Serv., Spec.Sci.Rep.- Fish No.316, Washington, DC :10 p.	1959
699	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Salvelinus fontinalis	Brook Trout	Fish	LC50	MOR	MORT	1	d	45	FW	Gardner, D.R.	The Effect of Some DDT and Methoxychlor Analogs on Temperature Selection and Lethality in Brook Trout Fingerlings	Pestic.Biochem.Physiol. 2:437-446	1973

Appendix D-9, Table 9. ECOTOX values for DDTs in freshwaters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
700	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Carassius auratus	Goldfish	Fish	NR-LETH	MOR	MORT	4	d	2000	FW	Ginsburg, J.M.	Comparative Toxicity of DDT Isomers and Related Compounds to Mosquito Larvae and Fish	Science 105:233-234	1947
701	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Carassius auratus	Goldfish	Fish	NR-LETH	MOR	MORT	4	d	2000	FW	Ginsburg, J.M.	Tests with New Toxicants, in Comparison with DDT, on Mosquito Larvae and Fish	Proc.N.J.Mosq.Exterm.Assoc. 34:132-135	1947
702	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Brachycentrus sp.	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.125	d	20	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
703	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Brachycentrus sp.	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.125	d	30	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
704	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Brachycentrus sp.	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.125	d	30	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
705	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Ceratopsyche morosa	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.125	d	70	FW	Fredeen, F.J.H.	Reactions of the Larvae of Three Rheophilic Species of Trichoptera to Selected Insecticides	Can.Entomol. 104:945-953	1972
706	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Chironomus tentans	Midge	Insects/Spiders	LC50	MOR	MORT	10	d	0.18	FW	Phipps, G.L., V.R. Mattson, and G.T. Ankley	Relative Sensitivity of Three Freshwater Benthic Macroinvertebrates to Ten Contaminants	Arch.Environ.Contam.Toxicol. 28(3):281-286	1995
707	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Pteronarcys californica	Stonefly	Insects/Spiders	LC50	MOR	MORT	2	d	1100	FW	Sanders, H.O., and O.B. Cope	The Relative Toxicities of Several Pesticides to Naiads of Three Species of Stoneflies	Limnol.Oceanogr. 13(1):112-117 (Author Communication Used) (Publ in Part As 6797)	1968
708	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	NR-LETH	MOR	MORT	1	d	1000	FW	Mitsuhashi, J., T.D.C. Grace, and D.F. Waterhouse	Effects of Insecticides on Cultures of Insect Cells	Entomol.Exp.Appl. 13:327-341	1970
709	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	NR-LETH	MOR	MORT	2	d	50	FW	Ginsburg, J.M.	Comparative Toxicity of DDT Isomers and Related Compounds to Mosquito Larvae and Fish	Science 105:233-234	1947
710	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	NR-LETH	MOR	MORT	2	d	50	FW	Ginsburg, J.M.	Tests with New Toxicants, in Comparison with DDT, on Mosquito Larvae and Fish	Proc.N.J.Mosq.Exterm.Assoc. 34:132-135	1947
711	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Anopheles quadrimaculatus	Common Malaria Mosquito	Insects/Spiders	NR-LETH	MOR	MORT	2	d	100	FW	LaBrecque, G.C., J.R. Noe, and J.B. Gahan	Effectiveness of Insecticides on Granular Clay Carriers Against Mosquito Larvae	Mosq.News 16:1-3	1956
712	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Polycelis felina	Turbellarian	Worms	LC50	MOR	MORT	4	d	740	FW	Kouyoumjian, H.H., and R.F. Uglow	Some Aspects of the Toxicity of p,p'-DDT, p-p'-DDE and p,p'-DDD to the Freshwater Planarian Polycelis felina (Tricladida)	Environ.Pollut. 7:103-109	1974
713	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Polycelis felina	Turbellarian	Worms	LOEC	BEH	RRSP	1	d	250	FW	Kouyoumjian, H.H., and R.F. Uglow	Some Aspects of the Toxicity of p,p'-DDT, p-p'-DDE and p,p'-DDD to the Freshwater Planarian Polycelis felina (Tricladida)	Environ.Pollut. 7:103-109	1974
714	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Polycelis felina	Turbellarian	Worms	LOEC	BEH	RRSP	4	d	250	FW	Kouyoumjian, H.H., and R.F. Uglow	Some Aspects of the Toxicity of p,p'-DDT, p-p'-DDE and p,p'-DDD to the Freshwater Planarian Polycelis felina (Tricladida)	Environ.Pollut. 7:103-109	1974
715	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Polycelis felina	Turbellarian	Worms	LOEC	BEH	RRSP	5	d	250	FW	Kouyoumjian, H.H., and R.F. Uglow	Some Aspects of the Toxicity of p,p'-DDT, p-p'-DDE and p,p'-DDD to the Freshwater Planarian Polycelis felina (Tricladida)	Environ.Pollut. 7:103-109	1974
716	1,1'-(2,2-Dichloroethylidene)bis(4-chlorobenzene)	Polycelis felina	Turbellarian	Worms	NR-LETH	MOR	MORT	4	d	10000	FW	Kouyoumjian, H.H., and R.F. Uglow	Some Aspects of the Toxicity of p,p'-DDT, p-p'-DDE and p,p'-DDD to the Freshwater Planarian Polycelis felina (Tricladida)	Environ.Pollut. 7:103-109	1974
717	1,1'-(Dichloroethenylidene)bis(4-chlorobenzene)	Hyalella azteca	Scud	Crustaceans	LC50	MOR	MORT	10	d	1.66	FW	Hoke, R.A., G.T. Ankley, A.M. Cotter, T. Goldenstein, P.A. Kosian, G.L. Phipps, and F.M. Vandermeiden	Evaluation of Equilibrium Partitioning Theory for Predicting Acute Toxicity of Field-Collected Sediments Contaminated with DDT, DDE and DDD to the	Environ.Toxicol.Chem. 13:157-166	1994

Appendix D-9, Table 9. ECOTOX values for DDTs in freshwaters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
718	1,1'-(Dichloroethenylidene)bis(4-chlorobenzene)	Hyalella azteca	Scud	Crustaceans	LC50	MOR	MORT	10	d	1.66	FW	Phipps, G.L., V.R. Mattson, and G.T. Ankley	Relative Sensitivity of Three Freshwater Benthic Macroinvertebrates to Ten Contaminants	Arch.Environ.Contam.Toxicol. 28(3):281-286	1995
719	1,1'-(Dichloroethenylidene)bis(4-chlorobenzene)	Chironomus riparius	Midge	Insects/Spiders	EC50	ITX	IMBL	1	d	1	FW	Lydy, M.J., K.A. Bruner, D.M. Fry, and S.W. Fisher	Effects of Sediment and the Route of Exposure on the Toxicity and Accumulation of Neutral Lipophilic and Moderately Water-Soluble Metabolizable Compounds in the Midge, Chironomus riparius	In: W.G.Landis and W.H.Van der Schalie (Eds.), Aquatic Toxicology and Risk Assessment, Vol.13, ASTM STP 1096, Philadelphia, PA :140-164	1990
720	1,1'-(Dichloroethenylidene)bis(4-chlorobenzene)	Chironomus riparius	Midge	Insects/Spiders	EC50	ITX	IMBL	1	d	1	FW	Lydy, M.J., K.A. Bruner, D.M. Fry, and S.W. Fisher	Effects of Sediment and the Route of Exposure on the Toxicity and Accumulation of Neutral Lipophilic and Moderately Water-Soluble Metabolizable Compounds in the Midge, Chironomus riparius	In: W.G.Landis and W.H.Van der Schalie (Eds.), Aquatic Toxicology and Risk Assessment, Vol.13, ASTM STP 1096, Philadelphia, PA :140-164	1990
721	1,1'-(Dichloroethenylidene)bis(4-chlorobenzene)	Chironomus riparius	Midge	Insects/Spiders	EC50	ITX	IMBL	1	d	1	FW	Lydy, M.J., K.A. Bruner, D.M. Fry, and S.W. Fisher	Effects of Sediment and the Route of Exposure on the Toxicity and Accumulation of Neutral Lipophilic and Moderately Water-Soluble Metabolizable Compounds in the Midge, Chironomus riparius	In: W.G.Landis and W.H.Van der Schalie (Eds.), Aquatic Toxicology and Risk Assessment, Vol.13, ASTM STP 1096, Philadelphia, PA :140-164	1990
722	1,1'-(Dichloroethenylidene)bis(4-chlorobenzene)	Chironomus tentans	Midge	Insects/Spiders	LC50	MOR	MORT	10	d	3	FW	Phipps, G.L., V.R. Mattson, and G.T. Ankley	Relative Sensitivity of Three Freshwater Benthic Macroinvertebrates to Ten Contaminants	Arch.Environ.Contam.Toxicol. 28(3):281-286	1995
723	1,1'-(Dichloroethenylidene)bis(4-chlorobenzene)	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	NR-LETH	MOR	MORT	1	d	1000	FW	Mitsuhashi, J., T.D.C. Grace, and D.F. Waterhouse	Effects of Insecticides on Cultures of Insect Cells	Entomol.Exp.Appl. 13:327-341	1970
724	1,1'-(Dichloroethenylidene)bis(4-chlorobenzene)	Lumbriculus variegatus	Oligochaete, Worm	Worms	LC50	MOR	MORT	10	d	3.27	FW	Phipps, G.L., V.R. Mattson, and G.T. Ankley	Relative Sensitivity of Three Freshwater Benthic Macroinvertebrates to Ten Contaminants	Arch.Environ.Contam.Toxicol. 28(3):281-286	1995
725	1,1'-(Dichloroethenylidene)bis(4-chlorobenzene)	Polycelis felina	Turbellarian	Worms	LC50	MOR	MORT	4	d	1050	FW	Kouyoumjian, H.H., and R.F. Uglow	Some Aspects of the Toxicity of p,p'-DDT, p-p'-DDE and p,p'-DDD to the Freshwater Planarian Polycelis felina (Tricladida)	Environ.Pollut. 7:103-109	1974
726	1,1-Bis(ethylphenyl)-2,2-dichloroethane	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	1.08	d	18	FW	Crosby, D.G., R.K. Tucker, and N. Aharonson	The Detection of Acute Toxicity with Daphnia magna	Food Cosmet.Toxicol. 4:503-514	1966
727	1,1-Bis(ethylphenyl)-2,2-dichloroethane	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	1.08	d	900	FW	Crosby, D.G., R.K. Tucker, and N. Aharonson	The Detection of Acute Toxicity with Daphnia magna	Food Cosmet.Toxicol. 4:503-514	1966
728	1,1-Bis(ethylphenyl)-2,2-dichloroethane	Gambusia affinis	Western Mosquitofish	Fish	LC50	MOR	MORT	1	d	10000	FW	Boyd, C.E., and D.E. Ferguson	Spectrum of Cross-Resistance to Insecticides in the Mosquito Fish, Gambusia affinis	Mosq.News 24(1):19-21	1964
729	1,1-Bis(ethylphenyl)-2,2-dichloroethane	Culex quinquefasciatus	Southern House Mosquito	Insects/Spiders	LC50	MOR	MORT	1	d	46	FW	Halliday, W.R., and G.P. Georghiou	Inheritance of Resistance to Permethrin and DDT in the Southern House Mosquito (Diptera: Culicidae)	J.Econ.Entomol. 78:762-767	1985
730	1,1-Bis(ethylphenyl)-2,2-dichloroethane	Branchiura sowerbyi	Oligochaete	Worms	NR-LETH	MOR	MORT	3	d	1000	FW	Naqvi, S.M.Z.	Toxicity of Twenty-Three Insecticides to a Tubificid Worm Branchiura sowerbyi from the Mississippi Delta	J.Econ.Entomol. 66(1):70-74	1973
731	1,1-Bis(ethylphenyl)-2,2-dichloroethane	Branchiura sowerbyi	Oligochaete	Worms	NR-LETH	MOR	MORT	3	d	1000	FW	Naqvi, S.M.Z.	Toxicity of Twenty-Three Insecticides to a Tubificid Worm Branchiura sowerbyi from the Mississippi Delta	J.Econ.Entomol. 66(1):70-74	1973
732	1,1-Bis(ethylphenyl)-2,2-dichloroethane	Branchiura sowerbyi	Oligochaete	Worms	NR-LETH	MOR	MORT	3	d	1000	FW	Naqvi, S.M.Z.	Toxicity of Twenty-Three Insecticides to a Tubificid Worm Branchiura sowerbyi from the Mississippi Delta	J.Econ.Entomol. 66(1):70-74	1973
733	1-Chloro-2-(2,2,2-trichloro-1-(4-chlorophenyl)ethyl)benzene	Oryzias latipes	Medaka, High-Eyes	Fish	LOEC	BCM	VITE	56	d	0.3	FW	Cheek, A.O., T.H. Brouwer, S. Carroll, S. Manning, J.A. McLachlan, and M. Brouwer	Experimental Evaluation of Vitellogenin as a Predictive Biomarker for Reproductive Disruption	Environ.Health Perspect. 109(7):681-689	2001
734	1-Chloro-2-(2,2,2-trichloro-1-(4-chlorophenyl)ethyl)benzene	Oryzias latipes	Medaka, High-Eyes	Fish	LOEC	MPH	IMPS	14	d	4.32	FW	Cheek, A.O., T.H. Brouwer, S. Carroll, S. Manning, J.A. McLachlan, and M. Brouwer	Experimental Evaluation of Vitellogenin as a Predictive Biomarker for Reproductive Disruption	Environ.Health Perspect. 109(7):681-689	2001

Appendix D-9, Table 9. ECOTOX values for DDTs in freshwaters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
735	1-Chloro-2-(2,2,2-trichloro-1-(4-chlorophenyl)ethyl)benzene	Oryzias latipes	Medaka, High-Eyes	Fish	LOEC	MPH	IMPS	56	d	1.94	FW	Cheek, A.O., T.H. Brouwer, S. Carroll, S. Manning, J.A. McLachlan, and M. Brouwer	Experimental Evaluation of Vitellogenin as a Predictive Biomarker for Reproductive Disruption	Environ.Health Perspect. 109(7):681-689	2001
736	1-Chloro-2-(2,2,2-trichloro-1-(4-chlorophenyl)ethyl)benzene	Oryzias latipes	Medaka, High-Eyes	Fish	LOEC	REP	FCND	14	d	1.37	FW	Cheek, A.O., T.H. Brouwer, S. Carroll, S. Manning, J.A. McLachlan, and M. Brouwer	Experimental Evaluation of Vitellogenin as a Predictive Biomarker for Reproductive Disruption	Environ.Health Perspect. 109(7):681-689	2001
737	1-Chloro-2-(2,2,2-trichloro-1-(4-chlorophenyl)ethyl)benzene	Oryzias latipes	Medaka, High-Eyes	Fish	LOEC	REP	FCND	56	d	1.94	FW	Cheek, A.O., T.H. Brouwer, S. Carroll, S. Manning, J.A. McLachlan, and M. Brouwer	Experimental Evaluation of Vitellogenin as a Predictive Biomarker for Reproductive Disruption	Environ.Health Perspect. 109(7):681-689	2001
738	1-Chloro-2-(2,2,2-trichloro-1-(4-chlorophenyl)ethyl)benzene	Oryzias latipes	Medaka, High-Eyes	Fish	LOEC	REP	FERT	14	d	0.5	FW	Cheek, A.O., T.H. Brouwer, S. Carroll, S. Manning, J.A. McLachlan, and M. Brouwer	Experimental Evaluation of Vitellogenin as a Predictive Biomarker for Reproductive Disruption	Environ.Health Perspect. 109(7):681-689	2001
739	1-Chloro-2-(2,2,2-trichloro-1-(4-chlorophenyl)ethyl)benzene	Oryzias latipes	Medaka, High-Eyes	Fish	LOEC	REP	FERT	14	d	0.23	FW	Cheek, A.O., T.H. Brouwer, S. Carroll, S. Manning, J.A. McLachlan, and M. Brouwer	Experimental Evaluation of Vitellogenin as a Predictive Biomarker for Reproductive Disruption	Environ.Health Perspect. 109(7):681-689	2001
740	1-Chloro-2-(2,2,2-trichloro-1-(4-chlorophenyl)ethyl)benzene	Oryzias latipes	Medaka, High-Eyes	Fish	LOEC	REP	FERT	56	d	0.3	FW	Cheek, A.O., T.H. Brouwer, S. Carroll, S. Manning, J.A. McLachlan, and M. Brouwer	Experimental Evaluation of Vitellogenin as a Predictive Biomarker for Reproductive Disruption	Environ.Health Perspect. 109(7):681-689	2001
741	1-Chloro-2-(2,2,2-trichloro-1-(4-chlorophenyl)ethyl)benzene	Oryzias latipes	Medaka, High-Eyes	Fish	LOEC	REP	FERT	56	d	0.3	FW	Cheek, A.O., T.H. Brouwer, S. Carroll, S. Manning, J.A. McLachlan, and M. Brouwer	Experimental Evaluation of Vitellogenin as a Predictive Biomarker for Reproductive Disruption	Environ.Health Perspect. 109(7):681-689	2001
742	1-Chloro-2-(2,2,2-trichloro-1-(4-chlorophenyl)ethyl)benzene	Carassius auratus	Goldfish	Fish	NR-LETH	MOR	MORT	4	d	4000	FW	Ginsburg, J.M.	Comparative Toxicity of DDT Isomers and Related Compounds to Mosquito Larvae and Fish	Science 105:233-234	1947
743	1-Chloro-2-(2,2,2-trichloro-1-(4-chlorophenyl)ethyl)benzene	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	NR-LETH	MOR	MORT	2	d	5000	FW	Ginsburg, J.M.	Comparative Toxicity of DDT Isomers and Related Compounds to Mosquito Larvae and Fish	Science 105:233-234	1947

Appendix D-9, Table 10. ECOTOX effects values for PAHs in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
1	Phenanthrene	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	60	d	0.0002	FW	Passino-Reader, D.R.	Rainbow Trout Larvae Compared with Daphnia pulex Response in Contaminant Bioassays. Copy of a Research Information Bulletin (RIB). Draft (Personal Communication)	October 19 Letter to R.Spehar, U.S.EPA, Duluth, MN :5 p.	1993
2	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	PHY	PSYI	0.25	d	0.05	FW	Mallakin, A., T.S. Babu, D.G. Dixon, and B.M. Greenberg	Sites of Toxicity of Specific Photooxidation Products of Anthracene to Higher Plants: Inhibition of Photosynthetic Activity and Electron Transport in Lemna gibba L. G-3 (Duckweed)	Environ. Toxicol.17(5): 462-471	2002
3	Pyrene	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	MOR	MORT	11	d	0.9	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
4	Anthracene	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	MOR	MORT	1	d	1	FW	Borovsky, D., J.R. Linley, and J. Kagan	Polycyclic Aromatic Compounds as Phototoxic Mosquito Larvicides	J.Am.Mosq.Control Assoc. 3(2):246-250	1987
5	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	PHY	PSII	0.25	d	1	FW	Mallakin, A., T.S. Babu, D.G. Dixon, and B.M. Greenberg	Sites of Toxicity of Specific Photooxidation Products of Anthracene to Higher Plants: Inhibition of Photosynthetic Activity and Electron Transport in Lemna gibba L. G-3 (Duckweed)	Environ. Toxicol.17(5): 462-471	2002
6	Fluoranthene	Lumbriculus variegatus	Oligochaete, Worm	Worms	MOR	MORT	4	d	1.2	FW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
7	Anthracene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	4	d	1.27	FW	McCloskey, J.T., and J.T. Oris	Effect of Water Temperature and Dissolved Oxygen Concentration on the Photo-Induced Toxicity of Anthracene to Juvenile Bluegill Sunfish (Lepomis macrochirus)	Aquat.Toxicol. 21(3/4):145-156	1991
8	Benzo(a)pyrene	Clarias gariepinus	Zambezi Barbel	Fish	ENZ	EROD	1	d	1.6	FW	Mdegela, R.H., M. Braathen, D. Correia, R.D. Mosha, J.U. Skaare, and M. Sandvik	Influence of 17alpha-Ethynylestradiol on CYP1A, GST and Biliary FACs Responses in Male African Sharptooth Catfish (Clarias gariepinus) Exposed to Waterborne Benzo(a)pyrene	Ecotoxicology 15(8):629-637	2006
9	Fluoranthene	Physella virgata	Snail	Molluscs	MOR	MORT	4	d	2	FW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
10	Fluoranthene	Utterbackia imbecillis	Paper Pondshell	Molluscs	MOR	MORT	1	d	2	FW	Weinstein, J.E.	Characterization of the Acute Toxicity of Photoactivated Fluoranthene to Glochidia of the Freshwater Mussel, Utterbackia imbecillis	Environ.Toxicol.Chem. 20(2):412-419	2001
11	Fluoranthene	Hydra americana	Hydra	Invertebrates	MOR	MORT	4	d	2.2	FW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
12	Fluoranthene	Utterbackia imbecillis	Paper Pondshell	Molluscs	MOR	MORT	1	d	2.44	FW	Weinstein, J.E.	Characterization of the Acute Toxicity of Photoactivated Fluoranthene to Glochidia of the Freshwater Mussel, Utterbackia imbecillis	Environ.Toxicol.Chem. 20(2):412-419	2001
13	Pyrene	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	MOR	MORT	NR	em	2.5	FW	Kagan, J., and E.D. Kagan	The Toxicity of Benzo(a)pyrene and Pyrene in the Mosquito Aedes aegypti, in the Dark and in the Presence of Ultraviolet Light	Chemosphere 15(3):243-251	1986
14	Fluoranthene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	32	d	2.6	FW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
15	Anthracene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	4	d	2.78	FW	Oris, J.T., J.P. Giesy, P.M. Allred, D.F. Grant, and P.F. Landrum	Photoinduced Toxicity of Anthracene in Aquatic Organisms: An Environmental Perspective	In: T.N.Veziroglu (Ed.), The Biosphere: Problems and Solutions, Elsevier Science Publ., Amsterdam, Netherlands :639-658	1984
16	Anthracene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	4	d	2.78	FW	Oris, J.T.Jr.	The Photoenhanced Toxicity of Anthracene to Juvenile Sunfish (Lepomis spp.)	Aquat.Toxicol. 6(2):133-146	1985
17	Fluoranthene	Utterbackia imbecillis	Paper Pondshell	Molluscs	MOR	MORT	1	d	2.9	FW	Weinstein, J.E.	Characterization of the Acute Toxicity of Photoactivated Fluoranthene to Glochidia of the Freshwater Mussel, Utterbackia imbecillis	Environ.Toxicol.Chem. 20(2):412-419	2001
18	Anthracene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	PHY	PSYN	1	d	3.3	FW	Gala, W.R., and J.P. Giesy	Photo-Induced Toxicity of Anthracene to the Green Alga, Selenastrum capricornutum	Arch. Environ. Contam. Toxicol.23(3): 316-323	1992
19	Anthracene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	2	d	3.36	FW	McCloskey, J.T., and J.T. Oris	Effect of Water Temperature and Dissolved Oxygen Concentration on the Photo-Induced Toxicity of Anthracene to Juvenile Bluegill Sunfish (Lepomis macrochirus)	Aquat.Toxicol. 21(3/4):145-156	1991

Appendix D-9, Table 10. ECOTOX effects values for PAHs in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
20	Anthracene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	4	d	3.74	FW	McCloskey, J.T., and J.T. Oris	Effect of Water Temperature and Dissolved Oxygen Concentration on the Photo-Induced Toxicity of Anthracene to Juvenile Bluegill Sunfish (Lepomis macrochirus)	Aquat.Toxicol. 21(3/4):145-156	1991
21	Anthracene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	GRO	GGRO	0.916667	d	3.9	FW	Gala, W.R., and J.P. Giesy	Photo-Induced Toxicity of Anthracene to the Green Alga, Selenastrum capricornutum	Arch. Environ. Contam. Toxicol.23(3): 316-323	1992
22	Pyrene	Daphnia magna	Water Flea	Crustaceans	MOR	SURV	0.08	d	4	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
23	Pyrene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	0.04	d	4	FW	Kagan, J., E.D. Kagan, I.A. Kagan, P.A. Kagan, and S. Quigley	The Phototoxicity of Non-Carcinogenic Polycyclic Aromatic Hydrocarbons in Aquatic Organisms	Chemosphere 14(11/12):1829-1834	1985
24	Fluoranthene	Daphnia magna	Water Flea	Crustaceans	MOR	SURV	0.08	d	4	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
25	Fluoranthene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	0.04	d	4	FW	Kagan, J., E.D. Kagan, I.A. Kagan, P.A. Kagan, and S. Quigley	The Phototoxicity of Non-Carcinogenic Polycyclic Aromatic Hydrocarbons in Aquatic Organisms	Chemosphere 14(11/12):1829-1834	1985
26	Anthracene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	4	d	4.5	FW	Oris, J.T.Jr.	Photoinduced Toxicity of Anthracene to Juvenile Bluegill Sunfish (Lepomis macrochirus Rafinesque): Photoperiod Effects and Predictive Hazard	Environ.Toxicol.Chem. 5(8):761-768	1986
27	Fluoranthene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	32	d	4.8	FW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
28	Anthracene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	PHY	PSYN	1	d	4.9	FW	Gala, W.R., and J.P. Giesy	Photo-Induced Toxicity of Anthracene to the Green Alga, Selenastrum capricornutum	Arch. Environ. Contam. Toxicol.23(3): 316-323	1992
29	Benzo(a)pyrene	Daphnia pulex	Water Flea	Crustaceans	MOR	MORT	4	d	5	FW	Trucco, R.G., F.R. Engelhardt, and B. Stacey	Toxicity, Accumulation and Clearance of Aromatic Hydrocarbons in Daphnia pulex	Environ.Pollut.Ser.A 31(3):191-202	1983
30	Benzo(a)pyrene	Chironomus riparius	Midge	Insects/Spiders	ITX	IMBL	1	d	5	FW	Lydy, M.J., K.A. Bruner, D.M. Fry, and S.W. Fisher	Effects of Sediment and the Route of Exposure on the Toxicity and Accumulation of Neutral Lipophilic and Moderately Water-Soluble Metabolizable Compounds in the Midge, Chironomus riparius	In: W.G.Landis and W.H.Van der Schalie (Eds.), Aquatic Toxicology and Risk Assessment, Vol.13, ASTM STP 1096, Philadelphia, PA :140-164	1990
31	Benzo(a)pyrene	Chironomus riparius	Midge	Insects/Spiders	ITX	IMBL	1	d	5	FW	Lydy, M.J., K.A. Bruner, D.M. Fry, and S.W. Fisher	Effects of Sediment and the Route of Exposure on the Toxicity and Accumulation of Neutral Lipophilic and Moderately Water-Soluble Metabolizable Compounds in the Midge, Chironomus riparius	In: W.G.Landis and W.H.Van der Schalie (Eds.), Aquatic Toxicology and Risk Assessment, Vol.13, ASTM STP 1096, Philadelphia, PA :140-164	1990
32	Benzo(a)pyrene	Chironomus riparius	Midge	Insects/Spiders	ITX	IMBL	1	d	5	FW	Lydy, M.J., K.A. Bruner, D.M. Fry, and S.W. Fisher	Effects of Sediment and the Route of Exposure on the Toxicity and Accumulation of Neutral Lipophilic and Moderately Water-Soluble Metabolizable Compounds in the Midge, Chironomus riparius	In: W.G.Landis and W.H.Van der Schalie (Eds.), Aquatic Toxicology and Risk Assessment, Vol.13, ASTM STP 1096, Philadelphia, PA :140-164	1990
33	Benzo(a)pyrene	Scenedesmus acutus	Green Algae	Algae, Moss, Fungi	GRO	GGRO	3	d	5	FW	Schoeny, R., T. Cody, D. Warshawsky, and M. Radike	Metabolism of Mutagenic Polycyclic Aromatic Hydrocarbons by Photosynthetic Algal Species	Mutat. Res.197(2): 289-302	1988
34	Anthracene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	2	d	5.1	FW	McCloskey, J.T., and J.T. Oris	Effect of Water Temperature and Dissolved Oxygen Concentration on the Photo-Induced Toxicity of Anthracene to Juvenile Bluegill Sunfish (Lepomis macrochirus)	Aquat.Toxicol. 21(3/4):145-156	1991
35	Anthracene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	GRO	GGRO	0.916667	d	5.3	FW	Gala, W.R., and J.P. Giesy	Photo-Induced Toxicity of Anthracene to the Green Alga, Selenastrum capricornutum	Arch. Environ. Contam. Toxicol.23(3): 316-323	1992
36	Anthracene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	PHY	PSYN	1	d	5.9	FW	Gala, W.R., and J.P. Giesy	Photo-Induced Toxicity of Anthracene to the Green Alga, Selenastrum capricornutum	Arch. Environ. Contam. Toxicol.23(3): 316-323	1992
37	Phenanthrene	Oncorhynchus mykiss	Rainbow Trout	Fish	MPH	ABNM	87	d	6	FW	Call, D.J., L.T. Brooke, S.L. Harting, S.H. Poirier, and D.J. McCauley	Toxicity of Phenanthrene to Several Freshwater Species	Rep.to Battelle Memorial Res.Inst., Columbus, OH, in Partial Fulfillment of Work Assignment No.45, Task Order No.4 of Subcontract No.F4114(8834)-411 :15 p.	1986
38	Anthracene	Pimephales promelas	Fathead Minnow	Fish	ACC	RSDE	35	d	6.08	FW	Hall, A.T.	Reproductive and Behavioral Toxicity of Anthracene in the Fathead Minnow (Pimephales promelas)	Ph.D.Thesis, Miami Univ., OH :161 p.	1993
39	Anthracene	Pimephales promelas	Fathead Minnow	Fish	ACC	RSDE	35	d	6.08	FW	Hall, A.T.	Reproductive and Behavioral Toxicity of Anthracene in the Fathead Minnow (Pimephales promelas)	Ph.D.Thesis, Miami Univ., OH :161 p.	1993

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
40	Anthracene	Pimephales promelas	Fathead Minnow	Fish	REP	FCND	35	d	6.08	FW	Hall, A.T.	Reproductive and Behavioral Toxicity of Anthracene in the Fathead Minnow (Pimephales promelas)	Ph.D.Thesis, Miami Univ., OH :161 p.	1993
41	Anthracene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	GRO	GGRO	0.916667	d	6.6	FW	Gala, W.R., and J.P. Giesy	Photo-Induced Toxicity of Anthracene to the Green Alga, Selenastrum capricornutum	Arch. Environ. Contam. Toxicol.23(3): 316-323	1992
42	Anthracene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	4	d	6.78	FW	McCloskey, J.T., and J.T. Oris	Effect of Water Temperature and Dissolved Oxygen Concentration on the Photo-Induced Toxicity of Anthracene to Juvenile Bluegill Sunfish (Lepomis macrochirus)	Aquat.Toxicol. 21(3/4):145-156	1991
43	Fluoranthene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	4	d	6.83	FW	Diamond, S.A.	Characterization of Acute and Chronic Toxicity of Fluoranthene and the Potential for Acquisition Enhanced Tolerance in Fathead Minnows (Pimephales promelas)	Ph.D.Thesis, Miami University, Oxford, OH :151 p. (Publ As 15050)	1995
44	Fluoranthene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	6	d	6.83	FW	Diamond, S.A., J.T. Oris, and S.I. Guttman	Adaptation to Fluoranthene Exposure in a Laboratory Population of Fathead Minnows	Environ.Toxicol.Chem. 14(8):1393-1400	1995
45	Anthracene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	PHY	PSYN	1	d	6.9	FW	Gala, W.R., and J.P. Giesy	Photo-Induced Toxicity of Anthracene to the Green Alga, Selenastrum capricornutum	Arch. Environ. Contam. Toxicol.23(3): 316-323	1992
46	Anthracene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	4	d	7.47	FW	McCloskey, J.T., and J.T. Oris	Effect of Water Temperature and Dissolved Oxygen Concentration on the Photo-Induced Toxicity of Anthracene to Juvenile Bluegill Sunfish (Lepomis macrochirus)	Aquat.Toxicol. 21(3/4):145-156	1991
47	Fluoranthene	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	4	d	7.7	FW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
48	Anthracene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	4	d	7.97	FW	McCloskey, J.T., and J.T. Oris	Effect of Water Temperature and Dissolved Oxygen Concentration on the Photo-Induced Toxicity of Anthracene to Juvenile Bluegill Sunfish (Lepomis macrochirus)	Aquat.Toxicol. 21(3/4):145-156	1991
49	Phenanthrene	Oncorhynchus mykiss	Rainbow Trout	Fish	GRO	WGHT	87	d	8	FW	Call, D.J., L.T. Brooke, S.L. Harting, S.H. Poirier, and D.J. McCauley	Toxicity of Phenanthrene to Several Freshwater Species	Rep.to Battelle Memorial Res.Inst., Columbus, OH, in Partial Fulfillment of Work Assignment No.45, Task Order No.4 of Subcontract No.F4114(8834)-411 :15 p.	1986
50	Phenanthrene	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	SURV	87	d	8	FW	Call, D.J., L.T. Brooke, S.L. Harting, S.H. Poirier, and D.J. McCauley	Toxicity of Phenanthrene to Several Freshwater Species	Rep.to Battelle Memorial Res.Inst., Columbus, OH, in Partial Fulfillment of Work Assignment No.45, Task Order No.4 of Subcontract No.F4114(8834)-411 :15 p.	1986
51	Pyrene	Artemia salina	Brine Shrimp	Crustaceans	MOR	MORT	0.04	d	8	FW	Kagan, J., E.D. Kagan, I.A. Kagan, P.A. Kagan, and S. Quigley	The Phototoxicity of Non-Carcinogenic Polycyclic Aromatic Hydrocarbons in Aquatic Organisms	Chemosphere 14(11/12):1829-1834	1985
52	Anthracene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	PHY	PSYN	1	d	8.1	FW	Gala, W.R., and J.P. Giesy	Photo-Induced Toxicity of Anthracene to the Green Alga, Selenastrum capricornutum	Arch. Environ. Contam. Toxicol.23(3): 316-323	1992
53	Anthracene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	4	d	8.27	FW	McCloskey, J.T., and J.T. Oris	Effect of Water Temperature and Dissolved Oxygen Concentration on the Photo-Induced Toxicity of Anthracene to Juvenile Bluegill Sunfish (Lepomis macrochirus)	Aquat.Toxicol. 21(3/4):145-156	1991
54	Pyrene	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	MOR	MORT	1	d	9	FW	Kagan, J., and E.D. Kagan	The Toxicity of Benzo(a)pyrene and Pyrene in the Mosquito Aedes aegypti, in the Dark and in the Presence of Ultraviolet Light	Chemosphere 15(3):243-251	1986
55	Anthracene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	2	d	9.69	FW	McCloskey, J.T., and J.T. Oris	Effect of Water Temperature and Dissolved Oxygen Concentration on the Photo-Induced Toxicity of Anthracene to Juvenile Bluegill Sunfish (Lepomis macrochirus)	Aquat.Toxicol. 21(3/4):145-156	1991
56	Anthracene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	PHY	PSYN	1	d	9.9	FW	Gala, W.R., and J.P. Giesy	Photo-Induced Toxicity of Anthracene to the Green Alga, Selenastrum capricornutum	Arch. Environ. Contam. Toxicol.23(3): 316-323	1992
57	Benzo(a)pyrene	Chironomus riparius	Midge	Insects/Spiders	GEN	GEXP	1	d	10	FW	Ha, M.H., and J. Choi	Effects of Environmental Contaminants on Hemoglobin of Larvae of Aquatic Midge, Chironomus riparius (Diptera: Chironomidae): A Potential Biomarker for Ecotoxicity Monitoring	Chemosphere 71(10):1928-1936	2008
58	Benz[a]anthracene	Daphnia pulex	Water Flea	Crustaceans	MOR	MORT	4	d	10	FW	Trucco, R.G., F.R. Engelhardt, and B. Stacey	Toxicity, Accumulation and Clearance of Aromatic Hydrocarbons in Daphnia pulex	Environ.Pollut.Ser.A 31(3):191-202	1983
59	Anthracene	Scenedesmus subspicatus	Green Algae	Algae, Moss, Fungi	POP	PGRT	7	d	10	FW	Djomo, J.E., A. Dauta, V. Ferrier, J.F. Narbonne, A. Monkiedje, T. Njine, and P. Garrigues	Toxic Effects of Some Major Polyaromatic Hydrocarbons Found in Crude Oil and Aquatic Sediments on Scenedesmus subspicatus	Water Res.38(7): 1817-1821	2004

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
60	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	POP	PGRT	7	d	10	FW	Mallakin, A., B.J. McConkey, G. Miao, B. McKibben, V. Snieckus, D.G. Dixon, and B.M. Greenberg	Impact of Structural Photomodification on the Toxicity of Environmental Contaminants: Anthracene Photooxidation Products	Ecotoxicol. Environ. Saf.43(2): 204-212	1999
61	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	POP	PGRT	7	d	10	FW	Mallakin, A., B.J. McConkey, G. Miao, B. McKibben, V. Snieckus, D.G. Dixon, and B.M. Greenberg	Impact of Structural Photomodification on the Toxicity of Environmental Contaminants: Anthracene Photooxidation Products	Ecotoxicol. Environ. Saf.43(2): 204-212	1999
62	Pyrene	Daphnia magna	Water Flea	Crustaceans	MOR	SURV	1	d	10	FW	Nikkila, A., S. Penttinen, and J.V.K. Kukkonen	UV-B-Induced Acute Toxicity of Pyrene to the Waterflea Daphnia magna in Natural Freshwaters	Ecotoxicol.Environ.Saf. 44(3):271-279	1999
63	Pyrene	Daphnia magna	Water Flea	Crustaceans	MOR	SURV	1	d	10	FW	Nikkila, A., S. Penttinen, and J.V.K. Kukkonen	UV-B-Induced Acute Toxicity of Pyrene to the Waterflea Daphnia magna in Natural Freshwaters	Ecotoxicol.Environ.Saf. 44(3):271-279	1999
64	Fluoranthene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	4	d	10	FW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
65	Fluoranthene	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	MOR	MORT	1	d	10	FW	Borovsky, D., J.R. Linley, and J. Kagan	Polycyclic Aromatic Compounds as Phototoxic Mosquito Larvicides	J.Am.Mosq.Control Assoc. 3(2):246-250	1987
66	Anthracene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	2	d	10.05	FW	McCloskey, J.T., and J.T. Oris	Effect of Water Temperature and Dissolved Oxygen Concentration on the Photo-Induced Toxicity of Anthracene to Juvenile Bluegill Sunfish (Lepomis macrochirus)	Aquat.Toxicol. 21(3/4):145-156	1991
67	Anthracene	Pimephales promelas	Fathead Minnow	Fish	MPH	SMIX	35	d	10.6	FW	Hall, A.T.	Reproductive and Behavioral Toxicity of Anthracene in the Fathead Minnow (Pimephales promelas)	Ph.D.Thesis, Miami Univ., OH :161 p.	1993
68	Fluoranthene	Daphnia magna	Water Flea	Crustaceans	MOR	SURV	0.06	d	11	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
69	Anthracene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	PHY	PSYN	1	d	11.2	FW	Gala, W.R., and J.P. Giesy	Photo-Induced Toxicity of Anthracene to the Green Alga, Selenastrum capricornutum	Arch. Environ. Contam. Toxicol.23(3): 316-323	1992
70	Anthracene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	2	d	11.56	FW	McCloskey, J.T., and J.T. Oris	Effect of Water Temperature and Dissolved Oxygen Concentration on the Photo-Induced Toxicity of Anthracene to Juvenile Bluegill Sunfish (Lepomis macrochirus)	Aquat.Toxicol. 21(3/4):145-156	1991
71	Anthracene	Pimephales promelas	Fathead Minnow	Fish	ACC	RSDE	56	d	11.56	FW	Hall, A.T.	Reproductive and Behavioral Toxicity of Anthracene in the Fathead Minnow (Pimephales promelas)	Ph.D.Thesis, Miami Univ., OH :161 p.	1993
72	Anthracene	Pimephales promelas	Fathead Minnow	Fish	ACC	RSDE	56	d	11.56	FW	Hall, A.T.	Reproductive and Behavioral Toxicity of Anthracene in the Fathead Minnow (Pimephales promelas)	Ph.D.Thesis, Miami Univ., OH :161 p.	1993
73	Anthracene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	4	d	11.92	FW	Oris, J.T., J.P. Giesy, P.M. Allred, D.F. Grant, and P.F. Landrum	Photoinduced Toxicity of Anthracene in Aquatic Organisms: An Environmental Perspective	In: T.N.Veziroglu (Ed.), The Biosphere: Problems and Solutions, Elsevier Science Publ., Amsterdam, Netherlands :639-658	1984
74	Anthracene	Lepomis sp.	Sunfish	Fish	MOR	MORT	4	d	11.92	FW	Oris, J.T.Jr.	The Photoenhanced Toxicity of Anthracene to Juvenile Sunfish (Lepomis spp.)	Aquat.Toxicol. 6(2):133-146	1985
75	Pyrene	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	MOR	MORT	1	d	12	FW	Kagan, J., and E.D. Kagan	The Toxicity of Benzo(a)pyrene and Pyrene in the Mosquito Aedes aegypti, in the Dark and in the Presence of Ultraviolet Light	Chemosphere 15(3):243-251	1986
76	Fluoranthene	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	4	d	12	FW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
77	Fluoranthene	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	MOR	SURV	0.04	d	12	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
78	Fluoranthene	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	MOR	MORT	0.04	d	12	FW	Kagan, J., E.D. Kagan, I.A. Kagan, P.A. Kagan, and S. Quigley	The Phototoxicity of Non-Carcinogenic Polycyclic Aromatic Hydrocarbons in Aquatic Organisms	Chemosphere 14(11/12):1829-1834	1985
79	Anthracene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	2	d	12.02	FW	McCloskey, J.T., and J.T. Oris	Effect of Water Temperature and Dissolved Oxygen Concentration on the Photo-Induced Toxicity of Anthracene to Juvenile Bluegill Sunfish (Lepomis macrochirus)	Aquat.Toxicol. 21(3/4):145-156	1991
80	Anthracene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	GRO	GGRO	0.916667	d	12.1	FW	Gala, W.R., and J.P. Giesy	Photo-Induced Toxicity of Anthracene to the Green Alga, Selenastrum capricornutum	Arch. Environ. Contam. Toxicol.23(3): 316-323	1992
81	Fluoranthene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	4	d	12.2	FW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999

Appendix D-9, Table 10. ECOTOX effects values for PAHs in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
82	Fluoranthene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	4	d	12.3	FW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
83	Anthracene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	0.375	d	12.7	FW	Bowling, J.W., G.J. Leversee, P.F. Landrum, and J.P. Giesy	Acute Mortality of Anthracene-Contaminated Fish Exposed to Sunlight	Aquat.Toxicol. 3:79-90	1983
84	Anthracene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	1.125	d	12.7	FW	Bowling, J.W., G.J. Leversee, P.F. Landrum, and J.P. Giesy	Acute Mortality of Anthracene-Contaminated Fish Exposed to Sunlight	Aquat.Toxicol. 3:79-90	1983
85	Anthracene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	1.47916667	d	12.7	FW	Bowling, J.W., G.J. Leversee, P.F. Landrum, and J.P. Giesy	Acute Mortality of Anthracene-Contaminated Fish Exposed to Sunlight	Aquat.Toxicol. 3:79-90	1983
86	Fluoranthene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	2	d	13.13	FW	Verrhiest, G., B. Clement, and G. Blake	Single and Combined Effects of Sediment-Associated PAHs on Three Species of Freshwater Macroinvertebrates	Ecotoxicology 10(6):363-372	2001
87	Fluoranthene	Pimephales promelas	Fathead Minnow	Fish	AVO	CHEM	0.00	d	14.7	FW	Farr, A.J., C.C. Chabot, and D.H. Taylor	Behavioral Avoidance of Fluoranthene by Fathead Minnows (Pimephales promelas)	Neurotoxicol.Teratol. 17(3):265-271	1995
88	Benzo(a)pyrene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	GRO	GGRO	3	d	15	FW	Schoeny, R., T. Cody, D. Warshawsky, and M. Radike	Metabolism of Mutagenic Polycyclic Aromatic Hydrocarbons by Photosynthetic Algal Species	Mutat. Res.197(2): 289-302	1988
89	Fluoranthene	Pimephales promelas	Fathead Minnow	Fish	GRO	DWGT	32	d	15	FW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
90	Fluoranthene	Pimephales promelas	Fathead Minnow	Fish	GRO	LGTH	32	d	15	FW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
91	Fluoranthene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	32	d	15	FW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
92	Fluoranthene	Pimephales promelas	Fathead Minnow	Fish	ACC	UPTK	1	d	16.8	FW	Cho, E.A., A.J. Bailer, and J.T. Oris	Effect of Methyl tert-Butyl Ether on the Bioconcentration and Photoinduced Toxicity of Fluoranthene in Fathead Minnow Larvae (Pimephales promelas)	Environ.Sci.Technol. 37(7):1306-1310	2003
93	Fluoranthene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	4	d	17	FW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
94	Anthracene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	4	d	18.23	FW	Oris, J.T., J.P. Giesy, P.M. Allred, D.F. Grant, and P.F. Landrum	Photoinduced Toxicity of Anthracene in Aquatic Organisms: An Environmental Perspective	In: T.N.Veziroglu (Ed.), The Biosphere: Problems and Solutions, Elsevier Science Publ., Amsterdam, Netherlands :639-658	1984
95	Anthracene	Lepomis sp.	Sunfish	Fish	MOR	MORT	4	d	18.23	FW	Oris, J.T.Jr.	The Photoenhanced Toxicity of Anthracene to Juvenile Sunfish (Lepomis spp.)	Aquat.Toxicol. 6(2):133-146	1985
96	Anthracene	Pimephales promelas	Fathead Minnow	Fish	BEH	ACTV	8	d	19.5	FW	Hall, A.T.	Reproductive and Behavioral Toxicity of Anthracene in the Fathead Minnow (Pimephales promelas)	Ph.D.Thesis, Miami Univ., OH :161 p.	1993
97	Anthracene	Artemia salina	Brine Shrimp	Crustaceans	MOR	MORT	0.04	d	20	FW	Kagan, J., E.D. Kagan, I.A. Kagan, P.A. Kagan, and S. Quigley	The Phototoxicity of Non-Carcinogenic Polycyclic Aromatic Hydrocarbons in Aquatic Organisms	Chemosphere 14(11/12):1829-1834	1985
98	Anthracene	Daphnia magna	Water Flea	Crustaceans	MOR	SURV	0.08	d	20	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
99	Anthracene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	0.04	d	20	FW	Kagan, J., E.D. Kagan, I.A. Kagan, P.A. Kagan, and S. Quigley	The Phototoxicity of Non-Carcinogenic Polycyclic Aromatic Hydrocarbons in Aquatic Organisms	Chemosphere 14(11/12):1829-1834	1985
100	Pyrene	Daphnia magna	Water Flea	Crustaceans	MOR	SURV	2	d	20	FW	Nikkila, A., S. Penttinen, and J.V.K. Kukkonen	UV-B-Induced Acute Toxicity of Pyrene to the Waterflea Daphnia magna in Natural Freshwaters	Ecotoxicol.Environ.Saf. 44(3):271-279	1999
101	Pyrene	Daphnia magna	Water Flea	Crustaceans	MOR	SURV	2	d	20	FW	Nikkila, A., S. Penttinen, and J.V.K. Kukkonen	UV-B-Induced Acute Toxicity of Pyrene to the Waterflea Daphnia magna in Natural Freshwaters	Ecotoxicol.Environ.Saf. 44(3):271-279	1999
102	Pyrene	Daphnia magna	Water Flea	Crustaceans	MOR	SURV	2	d	20	FW	Nikkila, A., S. Penttinen, and J.V.K. Kukkonen	UV-B-Induced Acute Toxicity of Pyrene to the Waterflea Daphnia magna in Natural Freshwaters	Ecotoxicol.Environ.Saf. 44(3):271-279	1999
103	Pyrene	Daphnia magna	Water Flea	Crustaceans	MOR	SURV	2	d	20	FW	Nikkila, A., S. Penttinen, and J.V.K. Kukkonen	UV-B-Induced Acute Toxicity of Pyrene to the Waterflea Daphnia magna in Natural Freshwaters	Ecotoxicol.Environ.Saf. 44(3):271-279	1999
104	Pyrene	Daphnia magna	Water Flea	Crustaceans	MOR	SURV	2	d	20	FW	Nikkila, A., S. Penttinen, and J.V.K. Kukkonen	UV-B-Induced Acute Toxicity of Pyrene to the Waterflea Daphnia magna in Natural Freshwaters	Ecotoxicol.Environ.Saf. 44(3):271-279	1999
105	Pyrene	Daphnia magna	Water Flea	Crustaceans	MOR	SURV	0.06	d	20	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
106	Pyrene	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	MOR	SURV	0.02	d	20	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
107	Pyrene	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	MOR	SURV	0.04	d	20	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
108	Pyrene	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	MOR	MORT	0.04	d	20	FW	Kagan, J., E.D. Kagan, I.A. Kagan, P.A. Kagan, and S. Quigley	The Phototoxicity of Non-Carcinogenic Polycyclic Aromatic Hydrocarbons in Aquatic Organisms	Chemosphere 14(11/12):1829-1834	1985
109	Anthracene	Pimephales promelas	Fathead Minnow	Fish	MOR	HTCH	63	d	20.1	FW	Hall, A.T.	Reproductive and Behavioral Toxicity of Anthracene in the Fathead Minnow (Pimephales promelas)	Ph.D.Thesis, Miami Univ., OH :161 p.	1993
110	Fluoranthene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	2.08	d	20.2	FW	Verrhiest, G., B. Clement, and G. Blake	Single and Combined Effects of Sediment-Associated PAHs on Three Species of Freshwater Macroinvertebrates	Ecotoxicology 10(6):363-372	2001
111	Anthracene	Pimephales promelas	Fathead Minnow	Fish	BEH	ACTV	4	d	21.4	FW	Hall, A.T.	Reproductive and Behavioral Toxicity of Anthracene in the Fathead Minnow (Pimephales promelas)	Ph.D.Thesis, Miami Univ., OH :161 p.	1993
112	Fluoranthene	Pimephales promelas	Fathead Minnow	Fish	GRO	DWGT	32	d	21.7	FW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
113	Fluoranthene	Pimephales promelas	Fathead Minnow	Fish	GRO	LGTH	32	d	21.7	FW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
114	Fluoranthene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	32	d	21.7	FW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
115	Benzo(a)pyrene	Eurytemora affinis	Calanoid Copepod	Crustaceans	MOR	SURV	10	d	23	FW	Forget-Leray, J., I. Landriau, C. Minier, and F. Leboulenger	Impact of Endocrine Toxicants on Survival, Development, and Reproduction of the Estuarine Copepod Eurytemora affinis (Poppe)	Ecotoxicol.Environ.Saf. 60(3):288-294	2005
116	Fluoranthene	Chironomus tentans	Midge	Insects/Spiders	MOR	MORT	10	d	23.6	FW	Suedel, B.C.Jr.	Toxicity of Fluoranthene to Daphnia magna, Hyalella azteca, Chironomus tentans, and Stylaria lacustris in Water-Only and Whole Sediment Exposures	Bull.Environ.Contam.Toxicol. 57(1):132-138	1996
117	Anthracene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	PHY	PSYN	1	d	24	FW	Gala, W.R., and J.P. Giesy	Photo-Induced Toxicity of Anthracene to the Green Alga, Selenastrum capricornutum	Arch. Environ. Contam. Toxicol.23(3): 316-323	1992
118	Anthracene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	4	d	26.47	FW	Oris, J.T., J.P. Giesy, P.M. Allred, D.F. Grant, and P.F. Landrum	Photoinduced Toxicity of Anthracene in Aquatic Organisms: An Environmental Perspective	In: T.N.Veziroglu (Ed.), The Biosphere: Problems and Solutions, Elsevier Science Publ., Amsterdam, Netherlands :639-658	1984
119	Anthracene	Lepomis sp.	Sunfish	Fish	MOR	MORT	4	d	26.47	FW	Oris, J.T.Jr.	The Photoenhanced Toxicity of Anthracene to Juvenile Sunfish (Lepomis spp.)	Aquat.Toxicol. 6(2):133-146	1985
120	Anthracene	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	MOR	MORT	1	d	26.8	FW	Oris, J.T., J.P. Giesy, P.M. Allred, D.F. Grant, and P.F. Landrum	Photoinduced Toxicity of Anthracene in Aquatic Organisms: An Environmental Perspective	In: T.N.Veziroglu (Ed.), The Biosphere: Problems and Solutions, Elsevier Science Publ., Amsterdam, Netherlands :639-658	1984
121	Phenanthrene	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	27	d	30	FW	Millemann, R.E., W.J. Birge, J.A. Black, R.M. Cushman, K.L. Daniels, P.J. Franco, J.M. Giddings, J.F. McCarthy, and A.J.	Comparative Acute Toxicity to Aquatic Organisms of Components of Coal-Derived Synthetic Fuels	Trans.Am.Fish.Soc. 113(1):74-85	1984
122	Anthracene	Daphnia magna	Water Flea	Crustaceans	MOR	SURV	0.06	d	30	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
123	Pyrene	Daphnia magna	Water Flea	Crustaceans	MOR	SURV	1	d	30	FW	Nikkila, A., S. Penttinen, and J.V.K. Kukkonen	UV-B-Induced Acute Toxicity of Pyrene to the Waterflea Daphnia magna in Natural Freshwaters	Ecotoxicol.Environ.Saf. 44(3):271-279	1999
124	Pyrene	Daphnia magna	Water Flea	Crustaceans	MOR	SURV	1	d	30	FW	Nikkila, A., S. Penttinen, and J.V.K. Kukkonen	UV-B-Induced Acute Toxicity of Pyrene to the Waterflea Daphnia magna in Natural Freshwaters	Ecotoxicol.Environ.Saf. 44(3):271-279	1999
125	Pyrene	Daphnia magna	Water Flea	Crustaceans	MOR	SURV	2	d	30	FW	Nikkila, A., S. Penttinen, and J.V.K. Kukkonen	UV-B-Induced Acute Toxicity of Pyrene to the Waterflea Daphnia magna in Natural Freshwaters	Ecotoxicol.Environ.Saf. 44(3):271-279	1999
126	Pyrene	Daphnia magna	Water Flea	Crustaceans	MOR	SURV	2	d	30	FW	Nikkila, A., S. Penttinen, and J.V.K. Kukkonen	UV-B-Induced Acute Toxicity of Pyrene to the Waterflea Daphnia magna in Natural Freshwaters	Ecotoxicol.Environ.Saf. 44(3):271-279	1999

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
127	Fluoranthene	Hyalella azteca	Scud	Crustaceans	MOR	MORT	10	d	30.3	FW	Suedel, B.C.Jr.	Toxicity of Fluoranthene to Daphnia magna, Hyalella azteca, Chironomus tentans, and Stylaria lacustris in Water-Only and Whole Sediment Exposures	Bull.Environ.Contam.Toxicol. 57(1):132-138	1996
128	Fluoranthene	Chironomus tentans	Midge	Insects/Spiders	ITX	IMBL	10	d	31.9	FW	Suedel, B.C., J.H. Rodgers Jr., and P.A. Clifford	Bioavailability of Fluoranthene in Freshwater Sediment Toxicity Tests	Environ.Toxicol.Chem. 12(1):155-165	1993
129	Fluoranthene	Gammarus minus	Scud	Crustaceans	MOR	MORT	4	d	32	FW	Horne, J.D., and B.R. Oblad	Aquatic Toxicity Studies of Six Priority Pollutants	Rep.No.4380, NUS Corp., Houston Environ.Center, Houston, TX:99 p./ Appendix A, J.D.Horne, M.A.Swirsky, T.A.Hollister, B.R.Oblad, and J.H.Kennedy (Eds.), Acute Toxicity Studies of Five Priority Pollutants, NUS Corp.Rep.No.4398, Houston, TX :47 p.	1983
130	Fluoranthene	Hydra americana	Hydra	Invertebrates	MOR	MORT	4	d	32	FW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
131	Fluoranthene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	2	d	34.37	FW	Verrhiest, G., B. Clement, and G. Blake	Single and Combined Effects of Sediment-Associated PAHs on Three Species of Freshwater Macroinvertebrates	Ecotoxicology 10(6):363-372	2001
132	Fluoranthene	Chlorella fusca ssp. vacuolata	Green Algae	Algae, Moss, Fungi	POP	PGRT	1	d	34.38	FW	Altenburger, R., H. Walter, and M. Grote	What Contributes to the Combined Effect of a Complex Mixture?	Environ. Sci. Technol.38(23): 6353-6362	2004
133	Pyrene	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	MOR	MORT	1	d	35	FW	Borovsky, D., J.R. Linley, and J. Kagan	Polycyclic Aromatic Compounds as Phototoxic Mosquito Larvicides	J.Am.Mosq.Control Assoc. 3(2):246-250	1987
134	Fluoranthene	Ictalurus punctatus	Channel Catfish	Fish	MOR	MORT	4	d	36	FW	Gendusa, A.C.	Toxicity of Chromium and Fluoranthene from Aqueous and Sediment Sources to Selected Freshwater Fish	Ph.D.Thesis, University of North Texas :138 p.(Publ in Part As 9393, 5091)	1990
135	Fluoranthene	Chlorella fusca ssp. vacuolata	Green Algae	Algae, Moss, Fungi	POP	ABND	1	d	36.41	FW	Walter, H., F. Consolaro, P. Gramatica, M. Scholze, and R. Altenburger	Mixture Toxicity of Priority Pollutants at No Observed Effect Concentrations (NOECs)	Ecotoxicology11(5): 299-310	2002
136	Anthracene	Culex quinquefasciatus	Southern House Mosquito	Insects/Spiders	MOR	MORT	1	d	37	FW	Borovsky, D., J.R. Linley, and J. Kagan	Polycyclic Aromatic Compounds as Phototoxic Mosquito Larvicides	J.Am.Mosq.Control Assoc. 3(2):246-250	1987
137	Pyrene	Culex quinquefasciatus	Southern House Mosquito	Insects/Spiders	MOR	MORT	1	d	37	FW	Borovsky, D., J.R. Linley, and J. Kagan	Polycyclic Aromatic Compounds as Phototoxic Mosquito Larvicides	J.Am.Mosq.Control Assoc. 3(2):246-250	1987
138	Anthracene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	GRO	GGRO	0.916667	d	37.4	FW	Gala, W.R., and J.P. Giesy	Photo-Induced Toxicity of Anthracene to the Green Alga, Selenastrum capricornutum	Arch. Environ. Contam. Toxicol.23(3): 316-323	1992
139	Fluoranthene	Chironomus tentans	Midge	Insects/Spiders	MOR	MORT	10	d	37.8	FW	Suedel, B.C.Jr.	Toxicity of Fluoranthene to Daphnia magna, Hyalella azteca, Chironomus tentans, and Stylaria lacustris in Water-Only and Whole Sediment Exposures	Bull.Environ.Contam.Toxicol. 57(1):132-138	1996
140	Fluoranthene	Rana catesbeiana	Bullfrog	Amphibians	BEH	LOCO	4	d	37.97	FW	Walker, S.E., D.H. Taylor, and J.T. Oris	Behavioral and Histopathiological Effects of Fluoranthene on Bullfrog Larvae (Rana catesbeiana)	Environ.Toxicol.Chem. 17(4):734-739	1998
141	Phenanthrene	Oncorhynchus mykiss	Rainbow Trout	Fish	BEH	GBHV	60	d	38	FW	Passino-Reader, D.R., W.H. Berlin, and J.P. Hickey	Chronic Bioassays of Rainbow Trout Fry with Compounds Representative of Contaminants in Great Lakes Fish	J.Gt.Lakes Res. 21(3):373-383	1995
142	Phenanthrene	Oncorhynchus mykiss	Rainbow Trout	Fish	DVP	GDVP	60	d	38	FW	Passino-Reader, D.R., W.H. Berlin, and J.P. Hickey	Chronic Bioassays of Rainbow Trout Fry with Compounds Representative of Contaminants in Great Lakes Fish	J.Gt.Lakes Res. 21(3):373-383	1995
143	Benzo(a)pyrene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	1	d	40	FW	Wernersson, A.S., and G. Dave	Phototoxicity Identification by Solid Phase Extraction and Photoinduced Toxicity to Daphnia magna	Arch.Environ.Contam.Toxicol. 32(3):268-273	1997
144	Acenaphthene	Paratanytarsus parthenogeneticus	Midge	Insects/Spiders	DVP	DVLP	20	d	40	FW	Meier, P.G., K. Choi, and L.I. Sweet	Acute and Chronic Life Cycle Toxicity of Acenaphthene and 2,4,6-Trichlorophenol to the Midge Paratanytarsus parthenogeneticus (Diptera: Chironomidae)	Aquat.Toxicol. 51(1):31-44	2000
145	Phenanthrene	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	23	d	40	FW	Black, J.A., W.J. Birge, A.G. Westerman, and P.C. Francis	Comparative Aquatic Toxicology of Aromatic Hydrocarbons	Fundam.Appl.Toxicol. 3(9/10):353-358 (OECDG Data File)	1983
146	Phenanthrene	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	27	d	40	FW	Black, J.A., W.J. Birge, A.G. Westerman, and P.C. Francis	Comparative Aquatic Toxicology of Aromatic Hydrocarbons	Fundam.Appl.Toxicol. 3(9/10):353-358 (OECDG Data File)	1983
147	Pyrene	Daphnia magna	Water Flea	Crustaceans	MOR	SURV	1	d	40	FW	Nikkila, A., S. Penttinen, and J.V.K. Kukkonen	UV-B-Induced Acute Toxicity of Pyrene to the Waterflea Daphnia magna in Natural Freshwaters	Ecotoxicol.Environ.Saf. 44(3):271-279	1999
148	Fluoranthene	Artemia salina	Brine Shrimp	Crustaceans	MOR	MORT	0.04	d	40	FW	Kagan, J., E.D. Kagan, I.A. Kagan, P.A. Kagan, and S. Quigley	The Phototoxicity of Non-Carcinogenic Polycyclic Aromatic Hydrocarbons in Aquatic Organisms	Chemosphere 14(11/12):1829-1834	1985
149	Phenanthrene	Oncorhynchus mykiss	Rainbow Trout	Fish	BEH	GBHV	60	d	44	FW	Passino-Reader, D.R., W.H. Berlin, and J.P. Hickey	Chronic Bioassays of Rainbow Trout Fry with Compounds Representative of Contaminants in Great Lakes Fish	J.Gt.Lakes Res. 21(3):373-383	1995
150	Phenanthrene	Oncorhynchus mykiss	Rainbow Trout	Fish	DVP	GDVP	60	d	44	FW	Passino-Reader, D.R., W.H. Berlin, and J.P. Hickey	Chronic Bioassays of Rainbow Trout Fry with Compounds Representative of Contaminants in Great Lakes Fish	J.Gt.Lakes Res. 21(3):373-383	1995
151	Phenanthrene	Oncorhynchus mykiss	Rainbow Trout	Fish	GRO	GGRO	60	d	44	FW	Passino-Reader, D.R., W.H. Berlin, and J.P. Hickey	Chronic Bioassays of Rainbow Trout Fry with Compounds Representative of Contaminants in Great Lakes Fish	J.Gt.Lakes Res. 21(3):373-383	1995
152	Fluoranthene	Hyalella azteca	Scud	Crustaceans	MOR	MORT	4	d	44	FW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
153	Fluoranthene	Chironomus riparius	Midge	Insects/Spiders	MOR	MORT	2	d	44	FW	Horne, J.D., and B.R. Oblad	Aquatic Toxicity Studies of Six Priority Pollutants	Rep.No.4380, NUS Corp., Houston Environ.Center, Houston, TX:99 p./ Appendix A, J.D.Horne, M.A.Swirsky, T.A.Hollister, B.R.Oblad, and J.H.Kennedy (Eds.), Acute Toxicity Studies of Five Priority Pollutants, NUS Corp.Rep.No.4398, Houston, TX :47 p.	1983
154	Fluoranthene	Hyalella azteca	Scud	Crustaceans	ITX	IMBL	10	d	44.9	FW	Suedel, B.C., J.H. Rodgers Jr., and P.A. Clifford	Bioavailability of Fluoranthene in Freshwater Sediment Toxicity Tests	Environ.Toxicol.Chem. 12(1):155-165	1993
155	Fluoranthene	Ceriodaphnia dubia	Water Flea	Crustaceans	MOR	MORT	2	d	45	FW	Oris, J.T., R.W. Winner, and M.V. Moore	A Four-Day Survival and Reproduction Toxicity Test for Ceriodaphnia dubia	Environ.Toxicol.Chem. 10(2):217-224	1991
156	Fluoranthene	Culex quinquefasciatus	Southern House Mosquito	Insects/Spiders	MOR	MORT	1	d	45	FW	Borovsky, D., J.R. Linley, and J. Kagan	Polycyclic Aromatic Compounds as Phototoxic Mosquito Larvicides	J.Am.Mosq.Control Assoc. 3(2):246-250	1987
157	Anthracene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	4	d	46	FW	Oris, J.T.Jr.	Photoinduced Toxicity of Anthracene to Juvenile Bluegill Sunfish (Lepomis macrochirus Rafinesque): Photoperiod Effects and Predictive Hazard	Environ.Toxicol.Chem. 5(8):761-768	1986
158	Fluoranthene	Aedes taeniorhynchus	Mosquito	Insects/Spiders	MOR	MORT	1	d	48	FW	Borovsky, D., J.R. Linley, and J. Kagan	Polycyclic Aromatic Compounds as Phototoxic Mosquito Larvicides	J.Am.Mosq.Control Assoc. 3(2):246-250	1987
159	Pyrene	Chlorella fusca ssp. vacuolata	Green Algae	Algae, Moss, Fungi	POP	PGRT	1	d	48.54	FW	Altenburger, R., H. Walter, and M. Grote	What Contributes to the Combined Effect of a Complex Mixture?	Environ. Sci. Technol.38(23): 6353-6362	2004
160	Phenanthrene	Lepomis macrochirus	Bluegill	Fish	PHY	GPHY	4	d	49	FW	Call, D.J., L.T. Brooke, S.L. Harting, S.H. Poirier, and D.J. McCauley	Toxicity of Phenanthrene to Several Freshwater Species	Rep.to Battelle Memorial Res.Inst., Columbus, OH, in Partial Fulfillment of Work Assignment No.45, Task Order No.4 of Subcontract No.F4114(8834)-411 :15 p.	1986
161	Benzo(a)pyrene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	GRO	NLEF	8	d	50	FW	Huang, X.D., D.G. Dixon, and B.M. Greenberg	Increased Polycyclic Aromatic Hydrocarbon Toxicity Following Their Photomodification in Natural Sunlight: Impacts on the Duckweed Lemna gibba L. G-3	Ecotoxicol. Environ. Saf.32(2): 194-200	1995
162	Acenaphthene	Paratanytarsus parthenogeneticus	Midge	Insects/Spiders	DVP	DVLP	20	d	50	FW	Meier, P.G., K. Choi, and L.I. Sweet	Acute and Chronic Life Cycle Toxicity of Acenaphthene and 2,4,6-Trichlorophenol to the Midge Paratanytarsus parthenogeneticus (Diptera: Chironomidae)	Aquat.Toxicol. 51(1):31-44	2000
163	Phenanthrene	Oncorhynchus mykiss	Rainbow Trout	Fish	PHY	GPHY	4	d	50	FW	Call, D.J., L.T. Brooke, S.L. Harting, S.H. Poirier, and D.J. McCauley	Toxicity of Phenanthrene to Several Freshwater Species	Rep.to Battelle Memorial Res.Inst., Columbus, OH, in Partial Fulfillment of Work Assignment No.45, Task Order No.4 of Subcontract No.F4114(8834)-411 :15 p.	1986
164	Fluoranthene	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	MOR	SURV	0.02	d	50	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
165	Benzo(a)pyrene	Clarias gariepinus	Zambezi Barbel	Fish	ENZ	EROD	1	d	54.17	FW	Mdegela, R.H., M. Braathen, D. Correia, R.D. Mosha, J.U. Skaare, and M. Sandvik	Influence of 17alpha-Ethynylestradiol on CYP1A, GST and Biliary FACs Responses in Male African Sharptooth Catfish (Clarias gariepinus) Exposed to Waterborne Benzo(a)pyrene	Ecotoxicology 15(8):629-637	2006
166	Benzo(a)pyrene	Clarias gariepinus	Zambezi Barbel	Fish	ENZ	EROD	1	d	54.17	FW	Mdegela, R.H., M. Braathen, D. Correia, R.D. Mosha, J.U. Skaare, and M. Sandvik	Influence of 17alpha-Ethynylestradiol on CYP1A, GST and Biliary FACs Responses in Male African Sharptooth Catfish (Clarias gariepinus) Exposed to Waterborne Benzo(a)pyrene	Ecotoxicology 15(8):629-637	2006
167	Fluoranthene	Hyalella azteca	Scud	Crustaceans	MOR	SURV	10	d	55.01	FW	Kane Driscoll, S., P.F. Landrum, and E. Tigue	Accumulation and Toxicokinetics of Fluoranthene in Water-Only Exposures with Freshwater Amphipods	Environ.Toxicol.Chem. 16(4):754-761	1997
168	Benzo(a)pyrene	Eurytemora affinis	Calanoid Copepod	Crustaceans	MOR	MORT	4	d	58	FW	Forget-Leray, J., I. Landriau, C. Minier, and F. Leboulenger	Impact of Endocrine Toxicants on Survival, Development, and Reproduction of the Estuarine Copepod Eurytemora affinis (Poppe)	Ecotoxicol.Environ.Saf. 60(3):288-294	2005
169	Acenaphthene	Paratanytarsus parthenogeneticus	Midge	Insects/Spiders	DVP	DVLP	20	d	60	FW	Meier, P.G., K. Choi, and L.I. Sweet	Acute and Chronic Life Cycle Toxicity of Acenaphthene and 2,4,6-Trichlorophenol to the Midge Paratanytarsus parthenogeneticus (Diptera: Chironomidae)	Aquat.Toxicol. 51(1):31-44	2000
170	Acenaphthene	Paratanytarsus sp.	Chironomid	Insects/Spiders	MOR	MORT	2	d	60	FW	Lemke, A.E., and R.L. Anderson	Insect Interlaboratory Toxicity Test Comparison Study for the Chironomid (Paratanytarsus sp.) Procedure	EPA-600/3-84-054, U.S.EPA, Duluth, MN :15 p. (NTIS/PB84-180025)	1984

Appendix D-9, Table 10. ECOTOX effects values for PAHs in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
171	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	POP	PGRT	7	d	60	FW	Mallakin, A., B.J. McConkey, G. Miao, B. McKibben, V. Snieckus, D.G. Dixon, and B.M. Greenberg	Impact of Structural Photomodification on the Toxicity of Environmental Contaminants: Anthracene Photooxidation Products	Ecotoxicol. Environ. Saf.43(2): 204-212	1999
172	Pyrene	Aedes taeniorhynchus	Mosquito	Insects/Spiders	MOR	MORT	1	d	60	FW	Borovsky, D., J.R. Linley, and J. Kagan	Polycyclic Aromatic Compounds as Phototoxic Mosquito Larvicides	J.Am.Mosq.Control Assoc. 3(2):246-250	1987
173	Fluoranthene	Hyalella azteca	Scud	Crustaceans	MOR	MORT	10	d	60.6	FW	Suedel, B.C.Jr.	Toxicity of Fluoranthene to Daphnia magna, Hyalella azteca, Chironomus tentans, and Stylaria lacustris in Water-Only and Whole Sediment Exposures	Bull.Environ.Contam.Toxicol. 57(1):132-138	1996
174	9H-Fluorene	Lepomis macrochirus	Bluegill	Fish	ACC	RSDE	30	d	62.5	FW	Finger, S.E., E.F. Little, M.G. Henry, J.F. Fairchild, and T.P. Boyle	Comparison of Laboratory and Field Assessment of Fluorene - Part 1: Effects of Fluorene on the Survival, Growth, Reproduction, and Behavior of Aquatic Organisms in Laboratory Tests	In: T.P.Boyle (Ed.), Validation and Predictability of Laboratory Methods for Assessing the Fate and Effects of Contaminants in Aquatic Ecosystems, 1st Symposium, ASTM STP 865, Philadelphia, PA :120-133	1985
175	9H-Fluorene	Lepomis macrochirus	Bluegill	Fish	FDB	PRBE	30	d	62.5	FW	Finger, S.E., E.F. Little, M.G. Henry, J.F. Fairchild, and T.P. Boyle	Comparison of Laboratory and Field Assessment of Fluorene - Part 1: Effects of Fluorene on the Survival, Growth, Reproduction, and Behavior of Aquatic Organisms in Laboratory Tests	In: T.P.Boyle (Ed.), Validation and Predictability of Laboratory Methods for Assessing the Fate and Effects of Contaminants in Aquatic Ecosystems, 1st Symposium, ASTM STP 865, Philadelphia, PA :120-133	1985
176	Fluoranthene	Diporeia sp.	Scud	Crustaceans	MOR	SURV	10	d	62.90	FW	Kane Driscoll, S., P.F. Landrum, and E. Tigue	Accumulation and Toxicokinetics of Fluoranthene in Water-Only Exposures with Freshwater Amphipods	Environ.Toxicol.Chem. 16(4):754-761	1997
177	Fluoranthene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	1	d	63.28	FW	Verrhiest, G., B. Clement, and G. Blake	Single and Combined Effects of Sediment-Associated PAHs on Three Species of Freshwater Macroinvertebrates	Ecotoxicology 10(6):363-372	2001
178	Phenanthrene	Oncorhynchus mykiss	Rainbow Trout	Fish	MPH	ABNM	87	d	66	FW	Call, D.J., L.T. Brooke, S.L. Harting, S.H. Poirier, and D.J. McCauley	Toxicity of Phenanthrene to Several Freshwater Species	Rep.to Battelle Memorial Res.Inst., Columbus, OH, in Partial Fulfillment of Work Assignment No.45, Task Order No.4 of Subcontract No.F4114(8834)-411 :15 p.	1986
179	Fluoranthene	Chironomus riparius	Midge	Insects/Spiders	MOR	MORT	1	d	68.4	FW	Horne, J.D., and B.R. Oblad	Aquatic Toxicity Studies of Six Priority Pollutants	Rep.No.4380, NUS Corp., Houston Environ.Center, Houston, TX:99 p./ Appendix A, J.D.Horne, M.A.Swirsky, T.A.Hollister, B.R.Oblad, and J.H.Kennedy (Eds.), Acute Toxicity Studies of Five Priority Pollutants, NUS Corp.Rep.No.4398, Houston, TX :47 p.	1983
180	Acenaphthene	Paratanytarsus parthenogeneticus	Midge	Insects/Spiders	DVP	DVLP	20	d	70	FW	Meier, P.G., K. Choi, and L.I. Sweet	Acute and Chronic Life Cycle Toxicity of Acenaphthene and 2,4,6-Trichlorophenol to the Midge Paratanytarsus parthenogeneticus (Diptera: Chironomidae)	Aquat.Toxicol. 51(1):31-44	2000
181	Acenaphthene	Paratanytarsus sp.	Chironomid	Insects/Spiders	MOR	MORT	2	d	70	FW	Lemke, A.E., and R.L. Anderson	Insect Interlaboratory Toxicity Test Comparison Study for the Chironomid (Paratanytarsus sp.) Procedure	EPA-600/3-84-054, U.S.EPA, Duluth, MN :15 p. (NTIS/PB84-180025)	1984
182	Phenanthrene	Micropterus salmoides	Largemouth Bass	Fish	MOR	MORT	3	d	70	FW	Black, J.A., W.J. Birge, A.G. Westerman, and P.C. Francis	Comparative Aquatic Toxicology of Aromatic Hydrocarbons	Fundam.Appl.Toxicol. 3(9/10):353-358 (OECDG Data File)	1983
183	Fluoranthene	Hydra americana	Hydra	Invertebrates	MOR	MORT	4	d	70	FW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
184	Fluoranthene	Daphnia magna	Water Flea	Crustaceans	FDB	FDNG	2	d	71	FW	McWilliam, R.A., and D.J. Baird	Postexposure Feeding Depression: A new Toxicity Endpoint for Use in Laboratory Studies with Daphnia magna	Environ.Toxicol.Chem. 21(6):1198-1205	2002
185	Phenanthrene	Oncorhynchus mykiss	Rainbow Trout	Fish	GRO	GGRO	60	d	75	FW	Passino-Reader, D.R., W.H. Berlin, and J.P. Hickey	Chronic Bioassays of Rainbow Trout Fry with Compounds Representative of Contaminants in Great Lakes Fish	J.Gt.Lakes Res. 21(3):373-383	1995
186	Phenanthrene	Oncorhynchus mykiss	Rainbow Trout	Fish	GRO	GGRO	60	d	75	FW	Passino-Reader, D.R., W.H. Berlin, and J.P. Hickey	Chronic Bioassays of Rainbow Trout Fry with Compounds Representative of Contaminants in Great Lakes Fish	J.Gt.Lakes Res. 21(3):373-383	1995
187	Anthracene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	POP	NCHG	1	d	75	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
188	Acenaphthene	Paratanytarsus parthenogeneticus	Midge	Insects/Spiders	DVP	DVLP	20	d	80	FW	Meier, P.G., K. Choi, and L.I. Sweet	Acute and Chronic Life Cycle Toxicity of Acenaphthene and 2,4,6-Trichlorophenol to the Midge Paratanytarsus parthenogeneticus (Diptera: Chironomidae)	Aquat.Toxicol. 51(1):31-44	2000

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
189	Acenaphthene	Paratanytarsus parthenogeneticus	Midge	Insects/Spiders	DVP	DVLP	20	d	80	FW	Meier, P.G., K. Choi, and L.I. Sweet	Acute and Chronic Life Cycle Toxicity of Acenaphthene and 2,4,6-Trichlorophenol to the Midge Paratanytarsus parthenogeneticus (Diptera: Chironomidae)	Aquat.Toxicol. 51(1):31-44	2000
190	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	BCM	FLRS	0.08	d	80	FW	Huang, X.D., T.S. Babu, C.A. Marwood, R.W. Gensemer, K.R. Solomon, and B.M. Greenberg	Inhibition of Photosynthesis as an Endpoint for the Photoinduced Toxicity of Intact and Photomodified PAHs	In: F.J.Dwyer, T.R.Doane, and M.L.Hinman (Eds.), Environmental Toxicology and Risk Assessment: Modeling and Risk Assessment, 6th Volume, ASTM STP 1317, Philadelphia, PA: 443-454	1997
191	Anthracene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	1	d	80.20	FW	Traczewska, T.M.	Changes of Toxicological Properties of Biodegradation Products of Anthracene and Phenanthrene	Water Sci.Technol. 41(12):31-38	2000
192	Fluoranthene	Physella virgata	Snail	Molluscs	MOR	MORT	4	d	82	FW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
193	Fluoranthene	Hyalella azteca	Scud	Crustaceans	MOR	SURV	10	d	84.95	FW	Kane Driscoll, S., P.F. Landrum, and E. Tigue	Accumulation and Toxicokinetics of Fluoranthene in Water-Only Exposures with Freshwater Amphipods	Environ.Toxicol.Chem. 16(4):754-761	1997
194	Phenanthrene	Oncorhynchus mykiss	Rainbow Trout	Fish	GRO	GGRO	60	d	88	FW	Passino-Reader, D.R., W.H. Berlin, and J.P. Hickey	Chronic Bioassays of Rainbow Trout Fry with Compounds Representative of Contaminants in Great Lakes Fish	J.Gt.Lakes Res. 21(3):373-383	1995
195	Anthracene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	POP	CHLA	2	d	89.12	FW	Traczewska, T.M.	Changes of Toxicological Properties of Biodegradation Products of Anthracene and Phenanthrene	Water Sci. Technol.41(12): 31-38	2000
196	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	PHY	PSYI	0.25	d	90	FW	Mallakin, A., T.S. Babu, D.G. Dixon, and B.M. Greenberg	Sites of Toxicity of Specific Photooxidation Products of Anthracene to Higher Plants: Inhibition of Photosynthetic Activity and Electron Transport in Lemna gibba L. G-3 (Duckweed)	Environ. Toxicol.17(5): 462-471	2002
197	Fluoranthene	Rana pipiens	Leopard Frog	Amphibians	MOR	SURV	1	d	90	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
198	Fluoranthene	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	4	d	91	FW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
199	Fluoranthene	Hyalella azteca	Scud	Crustaceans	MOR	MORT	2	d	92.2	FW	Suedel, B.C.Jr.	Toxicity of Fluoranthene to Daphnia magna, Hyalella azteca, Chironomus tentans, and Stylaria lacustris in Water-Only and Whole Sediment Exposures	Bull.Environ.Contam.Toxicol. 57(1):132-138	1996
200	Anthracene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	2	d	95	FW	Munoz, M.J., and J.V. Tarazona	Synergistic Effect of Two- and Four-Component Combinations of the Polycyclic Aromatic Hydrocarbons: Phenanthrene, Anthracene, Naphthalene and Acenaphthene on Daphnia magna	Bull.Environ.Contam.Toxicol. 50(3):363-368	1993
201	Fluoranthene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	4	d	95	FW	Horne, J.D., and B.R. Oblad	Aquatic Toxicity Studies of Six Priority Pollutants	Rep.No.4380, NUS Corp., Houston Environ.Center, Houston, TX:99 p./ Appendix A, J.D.Horne, M.A.Swirsky, T.A.Hollister, B.R.Oblad, and J.H.Kennedy (Eds.), Acute Toxicity Studies of Five Priority Pollutants, NUS Corp.Rep.No.4398, Houston, TX :47 p.	1983
202	Fluoranthene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	4	d	95	FW	Horne, J.D., and B.R. Oblad	Aquatic Toxicity Studies of Six Priority Pollutants	Rep.No.4380, NUS Corp., Houston Environ.Center, Houston, TX:99 p./ Appendix A, J.D.Horne, M.A.Swirsky, T.A.Hollister, B.R.Oblad, and J.H.Kennedy (Eds.), Acute Toxicity Studies of Five Priority Pollutants, NUS Corp.Rep.No.4398, Houston, TX :47 p.	1983
203	Phenanthrene	Hydra sp.	Hydra	Invertebrates	PHY	GPHY	4	d	96	FW	Call, D.J., L.T. Brooke, S.L. Harting, S.H. Poirier, and D.J. McCauley	Toxicity of Phenanthrene to Several Freshwater Species	Rep.to Battelle Memorial Res.Inst., Columbus, OH, in Partial Fulfillment of Work Assignment No.45, Task Order No.4 of Subcontract No.F4114(8834)-411 :15 p.	1986
204	Fluoranthene	Hyalella azteca	Scud	Crustaceans	MOR	SURV	10	d	97.28	FW	Kane Driscoll, S., P.F. Landrum, and E. Tigue	Accumulation and Toxicokinetics of Fluoranthene in Water-Only Exposures with Freshwater Amphipods	Environ.Toxicol.Chem. 16(4):754-761	1997
205	Phenanthrene	Daphnia pulex	Water Flea	Crustaceans	MOR	MORT	4	d	100	FW	Trucco, R.G., F.R. Engelhardt, and B. Stacey	Toxicity, Accumulation and Clearance of Aromatic Hydrocarbons in Daphnia pulex	Environ.Pollut.Ser.A 31(3):191-202	1983

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
206	Anthracene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	POP	NCHG	1	d	100	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
207	Pyrene	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	MOR	MORT	1	d	100	FW	Kagan, J., and E.D. Kagan	The Toxicity of Benzo(a)pyrene and Pyrene in the Mosquito Aedes aegypti, in the Dark and in the Presence of Ultraviolet Light	Chemosphere 15(3):243-251	1986
208	Pyrene	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	MOR	MORT	1	d	100	FW	Kagan, J., and E.D. Kagan	The Toxicity of Benzo(a)pyrene and Pyrene in the Mosquito Aedes aegypti, in the Dark and in the Presence of Ultraviolet Light	Chemosphere 15(3):243-251	1986
209	Pyrene	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	MOR	MORT	NR	em	100	FW	Kagan, J., and E.D. Kagan	The Toxicity of Benzo(a)pyrene and Pyrene in the Mosquito Aedes aegypti, in the Dark and in the Presence of Ultraviolet Light	Chemosphere 15(3):243-251	1986
210	Pyrene	Scenedesmus platydiscus	Green Algae	Algae, Moss, Fungi	BCM	GLTH	1	d	100	FW	Lei, A., Z. Hu, Y. Wong, and N.F. Tam	Antioxidant Responses of Microalgal Species to Pyrene	J. Appl. Phycol.18(1): 67-78	2006
211	Pyrene	Scenedesmus platydiscus	Green Algae	Algae, Moss, Fungi	ENZ	GSTR	1	d	100	FW	Lei, A., Z. Hu, Y. Wong, and N.F. Tam	Antioxidant Responses of Microalgal Species to Pyrene	J. Appl. Phycol.18(1): 67-78	2006
212	Pyrene	Scenedesmus quadricauda	Green Algae	Algae, Moss, Fungi	ENZ	GSTR	4	d	100	FW	Lei, A., Z. Hu, Y. Wong, and N.F. Tam	Antioxidant Responses of Microalgal Species to Pyrene	J. Appl. Phycol.18(1): 67-78	2006
213	Fluoranthene	Pimephales promelas	Fathead Minnow	Fish	MOR	SURV	1	d	100	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
214	Fluoranthene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	1	d	100	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
215	Fluoranthene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	GRO	NLEF	8	d	100	FW	Huang, X.D., D.G. Dixon, and B.M. Greenberg	Increased Polycyclic Aromatic Hydrocarbon Toxicity Following Their Photomodification in Natural Sunlight: Impacts on the Duckweed Lemna gibba L. G-3	Ecotoxicol. Environ. Saf.32(2): 194-200	1995
216	Fluoranthene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	10	d	102.6	FW	Suedel, B.C., J.H. Rodgers Jr., and P.A. Clifford	Bioavailability of Fluoranthene in Freshwater Sediment Toxicity Tests	Environ.Toxicol.Chem. 12(1):155-165	1993
217	Fluoranthene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	10	d	102.6	FW	Suedel, B.C.Jr.	Toxicity of Fluoranthene to Daphnia magna, Hyalella azteca, Chironomus tentans, and Stylaria lacustris in Water-Only and Whole Sediment Exposures	Bull.Environ.Contam.Toxicol. 57(1):132-138	1996
218	Fluoranthene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	2	d	105.7	FW	Suedel, B.C.Jr.	Toxicity of Fluoranthene to Daphnia magna, Hyalella azteca, Chironomus tentans, and Stylaria lacustris in Water-Only and Whole Sediment Exposures	Bull.Environ.Contam.Toxicol. 57(1):132-138	1996
219	Fluoranthene	Gammarus pseudolimnaeus	Scud	Crustaceans	MOR	MORT	4	d	108	FW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
220	Naphthalene	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	27	d	110	FW	Black, J.A., W.J. Birge, A.G. Westerman, and P.C. Francis	Comparative Aquatic Toxicology of Aromatic Hydrocarbons	Fundam.Appl.Toxicol. 3(9/10):353-358 (OECDG Data File)	1983
221	Anthracene	Rana pipiens	Leopard Frog	Amphibians	MOR	SURV	1	d	110	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
222	Fluoranthene	Ophiogomphus sp.	Dragonfly	Insects/Spiders	MOR	MORT	4	d	110	FW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
223	Fluoranthene	Utterbackia imbecillis	Paper Pondshell	Molluscs	MOR	MORT	1	d	110.48	FW	Weinstein, J.E.	Characterization of the Acute Toxicity of Photoactivated Fluoranthene to Glochidia of the Freshwater Mussel, Utterbackia imbecillis	Environ.Toxicol.Chem. 20(2):412-419	2001
224	Fluoranthene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	10	d	110.5	FW	Suedel, B.C.Jr.	Toxicity of Fluoranthene to Daphnia magna, Hyalella azteca, Chironomus tentans, and Stylaria lacustris in Water-Only and Whole Sediment Exposures	Bull.Environ.Contam.Toxicol. 57(1):132-138	1996
225	Fluoranthene	Hyalella azteca	Scud	Crustaceans	MOR	SURV	10	d	114.1	FW	Kane Driscoll, S., P.F. Landrum, and E. Tigue	Accumulation and Toxicokinetics of Fluoranthene in Water-Only Exposures with Freshwater Amphipods	Environ.Toxicol.Chem. 16(4):754-761	1997

Appendix D-9, Table 10. ECOTOX effects values for PAHs in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
226	Phenanthrene	Daphnia magna	Water Flea	Crustaceans	PHY	GPHY	2	d	117	FW	Call, D.J., L.T. Brooke, S.L. Harting, S.H. Poirier, and D.J. McCauley	Toxicity of Phenanthrene to Several Freshwater Species	Rep.to Battelle Memorial Res.Inst., Columbus, OH, in Partial Fulfillment of Work Assignment No.45, Task Order No.4 of Subcontract No.F4114(8834)-411 :15 p.	1986
227	Fluoranthene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	4	d	117	FW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
228	Fluoranthene	Algae	Algae	Algae, Moss, Fungi	PHY	PSII	0.02	d	118	FW	Marwood, C.A., R.E.H. Smith, M.N. Charlton, K.R. Solomon, and B.M. Greenberg	Photoinduced Toxicity to Lake Erie Phytoplankton Assemblages from Intact and Photomodified Polycyclic Aromatic Hydrocarbons	J. Great Lakes Res.29(4): 558-565	2003
229	Naphthalene	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	23	d	120	FW	Black, J.A., W.J. Birge, A.G. Westerman, and P.C. Francis	Comparative Aquatic Toxicology of Aromatic Hydrocarbons	Fundam.Appl.Toxicol. 3(9/10):353-358 (OECDG Data File)	1983
230	Naphthalene	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	27	d	120	FW	Millemann, R.E., W.J. Birge, J.A. Black, R.M. Cushman, K.L. Daniels, P.J. Franco, J.M. Giddings, J.F. McCarthy, and A.J.	Comparative Acute Toxicity to Aquatic Organisms of Components of Coal-Derived Synthetic Fuels	Trans.Am.Fish.Soc. 113(1):74-85	1984
231	9H-Fluorene	Daphnia magna	Water Flea	Crustaceans	REP	PROG	14	d	125	FW	Finger, S.E., E.F. Little, M.G. Henry, J.F. Fairchild, and T.P. Boyle	Comparison of Laboratory and Field Assessment of Fluorene - Part 1: Effects of Fluorene on the Survival, Growth, Reproduction, and Behavior of Aquatic Organisms in Laboratory Tests	In: T.P.Boyle (Ed.), Validation and Predictability of Laboratory Methods for Assessing the Fate and Effects of Contaminants in Aquatic Ecosystems, 1st Symposium, ASTM STP 865, Philadelphia, PA :120-133	1985
232	Fluoranthene	Algae	Algae	Algae, Moss, Fungi	PHY	PSII	0.02	d	125	FW	Marwood, C.A., R.E.H. Smith, M.N. Charlton, K.R. Solomon, and B.M. Greenberg	Photoinduced Toxicity to Lake Erie Phytoplankton Assemblages from Intact and Photomodified Polycyclic Aromatic Hydrocarbons	J. Great Lakes Res.29(4): 558-565	2003
233	Phenanthrene	Gammarus pseudolimnaeus	Scud	Crustaceans	PHY	GPHY	4	d	126	FW	Call, D.J., L.T. Brooke, S.L. Harting, S.H. Poirier, and D.J. McCauley	Toxicity of Phenanthrene to Several Freshwater Species	Rep.to Battelle Memorial Res.Inst., Columbus, OH, in Partial Fulfillment of Work Assignment No.45, Task Order No.4 of Subcontract No.F4114(8834)-411 :15 p.	1986
234	Naphthalene	Anguilla anguilla	Common Eel	Fish	GEN	NABN	0.33	d	128.17	FW	Teles, M., M. Pacheco, and M.A. Santos	Anguilla anguilla L. Liver Ethoxyresorufin O-Deethylation, Glutathione S-Transferase, Erythrocytic Nuclear Abnormalities, and Endocrine Responses to Naphthalene and beta-Naphthoflavone	Ecotoxicol.Environ.Saf. 55(1):98-107	2003
235	Naphthalene	Anguilla anguilla	Common Eel	Fish	CEL	NCEL	0.33	d	128.17	FW	Ahmad, I., M. Pacheco, and M.A. Santos	Naphthalene-Induced Differential Tissue Damage Association with Circulating Fish Phagocyte Induction	Ecotoxicol.Environ.Saf. 54(1):7-15	2003
236	Naphthalene	Anguilla anguilla	Common Eel	Fish	ENZ	EROD	3	d	128.17	FW	Pacheco, M., and M.A. Santos	Naphthalene and beta-Naphthoflavone Effects on Anguilla anguilla L. Hepatic Metabolism and Erythrocytic Nuclear Abnormalities	Environ.Int. 28:285-293	2002
237	Naphthalene	Anguilla anguilla	Common Eel	Fish	PHY	LDPX	0.33	d	128.17	FW	Ahmad, I., M. Pacheco, and M.A. Santos	Naphthalene-Induced Differential Tissue Damage Association with Circulating Fish Phagocyte Induction	Ecotoxicol.Environ.Saf. 54(1):7-15	2003
238	Benzo(a)pyrene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	GRO	NLEF	8	d	130	FW	Huang, X.D., D.G. Dixon, and B.M. Greenberg	Increased Polycyclic Aromatic Hydrocarbon Toxicity Following Their Photomodification in Natural Sunlight: Impacts on the Duckweed Lemna gibba L. G-3	Ecotoxicol. Environ. Saf.32(2): 194-200	1995
239	Acenaphthene	Paratanytarsus parthenogeneticus	Midge	Insects/Spiders	MOR	HTCH	20	d	130	FW	Meier, P.G., K. Choi, and L.I. Sweet	Acute and Chronic Life Cycle Toxicity of Acenaphthene and 2,4,6-Trichlorophenol to the Midge Paratanytarsus parthenogeneticus (Diptera: Chironomidae)	Aquat.Toxicol. 51(1):31-44	2000
240	Fluoranthene	Tallaperla maria	Stonefly	Insects/Spiders	MOR	MORT	4	d	135	FW	Horne, J.D., and B.R. Oblad	Aquatic Toxicity Studies of Six Priority Pollutants	Rep.No.4380, NUS Corp., Houston Environ.Center, Houston, TX:99 p./ Appendix A, J.D.Horne, M.A.Swirsky, T.A.Hollister, B.R.Oblad, and J.H.Kennedy (Eds.), Acute Toxicity Studies of Five Priority Pollutants, NUS Corp.Rep.No.4398, Houston, TX :47 p.	1983
241	Benz[a]anthracene	Chlorella fusca ssp. vacuolata	Green Algae	Algae, Moss, Fungi	POP	PGRT	1	d	137.0	FW	Altenburger, R., H. Walter, and M. Grote	What Contributes to the Combined Effect of a Complex Mixture?	Environ. Sci. Technol.38(23): 6353-6362	2004

Appendix D-9, Table 10. ECOTOX effects values for PAHs in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
242	Fluoranthene	Physa heterostropha	Pond Snail, Pneumonate Snail	Molluscs	MOR	MORT	4	d	137	FW	Horne, J.D., and B.R. Oblad	Aquatic Toxicity Studies of Six Priority Pollutants	Rep.No.4380, NUS Corp., Houston Environ.Center, Houston, TX:99 p./ Appendix A, J.D.Horne, M.A.Swirsky, T.A.Hollister, B.R.Oblad, and J.H.Kennedy (Eds.), Acute Toxicity Studies of Five Priority Pollutants, NUS Corp.Rep.No.4398, Houston, TX :47 p.	1983
243	Fluoranthene	Stylaria lacustris	Oligochaete	Worms	MOR	MORT	10	d	137	FW	Suedel, B.C.Jr.	Toxicity of Fluoranthene to Daphnia magna, Hyalella azteca, Chironomus tentans, and Stylaria lacustris in Water-Only and Whole Sediment Exposures	Bull.Environ.Contam.Toxicol. 57(1):132-138	1996
244	Acenaphthene	Paratanytarsus sp.	Chironomid	Insects/Spiders	MOR	MORT	2	d	140	FW	Lemke, A.E., and R.L. Anderson	Insect Interlaboratory Toxicity Test Comparison Study for the Chironomid (Paratanytarsus sp.) Procedure	EPA-600/3-84-054, U.S.EPA, Duluth, MN :15 p. (NTIS/PB84-180025)	1984
245	Pyrene	Rana pipiens	Leopard Frog	Amphibians	MOR	SURV	1	d	140	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
246	Fluoranthene	Lumbriculus variegatus	Oligochaete, Worm	Worms	MOR	MORT	4	d	148	FW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
247	Acenaphthene	Paratanytarsus parthenogeneticus	Midge	Insects/Spiders	REP	PROG	20	d	150	FW	Meier, P.G., K. Choi, and L.I. Sweet	Acute and Chronic Life Cycle Toxicity of Acenaphthene and 2,4,6-Trichlorophenol to the Midge Paratanytarsus parthenogeneticus (Diptera: Chironomidae)	Aquat.Toxicol. 51(1):31-44	2000
248	Anthracene	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	MOR	SURV	0.02	d	150	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
249	Anthracene	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	MOR	SURV	0.04	d	150	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
250	Anthracene	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	MOR	MORT	0.04	d	150	FW	Kagan, J., E.D. Kagan, I.A. Kagan, P.A. Kagan, and S. Quigley	The Phototoxicity of Non-Carcinogenic Polycyclic Aromatic Hydrocarbons in Aquatic Organisms	Chemosphere 14(11/12):1829-1834	1985
251	Fluoranthene	Lemna minor	Duckweed	Flowers, Trees, Shrubs, Ferns	GRO	GGRO	4	d	159	FW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch. Environ. Contam. Toxicol.37(4): 496-502	1999
252	Acenaphthene	Tanytarsus dissimilis	Midge	Insects/Spiders	DVP	MATR	NR	ma	164	FW	Lemke, A.E.	Round Robin Testing of the Midge (Tanytarsus): Acute and Chronic Toxicity Tests of 2,4,6-Trichlorophenol and Acenaphthene	Final Rep., Contract No.68-03-3081, U.S.EPA, Duluth, MN :66 p.	1982
253	Fluoranthene	Lemna minor	Duckweed	Flowers, Trees, Shrubs, Ferns	GRO	GGRO	4	d	166	FW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch. Environ. Contam. Toxicol.37(4): 496-502	1999
254	Fluoranthene	Ophiogomphus sp.	Dragonfly	Insects/Spiders	MOR	MORT	4	d	178	FW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
255	Fluoranthene	Physella virgata	Snail	Molluscs	MOR	MORT	4	d	178	FW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
256	Fluoranthene	Lumbriculus variegatus	Oligochaete, Worm	Worms	MOR	MORT	4	d	178	FW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
257	Phenanthrene	Micropterus salmoides	Largemouth Bass	Fish	MOR	MORT	7	d	180	FW	Black, J.A., W.J. Birge, A.G. Westerman, and P.C. Francis	Comparative Aquatic Toxicology of Aromatic Hydrocarbons	Fundam.Appl.Toxicol. 3(9/10):353-358 (OECDG Data File)	1983
258	Phenanthrene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	POP	GPOP	2	d	180	FW	Halling-Sorensen, B., N. Nyholm, and A. Baun	Algal Toxicity Tests with Volatile and Hazardous Compounds in Air-Tight Test Flasks with CO2 Enriched Headspace	Chemosphere32(8): 1513-1526	1996
259	Fluoranthene	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	4	d	187	FW	Birge, W.J., J.A. Black, S.T. Ballard, and W.E. McDonnell	Acute Toxicity Testing with Freshwater Fish	In: J.D.Horne, M.A.Sirsky, T.A.Hollister, B.R.Oblad, and J.H.Kennedy (Eds.), Aquatic Toxicity Studies of Five Priority Pollutants, Rep.No.4398, NUS Corp, Houston, TX :47 p.	1982
260	Fluoranthene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	1	d	190	FW	Sepic, E., M. Bricelj, and H. Leskovsek	Toxicity of Fluoranthene and Its Biodegradation Metabolites to Aquatic Organisms	Chemosphere 52(7):1125-1133	2003

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
261	Fluoranthene	Physa heterostropha	Pond Snail, Pneumonate Snail	Molluscs	MOR	MORT	4	d	190	FW	Horne, J.D., and B.R. Oblad	Aquatic Toxicity Studies of Six Priority Pollutants	Rep.No.4380, NUS Corp., Houston Environ.Center, Houston, TX:99 p./ Appendix A, J.D.Horne, M.A.Swirsky, T.A.Hollister, B.R.Oblad, and J.H.Kennedy (Eds.), Acute Toxicity Studies of Five Priority Pollutants, NUS Corp.Rep.No.4398, Houston, TX :47 p.	1983
262	Fluoranthene	Scenedesmus subspicatus	Green Algae	Algae, Moss, Fungi	POP	PGRT	7	d	192	FW	Sepic, E., M. Bricelj, and H. Leskovsek	Toxicity of Fluoranthene and Its Biodegradation Metabolites to Aquatic Organisms	Chemosphere52(7): 1125-1133	2003
263	Fluoranthene	Scenedesmus subspicatus	Green Algae	Algae, Moss, Fungi	POP	PGRT	7	d	192	FW	Sepic, E., M. Bricelj, and H. Leskovsek	Toxicity of Fluoranthene and Its Biodegradation Metabolites to Aquatic Organisms	Chemosphere52(7): 1125-1133	2003
264	Fluoranthene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	1	d	196	FW	Wernersson, A.S., and G. Dave	Phototoxicity Identification by Solid Phase Extraction and Photoinduced Toxicity to Daphnia magna	Arch.Environ.Contam.Toxicol. 32(3):268-273	1997
265	Phenanthrene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	2	d	198.91	FW	Verrhiest, G., B. Clement, and G. Blake	Single and Combined Effects of Sediment-Associated PAHs on Three Species of Freshwater Macroinvertebrates	Ecotoxicology 10(6):363-372	2001
266	Acenaphthene	Paratanytarsus parthenogeneticus	Midge	Insects/Spiders	MOR	HTCH	20	d	200	FW	Meier, P.G., K. Choi, and L.I. Sweet	Acute and Chronic Life Cycle Toxicity of Acenaphthene and 2,4,6-Trichlorophenol to the Midge Paratanytarsus parthenogeneticus (Diptera: Chironomidae)	Aquat.Toxicol. 51(1):31-44	2000
267	Anthracene	Algae	Algae	Algae, Moss, Fungi	PHY	PSII	0.06	d	200	FW	Marwood, C.A., R.E.H. Smith, K.R. Solomon, M.N. Charlton, and B.M. Greenberg	Intact and Photomodified Polycyclic Aromatic Hydrocarbons Inhibit Photosynthesis in Natural Assemblages of Lake Erie Phytoplankton Exposed to Solar Radiation	Ecotoxicol. Environ. Saf.44(3): 322-327	1999
268	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	GRO	NLEF	8	d	200	FW	Huang, X.D., D.G. Dixon, and B.M. Greenberg	Increased Polycyclic Aromatic Hydrocarbon Toxicity Following Their Photomodification in Natural Sunlight: Impacts on the Duckweed Lemna gibba L. G-3	Ecotoxicol. Environ. Saf.32(2): 194-200	1995
269	Pyrene	Pimephales promelas	Fathead Minnow	Fish	MOR	SURV	1	d	200	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
270	Anthracene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	1	d	211	FW	Munoz, M.J., and J.V. Tarazona	Synergistic Effect of Two- and Four-Component Combinations of the Polycyclic Aromatic Hydrocarbons: Phenanthrene, Anthracene, Naphthalene and Acenaphthene on Daphnia magna	Bull.Environ.Contam.Toxicol. 50(3):363-368	1993
271	9H-Fluorene	Daphnia pulex	Water Flea	Crustaceans	ITX	IMBL	2	d	212	FW	Smith, S.B., J.F. Savino, and M.A. Blouin	Acute Toxicity to Daphnia pulex of Six Classes of Chemical Compounds Potentially Hazardous to Great Lakes Aquatic Biota	J.Great Lakes Res.14(4):394-404 / Aquat.Sci.Fish.Abstr. 17(2):139	1988
272	Fluoranthene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	4	d	212	FW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
273	Fluoranthene	Stylaria lacustris	Oligochaete	Worms	MOR	MORT	2	d	220	FW	Suedel, B.C.Jr.	Toxicity of Fluoranthene to Daphnia magna, Hyalella azteca, Chironomus tentans, and Stylaria lacustris in Water-Only and Whole Sediment Exposures	Bull.Environ.Contam.Toxicol. 57(1):132-138	1996
274	Fluoranthene	Scenedesmus subspicatus	Green Algae	Algae, Moss, Fungi	POP	BMAS	7	d	229	FW	Sepic, E., M. Bricelj, and H. Leskovsek	Toxicity of Fluoranthene and Its Biodegradation Metabolites to Aquatic Organisms	Chemosphere52(7): 1125-1133	2003
275	Phenanthrene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	2	d	230	FW	Brooke, L.T.	Conducting Toxicity Tests with Freshwater Organisms Exposed to Dieldrin, Fluoranthene and Phenanthrene	U.S.EPA Contract No.68-C1-0034, Work Assignment No.5, to R.L.Spehar, U.S.EPA, Duluth, MN :18 p.	1993
276	Phenanthrene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	4	d	234	FW	Call, D.J., L.T. Brooke, S.L. Harting, S.H. Poirier, and D.J. McCauley	Toxicity of Phenanthrene to Several Freshwater Species	Rep.to Battelle Memorial Res.Inst., Columbus, OH, in Partial Fulfillment of Work Assignment No.45, Task Order No.4 of Subcontract No.F4114(8834)-411 :15 p.	1986
277	Acenaphthene	Tallaperla maria	Stonefly	Insects/Spiders	MOR	MORT	4	d	240	FW	Horne, J.D., M.A. Swirsky, T.A. Hollister, B.R. Oblad, and J.H. Kennedy	5Aquatic Toxicity Studies of Five Priority Pollutants	Rep.No.4398, Final Report, EPA Contract No.68-01-6201, NUS Corp., Houston, TX :196 p.	1983
278	Naphthalene	Micropterus salmoides	Largemouth Bass	Fish	MOR	MORT	3	d	240	FW	Black, J.A., W.J. Birge, A.G. Westerman, and P.C. Francis	Comparative Aquatic Toxicology of Aromatic Hydrocarbons	Fundam.Appl.Toxicol. 3(9/10):353-358 (OECDG Data File)	1983
279	Phenanthrene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	1	d	244.2	FW	Traczewska, T.M.	Changes of Toxicological Properties of Biodegradation Products of Anthracene and Phenanthrene	Water Sci.Technol. 41(12):31-38	2000

Appendix D-9, Table 10. ECOTOX effects values for PAHs in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
280	Phenanthrene	Micropterus salmoides	Largemouth Bass	Fish	MOR	MORT	7	d	250	FW	Millemann, R.E., W.J. Birge, J.A. Black, R.M. Cushman, K.L. Daniels, P.J. Franco, J.M. Giddings, J.F. McCarthy, and A.J.	Comparative Acute Toxicity to Aquatic Organisms of Components of Coal-Derived Synthetic Fuels	Trans.Am.Fish.Soc. 113(1):74-85	1984
281	9H-Fluorene	Lepomis macrochirus	Bluegill	Fish	FDB	PRBE	30	d	250	FW	Finger, S.E., E.F. Little, M.G. Henry, J.F. Fairchild, and T.P. Boyle	Comparison of Laboratory and Field Assessment of Fluorene - Part 1: Effects of Fluorene on the Survival, Growth, Reproduction, and Behavior of Aquatic Organisms in Laboratory Tests	In: T.P.Boyle (Ed.), Validation and Predictability of Laboratory Methods for Assessing the Fate and Effects of Contaminants in Aquatic Ecosystems, 1st Symposium, ASTM STP 865, Philadelphia, PA :120-133	1985
282	9H-Fluorene	Lepomis macrochirus	Bluegill	Fish	GRO	GGRO	30	d	250	FW	Finger, S.E., E.F. Little, M.G. Henry, J.F. Fairchild, and T.P. Boyle	Comparison of Laboratory and Field Assessment of Fluorene - Part 1: Effects of Fluorene on the Survival, Growth, Reproduction, and Behavior of Aquatic Organisms in Laboratory Tests	In: T.P.Boyle (Ed.), Validation and Predictability of Laboratory Methods for Assessing the Fate and Effects of Contaminants in Aquatic Ecosystems, 1st Symposium, ASTM STP 865, Philadelphia, PA :120-133	1985
283	Anthracene	Scenedesmus acutus var. acutus	Green Algae	Algae, Moss, Fungi	ENZ	SODA	0.5	d	250	FW	Zbigniew, T., and P. Wojciech	Individual and Combined Effect of Anthracene, Cadmium, and Chloridazone on Growth and Activity of SOD Izoformes in Three Scenedesmus Species	Ecotoxicol. Environ. Saf.65(3): 323-331	2006
284	Anthracene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	POP	NCHG	1	d	250	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
285	Anthracene	Scenedesmus microspina	Green Algae	Algae, Moss, Fungi	ENZ	SODA	1	d	250	FW	Zbigniew, T., and P. Wojciech	Individual and Combined Effect of Anthracene, Cadmium, and Chloridazone on Growth and Activity of SOD Izoformes in Three Scenedesmus Species	Ecotoxicol. Environ. Saf.65(3): 323-331	2006
286	Anthracene	Scenedesmus subspicatus	Green Algae	Algae, Moss, Fungi	ENZ	SODA	0.5	d	250	FW	Zbigniew, T., and P. Wojciech	Individual and Combined Effect of Anthracene, Cadmium, and Chloridazone on Growth and Activity of SOD Izoformes in Three Scenedesmus Species	Ecotoxicol. Environ. Saf.65(3): 323-331	2006
287	Fluoranthene	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	3	d	250	FW	Birge, W.J., J.A. Black, S.T. Ballard, and W.E. McDonnell	Acute Toxicity Testing with Freshwater Fish	In: J.D.Horne, M.A.Sirsky, T.A.Hollister, B.R.Oblad, and J.H.Kennedy (Eds.), Aquatic Toxicity Studies of Five Priority Pollutants, Rep.No.4398, NUS Corp, Houston, TX :47 p.	1982
288	Fluoranthene	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	3	d	250	FW	Birge, W.J., J.A. Black, S.T. Ballard, and W.E. McDonnell	Acute Toxicity Testing with Freshwater Fish	In: J.D.Horne, M.A.Sirsky, T.A.Hollister, B.R.Oblad, and J.H.Kennedy (Eds.), Aquatic Toxicity Studies of Five Priority Pollutants, Rep.No.4398, NUS Corp, Houston, TX :47 p.	1982
289	Fluoranthene	Chironomus tentans	Midge	Insects/Spiders	MOR	MORT	2	d	250	FW	Suedel, B.C.Jr.	Toxicity of Fluoranthene to Daphnia magna, Hyalella azteca, Chironomus tentans, and Stylaria lacustris in Water-Only and Whole Sediment Exposures	Bull.Environ.Contam.Toxicol. 57(1):132-138	1996
290	Anthracene	Aedes taeniorhynchus	Mosquito	Insects/Spiders	MOR	MORT	1	d	260	FW	Borovsky, D., J.R. Linley, and J. Kagan	Polycyclic Aromatic Compounds as Phototoxic Mosquito Larvicides	J.Am.Mosq.Control Assoc. 3(2):246-250	1987
291	Phenanthrene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	2	d	272.64	FW	Verrhiest, G., B. Clement, and G. Blake	Single and Combined Effects of Sediment-Associated PAHs on Three Species of Freshwater Macroinvertebrates	Ecotoxicology 10(6):363-372	2001
292	Acenaphthene	Tanytarsus dissimilis	Midge	Insects/Spiders	MOR	HTCH	NR	ht	295	FW	Lemke, A.E.	Round Robin Testing of the Midge (Tanytarsus): Acute and Chronic Toxicity Tests of 2,4,6-Trichlorophenol and Acenaphthene	Final Rep., Contract No.68-03-3081, U.S.EPA, Duluth, MN :66 p.	1982
293	Acenaphthene	Tanytarsus dissimilis	Midge	Insects/Spiders	REP	GREP	14	d	295	FW	Lemke, A.E.	Round Robin Testing of the Midge (Tanytarsus): Acute and Chronic Toxicity Tests of 2,4,6-Trichlorophenol and Acenaphthene	Final Rep., Contract No.68-03-3081, U.S.EPA, Duluth, MN :66 p.	1982
294	Phenanthrene	Chironomus tentans	Midge	Insects/Spiders	MOR	MORT	28	d	300	FW	Lamy-Enrici, M.H., A. Dondeyne, and E. Thybaud	Influence of the Organic Matter on the Bioavailability of Phenanthrene for Benthic Organisms	Aquat.Ecosyst.Health Manag. 6(4):391-396	2003
295	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	POP	PGRT	7	d	300	FW	Mallakin, A., B.J. McConkey, G. Miao, B. McKibben, V. Snieckus, D.G. Dixon, and B.M. Greenberg	Impact of Structural Photomodification on the Toxicity of Environmental Contaminants: Anthracene Photooxidation Products	Ecotoxicol. Environ. Saf.43(2): 204-212	1999
296	Phenanthrene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	1	d	302	FW	Brooke, L.T.	Acute Phenanthrene Toxicity to Daphnia magna	U.S.EPA Contract No.68-C1-0034, Work Assignment No.2-14, to R.L.Spehar, U.S.EPA, Duluth, MN :11 p.	1994

Appendix D-9, Table 10. ECOTOX effects values for PAHs in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
297	Phenanthrene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	POP	GPOP	2	d	302	FW	Halling-Sorensen, B., N. Nyholm, and A. Baun	Algal Toxicity Tests with Volatile and Hazardous Compounds in Air-Tight Test Flasks with CO2 Enriched Headspace	Chemosphere32(8): 1513-1526	1996
298	Anthracene	Algae	Algae	Algae, Moss, Fungi	PHY	PSII	0.02	d	314	FW	Marwood, C.A., R.E.H. Smith, M.N. Charlton, K.R. Solomon, and B.M. Greenberg	Photoinduced Toxicity to Lake Erie Phytoplankton Assemblages from Intact and Photomodified Polycyclic Aromatic Hydrocarbons	J. Great Lakes Res.29(4): 558-565	2003
299	Acenaphthene	Tanytarsus dissimilis	Midge	Insects/Spiders	MOR	SURV	9	d	315	FW	Lemke, A.E.	Round Robin Testing of the Midge (Tanytarsus): Acute and Chronic Toxicity Tests of 2,4,6-Trichlorophenol and Acenaphthene	Final Rep., Contract No.68-03-3081, U.S.EPA, Duluth, MN :66 p.	1982
300	Acenaphthene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	POP	CHLA	2	d	322	FW	U.S.Environmental Protection Agency	In-Depth Studies on Health and Environmental Impacts of Selected Water Pollutants	U.S.EPA Contract No.68-01-4646, Duluth, MN: 9 p.	1978
301	Phenanthrene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	POP	GPOP	3	d	324	FW	Halling-Sorensen, B., N. Nyholm, and A. Baun	Algal Toxicity Tests with Volatile and Hazardous Compounds in Air-Tight Test Flasks with CO2 Enriched Headspace	Chemosphere32(8): 1513-1526	1996
302	Phenanthrene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	POP	GPOP	3	d	333	FW	Halling-Sorensen, B., N. Nyholm, and A. Baun	Algal Toxicity Tests with Volatile and Hazardous Compounds in Air-Tight Test Flasks with CO2 Enriched Headspace	Chemosphere32(8): 1513-1526	1996
303	Phenanthrene	Daphnia pulex	Water Flea	Crustaceans	ITX	IMBL	2	d	350	FW	Smith, S.B., J.F. Savino, and M.A. Blouin	Acute Toxicity to Daphnia pulex of Six Classes of Chemical Compounds Potentially Hazardous to Great Lakes Aquatic Biota	J.Great Lakes Res.14(4):394-404 / Aquat.Sci.Fish.Abstr. 17(2):139	1988
304	Anthracene	Algae	Algae	Algae, Moss, Fungi	PHY	PSII	0.02	d	357	FW	Marwood, C.A., R.E.H. Smith, M.N. Charlton, K.R. Solomon, and B.M. Greenberg	Photoinduced Toxicity to Lake Erie Phytoplankton Assemblages from Intact and Photomodified Polycyclic Aromatic Hydrocarbons	J. Great Lakes Res.29(4): 558-565	2003
305	Naphthalene	Spirostomum ambiguum	Protozoa	Invertebrates	DVP	DFRM	2	d	364.0	FW	Nalecz-Jawecki, G., and J. Sawicki	Spirotox - A new Tool for Testing the Toxicity of Volatile Compounds	Chemosphere 38(14):3211-3218	1999
306	Phenanthrene	Oncorhynchus mykiss	Rainbow Trout	Fish	PHY	GPHY	4	d	375	FW	Call, D.J., L.T. Brooke, S.L. Harting, S.H. Poirier, and D.J. McCauley	Toxicity of Phenanthrene to Several Freshwater Species	Rep.to Battelle Memorial Res.Inst., Columbus, OH, in Partial Fulfillment of Work Assignment No.45, Task Order No.4 of Subcontract No.F4114(8834)-411 :15 p.	1986
307	Naphthalene	Spirostomum ambiguum	Protozoa	Invertebrates	DVP	DFRM	1	d	375.5	FW	Nalecz-Jawecki, G., and J. Sawicki	Spirotox - A new Tool for Testing the Toxicity of Volatile Compounds	Chemosphere 38(14):3211-3218	1999
308	Phenanthrene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	2	d	383	FW	Munoz, M.J., and J.V. Tarazona	Synergistic Effect of Two- and Four-Component Combinations of the Polycyclic Aromatic Hydrocarbons: Phenanthrene, Anthracene, Naphthalene and Acenaphthene on Daphnia magna	Bull.Environ.Contam.Toxicol. 50(3):363-368	1993
309	Naphthalene	Anguilla anguilla	Common Eel	Fish	ENZ	EROD	2	d	384.51	FW	Teles, M., M. Pacheco, and M.A. Santos	Anguilla anguilla L. Liver Ethoxyresorufin O-Deethylation, Glutathione S-Transferase, Erythrocytic Nuclear Abnormalities, and Endocrine Responses to Naphthalene and beta-Naphthoflavone	Ecotoxicol.Environ.Saf. 55(1):98-107	2003
310	Naphthalene	Spirostomum ambiguum	Protozoa	Invertebrates	MOR	MORT	2	d	401.2	FW	Nalecz-Jawecki, G., and J. Sawicki	Spirotox - A new Tool for Testing the Toxicity of Volatile Compounds	Chemosphere 38(14):3211-3218	1999
311	Phenanthrene	Gammarus pseudolimnaeus	Scud	Crustaceans	PHY	GPHY	4	d	412	FW	Call, D.J., L.T. Brooke, S.L. Harting, S.H. Poirier, and D.J. McCauley	Toxicity of Phenanthrene to Several Freshwater Species	Rep.to Battelle Memorial Res.Inst., Columbus, OH, in Partial Fulfillment of Work Assignment No.45, Task Order No.4 of Subcontract No.F4114(8834)-411 :15 p.	1986
312	Phenanthrene	Lumbriculus variegatus	Oligochaete, Worm	Worms	PHY	GPHY	4	d	419	FW	Call, D.J., L.T. Brooke, S.L. Harting, S.H. Poirier, and D.J. McCauley	Toxicity of Phenanthrene to Several Freshwater Species	Rep.to Battelle Memorial Res.Inst., Columbus, OH, in Partial Fulfillment of Work Assignment No.45, Task Order No.4 of Subcontract No.F4114(8834)-411 :15 p.	1986
313	9H-Fluorene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	2	d	430	FW	Finger, S.E., E.F. Little, M.G. Henry, J.F. Fairchild, and T.P. Boyle	Comparison of Laboratory and Field Assessment of Fluorene - Part 1: Effects of Fluorene on the Survival, Growth, Reproduction, and Behavior of Aquatic Organisms in Laboratory Tests	In: T.P.Boyle (Ed.), Validation and Predictability of Laboratory Methods for Assessing the Fate and Effects of Contaminants in Aquatic Ecosystems, 1st Symposium, ASTM STP 865, Philadelphia, PA :120-133	1985
314	Phenanthrene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	0.5	d	437	FW	Brooke, L.T.	Acute Phenanthrene Toxicity to Daphnia magna	U.S.EPA Contract No.68-C1-0034, Work Assignment No.2-14, to R.L.Spehar, U.S.EPA, Duluth, MN :11 p.	1994

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
315	Naphthalene	Spirostomum ambiguum	Protozoa	Invertebrates	MOR	MORT	1	d	437.1	FW	Nalecz-Jawecki, G., and J. Sawicki	Spirotox - A new Tool for Testing the Toxicity of Volatile Compounds	Chemosphere 38(14):3211-3218	1999
316	Phenanthrene	Daphnia magna	Water Flea	Crustaceans	MOR	SURV	0.08	d	450	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
317	Acenaphthene	Gammarus minus	Scud	Crustaceans	MOR	MORT	4	d	460	FW	Horne, J.D., M.A. Swirsky, T.A. Hollister, B.R. Oblad, and J.H. Kennedy	5Aquatic Toxicity Studies of Five Priority Pollutants	Rep.No.4398, Final Report, EPA Contract No.68-01-6201, NUS Corp., Houston, TX :196 p.	1983
318	Phenanthrene	Gammarus minus	Scud	Crustaceans	MOR	MORT	2	d	460	FW	Millemann, R.E., W.J. Birge, J.A. Black, R.M. Cushman, K.L. Daniels, P.J. Franco, J.M. Giddings, J.F. McCarthy, and A.J.	Comparative Acute Toxicity to Aquatic Organisms of Components of Coal-Derived Synthetic Fuels	Trans.Am.Fish.Soc. 113(1):74-85	1984
319	Acenaphthene	Paratanytarsus sp.	Chironomid	Insects/Spiders	MOR	MORT	2	d	470	FW	Lemke, A.E., and R.L. Anderson	Insect Interlaboratory Toxicity Test Comparison Study for the Chironomid (Paratanytarsus sp.) Procedure	EPA-600/3-84-054, U.S.EPA, Duluth, MN :15 p. (NTIS/PB84-180025)	1984
320	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	GRO	NLEF	8	d	470	FW	Huang, X.D., D.G. Dixon, and B.M. Greenberg	Increased Polycyclic Aromatic Hydrocarbon Toxicity Following Their Photomodification in Natural Sunlight: Impacts on the Duckweed Lemna gibba L. G-3	Ecotoxicol. Environ. Saf.32(2): 194-200	1995
321	Phenanthrene	Chironomus tentans	Midge	Insects/Spiders	MOR	MORT	2	d	490	FW	Millemann, R.E., W.J. Birge, J.A. Black, R.M. Cushman, K.L. Daniels, P.J. Franco, J.M. Giddings, J.F. McCarthy, and A.J.	Comparative Acute Toxicity to Aquatic Organisms of Components of Coal-Derived Synthetic Fuels	Trans.Am.Fish.Soc. 113(1):74-85	1984
322	Phenanthrene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	0.33	d	491	FW	Brooke, L.T.	Acute Phenanthrene Toxicity to Daphnia magna	U.S.EPA Contract No.68-C1-0034, Work Assignment No.2-14, to R.L.Spehar, U.S.EPA, Duluth, MN :11 p.	1994
323	Dibenz(a,h)anthracene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	1	d	496	FW	Wernersson, A.S., and G. Dave	Phototoxicity Identification by Solid Phase Extraction and Photoinduced Toxicity to Daphnia magna	Arch.Environ.Contam.Toxicol. 32(3):268-273	1997
324	Anthracene	Chlorella fusca ssp. vacuolata	Green Algae	Algae, Moss, Fungi	POP	PGRT	1	d	499.0	FW	Altenburger, R., H. Walter, and M. Grote	What Contributes to the Combined Effect of a Complex Mixture?	Environ. Sci. Technol.38(23): 6353-6362	2004
325	Phenanthrene	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	MOR	SURV	0.02	d	500	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
326	Phenanthrene	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	MOR	SURV	0.04	d	500	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
327	9H-Fluorene	Lepomis macrochirus	Bluegill	Fish	MOR	SURV	30	d	500	FW	Finger, S.E., E.F. Little, M.G. Henry, J.F. Fairchild, and T.P. Boyle	Comparison of Laboratory and Field Assessment of Fluorene - Part 1: Effects of Fluorene on the Survival, Growth, Reproduction, and Behavior of Aquatic Organisms in Laboratory Tests	In: T.P.Boyle (Ed.), Validation and Predictability of Laboratory Methods for Assessing the Fate and Effects of Contaminants in Aquatic Ecosystems, 1st Symposium, ASTM STP 865, Philadelphia, PA :120-133	1985
328	Naphthalene	Carassius auratus	Goldfish	Fish	BCM	PRCO	1	d	500	FW	Shi, H., Y. Sui, X. Wang, Y. Luo, and L. Ji	Hydroxyl Radical Production and Oxidative Damage Induced by Cadmium and Naphthalene in Liver of Carassius auratus	Comp.Biochem.Physiol.C 140(1):115-121	2005
329	Naphthalene	Carassius auratus	Goldfish	Fish	ENZ	CTLS	1	d	500	FW	Shi, H., Y. Sui, X. Wang, Y. Luo, and L. Ji	Hydroxyl Radical Production and Oxidative Damage Induced by Cadmium and Naphthalene in Liver of Carassius auratus	Comp.Biochem.Physiol.C 140(1):115-121	2005
330	Naphthalene	Carassius auratus	Goldfish	Fish	PHY	LDPX	1	d	500	FW	Shi, H., Y. Sui, X. Wang, Y. Luo, and L. Ji	Hydroxyl Radical Production and Oxidative Damage Induced by Cadmium and Naphthalene in Liver of Carassius auratus	Comp.Biochem.Physiol.C 140(1):115-121	2005
331	Anthracene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	ENZ	SODA	1	d	500	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
332	Anthracene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	ENZ	SODA	1	d	500	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
333	Anthracene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	ENZ	SODA	1	d	500	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
334	Anthracene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	ENZ	SODA	1	d	500	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
335	Anthracene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	ENZ	SODA	1	d	500	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
336	Anthracene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	ENZ	SODA	1	d	500	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
337	Anthracene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	ENZ	SODA	1	d	500	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
338	Anthracene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	PHY	PSYN	1	d	500	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
339	Anthracene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	PHY	PSYN	1	d	500	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
340	Anthracene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	PHY	PSYN	1	d	500	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
341	Anthracene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	PHY	PSYN	1	d	500	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
342	Anthracene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	PHY	PSYN	1	d	500	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
343	Anthracene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	PHY	PSYN	1	d	500	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
344	Anthracene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	PHY	PSYN	1	d	500	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
345	Anthracene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	POP	NCHG	1	d	500	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
346	Anthracene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	POP	NCHG	1	d	500	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004

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347	Anthracene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	POP	NCHG	1	d	500	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
348	Anthracene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	POP	NCHG	1	d	500	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
349	Anthracene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	POP	NCHG	1	d	500	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
350	Anthracene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	POP	NCHG	1	d	500	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
351	Anthracene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	POP	NCHG	1	d	500	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
352	Anthracene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	POP	NCHG	1	d	500	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
353	Anthracene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	POP	NCHG	1	d	500	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
354	Anthracene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	POP	NCHG	1	d	500	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
355	Fluoranthene	Pimephales promelas	Fathead Minnow	Fish	MOR	SURV	0.10	d	500	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
356	Naphthalene	Micropterus salmoides	Largemouth Bass	Fish	MOR	MORT	7	d	510	FW	Black, J.A., W.J. Birge, A.G. Westerman, and P.C. Francis	Comparative Aquatic Toxicology of Aromatic Hydrocarbons	Fundam.Appl.Toxicol. 3(9/10):353-358 (OECDG Data File)	1983
357	Acenaphthene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	POP	ABND	4	d	520	FW	U.S.Environmental Protection Agency	In-Depth Studies on Health and Environmental Impacts of Selected Water Pollutants	U.S.EPA Contract No.68-01-4646, Duluth, MN: 9 p.	1978
358	Acenaphthene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	POP	CHLA	4	d	530	FW	U.S.Environmental Protection Agency	In-Depth Studies on Health and Environmental Impacts of Selected Water Pollutants	U.S.EPA Contract No.68-01-4646, Duluth, MN: 9 p.	1978
359	Benzo(a)pyrene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	GRO	NLEF	8	d	560	FW	Huang, X.D., D.G. Dixon, and B.M. Greenberg	Increased Polycyclic Aromatic Hydrocarbon Toxicity Following Their Photomodification in Natural Sunlight: Impacts on the Duckweed Lemna gibba L. G-3	Ecotoxicol. Environ. Saf.32(2): 194-200	1995
360	Acenaphthene	Tanytarsus dissimilis	Midge	Insects/Spiders	DVP	MATR	NR	ma	575	FW	Lemke, A.E.	Round Robin Testing of the Midge (Tanytarsus): Acute and Chronic Toxicity Tests of 2,4,6-Trichlorophenol and Acenaphthene	Final Rep., Contract No.68-03-3081, U.S.EPA, Duluth, MN :66 p.	1982
361	Acenaphthene	Tanytarsus dissimilis	Midge	Insects/Spiders	GRO	GGRO	10	d	575	FW	Lemke, A.E.	Round Robin Testing of the Midge (Tanytarsus): Acute and Chronic Toxicity Tests of 2,4,6-Trichlorophenol and Acenaphthene	Final Rep., Contract No.68-03-3081, U.S.EPA, Duluth, MN :66 p.	1982
362	Acenaphthene	Tanytarsus dissimilis	Midge	Insects/Spiders	MOR	SURV	10	d	575	FW	Lemke, A.E.	Round Robin Testing of the Midge (Tanytarsus): Acute and Chronic Toxicity Tests of 2,4,6-Trichlorophenol and Acenaphthene	Final Rep., Contract No.68-03-3081, U.S.EPA, Duluth, MN :66 p.	1982
363	Acenaphthene	Salmo trutta	Brown Trout	Fish	MOR	MORT	4	d	580	FW	Holcombe, G.W., G.L. Phipps, and J.T. Fiandt	Toxicity of Selected Priority Pollutants to Various Aquatic Organisms	Ecotoxicol.Environ.Saf. 7(4):400-409 (OECDG Data File)	1983
364	Acenaphthene	Salmo trutta	Brown Trout	Fish	MOR	MORT	3	d	600	FW	Holcombe, G.W., G.L. Phipps, and J.T. Fiandt	Toxicity of Selected Priority Pollutants to Various Aquatic Organisms	Ecotoxicol.Environ.Saf. 7(4):400-409 (OECDG Data File)	1983

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365	9H-Fluorene	Gammarus pseudolimnaeus	Scud	Crustaceans	MOR	MORT	4	d	600	FW	Finger, S.E., E.F. Little, M.G. Henry, J.F. Fairchild, and T.P. Boyle	Comparison of Laboratory and Field Assessment of Fluorene - Part 1: Effects of Fluorene on the Survival, Growth, Reproduction, and Behavior of Aquatic Organisms in Laboratory Tests	In: T.P.Boyle (Ed.), Validation and Predictability of Laboratory Methods for Assessing the Fate and Effects of Contaminants in Aquatic Ecosystems, 1st Symposium, ASTM STP 865, Philadelphia, PA :120-133	1985
366	9H-Fluorene	Chironomus riparius	Midge	Insects/Spiders	DVP	EMRG	30	d	600	FW	Finger, S.E., E.F. Little, M.G. Henry, J.F. Fairchild, and T.P. Boyle	Comparison of Laboratory and Field Assessment of Fluorene - Part 1: Effects of Fluorene on the Survival, Growth, Reproduction, and Behavior of Aquatic Organisms in Laboratory Tests	In: T.P.Boyle (Ed.), Validation and Predictability of Laboratory Methods for Assessing the Fate and Effects of Contaminants in Aquatic Ecosystems, 1st Symposium, ASTM STP 865, Philadelphia, PA :120-133	1985
367	Phenanthrene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	2	d	604.38	FW	Verrhiest, G., B. Clement, and G. Blake	Single and Combined Effects of Sediment-Associated PAHs on Three Species of Freshwater Macroinvertebrates	Ecotoxicology 10(6):363-372	2001
368	Acenaphthene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	4	d	608	FW	Cairns, M.A., and A.V. Nebeker	Toxicity of Acenaphthene and Isophorone to Early Stages of Fathead Minnows	Arch.Environ.Contam.Toxicol. 11(6):703-707	1982
369	Acenaphthene	Salmo trutta	Brown Trout	Fish	MOR	MORT	2	d	650	FW	Holcombe, G.W., G.L. Phipps, and J.T. Fiandt	Toxicity of Selected Priority Pollutants to Various Aquatic Organisms	Ecotoxicol.Environ.Saf. 7(4):400-409 (OECDG Data File)	1983
370	Phenanthrene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	POP	GPOP	2	d	663	FW	Halling-Sorensen, B., N. Nyholm, and A. Baun	Algal Toxicity Tests with Volatile and Hazardous Compounds in Air-Tight Test Flasks with CO2 Enriched Headspace	Chemosphere32(8): 1513-1526	1996
371	Acenaphthene	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	4	d	670	FW	Holcombe, G.W., G.L. Phipps, and J.T. Fiandt	Toxicity of Selected Priority Pollutants to Various Aquatic Organisms	Ecotoxicol.Environ.Saf. 7(4):400-409 (OECDG Data File)	1983
372	Acenaphthene	Tanytarsus dissimilis	Midge	Insects/Spiders	GRO	GGRO	5	d	676	FW	Lemke, A.E.	Round Robin Testing of the Midge (Tanytarsus): Acute and Chronic Toxicity Tests of 2,4,6-Trichlorophenol and Acenaphthene	Final Rep., Contract No.68-03-3081, U.S.EPA, Duluth, MN :66 p.	1982
373	Acenaphthene	Tanytarsus dissimilis	Midge	Insects/Spiders	MOR	HTCH	NR	ht	676	FW	Lemke, A.E.	Round Robin Testing of the Midge (Tanytarsus): Acute and Chronic Toxicity Tests of 2,4,6-Trichlorophenol and Acenaphthene	Final Rep., Contract No.68-03-3081, U.S.EPA, Duluth, MN :66 p.	1982
374	Acenaphthene	Tanytarsus dissimilis	Midge	Insects/Spiders	REP	GREP	14	d	676	FW	Lemke, A.E.	Round Robin Testing of the Midge (Tanytarsus): Acute and Chronic Toxicity Tests of 2,4,6-Trichlorophenol and Acenaphthene	Final Rep., Contract No.68-03-3081, U.S.EPA, Duluth, MN :66 p.	1982
375	Phenanthrene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	1	d	678.41	FW	Verrhiest, G., B. Clement, and G. Blake	Single and Combined Effects of Sediment-Associated PAHs on Three Species of Freshwater Macroinvertebrates	Ecotoxicology 10(6):363-372	2001
376	Naphthalene	Micropterus salmoides	Largemouth Bass	Fish	MOR	MORT	7	d	680	FW	Millemann, R.E., W.J. Birge, J.A. Black, R.M. Cushman, K.L. Daniels, P.J. Franco, J.M. Giddings, J.F. McCarthy, and A.J.	Comparative Acute Toxicity to Aquatic Organisms of Components of Coal-Derived Synthetic Fuels	Trans.Am.Fish.Soc. 113(1):74-85	1984
377	Phenanthrene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	2	d	700	FW	Millemann, R.E., W.J. Birge, J.A. Black, R.M. Cushman, K.L. Daniels, P.J. Franco, J.M. Giddings, J.F. McCarthy, and A.J.	Comparative Acute Toxicity to Aquatic Organisms of Components of Coal-Derived Synthetic Fuels	Trans.Am.Fish.Soc. 113(1):74-85	1984
378	Phenanthrene	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	NR	d	700	FW	Passino-Reader, D.R., W.H. Berlin, and J.P. Hickey	Chronic Bioassays of Rainbow Trout Fry with Compounds Representative of Contaminants in Great Lakes Fish	J.Gt.Lakes Res. 21(3):373-383	1995
379	Phenanthrene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	GRO	NLEF	8	d	710	FW	Huang, X.D., D.G. Dixon, and B.M. Greenberg	Increased Polycyclic Aromatic Hydrocarbon Toxicity Following Their Photomodification in Natural Sunlight: Impacts on the Duckweed Lemna gibba L. G-3	Ecotoxicol. Environ. Saf.32(2): 194-200	1995
380	Phenanthrene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	POP	PGRT	2	d	720	FW	Baun, A., S.N. Sorensen, R.F. Rasmussen, N.B. Hartmann, and C.B. Koch	Toxicity and Bioaccumulation of Xenobiotic Organic Compounds in the Presence of Aqueous Suspensions of Aggregates of Nano-C60	Aquat. Toxicol.86(3): 379-387	2008
381	Phenanthrene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	2.08	d	725.02	FW	Verrhiest, G., B. Clement, and G. Blake	Single and Combined Effects of Sediment-Associated PAHs on Three Species of Freshwater Macroinvertebrates	Ecotoxicology 10(6):363-372	2001
382	Phenanthrene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	2	d	730.67	FW	Verrhiest, G., B. Clement, and G. Blake	Single and Combined Effects of Sediment-Associated PAHs on Three Species of Freshwater Macroinvertebrates	Ecotoxicology 10(6):363-372	2001
383	Phenanthrene	Daphnia pulex	Water Flea	Crustaceans	ITX	IMBL	2	d	734	FW	Passino, D.R.M., and S.B. Smith	Acute Bioassays and Hazard Evaluation of Representative Contaminants Detected in Great Lakes Fish	Environ.Toxicol.Chem. 6(11):901-907	1987
384	Anthracene	Daphnia pulex	Water Flea	Crustaceans	ITX	IMBL	2	d	754	FW	Smith, S.B., J.F. Savino, and M.A. Blouin	Acute Toxicity to Daphnia pulex of Six Classes of Chemical Compounds Potentially Hazardous to Great Lakes Aquatic Biota	J.Great Lakes Res.14(4):394-404 / Aquat.Sci.Fish.Abstr. 17(2):139	1988
385	Fluoranthene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	0.83	d	780	FW	Wernersson, A.S., and G. Dave	Effects of Different Protective Agents on the Phototoxicity of Fluoranthene to Daphnia magna	Comp.Biochem.Physiol.C 120(3):373-381	1998

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386	Acenaphthene	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	3	d	800	FW	Holcombe, G.W., G.L. Phipps, and J.T. Fiandt	Toxicity of Selected Priority Pollutants to Various Aquatic Organisms	Ecotoxicol.Environ.Saf. 7(4):400-409 (OECDG Data File)	1983
387	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	POP	PGRT	7	d	800	FW	Mallakin, A., B.J. McConkey, G. Miao, B. McKibben, V. Snieckus, D.G. Dixon, and B.M. Greenberg	Impact of Structural Photomodification on the Toxicity of Environmental Contaminants: Anthracene Photooxidation Products	Ecotoxicol. Environ. Saf.43(2): 204-212	1999
388	9H-Fluorene	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	4	d	820	FW	Finger, S.E., E.F. Little, M.G. Henry, J.F. Fairchild, and T.P. Boyle	Comparison of Laboratory and Field Assessment of Fluorene - Part 1: Effects of Fluorene on the Survival, Growth, Reproduction, and Behavior of Aquatic Organisms in Laboratory Tests	In: T.P.Boyle (Ed.), Validation and Predictability of Laboratory Methods for Assessing the Fate and Effects of Contaminants in Aquatic Ecosystems, 1st Symposium, ASTM STP 865, Philadelphia, PA :120-133	1985
389	Acenaphthene	Salmo trutta	Brown Trout	Fish	MOR	MORT	1	d	840	FW	Holcombe, G.W., G.L. Phipps, and J.T. Fiandt	Toxicity of Selected Priority Pollutants to Various Aquatic Organisms	Ecotoxicol.Environ.Saf. 7(4):400-409 (OECDG Data File)	1983
390	Phenanthrene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	2	d	843	FW	Eastmond, D.A., G.M. Booth, and M.L. Lee	Toxicity, Accumulation, and Elimination of Polycyclic Aromatic Sulfur Heterocycles in Daphnia magna	Arch.Environ.Contam.Toxicol. 13(1):105-111	1984
391	Phenanthrene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	1	d	853.74	FW	Verrhiest, G., B. Clement, and G. Blake	Single and Combined Effects of Sediment-Associated PAHs on Three Species of Freshwater Macroinvertebrates	Ecotoxicology 10(6):363-372	2001
392	Phenanthrene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	1	d	861	FW	Munoz, M.J., and J.V. Tarazona	Synergistic Effect of Two- and Four-Component Combinations of the Polycyclic Aromatic Hydrocarbons: Phenanthrene, Anthracene, Naphthalene and Acenaphthene on Daphnia magna	Bull.Environ.Contam.Toxicol. 50(3):363-368	1993
393	Phenanthrene	Nitzschia palea	Diatom	Algae, Moss, Fungi	PHY	PSYN	0.17	d	870	FW	Millemann, R.E., W.J. Birge, J.A. Black, R.M. Cushman, K.L. Daniels, P.J. Franco, J.M. Giddings, J.F. McCarthy, and A.J.	Comparative Acute Toxicity to Aquatic Organisms of Components of Coal-Derived Synthetic Fuels	Trans. Am. Fish. Soc.113(1): 74-85	1984
394	9H-Fluorene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	4	d	910	FW	Finger, S.E., E.F. Little, M.G. Henry, J.F. Fairchild, and T.P. Boyle	Comparison of Laboratory and Field Assessment of Fluorene - Part 1: Effects of Fluorene on the Survival, Growth, Reproduction, and Behavior of Aquatic Organisms in Laboratory Tests	In: T.P.Boyle (Ed.), Validation and Predictability of Laboratory Methods for Assessing the Fate and Effects of Contaminants in Aquatic Ecosystems, 1st Symposium, ASTM STP 865, Philadelphia, PA :120-133	1985
395	Fluoranthene	Daphnia magna	Water Flea	Crustaceans	MOR	SURV	1.5	d	920	FW	Burton, G.A.Jr., and J.F. Nordstrom	An In Situ Toxicity Identification Evaluation Method Part I: Laboratory Validation	Environ.Toxicol.Chem. 23(12):2844-2850	2004
396	Phenanthrene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	PHY	PSYN	0.17	d	940	FW	Millemann, R.E., W.J. Birge, J.A. Black, R.M. Cushman, K.L. Daniels, P.J. Franco, J.M. Giddings, J.F. McCarthy, and A.J.	Comparative Acute Toxicity to Aquatic Organisms of Components of Coal-Derived Synthetic Fuels	Trans. Am. Fish. Soc.113(1): 74-85	1984
397	Benzo(a)pyrene	Chironomus riparius	Midge	Insects/Spiders	GEN	GEXP	1	d	1000	FW	Ha, M.H., and J. Choi	Effects of Environmental Contaminants on Hemoglobin of Larvae of Aquatic Midge, Chironomus riparius (Diptera: Chironomidae): A Potential Biomarker for Ecotoxicity Monitoring	Chemosphere 71(10):1928-1936	2008
398	Benzo(a)pyrene	Chironomus riparius	Midge	Insects/Spiders	GEN	GEXP	1	d	1000	FW	Ha, M.H., and J. Choi	Effects of Environmental Contaminants on Hemoglobin of Larvae of Aquatic Midge, Chironomus riparius (Diptera: Chironomidae): A Potential Biomarker for Ecotoxicity Monitoring	Chemosphere 71(10):1928-1936	2008
399	Phenanthrene	Daphnia magna	Water Flea	Crustaceans	MOR	SURV	0.06	d	1000	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
400	9H-Fluorene	Lepomis macrochirus	Bluegill	Fish	BEH	LOCO	30	d	1000	FW	Finger, S.E., E.F. Little, M.G. Henry, J.F. Fairchild, and T.P. Boyle	Comparison of Laboratory and Field Assessment of Fluorene - Part 1: Effects of Fluorene on the Survival, Growth, Reproduction, and Behavior of Aquatic Organisms in Laboratory Tests	In: T.P.Boyle (Ed.), Validation and Predictability of Laboratory Methods for Assessing the Fate and Effects of Contaminants in Aquatic Ecosystems, 1st Symposium, ASTM STP 865, Philadelphia, PA :120-133	1985

Appendix D-9, Table 10. ECOTOX effects values for PAHs in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
401	9H-Fluorene	Lepomis macrochirus	Bluegill	Fish	FDB	FTIM	30	d	1000	FW	Finger, S.E., E.F. Little, M.G. Henry, J.F. Fairchild, and T.P. Boyle	Comparison of Laboratory and Field Assessment of Fluorene - Part 1: Effects of Fluorene on the Survival, Growth, Reproduction, and Behavior of Aquatic Organisms in Laboratory Tests	In: T.P.Boyle (Ed.), Validation and Predictability of Laboratory Methods for Assessing the Fate and Effects of Contaminants in Aquatic Ecosystems, 1st Symposium, ASTM STP 865, Philadelphia, PA :120-133	1985
402	9H-Fluorene	Lepomis macrochirus	Bluegill	Fish	FDB	PRBE	30	d	1000	FW	Finger, S.E., E.F. Little, M.G. Henry, J.F. Fairchild, and T.P. Boyle	Comparison of Laboratory and Field Assessment of Fluorene - Part 1: Effects of Fluorene on the Survival, Growth, Reproduction, and Behavior of Aquatic Organisms in Laboratory Tests	In: T.P.Boyle (Ed.), Validation and Predictability of Laboratory Methods for Assessing the Fate and Effects of Contaminants in Aquatic Ecosystems, 1st Symposium, ASTM STP 865, Philadelphia, PA :120-133	1985
403	Naphthalene	Daphnia pulex	Water Flea	Crustaceans	MOR	MORT	4	d	1000	FW	Trucco, R.G., F.R. Engelhardt, and B. Stacey	Toxicity, Accumulation and Clearance of Aromatic Hydrocarbons in Daphnia pulex	Environ.Pollut.Ser.A 31(3):191-202	1983
404	Pyrene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	1	d	1000	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
405	Pyrene	Chlorella vulgaris	Green Algae	Algae, Moss, Fungi	ENZ	GLRE	4	d	1000	FW	Lei, A., Z. Hu, Y. Wong, and N.F. Tam	Antioxidant Responses of Microalgal Species to Pyrene	J. Appl. Phycol.18(1): 67-78	2006
406	Pyrene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	BCM	GLTH	1	d	1000	FW	Lei, A., Z. Hu, Y. Wong, and N.F. Tam	Antioxidant Responses of Microalgal Species to Pyrene	J. Appl. Phycol.18(1): 67-78	2006
407	Pyrene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	ENZ	GSTR	1	d	1000	FW	Lei, A., Z. Hu, Y. Wong, and N.F. Tam	Antioxidant Responses of Microalgal Species to Pyrene	J. Appl. Phycol.18(1): 67-78	2006
408	Pyrene	Scenedesmus quadricauda	Green Algae	Algae, Moss, Fungi	BCM	GLTH	4	d	1000	FW	Lei, A., Z. Hu, Y. Wong, and N.F. Tam	Antioxidant Responses of Microalgal Species to Pyrene	J. Appl. Phycol.18(1): 67-78	2006
409	Pyrene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	GRO	NLEF	8	d	1000	FW	Huang, X.D., D.G. Dixon, and B.M. Greenberg	Increased Polycyclic Aromatic Hydrocarbon Toxicity Following Their Photomodification in Natural Sunlight: Impacts on the Duckweed Lemna gibba L. G-3	Ecotoxicol. Environ. Saf.32(2): 194-200	1995
410	Fluoranthene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	0.10	d	1000	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
411	Fluoranthene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	GRO	NLEF	8	d	1000	FW	Huang, X.D., D.G. Dixon, and B.M. Greenberg	Increased Polycyclic Aromatic Hydrocarbon Toxicity Following Their Photomodification in Natural Sunlight: Impacts on the Duckweed Lemna gibba L. G-3	Ecotoxicol. Environ. Saf.32(2): 194-200	1995
412	Fluoranthene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	GRO	NLEF	8	d	1000	FW	Huang, X.D., D.G. Dixon, and B.M. Greenberg	Increased Polycyclic Aromatic Hydrocarbon Toxicity Following Their Photomodification in Natural Sunlight: Impacts on the Duckweed Lemna gibba L. G-3	Ecotoxicol. Environ. Saf.32(2): 194-200	1995
413	Pyrene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	1	d	1024	FW	Wernersson, A.S., and G. Dave	Phototoxicity Identification by Solid Phase Extraction and Photoinduced Toxicity to Daphnia magna	Arch.Environ.Contam.Toxicol. 32(3):268-273	1997
414	Benz[e]acephenanthrylene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	1	d	1024	FW	Wernersson, A.S., and G. Dave	Phototoxicity Identification by Solid Phase Extraction and Photoinduced Toxicity to Daphnia magna	Arch.Environ.Contam.Toxicol. 32(3):268-273	1997
415	Anthracene	Scenedesmus subspicatus	Green Algae	Algae, Moss, Fungi	POP	PGRT	7	d	1040	FW	Djomo, J.E., A. Dauta, V. Ferrier, J.F. Narbonne, A. Monkiedje, T. Njine, and P. Garrigues	Toxic Effects of Some Major Polyaromatic Hydrocarbons Found in Crude Oil and Aquatic Sediments on Scenedesmus subspicatus	Water Res.38(7): 1817-1821	2004
416	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	GRO	NLEF	8	d	1100	FW	Huang, X.D., D.G. Dixon, and B.M. Greenberg	Increased Polycyclic Aromatic Hydrocarbon Toxicity Following Their Photomodification in Natural Sunlight: Impacts on the Duckweed Lemna gibba L. G-3	Ecotoxicol. Environ. Saf.32(2): 194-200	1995
417	Acenaphthene	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	2	d	1130	FW	Holcombe, G.W., G.L. Phipps, and J.T. Fiandt	Toxicity of Selected Priority Pollutants to Various Aquatic Organisms	Ecotoxicol.Environ.Saf. 7(4):400-409 (OECDG Data File)	1983
418	Naphthalene	Anguilla anguilla	Common Eel	Fish	ENZ	EROD	0.25	d	1153.53	FW	Teles, M., M. Pacheco, and M.A. Santos	Anguilla anguilla L. Liver Ethoxyresorufin O-Deethylation, Glutathione S-Transferase, Erythrocytic Nuclear Abnormalities, and Endocrine Responses to Naphthalene and beta-Naphthoflavone	Ecotoxicol.Environ.Saf. 55(1):98-107	2003
419	Naphthalene	Anguilla anguilla	Common Eel	Fish	ENZ	P450	0.67	d	1153.53	FW	Teles, M., M. Pacheco, and M.A. Santos	Anguilla anguilla L. Liver Ethoxyresorufin O-Deethylation, Glutathione S-Transferase, Erythrocytic Nuclear Abnormalities, and Endocrine Responses to Naphthalene and beta-Naphthoflavone	Ecotoxicol.Environ.Saf. 55(1):98-107	2003

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
420	Naphthalene	Anguilla anguilla	Common Eel	Fish	ENZ	EROD	0.08	d	1153.53	FW	Teles, M., M. Pacheco, and M.A. Santos	Anguilla anguilla L. Liver Ethoxyresorufin O-Deethylation, Glutathione S-Transferase, Erythrocytic Nuclear Abnormalities, and Endocrine Responses to Naphthalene and beta-Naphthoflavone	Ecotoxicol.Environ.Saf. 55(1):98-107	2003
421	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	BCM	FLRS	0.25	d	1200	FW	Mallakin, A., T.S. Babu, D.G. Dixon, and B.M. Greenberg	Sites of Toxicity of Specific Photooxidation Products of Anthracene to Higher Plants: Inhibition of Photosynthetic Activity and Electron Transport in Lemna gibba L. G-3 (Duckweed)	Environ. Toxicol.17(5): 462-471	2002
422	Phenanthrene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	POP	GPOP	2	d	1228	FW	Halling-Sorensen, B., N. Nyholm, and A. Baun	Algal Toxicity Tests with Volatile and Hazardous Compounds in Air-Tight Test Flasks with CO2 Enriched Headspace	Chemosphere32(8): 1513-1526	1996
423	Acenaphthene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	2	d	1275	FW	Munoz, M.J., and J.V. Tarazona	Synergistic Effect of Two- and Four-Component Combinations of the Polycyclic Aromatic Hydrocarbons: Phenanthrene, Anthracene, Naphthalene and Acenaphthene on Daphnia magna	Bull.Environ.Contam.Toxicol. 50(3):363-368	1993
424	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	POP	PGRT	7	d	1300	FW	Mallakin, A., B.J. McConkey, G. Miao, B. McKibben, V. Snieckus, D.G. Dixon, and B.M. Greenberg	Impact of Structural Photomodification on the Toxicity of Environmental Contaminants: Anthracene Photooxidation Products	Ecotoxicol. Environ. Saf.43(2): 204-212	1999
425	Phenanthrene	Lemna minor	Duckweed	Flowers, Trees, Shrubs, Ferns	POP	ABND	7	d	1350	FW	Becker, A.M., S. Heise, and W. Ahlf	Effects of Phenanthrene on Lemna minor in a Sediment-Water System and the Impacts of UVB	Ecotoxicology11(5): 343-348	2002
426	Acenaphthene	Tanytarsus dissimilis	Midge	Insects/Spiders	MOR	MORT	2	d	1360	FW	Lemke, A.E.	Round Robin Testing of the Midge (Tanytarsus): Acute and Chronic Toxicity Tests of 2,4,6-Trichlorophenol and Acenaphthene	Final Rep., Contract No.68-03-3081, U.S.EPA, Duluth, MN :66 p.	1982
427	Acenaphthene	Tanytarsus dissimilis	Midge	Insects/Spiders	MOR	MORT	2	d	1370	FW	Lemke, A.E.	Round Robin Testing of the Midge (Tanytarsus): Acute and Chronic Toxicity Tests of 2,4,6-Trichlorophenol and Acenaphthene	Final Rep., Contract No.68-03-3081, U.S.EPA, Duluth, MN :66 p.	1982
428	Naphthalene	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	MOR	MORT	2	d	1500	FW	Stickle, W.B., T.D. Sabourin, and S.D. Rice	Sensitivity and Osmoregulation of Coho Salmon, Oncorhynchus kisutch, Exposed to Toluene and Naphthalene at Different Salinities	In: W.B.Vernberg, A.Calabrese, F.P.Thurnberg, and F.J.Vernberg (Eds.), Physiological Mechanisms of Marine Pollutant Toxicity, Academic Press, Inc., NY :331-348	1982
429	Naphthalene	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	BCM	KCON	0.25	d	1500	FW	Stickle, W.B., T.D. Sabourin, and S.D. Rice	Sensitivity and Osmoregulation of Coho Salmon, Oncorhynchus kisutch, Exposed to Toluene and Naphthalene at Different Salinities	In: W.B.Vernberg, A.Calabrese, F.P.Thurnberg, and F.J.Vernberg (Eds.), Physiological Mechanisms of Marine Pollutant Toxicity, Academic Press, Inc., NY :331-348	1982
430	Naphthalene	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	PHY	OSMO	0.5	d	1500	FW	Stickle, W.B., T.D. Sabourin, and S.D. Rice	Sensitivity and Osmoregulation of Coho Salmon, Oncorhynchus kisutch, Exposed to Toluene and Naphthalene at Different Salinities	In: W.B.Vernberg, A.Calabrese, F.P.Thurnberg, and F.J.Vernberg (Eds.), Physiological Mechanisms of Marine Pollutant Toxicity, Academic Press, Inc., NY :331-348	1982
431	Acenaphthene	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	1	d	1570	FW	Holcombe, G.W., G.L. Phipps, and J.T. Fiandt	Toxicity of Selected Priority Pollutants to Various Aquatic Organisms	Ecotoxicol.Environ.Saf. 7(4):400-409 (OECDG Data File)	1983
432	Acenaphthene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	4	d	1600	FW	Holcombe, G.W., G.L. Phipps, and J.T. Fiandt	Toxicity of Selected Priority Pollutants to Various Aquatic Organisms	Ecotoxicol.Environ.Saf. 7(4):400-409 (OECDG Data File)	1983
433	Naphthalene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	2	d	1600	FW	MacLean, M.M., and K.G. Doe	The Comparative Toxicity of Crude and Refined Oils to Daphnia magna and Artemia	Environment Canada, EE-111, Dartmouth, Nova Scotia :64 p.	1989
434	Naphthalene	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	4	d	1600	FW	DeGraeve, G.M., R.G. Elder, D.C. Woods, and H.L. Bergman	Effects of Naphthalene and Benzene on Fathead Minnows and Rainbow Trout	Arch.Environ.Contam.Toxicol. 11(4):487-490	1982
435	Acenaphthene	Paratanytarsus sp.	Chironomid	Insects/Spiders	MOR	MORT	2	d	1620	FW	Lemke, A.E., and R.L. Anderson	Insect Interlaboratory Toxicity Test Comparison Study for the Chironomid (Paratanytarsus sp.) Procedure	EPA-600/3-84-054, U.S.EPA, Duluth, MN :15 p. (NTIS/PB84-180025)	1984
436	Acenaphthene	Paratanytarsus sp.	Chironomid	Insects/Spiders	MOR	MORT	2	d	1650	FW	Lemke, A.E., and R.L. Anderson	Insect Interlaboratory Toxicity Test Comparison Study for the Chironomid (Paratanytarsus sp.) Procedure	EPA-600/3-84-054, U.S.EPA, Duluth, MN :15 p. (NTIS/PB84-180025)	1984
437	Acenaphthene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	4	d	1700	FW	Buccafusco, R.J., S.J. Ells, and G.A. LeBlanc	Acute Toxicity of Priority Pollutants to Bluegill (Lepomis macrochirus)	Bull.Environ.Contam.Toxicol. 26(4):446-452 (OECDG Data File)	1981
438	Acenaphthene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	3	d	1700	FW	Holcombe, G.W., G.L. Phipps, and J.T. Fiandt	Toxicity of Selected Priority Pollutants to Various Aquatic Organisms	Ecotoxicol.Environ.Saf. 7(4):400-409 (OECDG Data File)	1983
439	Naphthalene	Xenopus laevis	African Clawed Frog	Amphibians	BEH	LOCO	0.25	d	1700	FW	Edmisten, G.E., and J.A. Bantle	Use of Xenopus laevis Larvae in 96-Hour, Flow-Through Toxicity Tests with Naphthalene	Bull.Environ.Contam.Toxicol. 29:392-399	1982

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
440	Chrysene	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	MOR	SURV	0.04	d	1700	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
441	Acenaphthene	Ictalurus punctatus	Channel Catfish	Fish	MOR	MORT	4	d	1720	FW	Holcombe, G.W., G.L. Phipps, and J.T. Fiandt	Toxicity of Selected Priority Pollutants to Various Aquatic Organisms	Ecotoxicol.Environ.Saf. 7(4):400-409 (OECDG Data File)	1983
442	Acenaphthene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	4	d	1730	FW	Geiger, D.L., C.E. Northcott, D.J. Call, and L.T. Brooke	Acute Toxicities of Organic Chemicals to Fathead Minnows (Pimephales promelas), Vol. 2	Ctr.for Lake Superior Environ.Stud., Univ.of Wisconsin-Superior, Superior, WI :326 p.	1985
443	Acenaphthene	Paratanytarsus parthenogeneticus	Midge	Insects/Spiders	MOR	MORT	2	d	1800	FW	Meier, P.G., K. Choi, and L.I. Sweet	Acute and Chronic Life Cycle Toxicity of Acenaphthene and 2,4,6-Trichlorophenol to the Midge Paratanytarsus parthenogeneticus (Diptera: Chironomidae)	Aquat.Toxicol. 51(1):31-44	2000
444	Naphthalene	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	4	d	1800	FW	Edsall, C.C.	Acute Toxicities to Larval Rainbow Trout of Representative Compounds Detected in Great Lakes Fish	Bull.Environ.Contam.Toxicol. 46(2):173-178	1991
445	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	PHY	PSII	0.25	d	1800	FW	Mallakin, A., T.S. Babu, D.G. Dixon, and B.M. Greenberg	Sites of Toxicity of Specific Photooxidation Products of Anthracene to Higher Plants: Inhibition of Photosynthetic Activity and Electron Transport in Lemna gibba L. G-3 (Duckweed)	Environ. Toxicol.17(5): 462-471	2002
446	Chrysene	Daphnia magna	Water Flea	Crustaceans	MOR	SURV	0.08	d	1900	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
447	Naphthalene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	2	d	1960	FW	Bio Dynamics Incorporated	Acute Toxicity of Naphthalene to Daphnia in a Flow-Through System	EPA/OTS Doc.#86-870000911 :20 p. (NTIS/OTS 0515349)	1987
448	Naphthalene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	4	d	1990	FW	Millemann, R.E., W.J. Birge, J.A. Black, R.M. Cushman, K.L. Daniels, P.J. Franco, J.M. Giddings, J.F. McCarthy, and A.J.	Comparative Acute Toxicity to Aquatic Organisms of Components of Coal-Derived Synthetic Fuels	Trans.Am.Fish.Soc. 113(1):74-85	1984
449	Acenaphthene	Paratanytarsus sp.	Chironomid	Insects/Spiders	MOR	MORT	2	d	2000	FW	Lemke, A.E., and R.L. Anderson	Insect Interlaboratory Toxicity Test Comparison Study for the Chironomid (Paratanytarsus sp.) Procedure	EPA-600/3-84-054, U.S.EPA, Duluth, MN :15 p. (NTIS/PB84-180025)	1984
450	Acenaphthene	Tanytarsus dissimilis	Midge	Insects/Spiders	MOR	MORT	2	d	2000	FW	Lemke, A.E.	Round Robin Testing of the Midge (Tanytarsus): Acute and Chronic Toxicity Tests of 2,4,6-Trichlorophenol and Acenaphthene	Final Rep., Contract No.68-03-3081, U.S.EPA, Duluth, MN :66 p.	1982
451	Phenanthrene	Algae	Algae	Algae, Moss, Fungi	PHY	PSII	0.02	d	2000	FW	Marwood, C.A., R.E.H. Smith, M.N. Charlton, K.R. Solomon, and B.M. Greenberg	Photoinduced Toxicity to Lake Erie Phytoplankton Assemblages from Intact and Photomodified Polycyclic Aromatic Hydrocarbons	J. Great Lakes Res.29(4): 558-565	2003
452	Phenanthrene	Algae	Algae	Algae, Moss, Fungi	PHY	PSII	0.06	d	2000	FW	Marwood, C.A., R.E.H. Smith, M.N. Charlton, K.R. Solomon, and B.M. Greenberg	Photoinduced Toxicity to Lake Erie Phytoplankton Assemblages from Intact and Photomodified Polycyclic Aromatic Hydrocarbons	J. Great Lakes Res.29(4): 558-565	2003
453	Anthracene	Rana pipiens	Leopard Frog	Amphibians	MOR	MORT	0.21	d	2000	FW	Kagan, J., P.A. Kagan, and H.E. Buhse Jr.	Light-Dependent Toxicity of alpha-Terthienyl and Anthracene Toward Late Embryonic Stages of Rana pipiens	J.Chem.Ecol. 10(7):1115-1122	1984
454	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	BCM	FLRS	0.08	d	2000	FW	Huang, X.D., T.S. Babu, C.A. Marwood, R.W. Gensemer, K.R. Solomon, and B.M. Greenberg	Inhibition of Photosynthesis as an Endpoint for the Photoinduced Toxicity of Intact and Photomodified PAHs	In: F.J.Dwyer, T.R.Doane, and M.L.Hinman (Eds.), Environmental Toxicology and Risk Assessment: Modeling and Risk Assessment, 6th Volume, ASTM STP 1317, Philadelphia, PA: 443-454	1997
455	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	BCM	CHLO	0.17	d	2000	FW	Huang, X.D., B.J. McConkey, T.S. Babu, and B.M. Greenberg	Mechanisms of Photoinduced Toxicity of Photomodified Anthracene to Plants: Inhibition of Photosynthesis in the Aquatic Higher Plant Lemna gibba	Environ. Toxicol. Chem.16(8): 1707-1715	1997
456	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	BCM	CHLO	1	d	2000	FW	Gensemer, R.W., D.G. Dixon, and B.M. Greenberg	Using Chlorophyll a Fluorescence to Detect the Onset of Anthracene Photoinduced Toxicity in Lemna gibba, and the Mitigating Effects of a Commercial Humic Acid	Limnol. Oceanogr.44(3, Pt. 2): 878-888	1999
457	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	BCM	FLRS	0.04	d	2000	FW	Gensemer, R.W., D.G. Dixon, and B.M. Greenberg	Using Chlorophyll a Fluorescence to Detect the Onset of Anthracene Photoinduced Toxicity in Lemna gibba, and the Mitigating Effects of a Commercial Humic Acid	Limnol. Oceanogr.44(3, Pt. 2): 878-888	1999
458	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	BCM	FLRS	0.04	d	2000	FW	Gensemer, R.W., D.G. Dixon, and B.M. Greenberg	Using Chlorophyll a Fluorescence to Detect the Onset of Anthracene Photoinduced Toxicity in Lemna gibba, and the Mitigating Effects of a Commercial Humic Acid	Limnol. Oceanogr.44(3, Pt. 2): 878-888	1999

Appendix D-9, Table 10. ECOTOX effects values for PAHs in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
459	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	BCM	FLRS	0.17	d	2000	FW	Gensemer, R.W., D.G. Dixon, and B.M. Greenberg	Using Chlorophyll a Fluorescence to Detect the Onset of Anthracene Photoinduced Toxicity in Lemna gibba, and the Mitigating Effects of a Commercial Humic Acid	Limnol. Oceanogr.44(3, Pt. 2): 878-888	1999
460	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	BCM	FLRS	0.17	d	2000	FW	Gensemer, R.W., D.G. Dixon, and B.M. Greenberg	Using Chlorophyll a Fluorescence to Detect the Onset of Anthracene Photoinduced Toxicity in Lemna gibba, and the Mitigating Effects of a Commercial Humic Acid	Limnol. Oceanogr.44(3, Pt. 2): 878-888	1999
461	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	BCM	FLRS	0.17	d	2000	FW	Gensemer, R.W., D.G. Dixon, and B.M. Greenberg	Using Chlorophyll a Fluorescence to Detect the Onset of Anthracene Photoinduced Toxicity in Lemna gibba, and the Mitigating Effects of a Commercial Humic Acid	Limnol. Oceanogr.44(3, Pt. 2): 878-888	1999
462	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	BCM	FLRS	1	d	2000	FW	Gensemer, R.W., D.G. Dixon, and B.M. Greenberg	Using Chlorophyll a Fluorescence to Detect the Onset of Anthracene Photoinduced Toxicity in Lemna gibba, and the Mitigating Effects of a Commercial Humic Acid	Limnol. Oceanogr.44(3, Pt. 2): 878-888	1999
463	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	BCM	FLRS	1	d	2000	FW	Gensemer, R.W., D.G. Dixon, and B.M. Greenberg	Using Chlorophyll a Fluorescence to Detect the Onset of Anthracene Photoinduced Toxicity in Lemna gibba, and the Mitigating Effects of a Commercial Humic Acid	Limnol. Oceanogr.44(3, Pt. 2): 878-888	1999
464	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	BCM	FLRS	1	d	2000	FW	Gensemer, R.W., D.G. Dixon, and B.M. Greenberg	Using Chlorophyll a Fluorescence to Detect the Onset of Anthracene Photoinduced Toxicity in Lemna gibba, and the Mitigating Effects of a Commercial Humic Acid	Limnol. Oceanogr.44(3, Pt. 2): 878-888	1999
465	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	BCM	FLRS	1	d	2000	FW	Gensemer, R.W., D.G. Dixon, and B.M. Greenberg	Using Chlorophyll a Fluorescence to Detect the Onset of Anthracene Photoinduced Toxicity in Lemna gibba, and the Mitigating Effects of a Commercial Humic Acid	Limnol. Oceanogr.44(3, Pt. 2): 878-888	1999
466	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	BCM	FLRS	2	d	2000	FW	Gensemer, R.W., D.G. Dixon, and B.M. Greenberg	Using Chlorophyll a Fluorescence to Detect the Onset of Anthracene Photoinduced Toxicity in Lemna gibba, and the Mitigating Effects of a Commercial Humic Acid	Limnol. Oceanogr.44(3, Pt. 2): 878-888	1999
467	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	BCM	FLRS	2	d	2000	FW	Gensemer, R.W., D.G. Dixon, and B.M. Greenberg	Using Chlorophyll a Fluorescence to Detect the Onset of Anthracene Photoinduced Toxicity in Lemna gibba, and the Mitigating Effects of a Commercial Humic Acid	Limnol. Oceanogr.44(3, Pt. 2): 878-888	1999
468	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	BCM	FLRS	2	d	2000	FW	Gensemer, R.W., D.G. Dixon, and B.M. Greenberg	Using Chlorophyll a Fluorescence to Detect the Onset of Anthracene Photoinduced Toxicity in Lemna gibba, and the Mitigating Effects of a Commercial Humic Acid	Limnol. Oceanogr.44(3, Pt. 2): 878-888	1999
469	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	BCM	FLRS	2	d	2000	FW	Gensemer, R.W., D.G. Dixon, and B.M. Greenberg	Using Chlorophyll a Fluorescence to Detect the Onset of Anthracene Photoinduced Toxicity in Lemna gibba, and the Mitigating Effects of a Commercial Humic Acid	Limnol. Oceanogr.44(3, Pt. 2): 878-888	1999
470	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	PHY	PSII	0.17	d	2000	FW	Gensemer, R.W., D.G. Dixon, and B.M. Greenberg	Using Chlorophyll a Fluorescence to Detect the Onset of Anthracene Photoinduced Toxicity in Lemna gibba, and the Mitigating Effects of a Commercial Humic Acid	Limnol. Oceanogr.44(3, Pt. 2): 878-888	1999
471	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	PHY	PSII	0.17	d	2000	FW	Gensemer, R.W., D.G. Dixon, and B.M. Greenberg	Using Chlorophyll a Fluorescence to Detect the Onset of Anthracene Photoinduced Toxicity in Lemna gibba, and the Mitigating Effects of a Commercial Humic Acid	Limnol. Oceanogr.44(3, Pt. 2): 878-888	1999
472	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	PHY	PSII	1	d	2000	FW	Gensemer, R.W., D.G. Dixon, and B.M. Greenberg	Using Chlorophyll a Fluorescence to Detect the Onset of Anthracene Photoinduced Toxicity in Lemna gibba, and the Mitigating Effects of a Commercial Humic Acid	Limnol. Oceanogr.44(3, Pt. 2): 878-888	1999
473	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	PHY	PSII	1	d	2000	FW	Gensemer, R.W., D.G. Dixon, and B.M. Greenberg	Using Chlorophyll a Fluorescence to Detect the Onset of Anthracene Photoinduced Toxicity in Lemna gibba, and the Mitigating Effects of a Commercial Humic Acid	Limnol. Oceanogr.44(3, Pt. 2): 878-888	1999
474	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	PHY	PSII	2	d	2000	FW	Gensemer, R.W., D.G. Dixon, and B.M. Greenberg	Using Chlorophyll a Fluorescence to Detect the Onset of Anthracene Photoinduced Toxicity in Lemna gibba, and the Mitigating Effects of a Commercial Humic Acid	Limnol. Oceanogr.44(3, Pt. 2): 878-888	1999
475	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	PHY	PSII	2	d	2000	FW	Gensemer, R.W., D.G. Dixon, and B.M. Greenberg	Using Chlorophyll a Fluorescence to Detect the Onset of Anthracene Photoinduced Toxicity in Lemna gibba, and the Mitigating Effects of a Commercial Humic Acid	Limnol. Oceanogr.44(3, Pt. 2): 878-888	1999
476	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	PHY	PSII	2	d	2000	FW	Gensemer, R.W., D.G. Dixon, and B.M. Greenberg	Using Chlorophyll a Fluorescence to Detect the Onset of Anthracene Photoinduced Toxicity in Lemna gibba, and the Mitigating Effects of a Commercial Humic Acid	Limnol. Oceanogr.44(3, Pt. 2): 878-888	1999
477	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	BCM	CHLO	8	d	2000	FW	Gensemer, R.W., D.G. Dixon, and B.M. Greenberg	Amelioration of the Photo-Induced Toxicity of Polycyclic Aromatic Hydrocarbons by a Commercial Humic Acid	Ecotoxicol. Environ. Saf.39(1): 57-64	1998
478	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	BCM	CHLO	8	d	2000	FW	Gensemer, R.W., D.G. Dixon, and B.M. Greenberg	Amelioration of the Photo-Induced Toxicity of Polycyclic Aromatic Hydrocarbons by a Commercial Humic Acid	Ecotoxicol. Environ. Saf.39(1): 57-64	1998
479	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	POP	PGRT	8	d	2000	FW	Gensemer, R.W., D.G. Dixon, and B.M. Greenberg	Amelioration of the Photo-Induced Toxicity of Polycyclic Aromatic Hydrocarbons by a Commercial Humic Acid	Ecotoxicol. Environ. Saf.39(1): 57-64	1998

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480	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	POP	PGRT	8	d	2000	FW	Gensemer, R.W., D.G. Dixon, and B.M. Greenberg	Amelioration of the Photo-Induced Toxicity of Polycyclic Aromatic Hydrocarbons by a Commercial Humic Acid	Ecotoxicol. Environ. Saf.39(1): 57-64	1998
481	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	POP	PGRT	8	d	2000	FW	Gensemer, R.W., D.G. Dixon, and B.M. Greenberg	Amelioration of the Photo-Induced Toxicity of Polycyclic Aromatic Hydrocarbons by a Commercial Humic Acid	Ecotoxicol. Environ. Saf.39(1): 57-64	1998
482	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	POP	PGRT	8	d	2000	FW	Gensemer, R.W., D.G. Dixon, and B.M. Greenberg	Amelioration of the Photo-Induced Toxicity of Polycyclic Aromatic Hydrocarbons by a Commercial Humic Acid	Ecotoxicol. Environ. Saf.39(1): 57-64	1998
483	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	BCM	CHLO	1	d	2000	FW	Gensemer, R.W., D.G. Dixon, and B.M. Greenberg	Using Chlorophyll a Fluorescence to Detect the Onset of Anthracene Photoinduced Toxicity in Lemna gibba, and the Mitigating Effects of a Commercial Humic Acid	Limnol. Oceanogr.44(3, Pt. 2): 878-888	1999
484	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	PHY	PSII	0.04	d	2000	FW	Gensemer, R.W., D.G. Dixon, and B.M. Greenberg	Using Chlorophyll a Fluorescence to Detect the Onset of Anthracene Photoinduced Toxicity in Lemna gibba, and the Mitigating Effects of a Commercial Humic Acid	Limnol. Oceanogr.44(3, Pt. 2): 878-888	1999
485	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	PHY	PSII	0.04	d	2000	FW	Gensemer, R.W., D.G. Dixon, and B.M. Greenberg	Using Chlorophyll a Fluorescence to Detect the Onset of Anthracene Photoinduced Toxicity in Lemna gibba, and the Mitigating Effects of a Commercial Humic Acid	Limnol. Oceanogr.44(3, Pt. 2): 878-888	1999
486	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	PHY	PSII	0.04	d	2000	FW	Gensemer, R.W., D.G. Dixon, and B.M. Greenberg	Using Chlorophyll a Fluorescence to Detect the Onset of Anthracene Photoinduced Toxicity in Lemna gibba, and the Mitigating Effects of a Commercial Humic Acid	Limnol. Oceanogr.44(3, Pt. 2): 878-888	1999
487	Anthracene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	PHY	PSII	0.04	d	2000	FW	Gensemer, R.W., D.G. Dixon, and B.M. Greenberg	Using Chlorophyll a Fluorescence to Detect the Onset of Anthracene Photoinduced Toxicity in Lemna gibba, and the Mitigating Effects of a Commercial Humic Acid	Limnol. Oceanogr.44(3, Pt. 2): 878-888	1999
488	Acenaphthene	Aplexa hypnorum	Snail	Molluscs	MOR	MORT	4	d	2040	FW	Holcombe, G.W., G.L. Phipps, and J.T. Fiandt	Toxicity of Selected Priority Pollutants to Various Aquatic Organisms	Ecotoxicol.Environ.Saf. 7(4):400-409 (OECDG Data File)	1983
489	Acenaphthene	Paratanytarsus sp.	Chironomid	Insects/Spiders	MOR	MORT	2	d	2090	FW	Lemke, A.E., and R.L. Anderson	Insect Interlaboratory Toxicity Test Comparison Study for the Chironomid (Paratanytarsus sp.) Procedure	EPA-600/3-84-054, U.S.EPA, Duluth, MN :15 p. (NTIS/PB84-180025)	1984
490	Acenaphthene	Tanytarsus dissimilis	Midge	Insects/Spiders	MOR	MORT	2	d	2090	FW	Lemke, A.E.	Round Robin Testing of the Midge (Tanytarsus): Acute and Chronic Toxicity Tests of 2,4,6-Trichlorophenol and Acenaphthene	Final Rep., Contract No.68-03-3081, U.S.EPA, Duluth, MN :66 p.	1982
491	Acenaphthene	Paratanytarsus parthenogeneticus	Midge	Insects/Spiders	MOR	MORT	2	d	2100	FW	Meier, P.G., K. Choi, and L.I. Sweet	Acute and Chronic Life Cycle Toxicity of Acenaphthene and 2,4,6-Trichlorophenol to the Midge Paratanytarsus parthenogeneticus (Diptera: Chironomidae)	Aquat.Toxicol. 51(1):31-44	2000
492	Naphthalene	Xenopus laevis	African Clawed Frog	Amphibians	MOR	MORT	4	d	2100	FW	Edmisten, G.E., and J.A. Bantle	Use of Xenopus laevis Larvae in 96-Hour, Flow-Through Toxicity Tests with Naphthalene	Bull.Environ.Contam.Toxicol. 29:392-399	1982
493	Naphthalene	Xenopus laevis	African Clawed Frog	Amphibians	MOR	MORT	4	d	2100	FW	Edmisten, G.E., and J.A. Bantle	Use of Xenopus laevis Larvae in 96-Hour, Flow-Through Toxicity Tests with Naphthalene	Bull.Environ.Contam.Toxicol. 29:392-399	1982
494	Naphthalene	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	MOR	MORT	4	d	2100	FW	Moles, A., S. Bates, S.D. Rice, and S. Korn	Reduced Growth of Coho Salmon Fry Exposed to Two Petroleum Components, Toluene and Naphthalene, in Fresh Water	Trans.Am.Fish.Soc. 110(3):430-436	1981
495	Fluoranthene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	GRO	NLEF	8	d	2100	FW	Huang, X.D., D.G. Dixon, and B.M. Greenberg	Increased Polycyclic Aromatic Hydrocarbon Toxicity Following Their Photomodification in Natural Sunlight: Impacts on the Duckweed Lemna gibba L. G-3	Ecotoxicol. Environ. Saf.32(2): 194-200	1995
496	Naphthalene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	2	d	2160	FW	Millemann, R.E., W.J. Birge, J.A. Black, R.M. Cushman, K.L. Daniels, P.J. Franco, J.M. Giddings, J.F. McCarthy, and A.J.	Comparative Acute Toxicity to Aquatic Organisms of Components of Coal-Derived Synthetic Fuels	Trans.Am.Fish.Soc. 113(1):74-85	1984
497	Naphthalene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	2	d	2194	FW	Munoz, M.J., and J.V. Tarazona	Synergistic Effect of Two- and Four-Component Combinations of the Polycyclic Aromatic Hydrocarbons: Phenanthrene, Anthracene, Naphthalene and Acenaphthene on Daphnia magna	Bull.Environ.Contam.Toxicol. 50(3):363-368	1993
498	Phenanthrene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	GRO	NLEF	8	d	2200	FW	Huang, X.D., D.G. Dixon, and B.M. Greenberg	Increased Polycyclic Aromatic Hydrocarbon Toxicity Following Their Photomodification in Natural Sunlight: Impacts on the Duckweed Lemna gibba L. G-3	Ecotoxicol. Environ. Saf.32(2): 194-200	1995
499	Naphthalene	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	4	d	2250	FW	Bergman, H.L., and A.D. Anderson	Effects of Aqueous Effluents from In Situ Fossil Fuel Processing Technologies on Aquatic Systems	Contract No.EY-77-C-04-3913, Univ.of Wyoming, Laramie, WY :73 p.	1977
500	Naphthalene	Xenopus laevis	African Clawed Frog	Amphibians	BEH	LOCO	0.25	d	2300	FW	Edmisten, G.E., and J.A. Bantle	Use of Xenopus laevis Larvae in 96-Hour, Flow-Through Toxicity Tests with Naphthalene	Bull.Environ.Contam.Toxicol. 29:392-399	1982
501	Naphthalene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	1	d	2305	FW	Munoz, M.J., and J.V. Tarazona	Synergistic Effect of Two- and Four-Component Combinations of the Polycyclic Aromatic Hydrocarbons: Phenanthrene, Anthracene, Naphthalene and Acenaphthene on Daphnia magna	Bull.Environ.Contam.Toxicol. 50(3):363-368	1993

Appendix D-9, Table 10. ECOTOX effects values for PAHs in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
502	9H-Fluorene	Chironomus riparius	Midge	Insects/Spiders	ITX	IMBL	2	d	2350	FW	Finger, S.E., E.F. Little, M.G. Henry, J.F. Fairchild, and T.P. Boyle	Comparison of Laboratory and Field Assessment of Fluorene - Part 1: Effects of Fluorene on the Survival, Growth, Reproduction, and Behavior of Aquatic Organisms in Laboratory Tests	In: T.P.Boyle (Ed.), Validation and Predictability of Laboratory Methods for Assessing the Fate and Effects of Contaminants in Aquatic Ecosystems, 1st Symposium, ASTM STP 865, Philadelphia, PA :120-133	1985
503	Pyrene	Scenedesmus subspicatus	Green Algae	Algae, Moss, Fungi	POP	PGRT	7	d	2410	FW	Djomo, J.E., A. Dauta, V. Ferrier, J.F. Narbonne, A. Monkiedje, T. Njine, and P. Garrigues	Toxic Effects of Some Major Polyaromatic Hydrocarbons Found in Crude Oil and Aquatic Sediments on Scenedesmus subspicatus	Water Res.38(7): 1817-1821	2004
504	Naphthalene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	2	d	2550	FW	MacLean, M.M., and K.G. Doe	The Comparative Toxicity of Crude and Refined Oils to Daphnia magna and Artemia	Environment Canada, EE-111, Dartmouth, Nova Scotia :64 p.	1989
505	Naphthalene	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	4	d	2600	FW	Edsall, C.C.	Acute Toxicities to Larval Rainbow Trout of Representative Compounds Detected in Great Lakes Fish	Bull.Environ.Contam.Toxicol. 46(2):173-178	1991
506	Fluoranthene	Daphnia magna	Water Flea	Crustaceans	MOR	SURV	1.5	d	2600	FW	Burton, G.A.Jr., and J.F. Nordstrom	An In Situ Toxicity Identification Evaluation Method Part I: Laboratory Validation	Environ.Toxicol.Chem. 23(12):2844-2850	2004
507	9H-Fluorene	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	MOR	SURV	0.02	d	2700	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
508	9H-Fluorene	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	MOR	SURV	0.04	d	2700	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
509	Chrysene	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	MOR	SURV	0.02	d	2700	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
510	Pyrene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	GRO	NLEF	8	d	2800	FW	Huang, X.D., D.G. Dixon, and B.M. Greenberg	Increased Polycyclic Aromatic Hydrocarbon Toxicity Following Their Photomodification in Natural Sunlight: Impacts on the Duckweed Lemna gibba L. G-3	Ecotoxicol. Environ. Saf.32(2): 194-200	1995
511	Naphthalene	Chironomus tentans	Midge	Insects/Spiders	MOR	MORT	2	d	2810	FW	Millemann, R.E., W.J. Birge, J.A. Black, R.M. Cushman, K.L. Daniels, P.J. Franco, J.M. Giddings, J.F. McCarthy, and A.J.	Comparative Acute Toxicity to Aquatic Organisms of Components of Coal-Derived Synthetic Fuels	Trans.Am.Fish.Soc. 113(1):74-85	1984
512	Naphthalene	Nitzschia palea	Diatom	Algae, Moss, Fungi	PHY	PSYN	0.17	d	2820	FW	Millemann, R.E., W.J. Birge, J.A. Black, R.M. Cushman, K.L. Daniels, P.J. Franco, J.M. Giddings, J.F. McCarthy, and A.J.	Comparative Acute Toxicity to Aquatic Organisms of Components of Coal-Derived Synthetic Fuels	Trans. Am. Fish. Soc.113(1): 74-85	1984
513	Acenaphthene	Tanytarsus dissimilis	Midge	Insects/Spiders	MOR	MORT	2	d	2900	FW	Lemke, A.E.	Round Robin Testing of the Midge (Tanytarsus): Acute and Chronic Toxicity Tests of 2,4,6-Trichlorophenol and Acenaphthene	Final Rep., Contract No.68-03-3081, U.S.EPA, Duluth, MN :66 p.	1982
514	Naphthalene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	PHY	PSYN	0.17	d	2960	FW	Millemann, R.E., W.J. Birge, J.A. Black, R.M. Cushman, K.L. Daniels, P.J. Franco, J.M. Giddings, J.F. McCarthy, and A.J.	Comparative Acute Toxicity to Aquatic Organisms of Components of Coal-Derived Synthetic Fuels	Trans. Am. Fish. Soc.113(1): 74-85	1984
515	Phenanthrene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	GRO	NLEF	8	d	3000	FW	Huang, X.D., D.G. Dixon, and B.M. Greenberg	Increased Polycyclic Aromatic Hydrocarbon Toxicity Following Their Photomodification in Natural Sunlight: Impacts on the Duckweed Lemna gibba L. G-3	Ecotoxicol. Environ. Saf.32(2): 194-200	1995
516	9H-Fluorene	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	MOR	SURV	0.04	d	3000	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
517	Pyrene	Aedes aegypti	Yellow Fever Mosquito	Insects/Spiders	MOR	SURV	0.04	d	3000	FW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987

Appendix D-9, Table 10. ECOTOX effects values for PAHs in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
518	Fluoranthene	Chironomus riparius	Midge	Insects/Spiders	MOR	MORT	10	d	3000	FW	Verrhiest, G., B. Clement, and G. Blake	Single and Combined Effects of Sediment-Associated PAHs on Three Species of Freshwater Macroinvertebrates	Ecotoxicology 10(6):363-372	2001
519	Naphthalene	Xenopus laevis	African Clawed Frog	Amphibians	MOR	MORT	4	d	3100	FW	Edmisten, G.E., and J.A. Bantle	Use of Xenopus laevis Larvae in 96-Hour, Flow-Through Toxicity Tests with Naphthalene	Bull.Environ.Contam.Toxicol. 29:392-399	1982
520	Acenaphthene	Tanytarsus dissimilis	Midge	Insects/Spiders	MOR	MORT	2	d	3150	FW	Lemke, A.E.	Round Robin Testing of the Midge (Tanytarsus): Acute and Chronic Toxicity Tests of 2,4,6-Trichlorophenol and Acenaphthene	Final Rep., Contract No.68-03-3081, U.S.EPA, Duluth, MN :66 p.	1982
521	Phenanthrene	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	4	d	3200	FW	Edsall, C.C.	Acute Toxicities to Larval Rainbow Trout of Representative Compounds Detected in Great Lakes Fish	Bull.Environ.Contam.Toxicol. 46(2):173-178	1991
522	Naphthalene	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	MOR	MORT	4	d	3220	FW	Moles, A.	Sensitivity of Parasitized Coho Salmon Fry to Crude Oil, Toluene, and Naphthalene	Trans.Am.Fish.Soc. 109(3):293-297	1980
523	9H-Fluorene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	POP	ABND	7	d	3330	FW	Finger, S.E., E.F. Little, M.G. Henry, J.F. Fairchild, and T.P. Boyle	Comparison of Laboratory and Field Assessment of Fluorene - Part 1: Effects of Fluorene on the Survival, Growth, Reproduction, and Behavior of Aquatic Organisms in Laboratory Tests	In: T.P.Boyle (Ed.), Validation and Predictability of Laboratory Methods for Assessing the Fate and Effects of Contaminants in Aquatic Ecosystems, 1st Symposium, ASTM STP 865, Philadelphia, PA: 120-133	1985
524	9H-Fluorene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	POP	BMAS	7	d	3330	FW	Finger, S.E., E.F. Little, M.G. Henry, J.F. Fairchild, and T.P. Boyle	Comparison of Laboratory and Field Assessment of Fluorene - Part 1: Effects of Fluorene on the Survival, Growth, Reproduction, and Behavior of Aquatic Organisms in Laboratory Tests	In: T.P.Boyle (Ed.), Validation and Predictability of Laboratory Methods for Assessing the Fate and Effects of Contaminants in Aquatic Ecosystems, 1st Symposium, ASTM STP 865, Philadelphia, PA: 120-133	1985
525	9H-Fluorene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	POP	CHLA	7	d	3330	FW	Finger, S.E., E.F. Little, M.G. Henry, J.F. Fairchild, and T.P. Boyle	Comparison of Laboratory and Field Assessment of Fluorene - Part 1: Effects of Fluorene on the Survival, Growth, Reproduction, and Behavior of Aquatic Organisms in Laboratory Tests	In: T.P.Boyle (Ed.), Validation and Predictability of Laboratory Methods for Assessing the Fate and Effects of Contaminants in Aquatic Ecosystems, 1st Symposium, ASTM STP 865, Philadelphia, PA: 120-133	1985
526	Fluoranthene	Daphnia magna	Water Flea	Crustaceans	MOR	SURV	1.5	d	3340	FW	Burton, G.A.Jr., and J.F. Nordstrom	An In Situ Toxicity Identification Evaluation Method Part I: Laboratory Validation	Environ.Toxicol.Chem. 23(12):2844-2850	2004
527	9H-Fluorene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	POP	GPOP	4	d	3400	FW	Finger, S.E., E.F. Little, M.G. Henry, J.F. Fairchild, and T.P. Boyle	Comparison of Laboratory and Field Assessment of Fluorene - Part 1: Effects of Fluorene on the Survival, Growth, Reproduction, and Behavior of Aquatic Organisms in Laboratory Tests	In: T.P.Boyle (Ed.), Validation and Predictability of Laboratory Methods for Assessing the Fate and Effects of Contaminants in Aquatic Ecosystems, 1st Symposium, ASTM STP 865, Philadelphia, PA: 120-133	1985
528	Naphthalene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	2	d	3400	FW	Crider, J.Y., J. Wilhm, and H.J. Harmon	Effects of Naphthalene on the Hemoglobin Concentration and Oxygen Uptake of Daphnia magna	Bull.Environ.Contam.Toxicol. 28:52-57	1982
529	Acenaphthene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	2	d	3450	FW	Randall, T.L., and P.V. Knopp	Detoxification of Specific Organic Substances by Wet Oxidation	J.Water Pollut.Control Fed. 52(8):2117-2130	1980
530	Naphthalene	Anguilla anguilla	Common Eel	Fish	ENZ	EROD	3	d	3461	FW	Teles, M., M. Pacheco, and M.A. Santos	Anguilla anguilla L. Liver Ethoxyresorufin O-Deethylation, Glutathione S-Transferase, Erythrocytic Nuclear Abnormalities, and Endocrine Responses to Naphthalene and beta-Naphthoflavone	Ecotoxicol.Environ.Saf. 55(1):98-107	2003
531	Naphthalene	Anguilla anguilla	Common Eel	Fish	ENZ	EROD	0.33	d	3461	FW	Maria, V.L., C. Gravato, A.C. Correia, and M.A. Santos	Biotransformation and Genotoxicity Responses to PAHs in Two Teleost Species	Fresenius Environ.Bull. 11(9a):609-615	2002
532	Naphthalene	Anguilla anguilla	Common Eel	Fish	GEN	NABN	0.17	d	3461	FW	Teles, M., M. Pacheco, and M.A. Santos	Anguilla anguilla L. Liver Ethoxyresorufin O-Deethylation, Glutathione S-Transferase, Erythrocytic Nuclear Abnormalities, and Endocrine Responses to Naphthalene and beta-Naphthoflavone	Ecotoxicol.Environ.Saf. 55(1):98-107	2003
533	Phenanthrene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	POP	GPOP	8	d	3480	FW	McConkey, B.J., C.L. Duxbury, D.G. Dixon, and B.M. Greenberg	Toxicity of a PAH Photooxidation Product to the Bacteria Photobacterium phosphoreum and the Duckweed Lemna gibba: Effects of Phenanthrene and Its Primary Photoproduct, Phenanthrenequinone	Environ. Toxicol. Chem.16(5): 892-899	1997
534	Naphthalene	Xenopus laevis	African Clawed Frog	Amphibians	PHY	PIGM	0.25	d	3700	FW	Edmisten, G.E., and J.A. Bantle	Use of Xenopus laevis Larvae in 96-Hour, Flow-Through Toxicity Tests with Naphthalene	Bull.Environ.Contam.Toxicol. 29:392-399	1982
535	Benzo(a)pyrene	Poeciliopsis sp.	Topminnow, Live-Bearer	Fish	MOR	MORT	1	d	3750	FW	Goddard, K.A., R.J. Schultz, and J.J. Stegeman	Uptake, Toxicity, and Distribution of Benzo(a)pyrene and Monooxygenase Induction in the Topminnows Poeciliopsis monacha and Poeciliopsis lucida	Drug Metab.Dispos. 15(4):449-455	1987

Appendix D-9, Table 10. ECOTOX effects values for PAHs in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
536	Naphthalene	Gammarus minus	Scud	Crustaceans	MOR	MORT	2	d	3930	FW	Millemann, R.E., W.J. Birge, J.A. Black, R.M. Cushman, K.L. Daniels, P.J. Franco, J.M. Giddings, J.F. McCarthy, and A.J.	Comparative Acute Toxicity to Aquatic Organisms of Components of Coal-Derived Synthetic Fuels	Trans.Am.Fish.Soc. 113(1):74-85	1984
537	Benzo(a)pyrene	Anabaena flosaquae	Blue-Green Algae	Algae, Moss, Fungi	GRO	GGRO	3	d	4000	FW	Schoeny, R., T. Cody, D. Warshawsky, and M. Radike	Metabolism of Mutagenic Polycyclic Aromatic Hydrocarbons by Photosynthetic Algal Species	Mutat. Res.197(2): 289-302	1988
538	Benzo(a)pyrene	Chlamydomonas reinhardtii	Green Algae	Algae, Moss, Fungi	GRO	GGRO	3	d	4000	FW	Schoeny, R., T. Cody, D. Warshawsky, and M. Radike	Metabolism of Mutagenic Polycyclic Aromatic Hydrocarbons by Photosynthetic Algal Species	Mutat. Res.197(2): 289-302	1988
539	Benzo(a)pyrene	Euglena gracilis	Flagellate Euglenoid	Algae, Moss, Fungi	GRO	GGRO	3	d	4000	FW	Schoeny, R., T. Cody, D. Warshawsky, and M. Radike	Metabolism of Mutagenic Polycyclic Aromatic Hydrocarbons by Photosynthetic Algal Species	Mutat. Res.197(2): 289-302	1988
540	Benzo(a)pyrene	Poteriochromonas malhamensis	Chrysophyte	Algae, Moss, Fungi	GRO	GGRO	3	d	4000	FW	Schoeny, R., T. Cody, D. Warshawsky, and M. Radike	Metabolism of Mutagenic Polycyclic Aromatic Hydrocarbons by Photosynthetic Algal Species	Mutat. Res.197(2): 289-302	1988
541	Benzo(a)pyrene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	GRO	NLEF	8	d	4000	FW	Huang, X.D., D.G. Dixon, and B.M. Greenberg	Increased Polycyclic Aromatic Hydrocarbon Toxicity Following Their Photomodification in Natural Sunlight: Impacts on the Duckweed Lemna gibba L. G-3	Ecotoxicol. Environ. Saf.32(2): 194-200	1995
542	Fluoranthene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	4	d	4000	FW	Buccafusco, R.J., S.J. Ells, and G.A. LeBlanc	Acute Toxicity of Priority Pollutants to Bluegill (Lepomis macrochirus)	Bull.Environ.Contam.Toxicol. 26(4):446-452 (OECDG Data File)	1981
543	Naphthalene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	2	d	4100	FW	Crider, J.Y., J. Wilhm, and H.J. Harmon	Effects of Naphthalene on the Hemoglobin Concentration and Oxygen Uptake of Daphnia magna	Bull.Environ.Contam.Toxicol. 28:52-57	1982
544	Fluoranthene	Daphnia magna	Water Flea	Crustaceans	MOR	SURV	1.5	d	4190	FW	Burton, G.A.Jr., and J.F. Nordstrom	An In Situ Toxicity Identification Evaluation Method Part I: Laboratory Validation	Environ.Toxicol.Chem. 23(12):2844-2850	2004
545	Naphthalene	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	4	d	4400	FW	Edsall, C.C.	Acute Toxicities to Larval Rainbow Trout of Representative Compounds Detected in Great Lakes Fish	Bull.Environ.Contam.Toxicol. 46(2):173-178	1991
546	Naphthalene	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	4	d	4500	FW	Edsall, C.C.	Acute Toxicities to Larval Rainbow Trout of Representative Compounds Detected in Great Lakes Fish	Bull.Environ.Contam.Toxicol. 46(2):173-178	1991
547	Naphthalene	Daphnia pulex	Water Flea	Crustaceans	ITX	IMBL	2	d	4663	FW	Smith, S.B., J.F. Savino, and M.A. Blouin	Acute Toxicity to Daphnia pulex of Six Classes of Chemical Compounds Potentially Hazardous to Great Lakes Aquatic Biota	J.Great Lakes Res.14(4):394-404 / Aquat.Sci.Fish.Abstr. 17(2):139	1988
548	Naphthalene	Xenopus laevis	African Clawed Frog	Amphibians	MOR	MORT	4	d	4900	FW	Edmisten, G.E., and J.A. Bantle	Use of Xenopus laevis Larvae in 96-Hour, Flow-Through Toxicity Tests with Naphthalene	Bull.Environ.Contam.Toxicol. 29:392-399	1982
549	Naphthalene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	4	d	4900	FW	Bergman, H.L., and A.D. Anderson	Effects of Aqueous Effluents from In Situ Fossil Fuel Processing Technologies on Aquatic Systems	Contract No.EY-77-C-04-3913, Univ.of Wyoming, Laramie, WY :73 p.	1977
550	Phenanthrene	Scenedesmus subspicatus	Green Algae	Algae, Moss, Fungi	POP	PGRT	7	d	4910	FW	Djomo, J.E., A. Dauta, V. Ferrier, J.F. Narbonne, A. Monkiedje, T. Njine, and P. Garrigues	Toxic Effects of Some Major Polyaromatic Hydrocarbons Found in Crude Oil and Aquatic Sediments on Scenedesmus subspicatus	Water Res.38(7): 1817-1821	2004
551	Phenanthrene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	POP	GPOP	8	d	5000	FW	McConkey, B.J., C.L. Duxbury, D.G. Dixon, and B.M. Greenberg	Toxicity of a PAH Photooxidation Product to the Bacteria Photobacterium phosphoreum and the Duckweed Lemna gibba: Effects of Phenanthrene and Its Primary Photoproduct, Phenanthrenequinone	Environ. Toxicol. Chem.16(5): 892-899	1997
552	9H-Fluorene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	POP	ABND	14	d	5000	FW	Finger, S.E., E.F. Little, M.G. Henry, J.F. Fairchild, and T.P. Boyle	Comparison of Laboratory and Field Assessment of Fluorene - Part 1: Effects of Fluorene on the Survival, Growth, Reproduction, and Behavior of Aquatic Organisms in Laboratory Tests	In: T.P.Boyle (Ed.), Validation and Predictability of Laboratory Methods for Assessing the Fate and Effects of Contaminants in Aquatic Ecosystems, 1st Symposium, ASTM STP 865, Philadelphia, PA: 120-133	1985
553	9H-Fluorene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	POP	BMAS	14	d	5000	FW	Finger, S.E., E.F. Little, M.G. Henry, J.F. Fairchild, and T.P. Boyle	Comparison of Laboratory and Field Assessment of Fluorene - Part 1: Effects of Fluorene on the Survival, Growth, Reproduction, and Behavior of Aquatic Organisms in Laboratory Tests	In: T.P.Boyle (Ed.), Validation and Predictability of Laboratory Methods for Assessing the Fate and Effects of Contaminants in Aquatic Ecosystems, 1st Symposium, ASTM STP 865, Philadelphia, PA: 120-133	1985
554	9H-Fluorene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	POP	CHLA	14	d	5000	FW	Finger, S.E., E.F. Little, M.G. Henry, J.F. Fairchild, and T.P. Boyle	Comparison of Laboratory and Field Assessment of Fluorene - Part 1: Effects of Fluorene on the Survival, Growth, Reproduction, and Behavior of Aquatic Organisms in Laboratory Tests	In: T.P.Boyle (Ed.), Validation and Predictability of Laboratory Methods for Assessing the Fate and Effects of Contaminants in Aquatic Ecosystems, 1st Symposium, ASTM STP 865, Philadelphia, PA: 120-133	1985
555	Naphthalene	Physa gyrina	Pouch Snail	Molluscs	MOR	MORT	2	d	5020	FW	Millemann, R.E., W.J. Birge, J.A. Black, R.M. Cushman, K.L. Daniels, P.J. Franco, J.M. Giddings, J.F. McCarthy, and A.J.	Comparative Acute Toxicity to Aquatic Organisms of Components of Coal-Derived Synthetic Fuels	Trans.Am.Fish.Soc. 113(1):74-85	1984

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
556	Naphthalene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	1	d	5150	FW	Bio Dynamics Incorporated	Acute Toxicity of Naphthalene to Daphnia in a Flow-Through System	EPA/OTS Doc.#86-870000911 :20 p. (NTIS/OTS 0515349)	1987
557	Naphthalene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	1	d	5150	FW	Bio Dynamics Incorporated	Acute Toxicity of Naphthalene to Daphnia in a Flow-Through System	EPA/OTS Doc.#86-870000911 :20 p. (NTIS/OTS 0515349)	1987
558	Fluoranthene	Hyalella azteca	Scud	Crustaceans	MOR	MORT	10	d	5200	FW	Verrhiest, G., B. Clement, and G. Blake	Single and Combined Effects of Sediment-Associated PAHs on Three Species of Freshwater Macroinvertebrates	Ecotoxicology 10(6):363-372	2001
559	Naphthalene	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	4	d	5500	FW	Edsall, C.C.	Acute Toxicities to Larval Rainbow Trout of Representative Compounds Detected in Great Lakes Fish	Bull.Environ.Contam.Toxicol. 46(2):173-178	1991
560	9H-Fluorene	Pleuroceridae	Snail Family	Molluscs	MOR	MORT	4	d	5600	FW	Finger, S.E., E.F. Little, M.G. Henry, J.F. Fairchild, and T.P. Boyle	Comparison of Laboratory and Field Assessment of Fluorene - Part 1: Effects of Fluorene on the Survival, Growth, Reproduction, and Behavior of Aquatic Organisms in Laboratory Tests	In: T.P.Boyle (Ed.), Validation and Predictability of Laboratory Methods for Assessing the Fate and Effects of Contaminants in Aquatic Ecosystems, 1st Symposium, ASTM STP 865, Philadelphia, PA :120-133	1985
561	Naphthalene	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	MOR	MORT	3	d	5600	FW	Holland, G.A., J.E. Lasater, E.D. Neumann, and W.E. Eldridge	Toxic Effects of Organic and Inorganic Pollutants on Young Salmon and Trout	Res.Bull.No.5, State of Washington Dept.Fish., Seattle, WA :263 p.	1960
562	Naphthalene	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	MOR	MORT	1.81958333	d	5600	FW	Holland, G.A., J.E. Lasater, E.D. Neumann, and W.E. Eldridge	Toxic Effects of Organic and Inorganic Pollutants on Young Salmon and Trout	Res.Bull.No.5, State of Washington Dept.Fish., Seattle, WA :263 p.	1960
563	Naphthalene	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	SURV	4	d	5600	FW	Bergman, H.L., and A.D. Anderson	Effects of Aqueous Effluents from In Situ Fossil Fuel Processing Technologies on Aquatic Systems	Contract No.EY-77-C-04-3913, Univ.of Wyoming, Laramie, WY :73 p.	1977
564	Phenanthrene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	2	d	5703	FW	Feldmannova, M., K. Hilscherova, B. Marsalek, and L. Blaha	Effects of N-Heterocyclic Polyaromatic Hydrocarbons on Survival, Reproduction, and Biochemical Parameters in Daphnia magna	Environ.Toxicol. 21(4):425-431	2006
565	Fluoranthene	Utterbackia imbecillis	Paper Pondshell	Molluscs	MOR	MORT	1	d	5730	FW	Weinstein, J.E.	Characterization of the Acute Toxicity of Photoactivated Fluoranthene to Glochidia of the Freshwater Mussel, Utterbackia imbecillis	Environ.Toxicol.Chem. 20(2):412-419	2001
566	9H-Fluorene	Hexagenia bilineata	Mayfly	Insects/Spiders	MOR	MORT	5	d	5800	FW	Finger, S.E., E.F. Little, M.G. Henry, J.F. Fairchild, and T.P. Boyle	Comparison of Laboratory and Field Assessment of Fluorene - Part 1: Effects of Fluorene on the Survival, Growth, Reproduction, and Behavior of Aquatic Organisms in Laboratory Tests	In: T.P.Boyle (Ed.), Validation and Predictability of Laboratory Methods for Assessing the Fate and Effects of Contaminants in Aquatic Ecosystems, 1st Symposium, ASTM STP 865, Philadelphia, PA :120-133	1985
567	Phenanthrene	Chlorella fusca ssp. vacuolata	Green Algae	Algae, Moss, Fungi	POP	PGRT	1	d	5882	FW	Altenburger, R., H. Walter, and M. Grote	What Contributes to the Combined Effect of a Complex Mixture?	Environ. Sci. Technol.38(23): 6353-6362	2004
568	Naphthalene	Artemia sp.	Brine Shrimp	Crustaceans	ITX	IMBL	2	d	5960	FW	MacLean, M.M., and K.G. Doe	The Comparative Toxicity of Crude and Refined Oils to Daphnia magna and Artemia	Environment Canada, EE-111, Dartmouth, Nova Scotia :64 p.	1989
569	Naphthalene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	3	d	6080	FW	Holcombe, G.W., G.L. Phipps, M.L. Knuth, and T. Felhaber	The Acute Toxicity of Selected Substituted Phenols, Benzenes and Benzoic Acid Esters to Fathead Minnows Pimephales promelas	Environ.Pollut.Ser.A 35(4):367-381 (OECDG Data File)	1984
570	Naphthalene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	4	d	6080	FW	Holcombe, G.W., G.L. Phipps, M.L. Knuth, and T. Felhaber	The Acute Toxicity of Selected Substituted Phenols, Benzenes and Benzoic Acid Esters to Fathead Minnows Pimephales promelas	Environ.Pollut.Ser.A 35(4):367-381 (OECDG Data File)	1984
571	Naphthalene	Oncorhynchus mykiss	Rainbow Trout	Fish	MOR	MORT	4	d	6100	FW	Edsall, C.C.	Acute Toxicities to Larval Rainbow Trout of Representative Compounds Detected in Great Lakes Fish	Bull.Environ.Contam.Toxicol. 46(2):173-178	1991
572	Naphthalene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	4	d	6140	FW	Broderius, S.J., M.D. Kahl, and M.D. Hoglund	Use of Joint Toxic Response to Define the Primary Mode of Toxic Action for Diverse Industrial Organic Chemicals	Environ.Toxicol.Chem. 14(9):1591-1605 (Author Communication Used)	1995
573	Naphthalene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	4	d	6140	FW	Geiger, D.L., C.E. Northcott, D.J. Call, and L.T. Brooke	Acute Toxicities of Organic Chemicals to Fathead Minnows (Pimephales promelas), Vol. 2	Ctr.for Lake Superior Environ.Stud., Univ.of Wisconsin-Superior, Superior, WI :326 p.	1985
574	Naphthalene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	2	d	6350	FW	Holcombe, G.W., G.L. Phipps, M.L. Knuth, and T. Felhaber	The Acute Toxicity of Selected Substituted Phenols, Benzenes and Benzoic Acid Esters to Fathead Minnows Pimephales promelas	Environ.Pollut.Ser.A 35(4):367-381 (OECDG Data File)	1984
575	Naphthalene	Artemia sp.	Brine Shrimp	Crustaceans	ITX	IMBL	2	d	6470	FW	MacLean, M.M., and K.G. Doe	The Comparative Toxicity of Crude and Refined Oils to Daphnia magna and Artemia	Environment Canada, EE-111, Dartmouth, Nova Scotia :64 p.	1989
576	Naphthalene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	1	d	6600	FW	Crider, J.Y., J. Wilhm, and H.J. Harmon	Effects of Naphthalene on the Hemoglobin Concentration and Oxygen Uptake of Daphnia magna	Bull.Environ.Contam.Toxicol. 28:52-57	1982
577	Fluoranthene	Utterbackia imbecillis	Paper Pondshell	Molluscs	MOR	MORT	1	d	6870	FW	Weinstein, J.E.	Characterization of the Acute Toxicity of Photoactivated Fluoranthene to Glochidia of the Freshwater Mussel, Utterbackia imbecillis	Environ.Toxicol.Chem. 20(2):412-419	2001
578	Acenaphthene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	1	d	7200	FW	Buccafusco, R.J., S.J. Ells, and G.A. LeBlanc	Acute Toxicity of Priority Pollutants to Bluegill (Lepomis macrochirus)	Bull.Environ.Contam.Toxicol. 26(4):446-452 (OECDG Data File)	1981

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579	Naphthalene	Scenedesmus subspicatus	Green Algae	Algae, Moss, Fungi	POP	ABND	7	d	7270	FW	Djomo, J.E., A. Dauta, V. Ferrier, J.F. Narbonne, A. Monkiedje, T. Njine, and P. Garrigues	Toxic Effects of Some Major Polyaromatic Hydrocarbons Found in Crude Oil and Aquatic Sediments on Scenedesmus subspicatus	Water Res.38(7): 1817-1821	2004
580	Fluoranthene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	GRO	NLEF	8	d	7500	FW	Huang, X.D., D.G. Dixon, and B.M. Greenberg	Increased Polycyclic Aromatic Hydrocarbon Toxicity Following Their Photomodification in Natural Sunlight: Impacts on the Duckweed Lemna gibba L. G-3	Ecotoxicol. Environ. Saf.32(2): 194-200	1995
581	Naphthalene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	1	d	7760	FW	Holcombe, G.W., G.L. Phipps, M.L. Knuth, and T. Felhaber	The Acute Toxicity of Selected Substituted Phenols, Benzenes and Benzoic Acid Esters to Fathead Minnows Pimephales promelas	Environ.Pollut.Ser.A 35(4):367-381 (OECDG Data File)	1984
582	Naphthalene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	4	d	7900	FW	DeGraeve, G.M., R.G. Elder, D.C. Woods, and H.L. Bergman	Effects of Naphthalene and Benzene on Fathead Minnows and Rainbow Trout	Arch.Environ.Contam.Toxicol. 11(4):487-490	1982
583	Benzo(a)pyrene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	GRO	NLEF	8	d	8000	FW	Huang, X.D., D.G. Dixon, and B.M. Greenberg	Increased Polycyclic Aromatic Hydrocarbon Toxicity Following Their Photomodification in Natural Sunlight: Impacts on the Duckweed Lemna gibba L. G-3	Ecotoxicol. Environ. Saf.32(2): 194-200	1995
584	Pyrene	Lemna gibba	Inflated Duckweed	Flowers, Trees, Shrubs, Ferns	GRO	NLEF	8	d	8000	FW	Huang, X.D., D.G. Dixon, and B.M. Greenberg	Increased Polycyclic Aromatic Hydrocarbon Toxicity Following Their Photomodification in Natural Sunlight: Impacts on the Duckweed Lemna gibba L. G-3	Ecotoxicol. Environ. Saf.32(2): 194-200	1995
585	Fluoranthene	Utterbackia imbecillis	Paper Pondshell	Molluscs	MOR	MORT	1	d	8350	FW	Weinstein, J.E.	Characterization of the Acute Toxicity of Photoactivated Fluoranthene to Glochidia of the Freshwater Mussel, Utterbackia imbecillis	Environ.Toxicol.Chem. 20(2):412-419	2001
586	Naphthalene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	2	d	8600	FW	LeBlanc, G.A.	Acute Toxicity of Priority Pollutants to Water Flea (Daphnia magna)	Bull.Environ.Contam.Toxicol. 24(5):684-691 (OECDG Data File)	1980
587	Anthracene	Cunninghamella elegans	Fungus	Algae, Moss, Fungi	POP	PGRT	2	d	9160	FW	Bonnet, J.L., P. Guiraud, M. Dusser, M. Kadri, J. Laffosse, R. Steiman, and J. Bohatier	Assessment of Anthracene Toxicity Toward Environmental Eukaryotic Microorganisms: Tetrahymena pyriformis and Selected Micromycetes	Ecotoxicol. Environ. Saf.60(1): 87-100	2005
588	Phenanthrene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	2	d	9500	FW	Xie, F., S.A. Koziar, M.A. Lampi, D.G. Dixon, W.P. Norwood, U. Borgmann, X.D. Huang, and B.M. Greenberg	Assessment of the Toxicity of Mixtures of Copper, 9,10-Phenanthrenequinone, and Phenanthrene to Daphnia magna: Evidence for a Reactive Oxygen Mechanism	Environ.Toxicol.Chem. 25(2):613-622	2006
589	Naphthalene	Artemia sp.	Brine Shrimp	Crustaceans	MOR	MORT	2	d	9820	FW	MacLean, M.M., and K.G. Doe	The Comparative Toxicity of Crude and Refined Oils to Daphnia magna and Artemia	Environment Canada, EE-111, Dartmouth, Nova Scotia :64 p.	1989
590	Naphthalene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	4	d	9930	FW	Bio Dynamics Incorporated	A Flow-Through Acute Fish Toxicity Test of Naphthalene	EPA/OTS Doc.#86-870000910 :26 p. (NTIS/OTS 0515348)	1987
591	Phenanthrene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	ENZ	SODA	1	d	10000	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
592	Phenanthrene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	ENZ	SODA	1	d	10000	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
593	Phenanthrene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	ENZ	SODA	1	d	10000	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
594	Phenanthrene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	ENZ	SODA	1	d	10000	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
595	Phenanthrene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	PHY	PSYN	1	d	10000	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
596	Phenanthrene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	PHY	PSYN	1	d	10000	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
597	Phenanthrene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	PHY	PSYN	1	d	10000	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004

Appendix D-9, Table 10. ECOTOX effects values for PAHs in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
598	Phenanthrene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	PHY	PSYN	1	d	10000	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
599	Phenanthrene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	PHY	PSYN	1	d	10000	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
600	Phenanthrene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	POP	NCHG	1	d	10000	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
601	Phenanthrene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	POP	NCHG	1	d	10000	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
602	Phenanthrene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	POP	NCHG	1	d	10000	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
603	Phenanthrene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	POP	NCHG	1	d	10000	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
604	Phenanthrene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	POP	NCHG	1	d	10000	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
605	Phenanthrene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	POP	NCHG	1	d	10000	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
606	Phenanthrene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	POP	NCHG	1	d	10000	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
607	Phenanthrene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	POP	NCHG	1	d	10000	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
608	Phenanthrene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	POP	NCHG	1	d	10000	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
609	Phenanthrene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	POP	NCHG	1	d	10000	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
610	Phenanthrene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	POP	NCHG	1	d	10000	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
611	Phenanthrene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	POP	NCHG	1	d	10000	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004
612	Phenanthrene	Scenedesmus armatus	Green Algae	Algae, Moss, Fungi	POP	NCHG	1	d	10000	FW	Aksmann, A., and Z. Tukaj	The Effect of Anthracene and Phenanthrene on the Growth, Photosynthesis, and SOD Activity of the Green Alga Scenedesmus armatus Depends on the PAR Irradiance and CO2 Level	Arch. Environ. Contam. Toxicol.47(2): 177-184	2004

Appendix D-9, Table 10. ECOTOX effects values for PAHs in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
613	Fluoranthene	Hyalella azteca	Scud	Crustaceans	MOR	MORT	10	d	10000	FW	Verrhiest, G., B. Clement, and G. Blake	Single and Combined Effects of Sediment-Associated PAHs on Three Species of Freshwater Macroinvertebrates	Ecotoxicology 10(6):363-372	2001
614	Benzo(a)pyrene	Chironomus riparius	Midge	Insects/Spiders	MOR	MORT	1	d	10030	FW	Ha, M.H., and J. Choi	Effects of Environmental Contaminants on Hemoglobin of Larvae of Aquatic Midge, Chironomus riparius (Diptera: Chironomidae): A Potential Biomarker for Ecotoxicity Monitoring	Chemosphere 71(10):1928-1936	2008
615	Anthracene	Saccharomyces cerevisiae	Fungi	Algae, Moss, Fungi	POP	PGRT	2	d	11080	FW	Bonnet, J.L., P. Guiraud, M. Dusser, M. Kadri, J. Laffosse, R. Steiman, and J. Bohatier	Assessment of Anthracene Toxicity Toward Environmental Eukaryotic Microorganisms: Tetrahymena pyriformis and Selected Micromycetes	Ecotoxicol. Environ. Saf.60(1): 87-100	2005
616	Naphthalene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	2	d	11400	FW	MacLean, M.M., and K.G. Doe	The Comparative Toxicity of Crude and Refined Oils to Daphnia magna and Artemia	Environment Canada, EE-111, Dartmouth, Nova Scotia :64 p.	1989
617	Phenanthrene	Lemna minor	Duckweed	Flowers, Trees, Shrubs, Ferns	POP	ABND	7	d	11500	FW	Becker, A.M., S. Heise, and W. Ahlf	Effects of Phenanthrene on Lemna minor in a Sediment-Water System and the Impacts of UVB	Ecotoxicology11(5): 343-348	2002
618	Naphthalene	Tanytarsus dissimilis	Midge	Insects/Spiders	MOR	MORT	2	d	12200	FW	Darville, R.G.	The Effects of Naphthalene on the Physiology and Life Cycle of Chironomus attenuatus and Tanytarsus dissimilis	Ph.D.Thesis, Oklahoma State University, Stillwater, OK :85 p. (Publ in Part As 7049, 11365)	1982
619	Naphthalene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	2	d	12300	FW	MacLean, M.M., and K.G. Doe	The Comparative Toxicity of Crude and Refined Oils to Daphnia magna and Artemia	Environment Canada, EE-111, Dartmouth, Nova Scotia :64 p.	1989
620	Naphthalene	Artemia sp.	Brine Shrimp	Crustaceans	MOR	MORT	2	d	12500	FW	MacLean, M.M., and K.G. Doe	The Comparative Toxicity of Crude and Refined Oils to Daphnia magna and Artemia	Environment Canada, EE-111, Dartmouth, Nova Scotia :64 p.	1989
621	Naphthalene	Tanytarsus dissimilis	Midge	Insects/Spiders	MOR	MORT	2	d	12600	FW	Darville, R.G., and J.L. Wilhm	The Effect of Naphthalene on Oxygen Consumption and Hemoglobin Concentration in Chironomus attenuatus and on Oxygen Consumption and Life Cycle of Tanytarsus dissimilis	Environ.Toxicol.Chem. 3(1):135-141	1984
622	Naphthalene	Chironomus attenuatus	Midge	Insects/Spiders	MOR	MORT	1	d	13000	FW	Darville, R.G., and J.L. Wilhm	The Effect of Naphthalene on Oxygen Consumption and Hemoglobin Concentration in Chironomus attenuatus and on Oxygen Consumption and Life Cycle of Tanytarsus dissimilis	Environ.Toxicol.Chem. 3(1):135-141	1984
623	Naphthalene	Chironomus attenuatus	Midge	Insects/Spiders	MOR	MORT	1	d	13100	FW	Darville, R.G., and J.L. Wilhm	The Effect of Naphthalene on Oxygen Consumption and Hemoglobin Concentration in Chironomus attenuatus and on Oxygen Consumption and Life Cycle of Tanytarsus dissimilis	Environ.Toxicol.Chem. 3(1):135-141	1984
624	Naphthalene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	1	d	13200	FW	Crider, J.Y., J. Wilhm, and H.J. Harmon	Effects of Naphthalene on the Hemoglobin Concentration and Oxygen Uptake of Daphnia magna	Bull.Environ.Contam.Toxicol. 28:52-57	1982
625	Naphthalene	Chironomus attenuatus	Midge	Insects/Spiders	MOR	MORT	1	d	13300	FW	Darville, R.G.	The Effects of Naphthalene on the Physiology and Life Cycle of Chironomus attenuatus and Tanytarsus dissimilis	Ph.D.Thesis, Oklahoma State University, Stillwater, OK :85 p. (Publ in Part As 7049, 11365)	1982
626	Phenanthrene	Chironomus riparius	Midge	Insects/Spiders	MOR	MORT	10	d	13630	FW	Verrhiest, G., B. Clement, and G. Blake	Single and Combined Effects of Sediment-Associated PAHs on Three Species of Freshwater Macroinvertebrates	Ecotoxicology 10(6):363-372	2001
627	Naphthalene	Tanytarsus dissimilis	Midge	Insects/Spiders	MOR	MORT	2	d	13700	FW	Darville, R.G.	The Effects of Naphthalene on the Physiology and Life Cycle of Chironomus attenuatus and Tanytarsus dissimilis	Ph.D.Thesis, Oklahoma State University, Stillwater, OK :85 p. (Publ in Part As 7049, 11365)	1982
628	Naphthalene	Chironomus attenuatus	Midge	Insects/Spiders	MOR	MORT	1	d	13900	FW	Darville, R.G.	The Effects of Naphthalene on the Physiology and Life Cycle of Chironomus attenuatus and Tanytarsus dissimilis	Ph.D.Thesis, Oklahoma State University, Stillwater, OK :85 p. (Publ in Part As 7049, 11365)	1982
629	Fluoranthene	Chironomus riparius	Midge	Insects/Spiders	MOR	MORT	10	d	14690	FW	Verrhiest, G., B. Clement, and G. Blake	Single and Combined Effects of Sediment-Associated PAHs on Three Species of Freshwater Macroinvertebrates	Ecotoxicology 10(6):363-372	2001
630	Phenanthrene	Chironomus riparius	Midge	Insects/Spiders	MOR	MORT	10	d	14700	FW	Verrhiest, G., B. Clement, and G. Blake	Single and Combined Effects of Sediment-Associated PAHs on Three Species of Freshwater Macroinvertebrates	Ecotoxicology 10(6):363-372	2001
631	Naphthalene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	1	d	15000	FW	Juttner, F., D. Backhaus, U. Matthias, U. Essers, R. Greiner, and B. Mahr	Emissions of Two- and Four-Stroke Outboard Engines - II. Impact on Water Quality	Water Res. 29(8):1983-1987	1995
632	Phenanthrene	Chironomus riparius	Midge	Insects/Spiders	MOR	MORT	10	d	15830	FW	Verrhiest, G., B. Clement, and G. Blake	Single and Combined Effects of Sediment-Associated PAHs on Three Species of Freshwater Macroinvertebrates	Ecotoxicology 10(6):363-372	2001
633	Naphthalene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	1	d	17000	FW	LeBlanc, G.A.	Acute Toxicity of Priority Pollutants to Water Flea (Daphnia magna)	Bull.Environ.Contam.Toxicol. 24(5):684-691 (OECDG Data File)	1980
634	Naphthalene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	2	d	17699.8	FW	Epsey Huston and Associates Incorporated	Bioassay Testing of Sample 5601-56-1 in Fresh Water with Theleopomis macrochirus and Daphnia magna	EPA/OTS Doc.#86-870000557 :22 p. (NTIS/OTS 0513635)	2000
635	Anthracene	Poecilia reticulata	Guppy	Fish	MOR	MORT	4	d	17823	FW	Traczewska, T.M.	Changes of Toxicological Properties of Biodegradation Products of Anthracene and Phenanthrene	Water Sci.Technol. 41(12):31-38	2000

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
636	Pyrene	Scenedesmus subspicatus	Green Algae	Algae, Moss, Fungi	POP	PGRT	7	d	18720	FW	Djomo, J.E., A. Dauta, V. Ferrier, J.F. Narbonne, A. Monkiedje, T. Njine, and P. Garrigues	Toxic Effects of Some Major Polyaromatic Hydrocarbons Found in Crude Oil and Aquatic Sediments on Scenedesmus subspicatus	Water Res.38(7): 1817-1821	2004
637	Naphthalene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	2	d	19767.5	FW	Epsey Huston and Associates Incorporated	Bioassay Testing of Sample 5601-56-1 in Fresh Water with Theleopomis macrochirus and Daphnia magna	EPA/OTS Doc.#86-870000557 :22 p. (NTIS/OTS 0513635)	2000
638	Naphthalene	Scenedesmus subspicatus	Green Algae	Algae, Moss, Fungi	HIS	PRLF	7	d	20000	FW	Trenel, J., and R. Kuhn	Bewertung Wassergefahrdender Stoffe im Hinblick auf Lagerung, Umschlag und Transport	Umweltforschungsplan des Bundesministers des Innern	1982
639	9H-Fluorene	Chara sp.	Stonewort	Algae, Moss, Fungi	GRO	DWGT	21	d	20300	FW	Finger, S.E., E.F. Little, M.G. Henry, J.F. Fairchild, and T.P. Boyle	Comparison of Laboratory and Field Assessment of Fluorene - Part 1: Effects of Fluorene on the Survival, Growth, Reproduction, and Behavior of Aquatic Organisms in Laboratory Tests	In: T.P.Boyle (Ed.), Validation and Predictability of Laboratory Methods for Assessing the Fate and Effects of Contaminants in Aquatic Ecosystems, 1st Symposium, ASTM STP 865, Philadelphia, PA: 120-133	1985
640	Anthracene	Saccharomyces cerevisiae	Fungi	Algae, Moss, Fungi	POP	PGRT	3	d	20440	FW	Bonnet, J.L., P. Guiraud, M. Dusser, M. Kadri, J. Laffosse, R. Steiman, and J. Bohatier	Assessment of Anthracene Toxicity Toward Environmental Eukaryotic Microorganisms: Tetrahymena pyriformis and Selected Micromycetes	Ecotoxicol. Environ. Saf.60(1): 87-100	2005
641	Phenanthrene	Hyalella azteca	Scud	Crustaceans	MOR	MORT	10	d	20540	FW	Verrhiest, G., B. Clement, and G. Blake	Single and Combined Effects of Sediment-Associated PAHs on Three Species of Freshwater Macroinvertebrates	Ecotoxicology 10(6):363-372	2001
642	Anthracene	Rhodotorula glutinis	Fungus	Algae, Moss, Fungi	POP	PGRT	NR	d	20550	FW	Bonnet, J.L., P. Guiraud, M. Dusser, M. Kadri, J. Laffosse, R. Steiman, and J. Bohatier	Assessment of Anthracene Toxicity Toward Environmental Eukaryotic Microorganisms: Tetrahymena pyriformis and Selected Micromycetes	Ecotoxicol. Environ. Saf.60(1): 87-100	2005
643	Naphthalene	Tanytarsus dissimilis	Midge	Insects/Spiders	MOR	MORT	2	d	20700	FW	Darville, R.G., and J.L. Wilhm	The Effect of Naphthalene on Oxygen Consumption and Hemoglobin Concentration in Chironomus attenuatus and on Oxygen Consumption and Life Cycle of Tanytarsus dissimilis	Environ.Toxicol.Chem. 3(1):135-141	1984
644	Anthracene	Rhodotorula glutinis	Fungus	Algae, Moss, Fungi	POP	PGRT	3	d	21500	FW	Bonnet, J.L., P. Guiraud, M. Dusser, M. Kadri, J. Laffosse, R. Steiman, and J. Bohatier	Assessment of Anthracene Toxicity Toward Environmental Eukaryotic Microorganisms: Tetrahymena pyriformis and Selected Micromycetes	Ecotoxicol. Environ. Saf.60(1): 87-100	2005
645	Anthracene	Chaetomium elatum	Fungus	Algae, Moss, Fungi	POP	PGRT	3	d	21750	FW	Bonnet, J.L., P. Guiraud, M. Dusser, M. Kadri, J. Laffosse, R. Steiman, and J. Bohatier	Assessment of Anthracene Toxicity Toward Environmental Eukaryotic Microorganisms: Tetrahymena pyriformis and Selected Micromycetes	Ecotoxicol. Environ. Saf.60(1): 87-100	2005
646	Anthracene	Aspergillus terreus var. terreus	Fungi	Algae, Moss, Fungi	POP	PGRT	3	d	22170	FW	Bonnet, J.L., P. Guiraud, M. Dusser, M. Kadri, J. Laffosse, R. Steiman, and J. Bohatier	Assessment of Anthracene Toxicity Toward Environmental Eukaryotic Microorganisms: Tetrahymena pyriformis and Selected Micromycetes	Ecotoxicol. Environ. Saf.60(1): 87-100	2005
647	Naphthalene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	2	d	22600	FW	Eastmond, D.A., G.M. Booth, and M.L. Lee	Toxicity, Accumulation, and Elimination of Polycyclic Aromatic Sulfur Heterocycles in Daphnia magna	Arch.Environ.Contam.Toxicol. 13(1):105-111	1984
648	Anthracene	Absidia fusca	Fungus	Algae, Moss, Fungi	POP	PGRT	3	d	24100	FW	Bonnet, J.L., P. Guiraud, M. Dusser, M. Kadri, J. Laffosse, R. Steiman, and J. Bohatier	Assessment of Anthracene Toxicity Toward Environmental Eukaryotic Microorganisms: Tetrahymena pyriformis and Selected Micromycetes	Ecotoxicol. Environ. Saf.60(1): 87-100	2005
649	Anthracene	Nectria haematococca	Fungi	Algae, Moss, Fungi	POP	PGRT	2	d	24210	FW	Bonnet, J.L., P. Guiraud, M. Dusser, M. Kadri, J. Laffosse, R. Steiman, and J. Bohatier	Assessment of Anthracene Toxicity Toward Environmental Eukaryotic Microorganisms: Tetrahymena pyriformis and Selected Micromycetes	Ecotoxicol. Environ. Saf.60(1): 87-100	2005
650	Naphthalene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	1	d	24740	FW	Bio Dynamics Incorporated	A Flow-Through Acute Fish Toxicity Test of Naphthalene	EPA/OTS Doc.#86-870000910 :26 p. (NTIS/OTS 0515348)	1987
651	Naphthalene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	1	d	24740	FW	Bio Dynamics Incorporated	A Flow-Through Acute Fish Toxicity Test of Naphthalene	EPA/OTS Doc.#86-870000910 :26 p. (NTIS/OTS 0515348)	1987
652	Naphthalene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	3.88	d	24740	FW	Bio Dynamics Incorporated	A Flow-Through Acute Fish Toxicity Test of Naphthalene	EPA/OTS Doc.#86-870000910 :26 p. (NTIS/OTS 0515348)	1987
653	Naphthalene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	3.88	d	24740	FW	Bio Dynamics Incorporated	A Flow-Through Acute Fish Toxicity Test of Naphthalene	EPA/OTS Doc.#86-870000910 :26 p. (NTIS/OTS 0515348)	1987
654	Benzo(a)pyrene	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	MOR	MORT	106	d	25000	FW	Ostrander, G.K., M.L. Landolt, and R.M. Kocan	Whole Life History Studies of Coho Salmon (Oncorhynchus kisutch) Following Embryonic Exposure to Benzo(a)pyrene	Aquat.Toxicol. 15(2):109-126	1989
655	Fluoranthene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	ITX	IMBL	7	d	25000	FW	Pagnout, C., C. Rast, A.M. Veber, P. Poupin, and J.F. Ferard	Ecotoxicological Assessment of PAHs and Their Dead-End Metabolites After Degradation by Mycobacterium sp. Strain SNP11	Ecotoxicol. Environ. Saf.65(2): 151-158	2006
656	Anthracene	Cunninghamella elegans	Fungus	Algae, Moss, Fungi	POP	PGRT	3	d	25270	FW	Bonnet, J.L., P. Guiraud, M. Dusser, M. Kadri, J. Laffosse, R. Steiman, and J. Bohatier	Assessment of Anthracene Toxicity Toward Environmental Eukaryotic Microorganisms: Tetrahymena pyriformis and Selected Micromycetes	Ecotoxicol. Environ. Saf.60(1): 87-100	2005
657	Anthracene	Rhodotorula glutinis	Fungus	Algae, Moss, Fungi	POP	PGRT	NR	d	27260	FW	Bonnet, J.L., P. Guiraud, M. Dusser, M. Kadri, J. Laffosse, R. Steiman, and J. Bohatier	Assessment of Anthracene Toxicity Toward Environmental Eukaryotic Microorganisms: Tetrahymena pyriformis and Selected Micromycetes	Ecotoxicol. Environ. Saf.60(1): 87-100	2005

Appendix D-9, Table 10. ECOTOX effects values for PAHs in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
658	Anthracene	Nectria haematococca	Fungi	Algae, Moss, Fungi	POP	PGRT	3	d	27350	FW	Bonnet, J.L., P. Guiraud, M. Dusser, M. Kadri, J. Laffosse, R. Steiman, and J. Bohatier	Assessment of Anthracene Toxicity Toward Environmental Eukaryotic Microorganisms: Tetrahymena pyriformis and Selected Micromycetes	Ecotoxicol. Environ. Saf.60(1): 87-100	2005
659	Anthracene	Phanerochaete chrysosporium	Fungi	Algae, Moss, Fungi	POP	PGRT	3	d	28660	FW	Bonnet, J.L., P. Guiraud, M. Dusser, M. Kadri, J. Laffosse, R. Steiman, and J. Bohatier	Assessment of Anthracene Toxicity Toward Environmental Eukaryotic Microorganisms: Tetrahymena pyriformis and Selected Micromycetes	Ecotoxicol. Environ. Saf.60(1): 87-100	2005
660	Phenanthrene	Hyalella azteca	Scud	Crustaceans	MOR	MORT	10	d	30000	FW	Verrhiest, G., B. Clement, and G. Blake	Single and Combined Effects of Sediment-Associated PAHs on Three Species of Freshwater Macroinvertebrates	Ecotoxicology 10(6):363-372	2001
661	Phenanthrene	Chironomus riparius	Midge	Insects/Spiders	MOR	MORT	10	d	30000	FW	Verrhiest, G., B. Clement, and G. Blake	Single and Combined Effects of Sediment-Associated PAHs on Three Species of Freshwater Macroinvertebrates	Ecotoxicology 10(6):363-372	2001
662	Phenanthrene	Chironomus riparius	Midge	Insects/Spiders	MOR	MORT	10	d	30000	FW	Verrhiest, G., B. Clement, and G. Blake	Single and Combined Effects of Sediment-Associated PAHs on Three Species of Freshwater Macroinvertebrates	Ecotoxicology 10(6):363-372	2001
663	Phenanthrene	Chironomus riparius	Midge	Insects/Spiders	MOR	MORT	10	d	30000	FW	Verrhiest, G., B. Clement, and G. Blake	Single and Combined Effects of Sediment-Associated PAHs on Three Species of Freshwater Macroinvertebrates	Ecotoxicology 10(6):363-372	2001
664	Anthracene	Phanerochaete chrysosporium	Fungi	Algae, Moss, Fungi	POP	PGRT	2	d	30220	FW	Bonnet, J.L., P. Guiraud, M. Dusser, M. Kadri, J. Laffosse, R. Steiman, and J. Bohatier	Assessment of Anthracene Toxicity Toward Environmental Eukaryotic Microorganisms: Tetrahymena pyriformis and Selected Micromycetes	Ecotoxicol. Environ. Saf.60(1): 87-100	2005
665	Anthracene	Penicillium chrysogenum	Fungus	Algae, Moss, Fungi	POP	PGRT	3	d	30340	FW	Bonnet, J.L., P. Guiraud, M. Dusser, M. Kadri, J. Laffosse, R. Steiman, and J. Bohatier	Assessment of Anthracene Toxicity Toward Environmental Eukaryotic Microorganisms: Tetrahymena pyriformis and Selected Micromycetes	Ecotoxicol. Environ. Saf.60(1): 87-100	2005
666	Naphthalene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	4	d	31026.5	FW	Epsey Huston and Associates Incorporated	Bioassay Testing of Sample 5601-56-1 in Fresh Water with Theleopomis macrochirus and Daphnia magna	EPA/OTS Doc.#86-870000557 :22 p. (NTIS/OTS 0513635)	2000
667	Benzo(a)pyrene	Chironomus riparius	Midge	Insects/Spiders	MOR	MORT	1	d	31590	FW	Ha, M.H., and J. Choi	Effects of Environmental Contaminants on Hemoglobin of Larvae of Aquatic Midge, Chironomus riparius (Diptera: Chironomidae): A Potential Biomarker for Ecotoxicity Monitoring	Chemosphere 71(10):1928-1936	2008
668	Naphthalene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	2	d	32000	FW	Epsey Huston and Associates Incorporated	Bioassay Testing of Sample 5601-56-1 in Fresh Water with Theleopomis macrochirus and Daphnia magna	EPA/OTS Doc.#86-870000557 :22 p. (NTIS/OTS 0513635)	2000
669	Fluoranthene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	1	d	32000	FW	Buccafusco, R.J., S.J. Ells, and G.A. LeBlanc	Acute Toxicity of Priority Pollutants to Bluegill (Lepomis macrochirus)	Bull.Environ.Contam.Toxicol. 26(4):446-452 (OECDG Data File)	1981
670	Fluoranthene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	POP	CHLA	2	d	32200	FW	U.S.Environmental Protection Agency	In-Depth Studies on Health and Environmental Impacts of Selected Water Pollutants	U.S.EPA Contract No.68-01-4646, Duluth, MN: 9 p.	1978
671	Phenanthrene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	2	d	32260	FW	DellaGreca, M., A. Fiorentino, M. Isidori, and A. Zarrelli	Toxicity Evaluation of Natural and Synthetic Phenanthrenes in Aquatic Systems	Environ.Toxicol.Chem. 20(8):1824-1830	2001
672	Naphthalene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	4	d	32980.2	FW	Epsey Huston and Associates Incorporated	Bioassay Testing of Sample 5601-56-1 in Fresh Water with Theleopomis macrochirus and Daphnia magna	EPA/OTS Doc.#86-870000557 :22 p. (NTIS/OTS 0513635)	2000
673	Naphthalene	Chlorella vulgaris	Green Algae	Algae, Moss, Fungi	GRO	GGRO	1	d	33000	FW	Kauss, P.B., and T.C. Hutchinson	The Effects of Water-Soluble Petroleum Components on the Growth of Chlorella vulgaris Beijerinck	Environ. Pollut.9(3): 157-174	1975
674	9H-Fluorene	Chara sp.	Stonewort	Algae, Moss, Fungi	GRO	DWGT	21	d	35000	FW	Finger, S.E., E.F. Little, M.G. Henry, J.F. Fairchild, and T.P. Boyle	Comparison of Laboratory and Field Assessment of Fluorene - Part 1: Effects of Fluorene on the Survival, Growth, Reproduction, and Behavior of Aquatic Organisms in Laboratory Tests	In: T.P.Boyle (Ed.), Validation and Predictability of Laboratory Methods for Assessing the Fate and Effects of Contaminants in Aquatic Ecosystems, 1st Symposium, ASTM STP 865, Philadelphia, PA: 120-133	1985
675	9H-Fluorene	Chara sp.	Stonewort	Algae, Moss, Fungi	GRO	DWGT	21	d	35000	FW	Finger, S.E., E.F. Little, M.G. Henry, J.F. Fairchild, and T.P. Boyle	Comparison of Laboratory and Field Assessment of Fluorene - Part 1: Effects of Fluorene on the Survival, Growth, Reproduction, and Behavior of Aquatic Organisms in Laboratory Tests	In: T.P.Boyle (Ed.), Validation and Predictability of Laboratory Methods for Assessing the Fate and Effects of Contaminants in Aquatic Ecosystems, 1st Symposium, ASTM STP 865, Philadelphia, PA: 120-133	1985
676	Fluoranthene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	POP	CHLA	1	d	37700	FW	U.S.Environmental Protection Agency	In-Depth Studies on Health and Environmental Impacts of Selected Water Pollutants	U.S.EPA Contract No.68-01-4646, Duluth, MN: 9 p.	1978
677	Pyrene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	2	d	39000	FW	Pagnout, C., C. Rast, A.M. Veber, P. Poupin, and J.F. Ferard	Ecotoxicological Assessment of PAHs and Their Dead-End Metabolites After Degradation by Mycobacterium sp. Strain SNP11	Ecotoxicol.Environ.Saf. 65(2):151-158	2006
678	Acenaphthene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	2	d	41000	FW	LeBlanc, G.A.	Acute Toxicity of Priority Pollutants to Water Flea (Daphnia magna)	Bull.Environ.Contam.Toxicol. 24(5):684-691 (OECDG Data File)	1980
679	Fluoranthene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	POP	CHLA	3	d	41400	FW	U.S.Environmental Protection Agency	In-Depth Studies on Health and Environmental Impacts of Selected Water Pollutants	U.S.EPA Contract No.68-01-4646, Duluth, MN: 9 p.	1978

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680	Phenanthrene	Scenedesmus subspicatus	Green Algae	Algae, Moss, Fungi	POP	PGRT	7	d	50240	FW	Djomo, J.E., A. Dauta, V. Ferrier, J.F. Narbonne, A. Monkiedje, T. Njine, and P. Garrigues	Toxic Effects of Some Major Polyaromatic Hydrocarbons Found in Crude Oil and Aquatic Sediments on Scenedesmus subspicatus	Water Res.38(7): 1817-1821	2004
681	Fluoranthene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	ITX	IMBL	7	d	54000	FW	Pagnout, C., C. Rast, A.M. Veber, P. Poupin, and J.F. Ferard	Ecotoxicological Assessment of PAHs and Their Dead-End Metabolites After Degradation by Mycobacterium sp. Strain SNP11	Ecotoxicol. Environ. Saf.65(2): 151-158	2006
682	Fluoranthene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	POP	ABND	4	d	54400	FW	U.S.Environmental Protection Agency	In-Depth Studies on Health and Environmental Impacts of Selected Water Pollutants	U.S.EPA Contract No.68-01-4646, Duluth, MN: 9 p.	1978
683	Fluoranthene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	POP	CHLA	4	d	54600	FW	U.S.Environmental Protection Agency	In-Depth Studies on Health and Environmental Impacts of Selected Water Pollutants	U.S.EPA Contract No.68-01-4646, Duluth, MN: 9 p.	1978
684	Phenanthrene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	GRO	GGRO	3	d	63093.42	FW	DellaGreca, M., A. Fiorentino, M. Isidori, and A. Zarrelli	Toxicity Evaluation of Natural and Synthetic Phenanthrenes in Aquatic Systems	Environ. Toxicol. Chem.20(8): 1824-1830	2001
685	Phenanthrene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	ITX	IMBL	7	d	65000	FW	Pagnout, C., C. Rast, A.M. Veber, P. Poupin, and J.F. Ferard	Ecotoxicological Assessment of PAHs and Their Dead-End Metabolites After Degradation by Mycobacterium sp. Strain SNP11	Ecotoxicol. Environ. Saf.65(2): 151-158	2006
686	Anthracene	Cladosporium herbarum	Fungus	Algae, Moss, Fungi	POP	PGRT	3	d	66800	FW	Bonnet, J.L., P. Guiraud, M. Dusser, M. Kadri, J. Laffosse, R. Steiman, and J. Bohatier	Assessment of Anthracene Toxicity Toward Environmental Eukaryotic Microorganisms: Tetrahymena pyriformis and Selected Micromycetes	Ecotoxicol. Environ. Saf.60(1): 87-100	2005
687	Pyrene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	2	d	67000	FW	Pagnout, C., C. Rast, A.M. Veber, P. Poupin, and J.F. Ferard	Ecotoxicological Assessment of PAHs and Their Dead-End Metabolites After Degradation by Mycobacterium sp. Strain SNP11	Ecotoxicol.Environ.Saf. 65(2):151-158	2006
688	Naphthalene	Diaptomus forbesi	Calanoid Copepod	Crustaceans	MOR	MORT	4	d	67800	FW	Saha, M.K., and S.K. Konar	Acute Toxicity of Some Petroleum Pollutants to Plankton and Fish	Environ.Ecol. 1(1):117-119	1983
689	Naphthalene	Scenedesmus subspicatus	Green Algae	Algae, Moss, Fungi	POP	ABND	7	d	68210	FW	Djomo, J.E., A. Dauta, V. Ferrier, J.F. Narbonne, A. Monkiedje, T. Njine, and P. Garrigues	Toxic Effects of Some Major Polyaromatic Hydrocarbons Found in Crude Oil and Aquatic Sediments on Scenedesmus subspicatus	Water Res.38(7): 1817-1821	2004
690	Fluoranthene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	2	d	89000	FW	Pagnout, C., C. Rast, A.M. Veber, P. Poupin, and J.F. Ferard	Ecotoxicological Assessment of PAHs and Their Dead-End Metabolites After Degradation by Mycobacterium sp. Strain SNP11	Ecotoxicol.Environ.Saf. 65(2):151-158	2006
691	Benzo(a)pyrene	Chironomus riparius	Midge	Insects/Spiders	MOR	MORT	1	d	99540	FW	Ha, M.H., and J. Choi	Effects of Environmental Contaminants on Hemoglobin of Larvae of Aquatic Midge, Chironomus riparius (Diptera: Chironomidae): A Potential Biomarker for Ecotoxicity Monitoring	Chemosphere 71(10):1928-1936	2008
692	9H-Fluorene	Pimephales promelas	Fathead Minnow	Fish	MOR	MORT	4	d	100000	FW	Finger, S.E., E.F. Little, M.G. Henry, J.F. Fairchild, and T.P. Boyle	Comparison of Laboratory and Field Assessment of Fluorene - Part 1: Effects of Fluorene on the Survival, Growth, Reproduction, and Behavior of Aquatic Organisms in Laboratory Tests	In: T.P.Boyle (Ed.), Validation and Predictability of Laboratory Methods for Assessing the Fate and Effects of Contaminants in Aquatic Ecosystems, 1st Symposium, ASTM STP 865, Philadelphia, PA :120-133	1985
693	Naphthalene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	2	d	100000	FW	Epsey Huston and Associates Incorporated	Bioassay Testing of Sample 5601-56-1 in Fresh Water with Theleopomis macrochirus and Daphnia magna	EPA/OTS Doc.#86-870000557 :22 p. (NTIS/OTS 0513635)	2000
694	Naphthalene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	4	d	100000	FW	Epsey Huston and Associates Incorporated	Bioassay Testing of Sample 5601-56-1 in Fresh Water with Theleopomis macrochirus and Daphnia magna	EPA/OTS Doc.#86-870000557 :22 p. (NTIS/OTS 0513635)	2000
695	Naphthalene	Lepomis macrochirus	Bluegill	Fish	MOR	MORT	4	d	100000	FW	Epsey Huston and Associates Incorporated	Bioassay Testing of Sample 5601-56-1 in Fresh Water with Theleopomis macrochirus and Daphnia magna	EPA/OTS Doc.#86-870000557 :22 p. (NTIS/OTS 0513635)	2000
696	Naphthalene	Gambusia affinis	Western Mosquitofish	Fish	MOR	MORT	4	d	150000	FW	Wallen, I.E., W.C. Greer, and R. Lasater	Toxicity to Gambusia affinis of Certain Pure Chemicals in Turbid Waters	Sewage Ind.Wastes 29(6):695-711	1957
697	Fluoranthene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	2	d	150000	FW	Pagnout, C., C. Rast, A.M. Veber, P. Poupin, and J.F. Ferard	Ecotoxicological Assessment of PAHs and Their Dead-End Metabolites After Degradation by Mycobacterium sp. Strain SNP11	Ecotoxicol.Environ.Saf. 65(2):151-158	2006
698	Pyrene	Ceriodaphnia dubia	Water Flea	Crustaceans	ITX	IMBL	7	d	154000	FW	Pagnout, C., C. Rast, A.M. Veber, P. Poupin, and J.F. Ferard	Ecotoxicological Assessment of PAHs and Their Dead-End Metabolites After Degradation by Mycobacterium sp. Strain SNP11	Ecotoxicol.Environ.Saf. 65(2):151-158	2006
699	Fluoranthene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	ITX	IMBL	3	d	154000	FW	Pagnout, C., C. Rast, A.M. Veber, P. Poupin, and J.F. Ferard	Ecotoxicological Assessment of PAHs and Their Dead-End Metabolites After Degradation by Mycobacterium sp. Strain SNP11	Ecotoxicol. Environ. Saf.65(2): 151-158	2006
700	Phenanthrene	Lemna minor	Duckweed	Flowers, Trees, Shrubs, Ferns	POP	ABND	7	d	161400	FW	Becker, A.M., S. Heise, and W. Ahlf	Effects of Phenanthrene on Lemna minor in a Sediment-Water System and the Impacts of UVB	Ecotoxicology11(5): 343-348	2002
701	Phenanthrene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	2	d	165000	FW	Pagnout, C., C. Rast, A.M. Veber, P. Poupin, and J.F. Ferard	Ecotoxicological Assessment of PAHs and Their Dead-End Metabolites After Degradation by Mycobacterium sp. Strain SNP11	Ecotoxicol.Environ.Saf. 65(2):151-158	2006

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702	Naphthalene	Gambusia affinis	Western Mosquitofish	Fish	MOR	MORT	2	d	165000	FW	Wallen, I.E., W.C. Greer, and R. Lasater	Toxicity to Gambusia affinis of Certain Pure Chemicals in Turbid Waters	Sewage Ind.Wastes 29(6):695-711	1957
703	Naphthalene	Gambusia affinis	Western Mosquitofish	Fish	MOR	MORT	1	d	220000	FW	Wallen, I.E., W.C. Greer, and R. Lasater	Toxicity to Gambusia affinis of Certain Pure Chemicals in Turbid Waters	Sewage Ind.Wastes 29(6):695-711	1957
704	Phenanthrene	Daphnia magna	Water Flea	Crustaceans	ITX	IMBL	2	d	244000	FW	Pagnout, C., C. Rast, A.M. Veber, P. Poupin, and J.F. Ferard	Ecotoxicological Assessment of PAHs and Their Dead-End Metabolites After Degradation by Mycobacterium sp. Strain SNP11	Ecotoxicol.Environ.Saf. 65(2):151-158	2006
705	Fluoranthene	Utterbackia imbecillis	Paper Pondshell	Molluscs	MOR	MORT	1	d	257500	FW	Weinstein, J.E.	Characterization of the Acute Toxicity of Photoactivated Fluoranthene to Glochidia of the Freshwater Mussel, Utterbackia imbecillis	Environ.Toxicol.Chem. 20(2):412-419	2001
706	Fluoranthene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	ITX	IMBL	3	d	267000	FW	Pagnout, C., C. Rast, A.M. Veber, P. Poupin, and J.F. Ferard	Ecotoxicological Assessment of PAHs and Their Dead-End Metabolites After Degradation by Mycobacterium sp. Strain SNP11	Ecotoxicol. Environ. Saf.65(2): 151-158	2006
707	Acenaphthene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	1	d	280000	FW	LeBlanc, G.A.	Acute Toxicity of Priority Pollutants to Water Flea (Daphnia magna)	Bull.Environ.Contam.Toxicol. 24(5):684-691 (OECDG Data File)	1980
708	Pyrene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	ITX	IMBL	3	d	297000	FW	Pagnout, C., C. Rast, A.M. Veber, P. Poupin, and J.F. Ferard	Ecotoxicological Assessment of PAHs and Their Dead-End Metabolites After Degradation by Mycobacterium sp. Strain SNP11	Ecotoxicol. Environ. Saf.65(2): 151-158	2006
709	Fluoranthene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	2	d	320000	FW	LeBlanc, G.A.	Acute Toxicity of Priority Pollutants to Water Flea (Daphnia magna)	Bull.Environ.Contam.Toxicol. 24(5):684-691 (OECDG Data File)	1980
710	Acenaphthene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	POP	CHLA	1	d	500000	FW	U.S.Environmental Protection Agency	In-Depth Studies on Health and Environmental Impacts of Selected Water Pollutants	U.S.EPA Contract No.68-01-4646, Duluth, MN: 9 p.	1978
711	Phenanthrene	Thamnocephalus platyurus	Fairy Shrimp	Crustaceans	MOR	MORT	1	d	566771	FW	DellaGreca, M., A. Fiorentino, M. Isidori, and A. Zarrelli	Toxicity Evaluation of Natural and Synthetic Phenanthrenes in Aquatic Systems	Environ.Toxicol.Chem. 20(8):1824-1830	2001
712	Pyrene	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	ITX	IMBL	3	d	894000	FW	Pagnout, C., C. Rast, A.M. Veber, P. Poupin, and J.F. Ferard	Ecotoxicological Assessment of PAHs and Their Dead-End Metabolites After Degradation by Mycobacterium sp. Strain SNP11	Ecotoxicol. Environ. Saf.65(2): 151-158	2006
713	Fluoranthene	Daphnia magna	Water Flea	Crustaceans	MOR	MORT	1	d	1300000	FW	LeBlanc, G.A.	Acute Toxicity of Priority Pollutants to Water Flea (Daphnia magna)	Bull.Environ.Contam.Toxicol. 24(5):684-691 (OECDG Data File)	1980
714	Phenanthrene	Brachionus calyciflorus	Rotifer	Invertebrates	MOR	MORT	1	d	1956965	FW	DellaGreca, M., A. Fiorentino, M. Isidori, and A. Zarrelli	Toxicity Evaluation of Natural and Synthetic Phenanthrenes in Aquatic Systems	Environ.Toxicol.Chem. 20(8):1824-1830	2001
715	Anthracene	Oryzias latipes	Medaka, High-Eyes	Fish	REP	FERT	56	d	20000000	FW	Cheek, A.O., J.A. Fentress, S.L. Steele, H.L. Bart Jr., and M. Brouwer	Models and Murkiness: Evaluating Fish Endocrine Disruption in the Laboratory and the Field	In: Proc.3rd Int.Conf.on Pharmaceuticals and Endocrine Disrupting Chemicals in Water, Minneapolis, MN :141-150	2003
716	Naphthalene	Callinectes sapidus	Blue Crab	Crustaceans	BEH	GBHV	0.00	d	0.000085	SW	Pearson, W.H., and B.L. Olla	Threshold for Detection of Naphthalene and Other Behavioral Responses by the Blue Crab, Callinectes sapidus	Estuaries 3(3):224-229	1980
717	Fluoranthene	Pleuronectes americanus	Winter Flounder	Fish	MOR	MORT	4	d	0.1	SW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
718	Fluoranthene	Americamysis bahia	Opossum Shrimp	Crustaceans	MOR	MORT	4	d	0.8	SW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
719	Pyrene	Americamysis bahia	Opossum Shrimp	Crustaceans	MOR	MORT	2	d	0.89	SW	Pelletier, M.C., R.M. Burgess, K.T. Ho, A. Kuhn, R.A. McKinney, and S.A. Ryba	Phototoxicity of Individual Polycyclic Aromatic Hydrocarbons and Petroleum to Marine Invertebrate Larvae and Juveniles	Environ.Toxicol.Chem. 16(10):2190-2199	1997
720	Fluoranthene	Americamysis bahia	Opossum Shrimp	Crustaceans	MOR	MORT	31	d	0.9	SW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
721	Phenanthrene	Lytechinus variegatus	Sea Urchin	Invertebrates	DVP	DVLP	0.04	d	1	SW	Steevens, J.A., M. Slattery, D. Schlenk, A. Aryl, and W.H. Benson	Effects of Ultraviolet-B Light and Polyaromatic Hydrocarbon Exposure on Sea Urchin Development and Bacterial Bioluminescence	Mar.Environ.Res. 48(4/5):439-457	1999
722	Fluoranthene	Americamysis bahia	Opossum Shrimp	Crustaceans	MOR	MORT	4	d	1.4	SW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
723	Fluoranthene	Americamysis bahia	Opossum Shrimp	Crustaceans	MOR	MORT	31	d	1.4	SW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
724	Pyrene	Callinectes sapidus	Blue Crab	Crustaceans	MOR	MORT	1.20833333	d	2.7	SW	Peachey, R.B.J.	The Synergism Between Hydrocarbon Pollutants and UV Radiation: A Potential Link Between Coastal Pollution and Larval Mortality	J.Exp.Mar.Biol.Ecol. 315(1):103-114	2005
725	Fluoranthene	Americamysis bahia	Opossum Shrimp	Crustaceans	MOR	MORT	4	d	2.8	SW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
726	Fluoranthene	Mulinia lateralis	Clam	Molluscs	MOR	MORT	2	d	2.8	SW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
727	Anthracene	Palaemonetes pugio	Daggerblade Grass Shrimp	Crustaceans	GEN	DAMG	1.20833333	d	3	SW	Lee, R., and G.B. Kim	Comet Assays to Assess DNA Damage and Repair in Grass Shrimp Embryos Exposed to Phototoxicants	Mar.Environ.Res. 54(3-5):465-469	2002
728	Anthracene	Americamysis bahia	Opossum Shrimp	Crustaceans	MOR	MORT	2	d	3.6	SW	Pelletier, M.C., R.M. Burgess, K.T. Ho, A. Kuhn, R.A. McKinney, and S.A. Ryba	Phototoxicity of Individual Polycyclic Aromatic Hydrocarbons and Petroleum to Marine Invertebrate Larvae and Juveniles	Environ.Toxicol.Chem. 16(10):2190-2199	1997
729	Fluoranthene	Arbacia punctulata	Purple-Spined Sea Urchin	Invertebrates	MOR	MORT	2	d	3.9	SW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
730	Pyrene	Libinia dubia	Longnose Spider Crab	Crustaceans	MOR	MORT	1.20833333	d	4.9	SW	Peachey, R.B.J.	The Synergism Between Hydrocarbon Pollutants and UV Radiation: A Potential Link Between Coastal Pollution and Larval Mortality	J.Exp.Mar.Biol.Ecol. 315(1):103-114	2005
731	Phenanthrene	Lytechinus variegatus	Sea Urchin	Invertebrates	DVP	DVLP	0.17	d	5	SW	Steevens, J.A., M. Slattery, D. Schlenk, A. Aryl, and W.H. Benson	Effects of Ultraviolet-B Light and Polyaromatic Hydrocarbon Exposure on Sea Urchin Development and Bacterial Bioluminescence	Mar.Environ.Res. 48(4/5):439-457	1999
732	Fluoranthene	Americamysis bahia	Opossum Shrimp	Crustaceans	MOR	MORT	2	d	5.32	SW	Pelletier, M.C., R.M. Burgess, K.T. Ho, A. Kuhn, R.A. McKinney, and S.A. Ryba	Phototoxicity of Individual Polycyclic Aromatic Hydrocarbons and Petroleum to Marine Invertebrate Larvae and Juveniles	Environ.Toxicol.Chem. 16(10):2190-2199	1997
733	Pyrene	Callinectes sapidus	Blue Crab	Crustaceans	MOR	MORT	1.20833333	d	5.8	SW	Peachey, R.B.J.	The Synergism Between Hydrocarbon Pollutants and UV Radiation: A Potential Link Between Coastal Pollution and Larval Mortality	J.Exp.Mar.Biol.Ecol. 315(1):103-114	2005
734	Fluoranthene	Mulinia lateralis	Clam	Molluscs	REP	VIAB	14	d	6.04	SW	Pelletier, M.C., R.M. Burgess, M.G. Cantwell, J.R. Serbst, K.T. Ho, and S.A. Ryba	Importance of Maternal Transfer of the Photoreactive Polycyclic Aromatic Hydrocarbon Fluoranthene from Benthic Adult Bivalves to Their Pelagic Larvae	Environ.Toxicol.Chem. 19(11):2691-2698	2000
735	Benzo(a)pyrene	Fundulus heteroclitus	Mummichog	Fish	ENZ	EROD	10	d	7.112	SW	Nacci, D., L. Coiro, A. Kuhn, D. Champlin, W. Munns Jr., J. Specker, and K. Cooper	Nondestructive Indicator of Ethoxyresorufin-O-Deethylase Activity in Embryonic Fish	Environ.Toxicol.Chem. 17(12):2481-2486	1998
736	Pyrene	Artemia salina	Brine Shrimp	Crustaceans	MOR	SURV	0.10	d	8	SW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
737	Pyrene	Artemia salina	Brine Shrimp	Crustaceans	MOR	SURV	0.13	d	8	SW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
738	Pyrene	Libinia dubia	Longnose Spider Crab	Crustaceans	MOR	MORT	1.20833333	d	8.3	SW	Peachey, R.B.J.	The Synergism Between Hydrocarbon Pollutants and UV Radiation: A Potential Link Between Coastal Pollution and Larval Mortality	J.Exp.Mar.Biol.Ecol. 315(1):103-114	2005
739	Dibenz(a,h)anthracene	Platichthys flesus	Starry, European Flounder	Fish	ENZ	EROD	9	d	10	SW	Kirby, M.F., A.J. Smith, J. Rooke, P. Neall, A.P. Scott, and I. Katsiadaki	Ethoxyresorufin-O-Deethylase (EROD) and Vitellogenin (VTG) in Flounder (Platichthys flesus): System Interaction, Crosstalk and Implications for Monitoring	Aquat.Toxicol. 81(3):233-244	2007
740	Benzo(k)fluoranthene	Platichthys flesus	Starry, European Flounder	Fish	ENZ	EROD	9	d	10	SW	Kirby, M.F., A.J. Smith, J. Rooke, P. Neall, A.P. Scott, and I. Katsiadaki	Ethoxyresorufin-O-Deethylase (EROD) and Vitellogenin (VTG) in Flounder (Platichthys flesus): System Interaction, Crosstalk and Implications for Monitoring	Aquat.Toxicol. 81(3):233-244	2007
741	Pyrene	Panopeus herbstii	Common Mud Crab	Crustaceans	MOR	MORT	1.20833333	d	11.4	SW	Peachey, R.B.J.	The Synergism Between Hydrocarbon Pollutants and UV Radiation: A Potential Link Between Coastal Pollution and Larval Mortality	J.Exp.Mar.Biol.Ecol. 315(1):103-114	2005
742	Fluoranthene	Mulinia lateralis	Clam	Molluscs	REP	VIAB	14	d	11.8	SW	Pelletier, M.C., R.M. Burgess, M.G. Cantwell, J.R. Serbst, K.T. Ho, and S.A. Ryba	Importance of Maternal Transfer of the Photoreactive Polycyclic Aromatic Hydrocarbon Fluoranthene from Benthic Adult Bivalves to Their Pelagic Larvae	Environ.Toxicol.Chem. 19(11):2691-2698	2000
743	Phenanthrene	Americamysis bahia	Opossum Shrimp	Crustaceans	MOR	SURV	32	d	11.909	SW	Kuhn, A., and S. Lussier	Phenanthrene Results of Acute and Chronic Tests (Flow-Thru) with Mysidopsis bahia	Letter to D.Hansen, U.S.EPA, Narragansett, RI :3 p.	1989
744	Phenanthrene	Americamysis bahia	Opossum Shrimp	Crustaceans	REP	PROG	32	d	11.909	SW	Kuhn, A., and S. Lussier	Phenanthrene Results of Acute and Chronic Tests (Flow-Thru) with Mysidopsis bahia	Letter to D.Hansen, U.S.EPA, Narragansett, RI :3 p.	1989
745	Fluoranthene	Americamysis bahia	Opossum Shrimp	Crustaceans	MOR	MORT	4	d	12	SW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
746	Fluoranthene	Americamysis bahia	Opossum Shrimp	Crustaceans	MOR	MORT	4	d	12	SW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
747	Fluoranthene	Macomona liliana	Wedge Clam	Molluscs	BEH	BBBH	4	d	12	SW	Ahrens, M.J., R. Nieuwenhuis, and C.W. Hickey	Sensitivity of Juvenile Macomona liliana (Bivalvia) to UV-Photoactivated Fluoranthene Toxicity	Environ.Toxicol. 17(6):567-577	2002

Appendix D-9, Table 10. ECOTOX effects values for PAHs in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
748	Fluoranthene	Callinectes sapidus	Blue Crab	Crustaceans	MOR	MORT	1.20833333	d	13	SW	Peachey, R.B.J.	The Synergism Between Hydrocarbon Pollutants and UV Radiation: A Potential Link Between Coastal Pollution and Larval Mortality	J.Exp.Mar.Biol.Ecol. 315(1):103-114	2005
749	Fluoranthene	Americamysis bahia	Opossum Shrimp	Crustaceans	REP	PROG	31	d	14.4	SW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
750	Pyrene	Panopeus herbstii	Common Mud Crab	Crustaceans	MOR	MORT	1.20833333	d	16.7	SW	Peachey, R.B.J.	The Synergism Between Hydrocarbon Pollutants and UV Radiation: A Potential Link Between Coastal Pollution and Larval Mortality	J.Exp.Mar.Biol.Ecol. 315(1):103-114	2005
751	Pyrene	Callinectes sapidus	Blue Crab	Crustaceans	MOR	MORT	1.20833333	d	16.8	SW	Peachey, R.B.J.	The Synergism Between Hydrocarbon Pollutants and UV Radiation: A Potential Link Between Coastal Pollution and Larval Mortality	J.Exp.Mar.Biol.Ecol. 315(1):103-114	2005
752	Fluoranthene	Libinia dubia	Longnose Spider Crab	Crustaceans	MOR	MORT	1.20833333	d	17.1	SW	Peachey, R.B.J.	The Synergism Between Hydrocarbon Pollutants and UV Radiation: A Potential Link Between Coastal Pollution and Larval Mortality	J.Exp.Mar.Biol.Ecol. 315(1):103-114	2005
753	Fluoranthene	Callinectes sapidus	Blue Crab	Crustaceans	MOR	MORT	1.20833333	d	17.6	SW	Peachey, R.B.J.	The Synergism Between Hydrocarbon Pollutants and UV Radiation: A Potential Link Between Coastal Pollution and Larval Mortality	J.Exp.Mar.Biol.Ecol. 315(1):103-114	2005
754	Fluoranthene	Americamysis bahia	Opossum Shrimp	Crustaceans	REP	PROG	31	d	18.8	SW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
755	Fluoranthene	Ankistrodesmus sp.	Green Algae	Algae, Moss, Fungi	BCM	ZXTN	1	d	19	SW	Southerland, H.A., and A.J. Lewitus	Physiological Responses of Estuarine Phytoplankton to Ultraviolet Light-Induced Fluoranthene Toxicity	J. Exp. Mar. Biol. Ecol.298(2): 303-322	2004
756	Fluoranthene	Ankistrodesmus sp.	Green Algae	Algae, Moss, Fungi	BCM	ZXVX	1.5	d	19	SW	Southerland, H.A., and A.J. Lewitus	Physiological Responses of Estuarine Phytoplankton to Ultraviolet Light-Induced Fluoranthene Toxicity	J. Exp. Mar. Biol. Ecol.298(2): 303-322	2004
757	Fluoranthene	Ankistrodesmus sp.	Green Algae	Algae, Moss, Fungi	BCM	VLXN	1.5	d	19	SW	Southerland, H.A., and A.J. Lewitus	Physiological Responses of Estuarine Phytoplankton to Ultraviolet Light-Induced Fluoranthene Toxicity	J. Exp. Mar. Biol. Ecol.298(2): 303-322	2004
758	Anthracene	Artemia salina	Brine Shrimp	Crustaceans	MOR	SURV	0.13	d	20	SW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
759	Fluoranthene	Americamysis bahia	Opossum Shrimp	Crustaceans	MOR	MORT	4	d	22	SW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
760	Fluoranthene	Libinia dubia	Longnose Spider Crab	Crustaceans	MOR	MORT	1.20833333	d	23.7	SW	Peachey, R.B.J.	The Synergism Between Hydrocarbon Pollutants and UV Radiation: A Potential Link Between Coastal Pollution and Larval Mortality	J.Exp.Mar.Biol.Ecol. 315(1):103-114	2005
761	Pyrene	Amphilocus sp.	Amphipod	Crustaceans	MOR	MORT	0.42	d	24	SW	Peachey, R.L., and D.G. Crosby	Phototoxicity in Tropical Reef Animals	Mar.Environ.Res. 42(1-4):359-362	1996
762	Pyrene	Americamysis bahia	Opossum Shrimp	Crustaceans	MOR	MORT	2	d	24.8	SW	Pelletier, M.C., R.M. Burgess, K.T. Ho, A. Kuhn, R.A. McKinney, and S.A. Ryba	Phototoxicity of Individual Polycyclic Aromatic Hydrocarbons and Petroleum to Marine Invertebrate Larvae and Juveniles	Environ.Toxicol.Chem. 16(10):2190-2199	1997
763	Acenaphthene	Americamysis bahia	Opossum Shrimp	Crustaceans	REP	PROG	28	d	25	SW	Thursby, G.B., W.J. Berry, and D. Champlin	Flow-Through Acute and Chronic Tests with Acenaphthene Using Mysidopsis bahia	Sept.19 Letter to D.J.Hansen, U.S.EPA, Narragansett, RI :5 p.	1989
764	Fluoranthene	Callinectes sapidus	Blue Crab	Crustaceans	MOR	MORT	1.20833333	d	25.1	SW	Peachey, R.B.J.	The Synergism Between Hydrocarbon Pollutants and UV Radiation: A Potential Link Between Coastal Pollution and Larval Mortality	J.Exp.Mar.Biol.Ecol. 315(1):103-114	2005
765	Fluoranthene	Panopeus herbstii	Common Mud Crab	Crustaceans	MOR	MORT	1.20833333	d	25.3	SW	Peachey, R.B.J.	The Synergism Between Hydrocarbon Pollutants and UV Radiation: A Potential Link Between Coastal Pollution and Larval Mortality	J.Exp.Mar.Biol.Ecol. 315(1):103-114	2005
766	Phenanthrene	Americamysis bahia	Opossum Shrimp	Crustaceans	MOR	MORT	4	d	27.1	SW	Kuhn, A., and S. Lussier	Phenanthrene Results of Acute and Chronic Tests (Flow-Thru) with Mysidopsis bahia	Letter to D.Hansen, U.S.EPA, Narragansett, RI :3 p.	1989
767	Fluoranthene	Capitella sp.	Polychaete	Worms	BCM	CCON	14	d	28	SW	Foss, H.E., and V.E. Forbes	Effects of the Polycyclic Aromatic Hydrocarbon Fluoranthene on Growth Rate and Nucleic Acid Composition of Capitella sp. I	Mar.Biol.(Berlin) 129(3):489-497	1997
768	Fluoranthene	Capitella sp.	Polychaete	Worms	GRO	DWGT	14	d	28	SW	Foss, H.E., and V.E. Forbes	Effects of the Polycyclic Aromatic Hydrocarbon Fluoranthene on Growth Rate and Nucleic Acid Composition of Capitella sp. I	Mar.Biol.(Berlin) 129(3):489-497	1997
769	Fluoranthene	Americamysis bahia	Opossum Shrimp	Crustaceans	MOR	MORT	4	d	31	SW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
770	Pyrene	Callinectes sapidus	Blue Crab	Crustaceans	MOR	MORT	1.20833333	d	33.3	SW	Peachey, R.B.J.	The Synergism Between Hydrocarbon Pollutants and UV Radiation: A Potential Link Between Coastal Pollution and Larval Mortality	J.Exp.Mar.Biol.Ecol. 315(1):103-114	2005

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
771	Dibenz(a,h)anthracene	Platichthys flesus	Starry, European Flounder	Fish	ENZ	EROD	10	d	40	SW	Kirby, M.F., A.J. Smith, J. Rooke, P. Neall, A.P. Scott, and I. Katsiadaki	Ethoxyresorufin-O-Deethylase (EROD) and Vitellogenin (VTG) in Flounder (Platichthys flesus): System Interaction, Crosstalk and Implications for Monitoring	Aquat.Toxicol. 81(3):233-244	2007
772	Anthracene	Artemia salina	Brine Shrimp	Crustaceans	MOR	SURV	0.10	d	40	SW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
773	Pyrene	Mytilus edulis	Common Bay Mussel,Blue Mussel	Molluscs	FDB	GFDB	0.07	d	40	SW	Donkin, P., J. Widdows, S.V. Evans, C.M. Worrall, and M. Carr	Quantitative Structure-Activity Relationships for the Effect of Hydrophobic Organic Chemicals on Rate of Feeding by Mussels (Mytilus edulis)	Aquat.Toxicol. 14(3):277-294	1989
774	Fluoranthene	Artemia salina	Brine Shrimp	Crustaceans	MOR	SURV	0.10	d	40	SW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
775	Fluoranthene	Artemia salina	Brine Shrimp	Crustaceans	MOR	SURV	0.13	d	40	SW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
776	Fluoranthene	Mulinia lateralis	Clam	Molluscs	MOR	MORT	4	d	45	SW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
777	Fluoranthene	Macomona liliana	Wedge Clam	Molluscs	BEH	BBBH	4.08	d	46	SW	Ahrens, M.J., R. Nieuwenhuis, and C.W. Hickey	Sensitivity of Juvenile Macomona liliana (Bivalvia) to UV-Photoactivated Fluoranthene Toxicity	Environ.Toxicol. 17(6):567-577	2002
778	Acenaphthene	Americamysis bahia	Opossum Shrimp	Crustaceans	GRO	DWGT	28	d	48	SW	Thursby, G.B., W.J. Berry, and D. Champlin	Flow-Through Acute and Chronic Tests with Acenaphthene Using Mysidopsis bahia	Sept.19 Letter to D.J.Hansen, U.S.EPA, Narragansett, RI :5 p.	1989
779	Fluoranthene	Macomona liliana	Wedge Clam	Molluscs	BEH	BBBH	4	d	48	SW	Ahrens, M.J., R. Nieuwenhuis, and C.W. Hickey	Sensitivity of Juvenile Macomona liliana (Bivalvia) to UV-Photoactivated Fluoranthene Toxicity	Environ.Toxicol. 17(6):567-577	2002
780	Dibenz(a,h)anthracene	Platichthys flesus	Starry, European Flounder	Fish	ENZ	EROD	6	d	50	SW	Kirby, M.F., A.J. Smith, J. Rooke, P. Neall, A.P. Scott, and I. Katsiadaki	Ethoxyresorufin-O-Deethylase (EROD) and Vitellogenin (VTG) in Flounder (Platichthys flesus): System Interaction, Crosstalk and Implications for Monitoring	Aquat.Toxicol. 81(3):233-244	2007
781	Phenanthrene	Mytilus edulis	Common Bay Mussel,Blue Mussel	Molluscs	ACC	UPTK	0.91666667	d	50	SW	Moore, M.N., and S.V. Farrar	Effects of Polynuclear Aromatic Hydrocarbons on Lysosomal Membranes in Molluscs	Mar.Environ.Res. 17(2-4):222-225	1985
782	Anthracene	Mytilus edulis	Common Bay Mussel,Blue Mussel	Molluscs	ENZ	NDFH	0.91666667	d	50	SW	Nott, J.A., and M.N. Moore	Effects of Polycyclic Aromatic Hydrocarbons on Molluscan Lysosomes and Endoplasmic Reticulum	Histochem.J. 19(6/7):357-368	1987
783	Anthracene	Mytilus edulis	Common Bay Mussel,Blue Mussel	Molluscs	ACC	UPTK	0.91666667	d	50	SW	Moore, M.N., and S.V. Farrar	Effects of Polynuclear Aromatic Hydrocarbons on Lysosomal Membranes in Molluscs	Mar.Environ.Res. 17(2-4):222-225	1985
784	Fluoranthene	Macomona liliana	Wedge Clam	Molluscs	BEH	BBBH	4.08	d	50	SW	Ahrens, M.J., R. Nieuwenhuis, and C.W. Hickey	Sensitivity of Juvenile Macomona liliana (Bivalvia) to UV-Photoactivated Fluoranthene Toxicity	Environ.Toxicol. 17(6):567-577	2002
785	Fluoranthene	Macomona liliana	Wedge Clam	Molluscs	MOR	MORT	4.08	d	50	SW	Ahrens, M.J., R. Nieuwenhuis, and C.W. Hickey	Sensitivity of Juvenile Macomona liliana (Bivalvia) to UV-Photoactivated Fluoranthene Toxicity	Environ.Toxicol. 17(6):567-577	2002
786	Benzo(k)fluoranthene	Platichthys flesus	Starry, European Flounder	Fish	ENZ	EROD	6	d	50	SW	Kirby, M.F., A.J. Smith, J. Rooke, P. Neall, A.P. Scott, and I. Katsiadaki	Ethoxyresorufin-O-Deethylase (EROD) and Vitellogenin (VTG) in Flounder (Platichthys flesus): System Interaction, Crosstalk and Implications for Monitoring	Aquat.Toxicol. 81(3):233-244	2007
787	Fluoranthene	Capitella capitata	Polychaete Worm	Worms	GEN	DAMG	1	d	50.73	SW	Palmqvist, A., H. Selck, L.J. Rasmussen, and V.E. Forbes	Biotransformation and Genotoxicity of Fluoranthene in the Deposit-Feeding Polychaete Capitella sp. I	Environ.Toxicol.Chem. 22(12):2977-2985	2003
788	Fluoranthene	Macomona liliana	Wedge Clam	Molluscs	BEH	BBBH	4	d	51	SW	Ahrens, M.J., R. Nieuwenhuis, and C.W. Hickey	Sensitivity of Juvenile Macomona liliana (Bivalvia) to UV-Photoactivated Fluoranthene Toxicity	Environ.Toxicol. 17(6):567-577	2002
789	Fluoranthene	Americamysis bahia	Opossum Shrimp	Crustaceans	MOR	MORT	4	d	58	SW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
790	Fluoranthene	Americamysis bahia	Opossum Shrimp	Crustaceans	MOR	MORT	2	d	63.8	SW	Pelletier, M.C., R.M. Burgess, K.T. Ho, A. Kuhn, R.A. McKinney, and S.A. Ryba	Phototoxicity of Individual Polycyclic Aromatic Hydrocarbons and Petroleum to Marine Invertebrate Larvae and Juveniles	Environ.Toxicol.Chem. 16(10):2190-2199	1997
791	Acenaphthene	Americamysis bahia	Opossum Shrimp	Crustaceans	REP	PROG	28	d	63.99	SW	Thursby, G.B., W.J. Berry, and D. Champlin	Flow-Through Acute and Chronic Tests with Acenaphthene Using Mysidopsis bahia	Sept.19 Letter to D.J.Hansen, U.S.EPA, Narragansett, RI :5 p.	1989
792	Naphthalene	Ostrea edulis	Flat, Native European Oyster	Molluscs	BCM	LDPL	3	d	65.7	SW	Riley, R.T., and M.C. Mix	The Effects of Naphthalene on Glucose Metabolism in the European Flat Oyster Ostrea edulis	Comp.Biochem.Physiol.C 70(1):13-20	1981
793	Fluoranthene	Mytilus edulis	Common Bay Mussel,Blue Mussel	Molluscs	FDB	GFDB	0.07	d	80	SW	Donkin, P., J. Widdows, S.V. Evans, C.M. Worrall, and M. Carr	Quantitative Structure-Activity Relationships for the Effect of Hydrophobic Organic Chemicals on Rate of Feeding by Mussels (Mytilus edulis)	Aquat.Toxicol. 14(3):277-294	1989

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
794	Fluoranthene	Phaeodactylum tricornutum	Diatom	Algae, Moss, Fungi	POP	ABND	3	d	80	SW	Wang, L., and B. Zheng	Toxic Effects of Fluoranthene and Copper on Marine Diatom Phaeodactylum tricornutum	J. Environ. Sci.20(11): 1363-1372	2008
795	Anthracene	Invertebrates	Invertebrates	Invertebrates	POP	ABND	162	d	95	SW	Bauer, J.E., R.P. Kerr, M.F. Bautista, C.J. Decker, and D.G. Capone	Stimulation of Microbial Activities and Polycyclic Aromatic Hydrocarbon Degradation in Marine Sediments Inhabited by Capitella capitata	Mar.Environ.Res. 25(1):63-84	1988
796	Fluoranthene	Plantae	Plant Kingdom	Miscellaneous	BCM	CACH	3	d	95	SW	Southerland, H.A., and A.J. Lewitus	Physiological Responses of Estuarine Phytoplankton to Ultraviolet Light-Induced Fluoranthene Toxicity	J. Exp. Mar. Biol. Ecol.298(2): 303-322	2004
797	Fluoranthene	Plantae	Plant Kingdom	Miscellaneous	BCM	CACH	3	d	95	SW	Southerland, H.A., and A.J. Lewitus	Physiological Responses of Estuarine Phytoplankton to Ultraviolet Light-Induced Fluoranthene Toxicity	J. Exp. Mar. Biol. Ecol.298(2): 303-322	2004
798	Fluoranthene	Plantae	Plant Kingdom	Miscellaneous	BCM	CHLA	3	d	95	SW	Southerland, H.A., and A.J. Lewitus	Physiological Responses of Estuarine Phytoplankton to Ultraviolet Light-Induced Fluoranthene Toxicity	J. Exp. Mar. Biol. Ecol.298(2): 303-322	2004
799	Fluoranthene	Plantae	Plant Kingdom	Miscellaneous	BCM	CHLA	3	d	95	SW	Southerland, H.A., and A.J. Lewitus	Physiological Responses of Estuarine Phytoplankton to Ultraviolet Light-Induced Fluoranthene Toxicity	J. Exp. Mar. Biol. Ecol.298(2): 303-322	2004
800	Fluoranthene	Plantae	Plant Kingdom	Miscellaneous	BCM	VXCA	3	d	95	SW	Southerland, H.A., and A.J. Lewitus	Physiological Responses of Estuarine Phytoplankton to Ultraviolet Light-Induced Fluoranthene Toxicity	J. Exp. Mar. Biol. Ecol.298(2): 303-322	2004
801	Fluoranthene	Plantae	Plant Kingdom	Miscellaneous	BCM	VXCA	3	d	95	SW	Southerland, H.A., and A.J. Lewitus	Physiological Responses of Estuarine Phytoplankton to Ultraviolet Light-Induced Fluoranthene Toxicity	J. Exp. Mar. Biol. Ecol.298(2): 303-322	2004
802	Fluoranthene	Plantae	Plant Kingdom	Miscellaneous	BCM	ZXCH	3	d	95	SW	Southerland, H.A., and A.J. Lewitus	Physiological Responses of Estuarine Phytoplankton to Ultraviolet Light-Induced Fluoranthene Toxicity	J. Exp. Mar. Biol. Ecol.298(2): 303-322	2004
803	Fluoranthene	Plantae	Plant Kingdom	Miscellaneous	BCM	ZXCH	3	d	95	SW	Southerland, H.A., and A.J. Lewitus	Physiological Responses of Estuarine Phytoplankton to Ultraviolet Light-Induced Fluoranthene Toxicity	J. Exp. Mar. Biol. Ecol.298(2): 303-322	2004
804	Fluoranthene	Plantae	Plant Kingdom	Miscellaneous	BCM	ZXVX	3	d	95	SW	Southerland, H.A., and A.J. Lewitus	Physiological Responses of Estuarine Phytoplankton to Ultraviolet Light-Induced Fluoranthene Toxicity	J. Exp. Mar. Biol. Ecol.298(2): 303-322	2004
805	Fluoranthene	Plantae	Plant Kingdom	Miscellaneous	BCM	ZXVX	3	d	95	SW	Southerland, H.A., and A.J. Lewitus	Physiological Responses of Estuarine Phytoplankton to Ultraviolet Light-Induced Fluoranthene Toxicity	J. Exp. Mar. Biol. Ecol.298(2): 303-322	2004
806	Fluoranthene	Macomona liliana	Wedge Clam	Molluscs	BEH	BBBH	4	d	100	SW	Ahrens, M.J., R. Nieuwenhuis, and C.W. Hickey	Sensitivity of Juvenile Macomona liliana (Bivalvia) to UV-Photoactivated Fluoranthene Toxicity	Environ.Toxicol. 17(6):567-577	2002
807	Fluoranthene	Mytilus edulis	Common Bay Mussel,Blue Mussel	Molluscs	ENZ	NABH	7	d	100	SW	Lowe, D.M., and R.K. Pipe	Contaminant Induced Lysosomal Membrane Damage in Marine Mussel Digestive Cells: An In Vitro Study	Aquat.Toxicol. 30(4):357-365	1994
808	Fluoranthene	Mytilus edulis	Common Bay Mussel,Blue Mussel	Molluscs	PHY	NRUP	7	d	100	SW	Lowe, D.M., and R.K. Pipe	Contaminant Induced Lysosomal Membrane Damage in Marine Mussel Digestive Cells: An In Vitro Study	Aquat.Toxicol. 30(4):357-365	1994
809	Fluoranthene	Phaeodactylum tricornutum	Diatom	Algae, Moss, Fungi	BCM	MLDH	0.5	d	100	SW	Wang, L., and B. Zheng	Toxic Effects of Fluoranthene and Copper on Marine Diatom Phaeodactylum tricornutum	J. Environ. Sci.20(11): 1363-1372	2008
810	Fluoranthene	Phaeodactylum tricornutum	Diatom	Algae, Moss, Fungi	BCM	MLDH	1	d	100	SW	Wang, L., and B. Zheng	Toxic Effects of Fluoranthene and Copper on Marine Diatom Phaeodactylum tricornutum	J. Environ. Sci.20(11): 1363-1372	2008
811	Fluoranthene	Phaeodactylum tricornutum	Diatom	Algae, Moss, Fungi	BCM	MLDH	1.5	d	100	SW	Wang, L., and B. Zheng	Toxic Effects of Fluoranthene and Copper on Marine Diatom Phaeodactylum tricornutum	J. Environ. Sci.20(11): 1363-1372	2008
812	Fluoranthene	Phaeodactylum tricornutum	Diatom	Algae, Moss, Fungi	BCM	MLDH	2	d	100	SW	Wang, L., and B. Zheng	Toxic Effects of Fluoranthene and Copper on Marine Diatom Phaeodactylum tricornutum	J. Environ. Sci.20(11): 1363-1372	2008
813	Fluoranthene	Phaeodactylum tricornutum	Diatom	Algae, Moss, Fungi	BCM	MLDH	2.5	d	100	SW	Wang, L., and B. Zheng	Toxic Effects of Fluoranthene and Copper on Marine Diatom Phaeodactylum tricornutum	J. Environ. Sci.20(11): 1363-1372	2008
814	Fluoranthene	Phaeodactylum tricornutum	Diatom	Algae, Moss, Fungi	BCM	MLDH	3	d	100	SW	Wang, L., and B. Zheng	Toxic Effects of Fluoranthene and Copper on Marine Diatom Phaeodactylum tricornutum	J. Environ. Sci.20(11): 1363-1372	2008
815	Fluoranthene	Phaeodactylum tricornutum	Diatom	Algae, Moss, Fungi	ENZ	SODA	0.5	d	100	SW	Wang, L., and B. Zheng	Toxic Effects of Fluoranthene and Copper on Marine Diatom Phaeodactylum tricornutum	J. Environ. Sci.20(11): 1363-1372	2008
816	Fluoranthene	Phaeodactylum tricornutum	Diatom	Algae, Moss, Fungi	ENZ	SODA	1	d	100	SW	Wang, L., and B. Zheng	Toxic Effects of Fluoranthene and Copper on Marine Diatom Phaeodactylum tricornutum	J. Environ. Sci.20(11): 1363-1372	2008
817	Fluoranthene	Phaeodactylum tricornutum	Diatom	Algae, Moss, Fungi	ENZ	SODA	1.5	d	100	SW	Wang, L., and B. Zheng	Toxic Effects of Fluoranthene and Copper on Marine Diatom Phaeodactylum tricornutum	J. Environ. Sci.20(11): 1363-1372	2008
818	Fluoranthene	Phaeodactylum tricornutum	Diatom	Algae, Moss, Fungi	POP	ABND	3	d	103	SW	Wang, L., and B. Zheng	Toxic Effects of Fluoranthene and Copper on Marine Diatom Phaeodactylum tricornutum	J. Environ. Sci.20(11): 1363-1372	2008
819	Fluoranthene	Phaeodactylum tricornutum	Diatom	Algae, Moss, Fungi	BCM	MLDH	3	d	120	SW	Wang, L., and B. Zheng	Toxic Effects of Fluoranthene and Copper on Marine Diatom Phaeodactylum tricornutum	J. Environ. Sci.20(11): 1363-1372	2008
820	Fluoranthene	Cyprinodon variegatus	Sheepshead Minnow	Fish	MOR	MORT	4	d	127	SW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
821	Fluoranthene	Arbacia punctulata	Purple-Spined Sea Urchin	Invertebrates	MOR	MORT	2	d	127	SW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
822	Fluoranthene	Mulinia lateralis	Clam	Molluscs	MOR	MORT	2	d	127	SW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999

Appendix D-9, Table 10. ECOTOX effects values for PAHs in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
823	Phenanthrene	Mytilus edulis	Common Bay Mussel,Blue Mussel	Molluscs	FDB	GFDB	0.07	d	150	SW	Donkin, P., J. Widdows, S.V. Evans, C.M. Worrall, and M. Carr	Quantitative Structure-Activity Relationships for the Effect of Hydrophobic Organic Chemicals on Rate of Feeding by Mussels (Mytilus edulis)	Aquat.Toxicol. 14(3):277-294	1989
824	Fluoranthene	Macomona liliana	Wedge Clam	Molluscs	BEH	BBBH	4	d	153	SW	Ahrens, M.J., R. Nieuwenhuis, and C.W. Hickey	Sensitivity of Juvenile Macomona liliana (Bivalvia) to UV-Photoactivated Fluoranthene Toxicity	Environ.Toxicol. 17(6):567-577	2002
825	Fluoranthene	Cyprinodon variegatus	Sheepshead Minnow	Fish	MOR	MORT	4	d	159	SW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
826	Acenaphthene	Americamysis bahia	Opossum Shrimp	Crustaceans	GRO	DWGT	28	d	168	SW	Thursby, G.B., W.J. Berry, and D. Champlin	Flow-Through Acute and Chronic Tests with Acenaphthene Using Mysidopsis bahia	Sept.19 Letter to D.J.Hansen, U.S.EPA, Narragansett, RI :5 p.	1989
827	Phenanthrene	Liza aurata	Golden Grey Mullet	Fish	GEN	NABN	0.67	d	178.23	SW	Oliveira, M., M. Pacheco, and M.A. Santos	Cytochrome P4501A, Genotoxic and Stress Responses in Golden Grey Mullet (Liza aurata) Following Short-Term Exposure to Phenanthrene	Chemosphere 66(7):1284-1291	2007
828	Fluoranthene	Pleuronectes americanus	Winter Flounder	Fish	MOR	MORT	4	d	188	SW	Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D.A. Cox	Comparative Toxicity of Fluoranthene to Freshwater and Saltwater Species Under Fluorescent and Ultraviolet Light	Arch.Environ.Contam.Toxicol. 37(4):496-502	1999
829	Acenaphthene	Americamysis bahia	Opossum Shrimp	Crustaceans	MOR	MORT	35	d	190	SW	Horne, J.D., M.A. Swirsky, T.A. Hollister, B.R. Oblad, and J.H. Kennedy	5Aquatic Toxicity Studies of Five Priority Pollutants	Rep.No.4398, Final Report, EPA Contract No.68-01-6201, NUS Corp., Houston, TX :196 p.	1983
830	Phenanthrene	Artemia salina	Brine Shrimp	Crustaceans	ITX	IMBL	1	d	200	SW	Foster, G.D., and R.E. Tullis	Quantitative Structure-Toxicity Relationships with Osmotically Stressed Artemia salina Nauplii	Environ.Pollut.Ser.A 38:273-281	1985
831	Phenanthrene	Lytechinus anamesus	White Sea Urchin	Invertebrates	DVP	GSTL	NR	gts	200	SW	Pillai, M.C., C.A. Vines, A.H. Wikramanayake, and G.N. Cherr	Polycyclic Aromatic Hydrocarbons Disrupt Axial Development in Sea Urchin Embryos Through a beta-Catenin Dependent Pathway	Toxicology 186(1/2):93-108	2003
832	Phenanthrene	Mytilus edulis	Common Bay Mussel,Blue Mussel	Molluscs	ENZ	NDFH	0.91666667	d	200	SW	Nott, J.A., and M.N. Moore	Effects of Polycyclic Aromatic Hydrocarbons on Molluscan Lysosomes and Endoplasmic Reticulum	Histochem.J. 19(6/7):357-368	1987
833	Fluoranthene	Macomona liliana	Wedge Clam	Molluscs	BEH	BBBH	4	d	207	SW	Ahrens, M.J., R. Nieuwenhuis, and C.W. Hickey	Sensitivity of Juvenile Macomona liliana (Bivalvia) to UV-Photoactivated Fluoranthene Toxicity	Environ.Toxicol. 17(6):567-577	2002
834	Acenaphthene	Americamysis bahia	Opossum Shrimp	Crustaceans	MOR	MORT	28	d	220	SW	Horne, J.D., M.A. Swirsky, T.A. Hollister, B.R. Oblad, and J.H. Kennedy	5Aquatic Toxicity Studies of Five Priority Pollutants	Rep.No.4398, Final Report, EPA Contract No.68-01-6201, NUS Corp., Houston, TX :196 p.	1983
835	Acenaphthene	Crangon septemspinosa	Bay Shrimp, Sand Shrimp	Crustaceans	MOR	MORT	4	d	220	SW	Horne, J.D., M.A. Swirsky, T.A. Hollister, B.R. Oblad, and J.H. Kennedy	5Aquatic Toxicity Studies of Five Priority Pollutants	Rep.No.4398, Final Report, EPA Contract No.68-01-6201, NUS Corp., Houston, TX :196 p.	1983
836	Acenaphthene	Americamysis bahia	Opossum Shrimp	Crustaceans	MOR	MORT	21	d	240	SW	Horne, J.D., M.A. Swirsky, T.A. Hollister, B.R. Oblad, and J.H. Kennedy	5Aquatic Toxicity Studies of Five Priority Pollutants	Rep.No.4398, Final Report, EPA Contract No.68-01-6201, NUS Corp., Houston, TX :196 p.	1983
837	Acenaphthene	Americamysis bahia	Opossum Shrimp	Crustaceans	MOR	MORT	4	d	250	SW	Horne, J.D., M.A. Swirsky, T.A. Hollister, B.R. Oblad, and J.H. Kennedy	5Aquatic Toxicity Studies of Five Priority Pollutants	Rep.No.4398, Final Report, EPA Contract No.68-01-6201, NUS Corp., Houston, TX :196 p.	1983
838	Phenanthrene	Artemia salina	Brine Shrimp	Crustaceans	ITX	IMBL	1	d	280	SW	Foster, G.D., and R.E. Tullis	Quantitative Structure-Toxicity Relationships with Osmotically Stressed Artemia salina Nauplii	Environ.Pollut.Ser.A 38:273-281	1985
839	Acenaphthene	Americamysis bahia	Opossum Shrimp	Crustaceans	MOR	MORT	14	d	290	SW	Horne, J.D., M.A. Swirsky, T.A. Hollister, B.R. Oblad, and J.H. Kennedy	5Aquatic Toxicity Studies of Five Priority Pollutants	Rep.No.4398, Final Report, EPA Contract No.68-01-6201, NUS Corp., Houston, TX :196 p.	1983
840	Acenaphthene	Americamysis bahia	Opossum Shrimp	Crustaceans	MOR	SURV	28	d	354	SW	Thursby, G.B., W.J. Berry, and D. Champlin	Flow-Through Acute and Chronic Tests with Acenaphthene Using Mysidopsis bahia	Sept.19 Letter to D.J.Hansen, U.S.EPA, Narragansett, RI :5 p.	1989
841	Acenaphthene	Mytilus edulis	Common Bay Mussel,Blue Mussel	Molluscs	FDB	GFDB	0.07	d	380	SW	Donkin, P., J. Widdows, S.V. Evans, C.M. Worrall, and M. Carr	Quantitative Structure-Activity Relationships for the Effect of Hydrophobic Organic Chemicals on Rate of Feeding by Mussels (Mytilus edulis)	Aquat.Toxicol. 14(3):277-294	1989
842	Acenaphthene	Americamysis bahia	Opossum Shrimp	Crustaceans	MOR	MORT	7	d	390	SW	Horne, J.D., M.A. Swirsky, T.A. Hollister, B.R. Oblad, and J.H. Kennedy	5Aquatic Toxicity Studies of Five Priority Pollutants	Rep.No.4398, Final Report, EPA Contract No.68-01-6201, NUS Corp., Houston, TX :196 p.	1983
843	Phenanthrene	Lytechinus anamesus	White Sea Urchin	Invertebrates	DVP	GSTL	NR	gts	410	SW	Pillai, M.C., C.A. Vines, A.H. Wikramanayake, and G.N. Cherr	Polycyclic Aromatic Hydrocarbons Disrupt Axial Development in Sea Urchin Embryos Through a beta-Catenin Dependent Pathway	Toxicology 186(1/2):93-108	2003
844	Acenaphthene	Americamysis bahia	Opossum Shrimp	Crustaceans	MOR	SURV	4	d	460	SW	Thursby, G.B., W.J. Berry, and D. Champlin	Flow-Through Acute and Chronic Tests with Acenaphthene Using Mysidopsis bahia	Sept.19 Letter to D.J.Hansen, U.S.EPA, Narragansett, RI :5 p.	1989
845	Acenaphthene	Skeletonema costatum	Diatom	Algae, Moss, Fungi	POP	ABND	4	d	500	SW	Syracuse Research Corp.	Results of Continuous Exposure of Fathead Minnow Embryo to 21 Priority Pollutants	EPA/OTS Doc.#40-7848049: 46 p.	2000
846	Acenaphthene	Skeletonema costatum	Diatom	Algae, Moss, Fungi	POP	CHLA	4	d	500	SW	Syracuse Research Corp.	Results of Continuous Exposure of Fathead Minnow Embryo to 21 Priority Pollutants	EPA/OTS Doc.#40-7848049: 46 p.	2000

Appendix D-9, Table 10. ECOTOX effects values for PAHs in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
847	9H-Fluorene	Lytechinus anamesus	White Sea Urchin	Invertebrates	DVP	GSTL	NR	gts	500	SW	Pillai, M.C., C.A. Vines, A.H. Wikramanayake, and G.N. Cherr	Polycyclic Aromatic Hydrocarbons Disrupt Axial Development in Sea Urchin Embryos Through a beta-Catenin Dependent Pathway	Toxicology 186(1/2):93-108	2003
848	Fluoranthene	Lytechinus anamesus	White Sea Urchin	Invertebrates	DVP	GSTL	NR	gts	500	SW	Pillai, M.C., C.A. Vines, A.H. Wikramanayake, and G.N. Cherr	Polycyclic Aromatic Hydrocarbons Disrupt Axial Development in Sea Urchin Embryos Through a beta-Catenin Dependent Pathway	Toxicology 186(1/2):93-108	2003
849	Fluoranthene	Macomona liliana	Wedge Clam	Molluscs	MOR	MORT	4	d	500	SW	Ahrens, M.J., R. Nieuwenhuis, and C.W. Hickey	Sensitivity of Juvenile Macomona liliana (Bivalvia) to UV-Photoactivated Fluoranthene Toxicity	Environ.Toxicol. 17(6):567-577	2002
850	Fluoranthene	Neanthes arenaceodentata	Polychaete Worm	Worms	MOR	MORT	4	d	500	SW	Rossi, S.S., and J.M. Neff	Toxicity of Polynuclear Aromatic Hydrocarbons to the Polychaete Neanthes arenaceodentata	Mar.Pollut.Bull. 9(8):220-223	1978
851	Phenanthrene	Artemia salina	Brine Shrimp	Crustaceans	ITX	IMBL	1	d	520	SW	Foster, G.D., and R.E. Tullis	A Quantitative Structure-Activity Relationship Between Partition Coefficients and the Acute Toxicity of Naphthalene Derivatives in Artemia salina Nauplii	Aquat.Toxicol. 5(3):245-254	1984
852	Phenanthrene	Liza aurata	Golden Grey Mullet	Fish	ENZ	CP1A	0.67	d	534.69	SW	Oliveira, M., M. Pacheco, and M.A. Santos	Cytochrome P4501A, Genotoxic and Stress Responses in Golden Grey Mullet (Liza aurata) Following Short-Term Exposure to Phenanthrene	Chemosphere 66(7):1284-1291	2007
853	Phenanthrene	Liza aurata	Golden Grey Mullet	Fish	HRM	CRTS	0.67	d	534.69	SW	Oliveira, M., M. Pacheco, and M.A. Santos	Cytochrome P4501A, Genotoxic and Stress Responses in Golden Grey Mullet (Liza aurata) Following Short-Term Exposure to Phenanthrene	Chemosphere 66(7):1284-1291	2007
854	Anthracene	Americamysis bahia	Opossum Shrimp	Crustaceans	MOR	MORT	2	d	535	SW	Pelletier, M.C., R.M. Burgess, K.T. Ho, A. Kuhn, R.A. McKinney, and S.A. Ryba	Phototoxicity of Individual Polycyclic Aromatic Hydrocarbons and Petroleum to Marine Invertebrate Larvae and Juveniles	Environ.Toxicol.Chem. 16(10):2190-2199	1997
855	Acenaphthene	Americamysis bahia	Opossum Shrimp	Crustaceans	MOR	SURV	3	d	539	SW	Thursby, G.B., W.J. Berry, and D. Champlin	Flow-Through Acute and Chronic Tests with Acenaphthene Using Mysidopsis bahia	Sept.19 Letter to D.J.Hansen, U.S.EPA, Narragansett, RI :5 p.	1989
856	Acenaphthene	Palaemonetes pugio	Daggerblade Grass Shrimp	Crustaceans	MOR	MORT	4	d	540	SW	Horne, J.D., M.A. Swirsky, T.A. Hollister, B.R. Oblad, and J.H. Kennedy	5Aquatic Toxicity Studies of Five Priority Pollutants	Rep.No.4398, Final Report, EPA Contract No.68-01-6201, NUS Corp., Houston, TX :196 p.	1983
857	Acenaphthene	Americamysis bahia	Opossum Shrimp	Crustaceans	MOR	SURV	2	d	545	SW	Thursby, G.B., W.J. Berry, and D. Champlin	Flow-Through Acute and Chronic Tests with Acenaphthene Using Mysidopsis bahia	Sept.19 Letter to D.J.Hansen, U.S.EPA, Narragansett, RI :5 p.	1989
858	Acenaphthene	Americamysis bahia	Opossum Shrimp	Crustaceans	MOR	SURV	1	d	556	SW	Thursby, G.B., W.J. Berry, and D. Champlin	Flow-Through Acute and Chronic Tests with Acenaphthene Using Mysidopsis bahia	Sept.19 Letter to D.J.Hansen, U.S.EPA, Narragansett, RI :5 p.	1989
859	Phenanthrene	Neanthes arenaceodentata	Polychaete Worm	Worms	MOR	MORT	4	d	600	SW	Rossi, S.S., and J.M. Neff	Toxicity of Polynuclear Aromatic Hydrocarbons to the Polychaete Neanthes arenaceodentata	Mar.Pollut.Bull. 9(8):220-223	1978
860	Fluoranthene	Mercenaria mercenaria	Northern Quahog Or Hard Clam	Molluscs	MOR	MORT	1	d	650	SW	Chung, K.W., M.H. Fulton, and G.I. Scott	Use of the Juvenile Clam, Mercenaria mercenaria, as a Sensitive Indicator of Aqueous and Sediment Toxicity	Ecotoxicol.Environ.Saf. 67(3):333-340	2007
861	Acenaphthene	Americamysis bahia	Opossum Shrimp	Crustaceans	MOR	MORT	4	d	670	SW	Horne, J.D., M.A. Swirsky, T.A. Hollister, B.R. Oblad, and J.H. Kennedy	5Aquatic Toxicity Studies of Five Priority Pollutants	Rep.No.4398, Final Report, EPA Contract No.68-01-6201, NUS Corp., Houston, TX :196 p.	1983
862	Naphthalene	Champia parvula	Red Algae	Algae, Moss, Fungi	GRO	GGRO	NR	d	695	SW	Thursby, G.B., R.L. Steele, and M.E. Kane	Effect of Organic Chemicals on Growth and Reproduction in the Marine Red Alga Champia parvula	Environ. Toxicol. Chem.4(6): 797-805	1985
863	Naphthalene	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	MOR	MORT	2	d	730	SW	Stickle, W.B., T.D. Sabourin, and S.D. Rice	Sensitivity and Osmoregulation of Coho Salmon, Oncorhynchus kisutch, Exposed to Toluene and Naphthalene at Different Salinities	In: W.B.Vernberg, A.Calabrese, F.P.Thurnberg, and F.J.Vernberg (Eds.), Physiological Mechanisms of Marine Pollutant Toxicity, Academic Press, Inc., NY :331-348	1982
864	Fluoranthene	Lytechinus anamesus	White Sea Urchin	Invertebrates	DVP	GSTL	NR	gts	820	SW	Pillai, M.C., C.A. Vines, A.H. Wikramanayake, and G.N. Cherr	Polycyclic Aromatic Hydrocarbons Disrupt Axial Development in Sea Urchin Embryos Through a beta-Catenin Dependent Pathway	Toxicology 186(1/2):93-108	2003
865	Naphthalene	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	MOR	MORT	2	d	830	SW	Stickle, W.B., T.D. Sabourin, and S.D. Rice	Sensitivity and Osmoregulation of Coho Salmon, Oncorhynchus kisutch, Exposed to Toluene and Naphthalene at Different Salinities	In: W.B.Vernberg, A.Calabrese, F.P.Thurnberg, and F.J.Vernberg (Eds.), Physiological Mechanisms of Marine Pollutant Toxicity, Academic Press, Inc., NY :331-348	1982
866	Naphthalene	Neomysis americana	Opossum Shrimp	Crustaceans	MOR	MORT	4	d	850	SW	Smith, R.L., and B.R. Hargreaves	A Simple Toxicity Apparatus for Continuous Flow with Small Volumes: Demonstration with Mysids and Naphthalene	Bull.Environ.Contam.Toxicol. 30(4):406-412	1983
867	Naphthalene	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	MOR	MORT	2	d	880	SW	Stickle, W.B., T.D. Sabourin, and S.D. Rice	Sensitivity and Osmoregulation of Coho Salmon, Oncorhynchus kisutch, Exposed to Toluene and Naphthalene at Different Salinities	In: W.B.Vernberg, A.Calabrese, F.P.Thurnberg, and F.J.Vernberg (Eds.), Physiological Mechanisms of Marine Pollutant Toxicity, Academic Press, Inc., NY :331-348	1982

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
868	Naphthalene	Oncorhynchus gorbuscha	Pink Salmon	Fish	MOR	MORT	2	d	890	SW	Rice, S.D., and R.E. Thomas	Effect of Pre-treatment Exposures of Toluene or Naphthalene on the Tolerance of Pink Salmon (Oncorhynchus gorbuscha) and Kelp Shrimp (Eualis suckleyi)	Comp.Biochem.Physiol.C 94(1):289-293	1989
869	Naphthalene	Oncorhynchus gorbuscha	Pink Salmon	Fish	MOR	MORT	2	d	900	SW	Rice, S.D., and R.E. Thomas	Effect of Pre-treatment Exposures of Toluene or Naphthalene on the Tolerance of Pink Salmon (Oncorhynchus gorbuscha) and Kelp Shrimp (Eualis suckleyi)	Comp.Biochem.Physiol.C 94(1):289-293	1989
870	Naphthalene	Mytilus edulis	Common Bay Mussel,Blue Mussel	Molluscs	FDB	GFDB	0.07	d	920	SW	Donkin, P., J. Widdows, S.V. Evans, C.M. Worrall, and M. Carr	Quantitative Structure-Activity Relationships for the Effect of Hydrophobic Organic Chemicals on Rate of Feeding by Mussels (Mytilus edulis)	Aquat.Toxicol. 14(3):277-294	1989
871	Naphthalene	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	MOR	MORT	2	d	950	SW	Stickle, W.B., T.D. Sabourin, and S.D. Rice	Sensitivity and Osmoregulation of Coho Salmon, Oncorhynchus kisutch, Exposed to Toluene and Naphthalene at Different Salinities	In: W.B.Vernberg, A.Calabrese, F.P.Thurnberg, and F.J.Vernberg (Eds.), Physiological Mechanisms of Marine Pollutant Toxicity, Academic Press, Inc., NY :331-348	1982
872	Acenaphthene	Gammarus annulatus	Scud	Crustaceans	MOR	MORT	4	d	960	SW	Horne, J.D., M.A. Swirsky, T.A. Hollister, B.R. Oblad, and J.H. Kennedy	5Aquatic Toxicity Studies of Five Priority Pollutants	Rep.No.4398, Final Report, EPA Contract No.68-01-6201, NUS Corp., Houston, TX :196 p.	1983
873	Naphthalene	Oncorhynchus gorbuscha	Pink Salmon	Fish	MOR	MORT	2	d	960	SW	Rice, S.D., and R.E. Thomas	Effect of Pre-treatment Exposures of Toluene or Naphthalene on the Tolerance of Pink Salmon (Oncorhynchus gorbuscha) and Kelp Shrimp (Eualis suckleyi)	Comp.Biochem.Physiol.C 94(1):289-293	1989
874	Acenaphthene	Cyprinodon variegatus	Sheepshead Minnow	Fish	MOR	MORT	28	dph	970	SW	Ward, G.S., P.R. Parrish, and R.A. Rigby	Early Life Stage Toxicity Tests with a Saltwater Fish: Effects of Eight Chemicals on Survival, Growth, and Development of Sheepshead Minnows	J.Toxicol.Environ.Health 8(1/2):225-240	1981
875	Naphthalene	Pandalus goniurus	Humpy Shrimp	Crustaceans	MOR	MORT	4	d	971	SW	Korn, S., D.A. Moles, and S.D. Rice	Effects of Temperature on the Median Tolerance Limit of Pink Salmon and Shrimp Exposed to Toluene, Naphthalene, and Cook Inlet Crude Oil	Bull.Environ.Contam.Toxicol. 21(4/5):521-525	1979
876	Naphthalene	Oncorhynchus gorbuscha	Pink Salmon	Fish	MOR	MORT	2	d	990	SW	Rice, S.D., and R.E. Thomas	Effect of Pre-treatment Exposures of Toluene or Naphthalene on the Tolerance of Pink Salmon (Oncorhynchus gorbuscha) and Kelp Shrimp (Eualis suckleyi)	Comp.Biochem.Physiol.C 94(1):289-293	1989
877	Benzo(a)pyrene	Neanthes arenaceodentata	Polychaete Worm	Worms	MOR	MORT	4	d	1000	SW	Rossi, S.S., and J.M. Neff	Toxicity of Polynuclear Aromatic Hydrocarbons to the Polychaete Neanthes arenaceodentata	Mar.Pollut.Bull. 9(8):220-223	1978
878	Acenaphthene	Palaemonetes pugio	Daggerblade Grass Shrimp	Crustaceans	MOR	MORT	4	d	1000	SW	Horne, J.D., M.A. Swirsky, T.A. Hollister, B.R. Oblad, and J.H. Kennedy	5Aquatic Toxicity Studies of Five Priority Pollutants	Rep.No.4398, Final Report, EPA Contract No.68-01-6201, NUS Corp., Houston, TX :196 p.	1983
879	Acenaphthene	Palaemonetes pugio	Daggerblade Grass Shrimp	Crustaceans	MOR	MORT	4	d	1000	SW	Horne, J.D., M.A. Swirsky, T.A. Hollister, B.R. Oblad, and J.H. Kennedy	5Aquatic Toxicity Studies of Five Priority Pollutants	Rep.No.4398, Final Report, EPA Contract No.68-01-6201, NUS Corp., Houston, TX :196 p.	1983
880	Acenaphthene	Skeletonema costatum	Diatom	Algae, Moss, Fungi	POP	CHLA	1	d	1000	SW	Syracuse Research Corp.	Results of Continuous Exposure of Fathead Minnow Embryo to 21 Priority Pollutants	EPA/OTS Doc.#40-7848049: 46 p.	2000
881	Acenaphthene	Skeletonema costatum	Diatom	Algae, Moss, Fungi	POP	CHLA	2	d	1000	SW	Syracuse Research Corp.	Results of Continuous Exposure of Fathead Minnow Embryo to 21 Priority Pollutants	EPA/OTS Doc.#40-7848049: 46 p.	2000
882	9H-Fluorene	Neanthes arenaceodentata	Polychaete Worm	Worms	MOR	MORT	4	d	1000	SW	Rossi, S.S., and J.M. Neff	Toxicity of Polynuclear Aromatic Hydrocarbons to the Polychaete Neanthes arenaceodentata	Mar.Pollut.Bull. 9(8):220-223	1978
883	Pyrene	Lytechinus anamesus	White Sea Urchin	Invertebrates	DVP	GSTL	NR	gts	1000	SW	Pillai, M.C., C.A. Vines, A.H. Wikramanayake, and G.N. Cherr	Polycyclic Aromatic Hydrocarbons Disrupt Axial Development in Sea Urchin Embryos Through a beta-Catenin Dependent Pathway	Toxicology 186(1/2):93-108	2003
884	Chrysene	Neanthes arenaceodentata	Polychaete Worm	Worms	MOR	MORT	4	d	1000	SW	Rossi, S.S., and J.M. Neff	Toxicity of Polynuclear Aromatic Hydrocarbons to the Polychaete Neanthes arenaceodentata	Mar.Pollut.Bull. 9(8):220-223	1978
885	Naphthalene	Oncorhynchus gorbuscha	Pink Salmon	Fish	MOR	MORT	2	d	1010	SW	Rice, S.D., and R.E. Thomas	Effect of Pre-treatment Exposures of Toluene or Naphthalene on the Tolerance of Pink Salmon (Oncorhynchus gorbuscha) and Kelp Shrimp (Eualis suckleyi)	Comp.Biochem.Physiol.C 94(1):289-293	1989
886	Naphthalene	Pandalus goniurus	Humpy Shrimp	Crustaceans	MOR	MORT	4	d	1020	SW	Korn, S., D.A. Moles, and S.D. Rice	Effects of Temperature on the Median Tolerance Limit of Pink Salmon and Shrimp Exposed to Toluene, Naphthalene, and Cook Inlet Crude Oil	Bull.Environ.Contam.Toxicol. 21(4/5):521-525	1979

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
887	Naphthalene	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	MOR	MORT	2	d	1130	SW	Stickle, W.B., T.D. Sabourin, and S.D. Rice	Sensitivity and Osmoregulation of Coho Salmon, Oncorhynchus kisutch, Exposed to Toluene and Naphthalene at Different Salinities	In: W.B.Vernberg, A.Calabrese, F.P.Thurnberg, and F.J.Vernberg (Eds.), Physiological Mechanisms of Marine Pollutant Toxicity, Academic Press, Inc., NY :331-348	1982
888	Naphthalene	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	PHY	OSMO	0.25	d	1130	SW	Stickle, W.B., T.D. Sabourin, and S.D. Rice	Sensitivity and Osmoregulation of Coho Salmon, Oncorhynchus kisutch, Exposed to Toluene and Naphthalene at Different Salinities	In: W.B.Vernberg, A.Calabrese, F.P.Thurnberg, and F.J.Vernberg (Eds.), Physiological Mechanisms of Marine Pollutant Toxicity, Academic Press, Inc., NY :331-348	1982
889	Naphthalene	Dicentrarchus labrax	Sea Bass	Fish	GEN	NABN	0.17	d	1153.53	SW	Gravato, C., and M.A. Santos	Juvenile Sea Bass Liver P450, EROD Induction, and Erythrocytic Genotoxic Responses to PAH and PAH-Like Compounds	Ecotoxicol.Environ.Saf. 51(2):115-127	2002
890	Naphthalene	Dicentrarchus labrax	Sea Bass	Fish	MPH	SMIX	0.08	d	1153.53	SW	Gravato, C., and M.A. Santos	Juvenile Sea Bass Liver P450, EROD Induction, and Erythrocytic Genotoxic Responses to PAH and PAH-Like Compounds	Ecotoxicol.Environ.Saf. 51(2):115-127	2002
891	Naphthalene	Oncorhynchus gorbuscha	Pink Salmon	Fish	MOR	MORT	4	d	1200	SW	Moles, A., and S.D. Rice	Effects of Crude Oil and Naphthalene on Growth, Caloric Content, and Fat Content of Pink Salmon Juveniles in Seawater	Trans.Am.Fish.Soc. 112(2A):205-211	1983
892	Naphthalene	Oncorhynchus gorbuscha	Pink Salmon	Fish	MOR	MORT	40	d	1200	SW	Moles, A., and S.D. Rice	Effects of Crude Oil and Naphthalene on Growth, Caloric Content, and Fat Content of Pink Salmon Juveniles in Seawater	Trans.Am.Fish.Soc. 112(2A):205-211	1983
893	Naphthalene	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	BCM	KCON	0.25	d	1235	SW	Stickle, W.B., T.D. Sabourin, and S.D. Rice	Sensitivity and Osmoregulation of Coho Salmon, Oncorhynchus kisutch, Exposed to Toluene and Naphthalene at Different Salinities	In: W.B.Vernberg, A.Calabrese, F.P.Thurnberg, and F.J.Vernberg (Eds.), Physiological Mechanisms of Marine Pollutant Toxicity, Academic Press, Inc., NY :331-348	1982
894	Naphthalene	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	PHY	OSMO	0.25	d	1235	SW	Stickle, W.B., T.D. Sabourin, and S.D. Rice	Sensitivity and Osmoregulation of Coho Salmon, Oncorhynchus kisutch, Exposed to Toluene and Naphthalene at Different Salinities	In: W.B.Vernberg, A.Calabrese, F.P.Thurnberg, and F.J.Vernberg (Eds.), Physiological Mechanisms of Marine Pollutant Toxicity, Academic Press, Inc., NY :331-348	1982
895	Naphthalene	Oncorhynchus gorbuscha	Pink Salmon	Fish	MOR	MORT	4	d	1240	SW	Korn, S., D.A. Moles, and S.D. Rice	Effects of Temperature on the Median Tolerance Limit of Pink Salmon and Shrimp Exposed to Toluene, Naphthalene, and Cook Inlet Crude Oil	Bull.Environ.Contam.Toxicol. 21(4/5):521-525	1979
896	9H-Fluorene	Lytechinus anamesus	White Sea Urchin	Invertebrates	DVP	GSTL	NR	gts	1260	SW	Pillai, M.C., C.A. Vines, A.H. Wikramanayake, and G.N. Cherr	Polycyclic Aromatic Hydrocarbons Disrupt Axial Development in Sea Urchin Embryos Through a beta-Catenin Dependent Pathway	Toxicology 186(1/2):93-108	2003
897	Naphthalene	Neomysis americana	Opossum Shrimp	Crustaceans	MOR	MORT	4	d	1280	SW	Smith, R.L., and B.R. Hargreaves	A Simple Toxicity Apparatus for Continuous Flow with Small Volumes: Demonstration with Mysids and Naphthalene	Bull.Environ.Contam.Toxicol. 30(4):406-412	1983
898	Naphthalene	Pandalus goniurus	Humpy Shrimp	Crustaceans	MOR	MORT	1	d	1290	SW	Korn, S., D.A. Moles, and S.D. Rice	Effects of Low Temperature on the Survival of Pink Salmon and Shrimp Exposed to Toluene, Naphthalene, and the Water-Soluble Fraction of Cook Inlet Crude Oil	In: Environ.Assess.of the Alaskan Continental Shelf, Principal Investigator's Rep.for the Year Ending Mar.1977 12:66-84 (Publ in Part As 5030) (Author Communication Used)	1977
899	Acenaphthene	Americamysis bahia	Opossum Shrimp	Crustaceans	MOR	MORT	1	d	1300	SW	Thursby, G.B., W.J. Berry, and D. Champlin	Flow-Through Acute and Chronic Tests with Acenaphthene Using Mysidopsis bahia	Sept.19 Letter to D.J.Hansen, U.S.EPA, Narragansett, RI :5 p.	1989
900	Naphthalene	Oncorhynchus gorbuscha	Pink Salmon	Fish	MOR	MORT	4	d	1370	SW	Korn, S., D.A. Moles, and S.D. Rice	Effects of Temperature on the Median Tolerance Limit of Pink Salmon and Shrimp Exposed to Toluene, Naphthalene, and Cook Inlet Crude Oil	Bull.Environ.Contam.Toxicol. 21(4/5):521-525	1979
901	Naphthalene	Oncorhynchus gorbuscha	Pink Salmon	Fish	MOR	MORT	1	d	1380	SW	Korn, S., D.A. Moles, and S.D. Rice	Effects of Low Temperature on the Survival of Pink Salmon and Shrimp Exposed to Toluene, Naphthalene, and the Water-Soluble Fraction of Cook Inlet Crude Oil	In: Environ.Assess.of the Alaskan Continental Shelf, Principal Investigator's Rep.for the Year Ending Mar.1977 12:66-84 (Publ in Part As 5030) (Author Communication Used)	1977
902	Naphthalene	Eualus suckleyi	Shortscale Eualid	Crustaceans	MOR	MORT	4	d	1390	SW	Rice, S.D., and R.E. Thomas	Effect of Pre-treatment Exposures of Toluene or Naphthalene on the Tolerance of Pink Salmon (Oncorhynchus gorbuscha) and Kelp Shrimp (Eualis suckleyi)	Comp.Biochem.Physiol.C 94(1):289-293	1989

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903	Naphthalene	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	BCM	KCON	0.25	d	1469	SW	Stickle, W.B., T.D. Sabourin, and S.D. Rice	Sensitivity and Osmoregulation of Coho Salmon, Oncorhynchus kisutch, Exposed to Toluene and Naphthalene at Different Salinities	In: W.B.Vernberg, A.Calabrese, F.P.Thurnberg, and F.J.Vernberg (Eds.), Physiological Mechanisms of Marine Pollutant Toxicity, Academic Press, Inc., NY :331-348	1982
904	Naphthalene	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	MOR	MORT	2	d	1550	SW	Stickle, W.B., T.D. Sabourin, and S.D. Rice	Sensitivity and Osmoregulation of Coho Salmon, Oncorhynchus kisutch, Exposed to Toluene and Naphthalene at Different Salinities	In: W.B.Vernberg, A.Calabrese, F.P.Thurnberg, and F.J.Vernberg (Eds.), Physiological Mechanisms of Marine Pollutant Toxicity, Academic Press, Inc., NY :331-348	1982
905	Naphthalene	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	BCM	KCON	0.25	d	1550	SW	Stickle, W.B., T.D. Sabourin, and S.D. Rice	Sensitivity and Osmoregulation of Coho Salmon, Oncorhynchus kisutch, Exposed to Toluene and Naphthalene at Different Salinities	In: W.B.Vernberg, A.Calabrese, F.P.Thurnberg, and F.J.Vernberg (Eds.), Physiological Mechanisms of Marine Pollutant Toxicity, Academic Press, Inc., NY :331-348	1982
906	Naphthalene	Oncorhynchus gorbuscha	Pink Salmon	Fish	MOR	MORT	1	d	1560	SW	Korn, S., D.A. Moles, and S.D. Rice	Effects of Low Temperature on the Survival of Pink Salmon and Shrimp Exposed to Toluene, Naphthalene, and the Water-Soluble Fraction of Cook Inlet Crude Oil	In: Environ.Assess.of the Alaskan Continental Shelf, Principal Investigator's Rep.for the Year Ending Mar.1977 12:66-84 (Publ in Part As 5030) (Author Communication Used)	1977
907	Phenanthrene	Liza aurata	Golden Grey Mullet	Fish	BCM	GLUC	0.67	d	1604.07	SW	Oliveira, M., M. Pacheco, and M.A. Santos	Cytochrome P4501A, Genotoxic and Stress Responses in Golden Grey Mullet (Liza aurata) Following Short-Term Exposure to Phenanthrene	Chemosphere 66(7):1284-1291	2007
908	Naphthalene	Oncorhynchus gorbuscha	Pink Salmon	Fish	MOR	MORT	4	d	1840	SW	Korn, S., D.A. Moles, and S.D. Rice	Effects of Temperature on the Median Tolerance Limit of Pink Salmon and Shrimp Exposed to Toluene, Naphthalene, and Cook Inlet Crude Oil	Bull.Environ.Contam.Toxicol. 21(4/5):521-525	1979
909	Naphthalene	Oncorhynchus gorbuscha	Pink Salmon	Fish	MOR	MORT	1	d	1840	SW	Korn, S., D.A. Moles, and S.D. Rice	Effects of Low Temperature on the Survival of Pink Salmon and Shrimp Exposed to Toluene, Naphthalene, and the Water-Soluble Fraction of Cook Inlet Crude Oil	In: Environ.Assess.of the Alaskan Continental Shelf, Principal Investigator's Rep.for the Year Ending Mar.1977 12:66-84 (Publ in Part As 5030) (Author Communication Used)	1977
910	Pyrene	Lytechinus anamesus	White Sea Urchin	Invertebrates	DVP	GSTL	NR	gts	1860	SW	Pillai, M.C., C.A. Vines, A.H. Wikramanayake, and G.N. Cherr	Polycyclic Aromatic Hydrocarbons Disrupt Axial Development in Sea Urchin Embryos Through a beta-Catenin Dependent Pathway	Toxicology 186(1/2):93-108	2003
911	Naphthalene	Callinectes sapidus	Blue Crab	Crustaceans	MOR	MORT	1	d	1980	SW	Sabourin, T.D.	Respiratory and Circulatory Responses of the Blue Crab to Naphthalene and the Effect of Acclimation Salinity	Aquat.Toxicol. 2(5/6):301-318	1982
912	Acenaphthene	Cyprinodon variegatus	Sheepshead Minnow	Fish	MOR	HTCH	NR	ht	2000	SW	Ward, G.S., P.R. Parrish, and R.A. Rigby	Early Life Stage Toxicity Tests with a Saltwater Fish: Effects of Eight Chemicals on Survival, Growth, and Development of Sheepshead Minnows	J.Toxicol.Environ.Health 8(1/2):225-240	1981
913	Acenaphthene	Cyprinodon variegatus	Sheepshead Minnow	Fish	MOR	MORT	28	dph	2000	SW	Ward, G.S., P.R. Parrish, and R.A. Rigby	Early Life Stage Toxicity Tests with a Saltwater Fish: Effects of Eight Chemicals on Survival, Growth, and Development of Sheepshead Minnows	J.Toxicol.Environ.Health 8(1/2):225-240	1981
914	Naphthalene	Cancer magister	Dungeness Or Edible Crab	Crustaceans	MOR	MORT	4	d	2000	SW	Caldwell, R.S., E.M. Caldarone, and M.H. Mallon	Effects of a Seawater-Soluble Fraction of Cook Inlet Crude Oil and Its Major Aromatic Components on Larval Stages of the Dungeness Crab, Cancer magister Dana	In: D.A.Wolfe (Ed.), Fate and Effects of Petroleum Hydrocarbons in Marine Ecosystems and Organisms, Pergamon Press, Oxford :210-220	1977
915	Naphthalene	Thalassiosira pseudonana	Diatom	Algae, Moss, Fungi	PHY	PSYN	1	d	2000	SW	Andersen, O.K., B. Bohle, and E. Dahl	Effects of Hydrocarbons on Growth and 14C-Uptake by Thalassiosira pseudonana (Bacillariophyceae)	Flodevigen Rapportser.2: 1-10	1990
916	Naphthalene	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	PHY	OSMO	0.25	d	2015	SW	Stickle, W.B., T.D. Sabourin, and S.D. Rice	Sensitivity and Osmoregulation of Coho Salmon, Oncorhynchus kisutch, Exposed to Toluene and Naphthalene at Different Salinities	In: W.B.Vernberg, A.Calabrese, F.P.Thurnberg, and F.J.Vernberg (Eds.), Physiological Mechanisms of Marine Pollutant Toxicity, Academic Press, Inc., NY :331-348	1982
917	Naphthalene	Pandalus goniurus	Humpy Shrimp	Crustaceans	MOR	MORT	1	d	2060	SW	Korn, S., D.A. Moles, and S.D. Rice	Effects of Low Temperature on the Survival of Pink Salmon and Shrimp Exposed to Toluene, Naphthalene, and the Water-Soluble Fraction of Cook Inlet Crude Oil	In: Environ.Assess.of the Alaskan Continental Shelf, Principal Investigator's Rep.for the Year Ending Mar.1977 12:66-84 (Publ in Part As 5030) (Author Communication Used)	1977
918	Naphthalene	Artemia salina	Brine Shrimp	Crustaceans	ITX	IMBL	1	d	2110	SW	Foster, G.D., and R.E. Tullis	Quantitative Structure-Toxicity Relationships with Osmotically Stressed Artemia salina Nauplii	Environ.Pollut.Ser.A 38:273-281	1985

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
919	Naphthalene	Pandalus goniurus	Humpy Shrimp	Crustaceans	MOR	MORT	4	d	2160	SW	Korn, S., D.A. Moles, and S.D. Rice	Effects of Temperature on the Median Tolerance Limit of Pink Salmon and Shrimp Exposed to Toluene, Naphthalene, and Cook Inlet Crude Oil	Bull.Environ.Contam.Toxicol. 21(4/5):521-525	1979
920	Acenaphthene	Cyprinodon variegatus	Sheepshead Minnow	Fish	MOR	MORT	4	d	2200	SW	Heitmuller, P.T., T.A. Hollister, and P.R. Parrish	Acute Toxicity of 54 Industrial Chemicals to Sheepshead Minnows (Cyprinodon variegatus)	Bull.Environ.Contam.Toxicol. 27(5):596-604 (OECDG Data File)	1981
921	Naphthalene	Pandalus goniurus	Humpy Shrimp	Crustaceans	MOR	MORT	1	d	2210	SW	Korn, S., D.A. Moles, and S.D. Rice	Effects of Low Temperature on the Survival of Pink Salmon and Shrimp Exposed to Toluene, Naphthalene, and the Water-Soluble Fraction of Cook Inlet Crude Oil	In: Environ.Assess.of the Alaskan Continental Shelf, Principal Investigator's Rep.for the Year Ending Mar.1977 12:66-84 (Publ in Part As 5030) (Author Communication Used)	1977
922	Naphthalene	Callinectes sapidus	Blue Crab	Crustaceans	MOR	MORT	1	d	2250	SW	Sabourin, T.D.	Respiratory and Circulatory Responses of the Blue Crab to Naphthalene and the Effect of Acclimation Salinity	Aquat.Toxicol. 2(5/6):301-318	1982
923	Acenaphthene	Cyprinodon variegatus	Sheepshead Minnow	Fish	MOR	MORT	2	d	2300	SW	Heitmuller, P.T., T.A. Hollister, and P.R. Parrish	Acute Toxicity of 54 Industrial Chemicals to Sheepshead Minnows (Cyprinodon variegatus)	Bull.Environ.Contam.Toxicol. 27(5):596-604 (OECDG Data File)	1981
924	Acenaphthene	Menidia beryllina	Inland Silverside	Fish	MOR	MORT	4	d	2300	SW	Horne, J.D., M.A. Swirsky, T.A. Hollister, B.R. Oblad, and J.H. Kennedy	5Aquatic Toxicity Studies of Five Priority Pollutants	Rep.No.4398, Final Report, EPA Contract No.68-01-6201, NUS Corp., Houston, TX :196 p.	1983
925	Naphthalene	Palaemonetes pugio	Daggerblade Grass Shrimp	Crustaceans	MOR	MORT	4	d	2350	SW	Tatem, H.E., B.A. Cox, and J.W. Anderson	The Toxicity of Oils and Petroleum Hydrocarbons to Estuarine Crustaceans	Estuar.Coast.Mar.Sci. 6(4):365-373	1978
926	Naphthalene	Palaemonetes pugio	Daggerblade Grass Shrimp	Crustaceans	MOR	MORT	4	d	2350	SW	Tatem, H.E.	The Toxicity and Physiological Effects of Oil and Petroleum Hydrocarbons on Estuarine Grass Shrimp Palaemonetes pugio (Holthuis)	Ph.D.Thesis, Texas A&M University, College Station, TX :133 p.	1975
927	Naphthalene	Cyprinodon variegatus	Sheepshead Minnow	Fish	MOR	MORT	1	d	2400	SW	Anderson, J.W., J.M. Neff, B.A. Cox, H.E. Tatem, and G.M. Hightower	The Effects of Oil on Estuarine Animals: Toxicity, Uptake and Depuration, Respiration	In: F.J.Vernberg and W.B.Vernberg (Eds.), Pollution and Physiology of Mar.Organisms, Acad.Press, NY :285-310	1974
928	Naphthalene	Penaeus aztecus	Brown Shrimp	Crustaceans	MOR	MORT	1	d	2500	SW	Anderson, J.W., J.M. Neff, B.A. Cox, H.E. Tatem, and G.M. Hightower	The Effects of Oil on Estuarine Animals: Toxicity, Uptake and Depuration, Respiration	In: F.J.Vernberg and W.B.Vernberg (Eds.), Pollution and Physiology of Mar.Organisms, Acad.Press, NY :285-310	1974
929	Naphthalene	Penaeus aztecus	Brown Shrimp	Crustaceans	MOR	MORT	4	d	2500	SW	Tatem, H.E., B.A. Cox, and J.W. Anderson	The Toxicity of Oils and Petroleum Hydrocarbons to Estuarine Crustaceans	Estuar.Coast.Mar.Sci. 6(4):365-373	1978
930	Naphthalene	Palaemonetes pugio	Daggerblade Grass Shrimp	Crustaceans	MOR	MORT	1	d	2600	SW	Tatem, H.E.	The Toxicity and Physiological Effects of Oil and Petroleum Hydrocarbons on Estuarine Grass Shrimp Palaemonetes pugio (Holthuis)	Ph.D.Thesis, Texas A&M University, College Station, TX :133 p.	1975
931	Naphthalene	Palaemonetes pugio	Daggerblade Grass Shrimp	Crustaceans	MOR	MORT	1	d	2600	SW	Anderson, J.W., J.M. Neff, B.A. Cox, H.E. Tatem, and G.M. Hightower	The Effects of Oil on Estuarine Animals: Toxicity, Uptake and Depuration, Respiration	In: F.J.Vernberg and W.B.Vernberg (Eds.), Pollution and Physiology of Mar.Organisms, Acad.Press, NY :285-310	1974
932	Naphthalene	Palaemonetes pugio	Daggerblade Grass Shrimp	Crustaceans	MOR	MORT	2	d	2600	SW	Tatem, H.E.	The Toxicity and Physiological Effects of Oil and Petroleum Hydrocarbons on Estuarine Grass Shrimp Palaemonetes pugio (Holthuis)	Ph.D.Thesis, Texas A&M University, College Station, TX :133 p.	1975
933	Naphthalene	Strongylocentrotus droebachiensis	Green Sea Urchin	Invertebrates	MOR	MORT	2	d	2700	SW	Saethre, L.J., I.B. Falk-Petersen, L.K. Sydnes, S. Lonning, and A.M. Naley	Toxicity and Chemical Reactivity of Naphthalene and Methylnaphthalenes	Aquat.Toxicol. 5:291-306	1984
934	Naphthalene	Strongylocentrotus droebachiensis	Green Sea Urchin	Invertebrates	MOR	MORT	4	d	2780	SW	Saethre, L.J., I.B. Falk-Petersen, L.K. Sydnes, S. Lonning, and A.M. Naley	Toxicity and Chemical Reactivity of Naphthalene and Methylnaphthalenes	Aquat.Toxicol. 5:291-306	1984
935	Naphthalene	Artemia salina	Brine Shrimp	Crustaceans	ITX	IMBL	1	d	2890	SW	Foster, G.D., and R.E. Tullis	Quantitative Structure-Toxicity Relationships with Osmotically Stressed Artemia salina Nauplii	Environ.Pollut.Ser.A 38:273-281	1985
936	Phenanthrene	Pyrocystis lunula	Dinoflagellate	Algae, Moss, Fungi	PHY	BLUM	0.17	d	2923	SW	Heimann, K., J.M. Matuszewski, and P.L. Klerks	Effects of Metals and Organic Contaminants on the Recovery of Bioluminescence in the Marine Dinoflagellate Pyrocystis lunula (Dinophyceae)	J. Phycol.38(3): 482-492	2002
937	9H-Fluorene	Artemia salina	Brine Shrimp	Crustaceans	MOR	SURV	0.13	d	3000	SW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987
938	Chrysene	Artemia salina	Brine Shrimp	Crustaceans	MOR	SURV	0.13	d	3000	SW	Kagan, J., E.D. Kagan, I.A. Kagan, and P.A. Kagan	Do Polycyclic Aromatic Hydrocarbons, Acting as Photosensitizers, Participate in the Toxic Effects of Acid Rain?	In: W.J.Cooper and R.G.Zika (Eds.), Photochemistry of Environmental Aquatic Systems, Chapter 14, Am.Chem.Soc.Symp.Ser.No.327, Washington, D.C.: :191-204	1987

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc ug/L	Media Type	Author	Title	Source	Publication Year
939	Naphthalene	Strongylocentrotus droebachiensis	Green Sea Urchin	Invertebrates	MOR	MORT	2	d	3070	SW	Falk-Petersen, I.B., L.J. Saethre, and S. Lonning	Toxic Effects of Naphthalene and Methylnaphthalenes on Marine Plankton Organisms	Sarsia 67(3):171-178	1982
940	Acenaphthene	Cyprinodon variegatus	Sheepshead Minnow	Fish	MOR	MORT	4	d	3100	SW	Ward, G.S., P.R. Parrish, and R.A. Rigby	Early Life Stage Toxicity Tests with a Saltwater Fish: Effects of Eight Chemicals on Survival, Growth, and Development of Sheepshead Minnows	J.Toxicol.Environ.Health 8(1/2):225-240	1981
941	Naphthalene	Callinectes sapidus	Blue Crab	Crustaceans	MOR	MORT	1	d	3120	SW	Sabourin, T.D.	Respiratory and Circulatory Responses of the Blue Crab to Naphthalene and the Effect of Acclimation Salinity	Aquat.Toxicol. 2(5/6):301-318	1982
942	Naphthalene	Artemia salina	Brine Shrimp	Crustaceans	ITX	IMBL	1	d	3190	SW	Foster, G.D., and R.E. Tullis	A Quantitative Structure-Activity Relationship Between Partition Coefficients and the Acute Toxicity of Naphthalene Derivatives in Artemia salina Nauplii	Aquat.Toxicol. 5(3):245-254	1984
943	Naphthalene	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	MOR	MORT	3	d	3200	SW	Holland, G.A., J.E. Lasater, E.D. Neumann, and W.E. Eldridge	Toxic Effects of Organic and Inorganic Pollutants on Young Salmon and Trout	Res.Bull.No.5, State of Washington Dept.Fish., Seattle, WA :263 p.	1960
944	Naphthalene	Dicentrarchus labrax	Sea Bass	Fish	ENZ	AATT	0.33	d	3461	SW	Gravato, C., and M.A. Santos	Juvenile Sea Bass Liver P450, EROD Induction, and Erythrocytic Genotoxic Responses to PAH and PAH-Like Compounds	Ecotoxicol.Environ.Saf. 51(2):115-127	2002
945	Acenaphthene	Neanthes arenaceodentata	Polychaete Worm	Worms	MOR	MORT	4	d	3600	SW	Horne, J.D., M.A. Swirsky, T.A. Hollister, B.R. Oblad, and J.H. Kennedy	5Aquatic Toxicity Studies of Five Priority Pollutants	Rep.No.4398, Final Report, EPA Contract No.68-01-6201, NUS Corp., Houston, TX :196 p.	1983
946	Naphthalene	Balanus eburneus	Barnacle	Crustaceans	BEH	GBHV	0.04	d	3600	SW	Blundo, R.	The Toxic Effects of the Water Soluble Fractions of No. 2 Fuel Oil and of Three Aromatic Hydrocarbons on the Behavior and Survival of Barnacle Larvae	Contrib.Mar.Sci. 21:25-37	1978
947	Acenaphthene	Cyprinodon variegatus	Sheepshead Minnow	Fish	MOR	MORT	1	d	3700	SW	Heitmuller, P.T., T.A. Hollister, and P.R. Parrish	Acute Toxicity of 54 Industrial Chemicals to Sheepshead Minnows (Cyprinodon variegatus)	Bull.Environ.Contam.Toxicol. 27(5):596-604 (OECDG Data File)	1981
948	Naphthalene	Eurytemora affinis	Calanoid Copepod	Crustaceans	MOR	MORT	1	d	3798	SW	Ott, F.S., R.P. Harris, and S.C.M. O'Hara	Acute and Sublethal Toxicity of Naphthalene and Three Methylated Derivatives to the Estuarine Copepod, Eurytemora affinis	Mar.Environ.Res. 1(1):49-58	1978
949	Naphthalene	Neanthes arenaceodentata	Polychaete Worm	Worms	MOR	MORT	4	d	3800	SW	Rossi, S.S., and J.M. Neff	Toxicity of Polynuclear Aromatic Hydrocarbons to the Polychaete Neanthes arenaceodentata	Mar.Pollut.Bull. 9(8):220-223	1978
950	Anthracene	Crassostrea gigas	Pacific Oyster	Molluscs	DVP	GDVP	2	d	5000	SW	Legore, R.S.	The Effect of Alaskan Crude Oil and Selected Hydrocarbon Compounds on Embryonic Development of the Pacfic Oyster, Crassostrea gigas	Ph.D.Thesis, Univ.of Washington, Seattle, WA :189 p.	1974
951	Anthracene	Crassostrea gigas	Pacific Oyster	Molluscs	MOR	MORT	2	d	5000	SW	Legore, R.S.	The Effect of Alaskan Crude Oil and Selected Hydrocarbon Compounds on Embryonic Development of the Pacfic Oyster, Crassostrea gigas	Ph.D.Thesis, Univ.of Washington, Seattle, WA :189 p.	1974
952	Fluoranthene	Rhepoxynius abronius	Amphipod	Crustaceans	MOR	MORT	10	d	11100	SW	DeWitt, T.H., R.J. Ozretich, R.C. Swartz, J.O. Lamberson, D.W. Schults, G.R. Ditsworth, J.K.P. Jones, L. Hoselton, and L	The Influence of Organic Matter Quality on the Toxicity and Partitioning of Sediment-Associated Fluoranthene	Environ.Toxicol.Chem. 11(2):197-208	1992
953	Naphthalene	Terapon jarbua	Tigerfish	Fish	MOR	MORT	4	d	15500	SW	Dange, A.D., and V.B. Masurekar	Acute Toxicity of Petroleum Hydrocarbons to the Estuarine Fish Therapon jarbua (Forsskal) and the Estuarine Clam Katelysia opima (Gmelin)	Proc.Symp.Coastal Aquacult. 3:828-832	1984
954	Naphthalene	Terapon jarbua	Tigerfish	Fish	MOR	MORT	3	d	18000	SW	Dange, A.D., and V.B. Masurekar	Acute Toxicity of Petroleum Hydrocarbons to the Estuarine Fish Therapon jarbua (Forsskal) and the Estuarine Clam Katelysia opima (Gmelin)	Proc.Symp.Coastal Aquacult. 3:828-832	1984
955	Fluoranthene	Rhepoxynius abronius	Amphipod	Crustaceans	MOR	MORT	10	d	19100	SW	DeWitt, T.H., R.J. Ozretich, R.C. Swartz, J.O. Lamberson, D.W. Schults, G.R. Ditsworth, J.K.P. Jones, L. Hoselton, and L	The Influence of Organic Matter Quality on the Toxicity and Partitioning of Sediment-Associated Fluoranthene	Environ.Toxicol.Chem. 11(2):197-208	1992
956	Naphthalene	Terapon jarbua	Tigerfish	Fish	MOR	MORT	2	d	20000	SW	Dange, A.D., and V.B. Masurekar	Acute Toxicity of Petroleum Hydrocarbons to the Estuarine Fish Therapon jarbua (Forsskal) and the Estuarine Clam Katelysia opima (Gmelin)	Proc.Symp.Coastal Aquacult. 3:828-832	1984
957	Naphthalene	Terapon jarbua	Tigerfish	Fish	MOR	MORT	1	d	22500	SW	Dange, A.D., and V.B. Masurekar	Acute Toxicity of Petroleum Hydrocarbons to the Estuarine Fish Therapon jarbua (Forsskal) and the Estuarine Clam Katelysia opima (Gmelin)	Proc.Symp.Coastal Aquacult. 3:828-832	1984
958	Fluoranthene	Skeletonema costatum	Diatom	Algae, Moss, Fungi	POP	CHLA	3	d	41300	SW	Syracuse Research Corp.	Results of Continuous Exposure of Fathead Minnow Embryo to 21 Priority Pollutants	EPA/OTS Doc.#40-7848049: 46 p.	2000
959	Fluoranthene	Skeletonema costatum	Diatom	Algae, Moss, Fungi	POP	CHLA	2	d	44800	SW	Syracuse Research Corp.	Results of Continuous Exposure of Fathead Minnow Embryo to 21 Priority Pollutants	EPA/OTS Doc.#40-7848049: 46 p.	2000
960	Fluoranthene	Skeletonema costatum	Diatom	Algae, Moss, Fungi	POP	CHLA	4	d	45000	SW	Syracuse Research Corp.	Results of Continuous Exposure of Fathead Minnow Embryo to 21 Priority Pollutants	EPA/OTS Doc.#40-7848049: 46 p.	2000

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961	Fluoranthene	Skeletonema costatum	Diatom	Algae, Moss, Fungi	POP	ABND	4	d	45600	SW	Syracuse Research Corp.	Results of Continuous Exposure of Fathead Minnow Embryo to 21 Priority Pollutants	EPA/OTS Doc.#40-7848049: 46 p.	2000
962	Naphthalene	Katelysia opima	Marine Bivalve	Molluscs	MOR	MORT	4	d	57000	SW	Dange, A.D., and V.B. Masurekar	Acute Toxicity of Petroleum Hydrocarbons to the Estuarine Fish Therapon jarbua (Forsskal) and the Estuarine Clam Katelysia opima (Gmelin)	Proc.Symp.Coastal Aquacult. 3:828-832	1984
963	Naphthalene	Katelysia opima	Marine Bivalve	Molluscs	MOR	MORT	3	d	64000	SW	Dange, A.D., and V.B. Masurekar	Acute Toxicity of Petroleum Hydrocarbons to the Estuarine Fish Therapon jarbua (Forsskal) and the Estuarine Clam Katelysia opima (Gmelin)	Proc.Symp.Coastal Aquacult. 3:828-832	1984
964	Fluoranthene	Skeletonema costatum	Diatom	Algae, Moss, Fungi	POP	CHLA	1	d	66800	SW	Syracuse Research Corp.	Results of Continuous Exposure of Fathead Minnow Embryo to 21 Priority Pollutants	EPA/OTS Doc.#40-7848049: 46 p.	2000
965	Naphthalene	Katelysia opima	Marine Bivalve	Molluscs	MOR	MORT	2	d	68000	SW	Dange, A.D., and V.B. Masurekar	Acute Toxicity of Petroleum Hydrocarbons to the Estuarine Fish Therapon jarbua (Forsskal) and the Estuarine Clam Katelysia opima (Gmelin)	Proc.Symp.Coastal Aquacult. 3:828-832	1984
966	Naphthalene	Katelysia opima	Marine Bivalve	Molluscs	MOR	MORT	1	d	74000	SW	Dange, A.D., and V.B. Masurekar	Acute Toxicity of Petroleum Hydrocarbons to the Estuarine Fish Therapon jarbua (Forsskal) and the Estuarine Clam Katelysia opima (Gmelin)	Proc.Symp.Coastal Aquacult. 3:828-832	1984
967	Naphthalene	Scylla serrata	Crab	Crustaceans	BCM	GLTH	4	d	100000	SW	Vijayavel, K., R.D. Gomathi, K. Durgabhavani, and M.P. Balasubramanian	Sublethal Effect of Naphthalene on Lipid Peroxidation and Antioxidant Status in the Edible Marine Crab Scylla serrata	Mar.Pollut.Bull. 48(5/6):429-433	2004
968	Naphthalene	Scylla serrata	Crab	Crustaceans	ENZ	CTLS	4	d	100000	SW	Vijayavel, K., R.D. Gomathi, K. Durgabhavani, and M.P. Balasubramanian	Sublethal Effect of Naphthalene on Lipid Peroxidation and Antioxidant Status in the Edible Marine Crab Scylla serrata	Mar.Pollut.Bull. 48(5/6):429-433	2004
969	Naphthalene	Scylla serrata	Crab	Crustaceans	PHY	LDPX	4	d	100000	SW	Vijayavel, K., R.D. Gomathi, K. Durgabhavani, and M.P. Balasubramanian	Sublethal Effect of Naphthalene on Lipid Peroxidation and Antioxidant Status in the Edible Marine Crab Scylla serrata	Mar.Pollut.Bull. 48(5/6):429-433	2004
970	Naphthalene	Zostera marina	Eelgrass	Flowers, Trees, Shrubs, Ferns	ENZ	NITG	1	d	100000	SW	Brackup, I., and D.G. Capone	The Effect of Several Metal and Organic Pollutants on Nitrogen Fixation (Acetylene Reduction) by the Roots and Rhizomes of Zostera marina L	Environ. Exp. Bot.25(2): 145-151	1985
971	Naphthalene	Crassostrea gigas	Pacific Oyster	Molluscs	MOR	MORT	2	d	110000	SW	Legore, R.S.	The Effect of Alaskan Crude Oil and Selected Hydrocarbon Compounds on Embryonic Development of the Pacfic Oyster, Crassostrea gigas	Ph.D.Thesis, Univ.of Washington, Seattle, WA :189 p.	1974
972	Naphthalene	Crassostrea gigas	Pacific Oyster	Molluscs	DVP	GDVP	2	d	194000	SW	Legore, R.S.	The Effect of Alaskan Crude Oil and Selected Hydrocarbon Compounds on Embryonic Development of the Pacfic Oyster, Crassostrea gigas	Ph.D.Thesis, Univ.of Washington, Seattle, WA :189 p.	1974
973	Fluoranthene	Cyprinodon variegatus	Sheepshead Minnow	Fish	MOR	MORT	1	d	560000	SW	Heitmuller, P.T., T.A. Hollister, and P.R. Parrish	Acute Toxicity of 54 Industrial Chemicals to Sheepshead Minnows (Cyprinodon variegatus)	Bull.Environ.Contam.Toxicol. 27(5):596-604 (OECDG Data File)	1981
974	Fluoranthene	Cyprinodon variegatus	Sheepshead Minnow	Fish	MOR	MORT	2	d	560000	SW	Heitmuller, P.T., T.A. Hollister, and P.R. Parrish	Acute Toxicity of 54 Industrial Chemicals to Sheepshead Minnows (Cyprinodon variegatus)	Bull.Environ.Contam.Toxicol. 27(5):596-604 (OECDG Data File)	1981
975	Fluoranthene	Cyprinodon variegatus	Sheepshead Minnow	Fish	MOR	MORT	3	d	560000	SW	Heitmuller, P.T., T.A. Hollister, and P.R. Parrish	Acute Toxicity of 54 Industrial Chemicals to Sheepshead Minnows (Cyprinodon variegatus)	Bull.Environ.Contam.Toxicol. 27(5):596-604 (OECDG Data File)	1981
976	Fluoranthene	Cyprinodon variegatus	Sheepshead Minnow	Fish	MOR	MORT	4	d	560000	SW	Heitmuller, P.T., T.A. Hollister, and P.R. Parrish	Acute Toxicity of 54 Industrial Chemicals to Sheepshead Minnows (Cyprinodon variegatus)	Bull.Environ.Contam.Toxicol. 27(5):596-604 (OECDG Data File)	1981
977	Fluoranthene	Macomona liliana	Wedge Clam	Molluscs	BEH	BBBH	4	d	700000	SW	Ahrens, M.J., R. Nieuwenhuis, and C.W. Hickey	Sensitivity of Juvenile Macomona liliana (Bivalvia) to UV-Photoactivated Fluoranthene Toxicity	Environ.Toxicol. 17(6):567-577	2002

Appendix D-9, Table 11. ECOTOX effects values for bis(2-ethylhexyl)phthalate.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measurement	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
1	1,2-Benzenedicarboxylic acid, bis(2-Ethylhexyl)ester	Daphnia magna	Water Flea	Crustaceans	MATC	MOR	MORT	21	d	D	110	FW	Rhodes, J.E., W.J. Adams, G.R. Biddinger, K.A. Robillard, and J.W. Gorsuch	Chronic Toxicity of 14 Phthalate Esters to Daphnia magna and Rainbow Trout (Oncorhynchus mykiss)	Environ.Toxicol.Chem. 14(11):1967-1976	1995
2	1,2-Benzenedicarboxylic acid, bis(2-Ethylhexyl)ester	Daphnia pulex	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	133	FW	Passino, D.R.M., and S.B. Smith	Acute Bioassays and Hazard Evaluation of Representative Contaminants Detected in Great Lakes Fish	Environ.Toxicol.Chem. 6(11):901-907	1987
3	1,2-Benzenedicarboxylic acid, bis(2-Ethylhexyl)ester	Daphnia magna	Water Flea	Crustaceans	LOEC	MOR	MORT	21	d	D	160	FW	Rhodes, J.E., W.J. Adams, G.R. Biddinger, K.A. Robillard, and J.W. Gorsuch	Chronic Toxicity of 14 Phthalate Esters to Daphnia magna and Rainbow Trout (Oncorhynchus mykiss)	Environ.Toxicol.Chem. 14(11):1967-1976	1995
4	1,2-Benzenedicarboxylic acid, bis(2-Ethylhexyl)ester	Eurytemora affinis	Calanoid Copepod	Crustaceans	LOEC	MOR	SURV	10	d	D	245	FW	Forget-Leray, J., I. Landriau, C. Minier, and F. Leboulenger	Impact of Endocrine Toxicants on Survival, Development, and Reproduction of the Estuarine Copepod Eurytemora affinis (Poppe)	Ecotoxicol.Environ.Saf. 60(3):288-294	2005
5	1,2-Benzenedicarboxylic acid, bis(2-Ethylhexyl)ester	Eurytemora affinis	Calanoid Copepod	Crustaceans	LC50	MOR	MORT	4	d	D	511	FW	Forget-Leray, J., I. Landriau, C. Minier, and F. Leboulenger	Impact of Endocrine Toxicants on Survival, Development, and Reproduction of the Estuarine Copepod Eurytemora affinis (Poppe)	Ecotoxicol.Environ.Saf. 60(3):288-294	2005
6	1,2-Benzenedicarboxylic acid, 1,2-Bis(2-ethylhexyl)ester	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	GPOP	5	d	D	960	FW	Call, D.J., L.T. Brooke, N. Ahmad, and D.D. Vaishnav	Aquatic Pollutant Hazard Assessments and Development of a Hazard Prediction Technology by Quantitative Structure-Activity Relationships	Second Quarterly Rep., U.S.EPA Coop.Agreement No.CR 809234-01-0, Ctr.for Lake Superior Environ.Stud., Univ.of Wisconsin, Superior, WI: 74 p.	1981
7	1,2-Benzenedicarboxylic acid, 1,2-Bis(2-ethylhexyl)ester	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	PGRT	5	d	D	960	FW	Richter, J.E.	Results of Algal Toxicity Tests with Priority Pollutants	Center for Lake Superior Environmental Studies, University of Wisconsin-Superior, Superior, WI: 12 p.	1982
8	1,2-Benzenedicarboxylic acid, bis(2-Ethylhexyl)ester	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	D	2000	FW	Adams, W.J., and B.B. Heidolph	Short-Cut Chronic Toxicity Estimates Using Daphnia magna	In: R.D.Cardwell, R.Purdy and R.C.Bahner (Eds.), Aquatic Toxicology and Hazard Assessment, Seventh Symposium, ASTM STP 854, Philadelphia, PA :87-103	1985
9	1,2-Benzenedicarboxylic acid, bis(2-Ethylhexyl)ester	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	1	d	D	9500	FW	Adams, W.J., and B.B. Heidolph	Short-Cut Chronic Toxicity Estimates Using Daphnia magna	In: R.D.Cardwell, R.Purdy and R.C.Bahner (Eds.), Aquatic Toxicology and Hazard Assessment, Seventh Symposium, ASTM STP 854, Philadelphia, PA :87-103	1985
10	1,2-Benzenedicarboxylic acid, bis(2-Ethylhexyl)ester	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	D	11000	FW	LeBlanc, G.A.	Acute Toxicity of Priority Pollutants to Water Flea (Daphnia magna)	Bull.Environ.Contam.Toxicol. 24(5):684-691 (OECDG Data File)	1980
11	1,2-Benzenedicarboxylic acid, bis(2-Ethylhexyl)ester	Micropterus salmoides	Largemouth Bass	Fish	LC50	MOR	MORT	3.5	d	D	32100	FW	Birge, W.J., J.A. Black, and D.M. Bruser	Toxicity of Organic Chemicals to Embryo-Larval Stages of Fish	EPA-560/11-79-007, U.S.EPA, Washington, D.C. :60 p. (OECDG Data File) (NTIS PB80-101637)	1979
12	1,2-Benzenedicarboxylic acid, bis(2-Ethylhexyl)ester	Micropterus salmoides	Largemouth Bass	Fish	LC50	MOR	MORT	4	d	D	32900	FW	Birge, W.J., J.A. Black, and A.G. Westerman	Effects of Polychlorinated Biphenyl Compounds and Proposed PCB-Replacement Products on Embryo-Larval Stages of Fish and Amphibians	Res.Rep.No.118, Kentucky Water Resour.Res.Inst., Univ.of Kentucky, Lexington, KY :44 p. (NTIS/PB-290711) (Author Communication Used)	1978
13	1,2-Benzenedicarboxylic acid, bis(2-Ethylhexyl)ester	Micropterus salmoides	Largemouth Bass	Fish	LC50	MOR	MORT	4	d	D	42100	FW	Birge, W.J., J.A. Black, and A.G. Westerman	Effects of Polychlorinated Biphenyl Compounds and Proposed PCB-Replacement Products on Embryo-Larval Stages of Fish and Amphibians	Res.Rep.No.118, Kentucky Water Resour.Res.Inst., Univ.of Kentucky, Lexington, KY :44 p. (NTIS/PB-290711) (Author Communication Used)	1978
14	1,2-Benzenedicarboxylic acid, bis(2-Ethylhexyl)ester	Micropterus salmoides	Largemouth Bass	Fish	LC50	MOR	MORT	7.5	d	D	45500	FW	Birge, W.J., J.A. Black, and D.M. Bruser	Toxicity of Organic Chemicals to Embryo-Larval Stages of Fish	EPA-560/11-79-007, U.S.EPA, Washington, D.C. :60 p. (OECDG Data File) (NTIS PB80-101637)	1979
15	1,2-Benzenedicarboxylic acid, bis(2-Ethylhexyl)ester	Micropterus salmoides	Largemouth Bass	Fish	LC50	MOR	MORT	7.5	d	D	55700	FW	Birge, W.J., J.A. Black, and D.M. Bruser	Toxicity of Organic Chemicals to Embryo-Larval Stages of Fish	EPA-560/11-79-007, U.S.EPA, Washington, D.C. :60 p. (OECDG Data File) (NTIS PB80-101637)	1979
16	1,2-Benzenedicarboxylic acid, bis(2-Ethylhexyl)ester	Micropterus salmoides	Largemouth Bass	Fish	LC50	MOR	MORT	3.5	d	D	65500	FW	Birge, W.J., J.A. Black, and D.M. Bruser	Toxicity of Organic Chemicals to Embryo-Larval Stages of Fish	EPA-560/11-79-007, U.S.EPA, Washington, D.C. :60 p. (OECDG Data File) (NTIS PB80-101637)	1979
17	1,2-Benzenedicarboxylic acid, bis(2-Ethylhexyl)ester	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	23	d	D	139100	FW	Birge, W.J., J.A. Black, and D.M. Bruser	Toxicity of Organic Chemicals to Embryo-Larval Stages of Fish	EPA-560/11-79-007, U.S.EPA, Washington, D.C. :60 p. (OECDG Data File) (NTIS PB80-101637)	1979
18	1,2-Benzenedicarboxylic acid, bis(2-Ethylhexyl)ester	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	139500	FW	Birge, W.J., J.A. Black, and A.G. Westerman	Effects of Polychlorinated Biphenyl Compounds and Proposed PCB-Replacement Products on Embryo-Larval Stages of Fish and Amphibians	Res.Rep.No.118, Kentucky Water Resour.Res.Inst., Univ.of Kentucky, Lexington, KY :44 p. (NTIS/PB-290711) (Author Communication Used)	1978

19	1,2-Benzenedicarboxylic acid, bis(2-Ethylhexyl)ester	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	27	d	D	139500	FW	Birge, W.J., J.A. Black, and D.M. Bruser	Toxicity of Organic Chemicals to Embryo-Larval Stages of Fish	EPA-560/11-79-007, U.S.EPA, Washington, D.C. :60 p. (OECDG Data File) (NTIS PB80-101637)	1979
20	1,2-Benzenedicarboxylic acid, bis(2-Ethylhexyl)ester	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	149200	FW	Birge, W.J., J.A. Black, and A.G. Westerman	Effects of Polychlorinated Biphenyl Compounds and Proposed PCB-Replacement Products on Embryo-Larval Stages of Fish and Amphibians	Res.Rep.No.118, Kentucky Water Resour.Res.Inst., Univ.of Kentucky, Lexington, KY :44 p. (NTIS/PB-290711) (Author Communication Used)	1978
21	1,2-Benzenedicarboxylic acid, bis(2-Ethylhexyl)ester	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	27	d	D	149200	FW	Birge, W.J., J.A. Black, and D.M. Bruser	Toxicity of Organic Chemicals to Embryo-Larval Stages of Fish	EPA-560/11-79-007, U.S.EPA, Washington, D.C. :60 p. (OECDG Data File) (NTIS PB80-101637)	1979
22	1,2-Benzenedicarboxylic acid, bis(2-Ethylhexyl)ester	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	23	d	D	154000	FW	Birge, W.J., J.A. Black, and D.M. Bruser	Toxicity of Organic Chemicals to Embryo-Larval Stages of Fish	EPA-560/11-79-007, U.S.EPA, Washington, D.C. :60 p. (OECDG Data File) (NTIS PB80-101637)	1979
23	1,2-Benzenedicarboxylic acid, bis(2-Ethylhexyl)ester	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	D	1106200	FW	Birge, W.J., J.A. Black, S.T. Ballard, and W.E. McDonnell	Acute Toxicity Testing with Freshwater Fish	In: J.D.Horne, M.A.Sirsky, T.A.Hollister, B.R.Oblad, and J.H.Kennedy (Eds.), Aquatic Toxicity Studies of Five Priority Pollutants, Rep.No.4398, NUS Corp, Houston, TX :47 p.	1982
24	1,2-Benzenedicarboxylic acid, bis(2-Ethylhexyl)ester	Nitocra spinipes	Harpacticoid Copepod	Crustaceans	LC50	MOR	MORT	4	d	F	1000000	SW	Bengtsson, B.E., and M. Tarkpea	The Acute Aquatic Toxicity of Some Substances Carried by Ships	Mar.Pollut.Bull. 14(6):213-214	1983
25	1,2-Benzenedicarboxylic acid, bis(2-Ethylhexyl)ester	Nitocra spinipes	Harpacticoid Copepod	Crustaceans	LC50	MOR	MORT	4	d	F	300000	SW	Linden, E., B.E. Bengtsson, O. Svanberg, and G. Sundstrom	The Acute Toxicity of 78 Chemicals and Pesticide Formulations Against Two Brackish Water Organisms, the Bleak (Alburnus alburnus) and the Harpacticoid Nitocra spinipes	Chemosphere 8(11/12):843-851 (Author Communication Used) (OECDG Data File)	1979
26	1,2-Benzenedicarboxylic acid, bis(2-Ethylhexyl)ester	Cyprinodon variegatus	Sheepshead Minnow	Fish	LC50	MOR	MORT	1	d	A	550000	SW	Heitmuller, P.T., T.A. Hollister, and P.R. Parrish	Acute Toxicity of 54 Industrial Chemicals to Sheepshead Minnows (Cyprinodon variegatus)	Bull.Environ.Contam.Toxicol. 27(5):596-604 (OECDG Data File)	1981
27	1,2-Benzenedicarboxylic acid, bis(2-Ethylhexyl)ester	Cyprinodon variegatus	Sheepshead Minnow	Fish	LC50	MOR	MORT	2	d	A	550000	SW	Heitmuller, P.T., T.A. Hollister, and P.R. Parrish	Acute Toxicity of 54 Industrial Chemicals to Sheepshead Minnows (Cyprinodon variegatus)	Bull.Environ.Contam.Toxicol. 27(5):596-604 (OECDG Data File)	1981
28	1,2-Benzenedicarboxylic acid, bis(2-Ethylhexyl)ester	Cyprinodon variegatus	Sheepshead Minnow	Fish	LC50	MOR	MORT	3	d	A	550000	SW	Heitmuller, P.T., T.A. Hollister, and P.R. Parrish	Acute Toxicity of 54 Industrial Chemicals to Sheepshead Minnows (Cyprinodon variegatus)	Bull.Environ.Contam.Toxicol. 27(5):596-604 (OECDG Data File)	1981
29	1,2-Benzenedicarboxylic acid, bis(2-Ethylhexyl)ester	Cyprinodon variegatus	Sheepshead Minnow	Fish	LC50	MOR	MORT	4	d	A	550000	SW	Heitmuller, P.T., T.A. Hollister, and P.R. Parrish	Acute Toxicity of 54 Industrial Chemicals to Sheepshead Minnows (Cyprinodon variegatus)	Bull.Environ.Contam.Toxicol. 27(5):596-604 (OECDG Data File)	1981
30	1,2-Benzenedicarboxylic acid, 1,2-Bis(2-ethylhexyl)ester	Gymnodinium breve	Dinoflagellate	Algae, Moss, Fungi	EC50	GRO	GGRO	4	d	F	31000000*	SW	Wilson, W.B., C.S. Giam, T.E. Goodwin, A. Aldrich, V. Carpenter, and Y.C. Hrung	The Toxicity of Phthalates to the Marine Dinoflagellate Gymnodinium breve	Bull. Environ. Contam. Toxicol.20: 149-154	1978

Appendix D-9, Table 12. ECOTOX effects values for triclopyr in fresh water.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measurement	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
1	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Myriophyllum sibiricum	Water Milfoil	Flowers, Trees, Shrubs, Ferns	LOEC	GRO	AREA	14	d	D	27.4	FW	Roshon, R.D.	A Toxicity Test for the Effects of Chemicals on the Non-Target Submersed Aquatic Macrophyte, Myriophyllum sibiricum Komarov	Ph.D.Thesis, Univ.of Guelph, Canada(): -	1997
2	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Myriophyllum sibiricum	Water Milfoil	Flowers, Trees, Shrubs, Ferns	LOEC	GRO	LGTH	14	d	D	27.4	FW	Roshon, R.D.	A Toxicity Test for the Effects of Chemicals on the Non-Target Submersed Aquatic Macrophyte, Myriophyllum sibiricum Komarov	Ph.D.Thesis, Univ.of Guelph, Canada(): -	1997
3	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Myriophyllum sibiricum	Water Milfoil	Flowers, Trees, Shrubs, Ferns	LOEC	PHY	PERM	14	d	D	27.4	FW	Roshon, R.D.	A Toxicity Test for the Effects of Chemicals on the Non-Target Submersed Aquatic Macrophyte, Myriophyllum sibiricum Komarov	Ph.D.Thesis, Univ.of Guelph, Canada(): -	1997
4	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LOEC	PHY	OXYG	4	d	D	30	FW	Johansen, J.A., and G.H. Geen	Sublethal and Acute Toxicity of the Ethylene Glycol Butyl Ether Ester Formulation of Triclopyr to Juvenile Coho Salmon (Oncorhynchus kisutch)	Arch.Environ.Contam.Toxicol. 19(4):610-616	1990
5	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Myriophyllum sibiricum	Water Milfoil	Flowers, Trees, Shrubs, Ferns	LOEC	BCM	CARC	14	d	D	82.3	FW	Roshon, R.D.	A Toxicity Test for the Effects of Chemicals on the Non-Target Submersed Aquatic Macrophyte, Myriophyllum sibiricum Komarov	Ph.D.Thesis, Univ.of Guelph, Canada(): -	1997
6	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Myriophyllum sibiricum	Water Milfoil	Flowers, Trees, Shrubs, Ferns	LOEC	BCM	CHLA	14	d	D	82.3	FW	Roshon, R.D.	A Toxicity Test for the Effects of Chemicals on the Non-Target Submersed Aquatic Macrophyte, Myriophyllum sibiricum Komarov	Ph.D.Thesis, Univ.of Guelph, Canada(): -	1997
7	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Myriophyllum sibiricum	Water Milfoil	Flowers, Trees, Shrubs, Ferns	LOEC	BCM	CHLB	14	d	D	82.3	FW	Roshon, R.D.	A Toxicity Test for the Effects of Chemicals on the Non-Target Submersed Aquatic Macrophyte, Myriophyllum sibiricum Komarov	Ph.D.Thesis, Univ.of Guelph, Canada(): -	1997
8	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LOEC	PHY	OXYG	4	d	D	290	FW	Johansen, J.A., and G.H. Geen	Sublethal and Acute Toxicity of the Ethylene Glycol Butyl Ether Ester Formulation of Triclopyr to Juvenile Coho Salmon (Oncorhynchus kisutch)	Arch.Environ.Contam.Toxicol. 19(4):610-616	1990
9	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus keta	Chum Salmon	Fish	LC50	MOR	MORT	2	d	D	300	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
10	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus keta	Chum Salmon	Fish	LC50	MOR	MORT	3	d	D	300	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
11	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus keta	Chum Salmon	Fish	LC50	MOR	MORT	4	d	D	300	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
12	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus keta	Chum Salmon	Fish	LC50	MOR	MORT	1	d	D	400	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
13	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus nerka	Sockeye Salmon	Fish	LC50	MOR	MORT	2	d	D	400	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
14	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus nerka	Sockeye Salmon	Fish	LC50	MOR	MORT	3	d	D	400	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987

Appendix D-9, Table 12. ECOTOX effects values for triclopyr in fresh water.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measurement	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
15	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus nerka	Sockeye Salmon	Fish	LC50	MOR	MORT	4	d	D	400	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
16	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LOEC	PHY	OXYG	4	d	D	420	FW	Johansen, J.A., and G.H. Geen	Sublethal and Acute Toxicity of the Ethylene Glycol Butyl Ether Ester Formulation of Triclopyr to Juvenile Coho Salmon (Oncorhynchus kisutch)	Arch.Environ.Contam.Toxicol. 19(4):610-616	1990
17	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	4	d	D	470	FW	Barron, M.G., M.A. Mayes, P.G. Murphy, and R.J. Nolan	Pharmacokinetics and Metabolism of Triclopyr Butoxyethyl Ester in Coho Salmon	Aquat.Toxicol. 16(1):19-32	1990
18	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus gorbuscha	Pink Salmon	Fish	LC50	MOR	MORT	2	d	D	500	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
19	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus gorbuscha	Pink Salmon	Fish	LC50	MOR	MORT	3	d	D	500	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
20	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus gorbuscha	Pink Salmon	Fish	LC50	MOR	MORT	4	d	D	500	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
21	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	2	d	D	500	FW	Barron, M.G., M.A. Mayes, P.G. Murphy, and R.J. Nolan	Pharmacokinetics and Metabolism of Triclopyr Butoxyethyl Ester in Coho Salmon	Aquat.Toxicol. 16(1):19-32	1990
22	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus nerka	Sockeye Salmon	Fish	LC50	MOR	MORT	1	d	D	500	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
23	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus gorbuscha	Pink Salmon	Fish	LC50	MOR	MORT	1	d	D	600	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
24	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus mykiss	Rainbow Trout	Fish	LOEC	BEH	GBHV	2	d	D	600	FW	Morgan, J.D., G.A. Vigers, A.P. Farrell, D.M. Janz, and J.F. Manville	Acute Avoidance Reactions and Behavioral Responses of Juvenile Rainbow Trout (Oncorhynchus mykiss) to Garlon 4, Garlon 3A, And Vision Herbicides	Environ.Toxicol.Chem. 10(1):73-79	1991
25	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	NR-LETH	MOR	MORT	2.2916667	d	D	650	FW	Johansen, J.A., and G.H. Geen	Sublethal and Acute Toxicity of the Ethylene Glycol Butyl Ether Ester Formulation of Triclopyr to Juvenile Coho Salmon (Oncorhynchus kisutch)	Arch.Environ.Contam.Toxicol. 19(4):610-616	1990
26	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus mykiss	Rainbow Trout	Fish	LC10	MOR	MORT	1	d	D	720	FW	Kreutzweiser, D.P., S.B. Holmes, and D.C. Eichenberg	Influence of Exposure Duration on the Toxicity of Triclopyr Ester to Fish and Aquatic Insects	Arch.Environ.Contam.Toxicol. 26(1):124-129	1994
27	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	1	d	D	720	FW	Barron, M.G., M.A. Mayes, P.G. Murphy, and R.J. Nolan	Pharmacokinetics and Metabolism of Triclopyr Butoxyethyl Ester in Coho Salmon	Aquat.Toxicol. 16(1):19-32	1990
28	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	1	d	D	790	FW	Kreutzweiser, D.P., S.B. Holmes, and D.C. Eichenberg	Influence of Exposure Duration on the Toxicity of Triclopyr Ester to Fish and Aquatic Insects	Arch.Environ.Contam.Toxicol. 26(1):124-129	1994

Appendix D-9, Table 12. ECOTOX effects values for triclopyr in fresh water.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measurement	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
29	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	4	d	D	840	FW	Johansen, J.A., and G.H. Geen	Sublethal and Acute Toxicity of the Ethylene Glycol Butyl Ether Ester Formulation of Triclopyr to Juvenile Coho Salmon (Oncorhynchus kisutch)	Arch.Environ.Contam.Toxicol. 19(4):610-616	1990
30	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	1	d	D	1000	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
31	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	2	d	D	1000	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
32	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	3	d	D	1000	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
33	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	4	d	D	1000	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
34	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	NR-LETH	MOR	MORT	0.75	d	D	1000	FW	Johansen, J.A., and G.H. Geen	Sublethal and Acute Toxicity of the Ethylene Glycol Butyl Ether Ester Formulation of Triclopyr to Juvenile Coho Salmon (Oncorhynchus kisutch)	Arch.Environ.Contam.Toxicol. 19(4):610-616	1990
35	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	1	d	D	1100	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
36	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	2	d	D	1100	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
37	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	3	d	D	1100	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
38	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	1100	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
39	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	2	d	D	1100	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
40	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	3	d	D	1100	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987

Appendix D-9, Table 12. ECOTOX effects values for triclopyr in fresh water.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measurement	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
41	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	4	d	D	1100	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
42	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Daphnia pulex	Water Flea	Crustaceans	EC50	ITX	IMBL	4	d	D	1200	FW	Servizi, J.A., R.W. Gordon, and D.W. Martens	Acute Toxicity of Garlon 4 and Roundup Herbicides to Salmon, Daphnia, and Trout	Bull.Environ.Contam.Toxicol. 39(1):15-22	1987
43	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus gorbuscha	Pink Salmon	Fish	LC50	MOR	MORT	3	d	D	1200	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
44	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus gorbuscha	Pink Salmon	Fish	LC50	MOR	MORT	4	d	D	1200	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
45	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus nerka	Sockeye Salmon	Fish	LC50	MOR	MORT	4	d	D	1200	FW	Servizi, J.A., R.W. Gordon, and D.W. Martens	Acute Toxicity of Garlon 4 and Roundup Herbicides to Salmon, Daphnia, and Trout	Bull.Environ.Contam.Toxicol. 39(1):15-22	1987
46	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus mykiss	Rainbow Trout	Fish	LC10	MOR	MORT	0.25	d	D	1230	FW	Kreutzweiser, D.P., S.B. Holmes, and D.C. Eichenberg	Influence of Exposure Duration on the Toxicity of Triclopyr Ester to Fish and Aquatic Insects	Arch.Environ.Contam.Toxicol. 26(1):124-129	1994
47	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus gorbuscha	Pink Salmon	Fish	LC50	MOR	MORT	2	d	D	1300	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
48	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus nerka	Sockeye Salmon	Fish	LC50	MOR	MORT	3	d	D	1400	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
49	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus nerka	Sockeye Salmon	Fish	LC50	MOR	MORT	4	d	D	1400	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
50	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus nerka	Sockeye Salmon	Fish	LC50	MOR	MORT	4	d	D	1400	FW	Servizi, J.A., R.W. Gordon, and D.W. Martens	Acute Toxicity of Garlon 4 and Roundup Herbicides to Salmon, Daphnia, and Trout	Bull.Environ.Contam.Toxicol. 39(1):15-22	1987
51	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus nerka	Sockeye Salmon	Fish	LC50	MOR	MORT	2	d	D	1500	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
52	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	1	d	D	1600	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
53	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC10	MOR	MORT	1	d	D	1610	FW	Kreutzweiser, D.P., S.B. Holmes, and D.C. Eichenberg	Influence of Exposure Duration on the Toxicity of Triclopyr Ester to Fish and Aquatic Insects	Arch.Environ.Contam.Toxicol. 26(1):124-129	1994

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measurement	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
54	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus keta	Chum Salmon	Fish	LC50	MOR	MORT	3	d	D	1700	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
55	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus keta	Chum Salmon	Fish	LC50	MOR	MORT	4	d	D	1700	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
56	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	2	d	D	1700	FW	Barron, M.G., M.A. Mayes, P.G. Murphy, and R.J. Nolan	Pharmacokinetics and Metabolism of Triclopyr Butoxyethyl Ester in Coho Salmon	Aquat.Toxicol. 16(1):19-32	1990
57	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	4	d	D	1700	FW	Barron, M.G., M.A. Mayes, P.G. Murphy, and R.J. Nolan	Pharmacokinetics and Metabolism of Triclopyr Butoxyethyl Ester in Coho Salmon	Aquat.Toxicol. 16(1):19-32	1990
58	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	1	d	D	1760	FW	Kreutzweiser, D.P., S.B. Holmes, and D.C. Eichenberg	Influence of Exposure Duration on the Toxicity of Triclopyr Ester to Fish and Aquatic Insects	Arch.Environ.Contam.Toxicol. 26(1):124-129	1994
59	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus keta	Chum Salmon	Fish	LC50	MOR	MORT	2	d	D	1800	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
60	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Ameletus sp.	Mayfly	Insects/Spiders	LC01	MOR	MORT	4	d	D	1800	FW	Peterson, J.L., P.C. Jepson, and J.J. Jenkins	A Test System to Evaluate the Susceptibility of Oregon, USA, Native Stream Invertebrates to Triclopyr and Carbaryl	Environ.Toxicol.Chem. 20(10):2205-2214	2001
61	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus gorbuscha	Pink Salmon	Fish	LC50	MOR	MORT	1	d	D	1900	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
62	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	1	d	D	1900	FW	Barron, M.G., M.A. Mayes, P.G. Murphy, and R.J. Nolan	Pharmacokinetics and Metabolism of Triclopyr Butoxyethyl Ester in Coho Salmon	Aquat.Toxicol. 16(1):19-32	1990
63	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.25	d	D	1950	FW	Kreutzweiser, D.P., S.B. Holmes, and D.C. Eichenberg	Influence of Exposure Duration on the Toxicity of Triclopyr Ester to Fish and Aquatic Insects	Arch.Environ.Contam.Toxicol. 26(1):124-129	1994
64	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus keta	Chum Salmon	Fish	LC50	MOR	MORT	1	d	D	2100	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
65	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	1	d	D	2100	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
66	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	2	d	D	2100	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987

Appendix D-9, Table 12. ECOTOX effects values for triclopyr in fresh water.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measurement	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
67	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	3	d	D	2100	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
68	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	4	d	D	2100	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
69	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	4	d	D	2200	FW	Servizi, J.A., R.W. Gordon, and D.W. Martens	Acute Toxicity of Garlon 4 and Roundup Herbicides to Salmon, Daphnia, and Trout	Bull.Environ.Contam.Toxicol. 39(1):15-22	1987
70	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	2200	FW	Servizi, J.A., R.W. Gordon, and D.W. Martens	Acute Toxicity of Garlon 4 and Roundup Herbicides to Salmon, Daphnia, and Trout	Bull.Environ.Contam.Toxicol. 39(1):15-22	1987
71	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Rana catesbeiana	Bullfrog	Amphibians	NR-LETH	MOR	MORT	2	d	D	2400	FW	Berrill, M., S. Bertram, L. McGillivray, M. Kolohon, and B. Pauli	Effects of Low Concentrations of Forest-Use Pesticides on Frog Embryos and Tadpoles	Environ.Toxicol.Chem. 13(4):657-664	1994
72	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Rana clamitans	Green Frog	Amphibians	NR-LETH	MOR	MORT	2	d	D	2400	FW	Berrill, M., S. Bertram, L. McGillivray, M. Kolohon, and B. Pauli	Effects of Low Concentrations of Forest-Use Pesticides on Frog Embryos and Tadpoles	Environ.Toxicol.Chem. 13(4):657-664	1994
73	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	2400	FW	Morgan, J.D., G.A. Vigers, A.P. Farrell, D.M. Janz, and J.F. Manville	Acute Avoidance Reactions and Behavioral Responses of Juvenile Rainbow Trout (Oncorhynchus mykiss) to Garlon 4, Garlon 3A, And Vision Herbicides	Environ.Toxicol.Chem. 10(1):73-79	1991
74	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus nerka	Sockeye Salmon	Fish	LC50	MOR	MORT	1	d	D	2500	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
75	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	3	d	D	2700	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
76	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	2700	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
77	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	2	d	D	2700	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
78	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	3	d	D	2700	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987

Appendix D-9, Table 12. ECOTOX effects values for triclopyr in fresh water.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measurement	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
79	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	4	d	D	2700	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
80	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	2	d	D	2900	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
81	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Isonychia sp.	Mayfly	Insects/Spiders	LC10	MOR	MORT	1	d	D	3500	FW	Kreutzweiser, D.P., S.B. Holmes, and D.C. Eichenberg	Influence of Exposure Duration on the Toxicity of Triclopyr Ester to Fish and Aquatic Insects	Arch.Environ.Contam.Toxicol. 26(1):124-129	1994
82	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Brachycentrus americanus	Caddisfly	Insects/Spiders	LC01	MOR	MORT	4	d	D	3900	FW	Peterson, J.L., P.C. Jepson, and J.J. Jenkins	A Test System to Evaluate the Susceptibility of Oregon, USA, Native Stream Invertebrates to Triclopyr and Carbaryl	Environ.Toxicol.Chem. 20(10):2205-2214	2001
83	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC10	MOR	MORT	0.25	d	D	4000	FW	Kreutzweiser, D.P., S.B. Holmes, and D.C. Eichenberg	Influence of Exposure Duration on the Toxicity of Triclopyr Ester to Fish and Aquatic Insects	Arch.Environ.Contam.Toxicol. 26(1):124-129	1994
84	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Calineuria californica	Stonefly	Insects/Spiders	LC01	MOR	MORT	4	d	D	4000	FW	Peterson, J.L., P.C. Jepson, and J.J. Jenkins	A Test System to Evaluate the Susceptibility of Oregon, USA, Native Stream Invertebrates to Triclopyr and Carbaryl	Environ.Toxicol.Chem. 20(10):2205-2214	2001
85	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Isonychia sp.	Mayfly	Insects/Spiders	LC10	MOR	MORT	1	d	D	4000	FW	Kreutzweiser, D.P., S.B. Holmes, and D.C. Eichenberg	Influence of Exposure Duration on the Toxicity of Triclopyr Ester to Fish and Aquatic Insects	Arch.Environ.Contam.Toxicol. 26(1):124-129	1994
86	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Isonychia sp.	Mayfly	Insects/Spiders	LC50	MOR	MORT	1	d	D	4000	FW	Kreutzweiser, D.P., S.B. Holmes, and D.C. Eichenberg	Influence of Exposure Duration on the Toxicity of Triclopyr Ester to Fish and Aquatic Insects	Arch.Environ.Contam.Toxicol. 26(1):124-129	1994
87	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	1	d	D	4100	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
88	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	1	d	D	4200	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
89	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Cinygma sp.	Mayfly	Insects/Spiders	LC01	MOR	MORT	4	d	D	4200	FW	Peterson, J.L., P.C. Jepson, and J.J. Jenkins	A Test System to Evaluate the Susceptibility of Oregon, USA, Native Stream Invertebrates to Triclopyr and Carbaryl	Environ.Toxicol.Chem. 20(10):2205-2214	2001
90	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Isonychia sp.	Mayfly	Insects/Spiders	LC50	MOR	MORT	1	d	D	4500	FW	Kreutzweiser, D.P., S.B. Holmes, and D.C. Eichenberg	Influence of Exposure Duration on the Toxicity of Triclopyr Ester to Fish and Aquatic Insects	Arch.Environ.Contam.Toxicol. 26(1):124-129	1994
91	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	0.25	d	D	4700	FW	Kreutzweiser, D.P., S.B. Holmes, and D.C. Eichenberg	Influence of Exposure Duration on the Toxicity of Triclopyr Ester to Fish and Aquatic Insects	Arch.Environ.Contam.Toxicol. 26(1):124-129	1994
92	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Hydropsyche sp.	Caddisfly	Insects/Spiders	LC10	MOR	MORT	1	d	D	5200	FW	Kreutzweiser, D.P., S.B. Holmes, and D.C. Eichenberg	Influence of Exposure Duration on the Toxicity of Triclopyr Ester to Fish and Aquatic Insects	Arch.Environ.Contam.Toxicol. 26(1):124-129	1994
93	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Oncorhynchus gorbuscha	Pink Salmon	Fish	LC50	MOR	MORT	4	d	D	5300	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987

Appendix D-9, Table 12. ECOTOX effects values for triclopyr in fresh water.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measurement	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
94	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Oncorhynchus gorbuscha	Pink Salmon	Fish	LC50	MOR	MORT	3	d	D	6100	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
95	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Isonychia sp.	Mayfly	Insects/Spiders	LC10	MOR	MORT	0.375	d	D	6100	FW	Kreutzweiser, D.P., S.B. Holmes, and D.C. Eichenberg	Influence of Exposure Duration on the Toxicity of Triclopyr Ester to Fish and Aquatic Insects	Arch.Environ.Contam.Toxicol. 26(1):124-129	1994
96	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Myriophyllum sibiricum	Water Milfoil	Flowers, Trees, Shrubs, Ferns	LOEL	BCM	CHLA	14	d	D	6670	FW	Roshon, R.D.	A Toxicity Test for the Effects of Chemicals on the Non-Target Submersed Aquatic Macrophyte, Myriophyllum sibiricum Komarov	Ph.D.Thesis, Univ.of Guelph, Canada(): -	1997
97	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Myriophyllum sibiricum	Water Milfoil	Flowers, Trees, Shrubs, Ferns	LOEL	GRO	LGTH	14	d	D	6670	FW	Roshon, R.D.	A Toxicity Test for the Effects of Chemicals on the Non-Target Submersed Aquatic Macrophyte, Myriophyllum sibiricum Komarov	Ph.D.Thesis, Univ.of Guelph, Canada(): -	1997
98	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Myriophyllum sibiricum	Water Milfoil	Flowers, Trees, Shrubs, Ferns	LOEL	PHY	PERM	14	d	D	6670	FW	Roshon, R.D.	A Toxicity Test for the Effects of Chemicals on the Non-Target Submersed Aquatic Macrophyte, Myriophyllum sibiricum Komarov	Ph.D.Thesis, Univ.of Guelph, Canada(): -	1997
99	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Oncorhynchus keta	Chum Salmon	Fish	LC50	MOR	MORT	2	d	D	7500	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
100	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Oncorhynchus keta	Chum Salmon	Fish	LC50	MOR	MORT	3	d	D	7500	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
101	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Oncorhynchus keta	Chum Salmon	Fish	LC50	MOR	MORT	4	d	D	7500	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
102	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	7500	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
103	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Oncorhynchus nerka	Sockeye Salmon	Fish	LC50	MOR	MORT	2	d	D	7500	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
104	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Oncorhynchus nerka	Sockeye Salmon	Fish	LC50	MOR	MORT	3	d	D	7500	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
105	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Oncorhynchus nerka	Sockeye Salmon	Fish	LC50	MOR	MORT	4	d	D	7500	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
106	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	3	d	D	7600	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987

Appendix D-9, Table 12. ECOTOX effects values for triclopyr in fresh water.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measurement	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
107	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	2	d	D	7800	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
108	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Oncorhynchus nerka	Sockeye Salmon	Fish	LC50	MOR	MORT	1	d	D	7800	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
109	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Oncorhynchus keta	Chum Salmon	Fish	LC50	MOR	MORT	1	d	D	7900	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
110	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Calineuria californica	Stonefly	Insects/Spiders	LC50	MOR	MORT	4	d	D	8100	FW	Peterson, J.L., P.C. Jepson, and J.J. Jenkins	A Test System to Evaluate the Susceptibility of Oregon, USA, Native Stream Invertebrates to Triclopyr and Carbaryl	Environ.Toxicol.Chem. 20(10):2205-2214	2001
111	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	1	d	D	8400	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
112	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Ameletus sp.	Mayfly	Insects/Spiders	LC50	MOR	MORT	4	d	D	8550	FW	Peterson, J.L., P.C. Jepson, and J.J. Jenkins	A Test System to Evaluate the Susceptibility of Oregon, USA, Native Stream Invertebrates to Triclopyr and Carbaryl	Environ.Toxicol.Chem. 20(10):2205-2214	2001
113	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Oncorhynchus gorbuscha	Pink Salmon	Fish	LC50	MOR	MORT	2	d	D	8800	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
114	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Hydropsyche sp.	Caddisfly	Insects/Spiders	LC50	MOR	MORT	1	d	D	8800	FW	Kreutzweiser, D.P., S.B. Holmes, and D.C. Eichenberg	Influence of Exposure Duration on the Toxicity of Triclopyr Ester to Fish and Aquatic Insects	Arch.Environ.Contam.Toxicol. 26(1):124-129	1994
115	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	2	d	D	9600	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
116	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	3	d	D	9600	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
117	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	4	d	D	9600	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
118	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	1	d	D	9700	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987

Appendix D-9, Table 12. ECOTOX effects values for triclopyr in fresh water.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measurement	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
119	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	2	d	D	9700	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
120	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	3	d	D	9700	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
121	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	4	d	D	9700	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
122	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Oncorhynchus kisutch	Coho Salmon,Silver Salmon	Fish	LC50	MOR	MORT	1	d	D	9900	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
123	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Brachycentrus americanus	Caddisfly	Insects/Spiders	LC50	MOR	MORT	4	d	D	11300	FW	Peterson, J.L., P.C. Jepson, and J.J. Jenkins	A Test System to Evaluate the Susceptibility of Oregon, USA, Native Stream Invertebrates to Triclopyr and Carbaryl	Environ.Toxicol.Chem. 20(10):2205-2214	2001
124	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Oncorhynchus gorbuscha	Pink Salmon	Fish	LC50	MOR	MORT	1	d	D	13300	FW	Wan, M.T., D.J. Moul, and R.G. Watts	Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4, Triclopyr, Triclopyr Ester, and Their Transformation Products: 3,5,6-Trichloro-2 Pyridinol and 2-Methoxy-3,5,6-Trichloropyridine	Bull.Environ.Contam.Toxicol. 39(4):721-728 (OECDG Data File)	1987
125	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Isonychia sp.	Mayfly	Insects/Spiders	LC50	MOR	MORT	0.375	d	D	14900	FW	Kreutzweiser, D.P., S.B. Holmes, and D.C. Eichenberg	Influence of Exposure Duration on the Toxicity of Triclopyr Ester to Fish and Aquatic Insects	Arch.Environ.Contam.Toxicol. 26(1):124-129	1994
126	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Psychoglypha sp.	Caddisfly	Insects/Spiders	LC01	MOR	MORT	4	d	D	16100	FW	Peterson, J.L., P.C. Jepson, and J.J. Jenkins	A Test System to Evaluate the Susceptibility of Oregon, USA, Native Stream Invertebrates to Triclopyr and Carbaryl	Environ.Toxicol.Chem. 20(10):2205-2214	2001
127	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Isonychia sp.	Mayfly	Insects/Spiders	LC10	MOR	MORT	0.375	d	D	16200	FW	Kreutzweiser, D.P., S.B. Holmes, and D.C. Eichenberg	Influence of Exposure Duration on the Toxicity of Triclopyr Ester to Fish and Aquatic Insects	Arch.Environ.Contam.Toxicol. 26(1):124-129	1994
128	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Isonychia sp.	Mayfly	Insects/Spiders	LC50	MOR	MORT	0.375	d	D	17600	FW	Kreutzweiser, D.P., S.B. Holmes, and D.C. Eichenberg	Influence of Exposure Duration on the Toxicity of Triclopyr Ester to Fish and Aquatic Insects	Arch.Environ.Contam.Toxicol. 26(1):124-129	1994
129	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus mykiss	Rainbow Trout	Fish	LC10	MOR	MORT	0.0416667	d	D	18100	FW	Kreutzweiser, D.P., S.B. Holmes, and D.C. Eichenberg	Influence of Exposure Duration on the Toxicity of Triclopyr Ester to Fish and Aquatic Insects	Arch.Environ.Contam.Toxicol. 26(1):124-129	1994
130	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus mykiss	Rainbow Trout	Fish	LOEC	AVO	CHEM	0.0416667	d	D	19200	FW	Morgan, J.D., G.A. Vigers, A.P. Farrell, D.M. Janz, and J.F. Manville	Acute Avoidance Reactions and Behavioral Responses of Juvenile Rainbow Trout (Oncorhynchus mykiss) to Garlon 4, Garlon 3A, And Vision Herbicides	Environ.Toxicol.Chem. 10(1):73-79	1991
131	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Cinygma sp.	Mayfly	Insects/Spiders	LC50	MOR	MORT	4	d	D	20210	FW	Peterson, J.L., P.C. Jepson, and J.J. Jenkins	A Test System to Evaluate the Susceptibility of Oregon, USA, Native Stream Invertebrates to Triclopyr and Carbaryl	Environ.Toxicol.Chem. 20(10):2205-2214	2001
132	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.0416667	d	D	22500	FW	Kreutzweiser, D.P., S.B. Holmes, and D.C. Eichenberg	Influence of Exposure Duration on the Toxicity of Triclopyr Ester to Fish and Aquatic Insects	Arch.Environ.Contam.Toxicol. 26(1):124-129	1994
133	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC10	MOR	MORT	0.0416667	d	D	26800	FW	Kreutzweiser, D.P., S.B. Holmes, and D.C. Eichenberg	Influence of Exposure Duration on the Toxicity of Triclopyr Ester to Fish and Aquatic Insects	Arch.Environ.Contam.Toxicol. 26(1):124-129	1994

Appendix D-9, Table 12. ECOTOX effects values for triclopyr in fresh water.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measurement	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
134	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Myriophyllum sibiricum	Water Milfoil	Flowers, Trees, Shrubs, Ferns	LOEC	POP	ABND	14	d	D	27400	FW	Roshon, R.D.	A Toxicity Test for the Effects of Chemicals on the Non-Target Submersed Aquatic Macrophyte, Myriophyllum sibiricum Komarov	Ph.D.Thesis, Univ.of Guelph, Canada(): -	1997
135	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Psychoglypha sp.	Caddisfly	Insects/Spiders	LC50	MOR	MORT	4	d	D	28340	FW	Peterson, J.L., P.C. Jepson, and J.J. Jenkins	A Test System to Evaluate the Susceptibility of Oregon, USA, Native Stream Invertebrates to Triclopyr and Carbaryl	Environ.Toxicol.Chem. 20(10):2205-2214	2001
136	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Lepidostoma unicolor	Caddisfly	Insects/Spiders	LC01	MOR	MORT	4	d	D	29000	FW	Peterson, J.L., P.C. Jepson, and J.J. Jenkins	A Test System to Evaluate the Susceptibility of Oregon, USA, Native Stream Invertebrates to Triclopyr and Carbaryl	Environ.Toxicol.Chem. 20(10):2205-2214	2001
137	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Hydropsyche sp.	Caddisfly	Insects/Spiders	LC10	MOR	MORT	0.375	d	D	29300	FW	Kreutzweiser, D.P., S.B. Holmes, and D.C. Eichenberg	Influence of Exposure Duration on the Toxicity of Triclopyr Ester to Fish and Aquatic Insects	Arch.Environ.Contam.Toxicol. 26(1):124-129	1994
138	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	ABND	5	d	D	32500	FW	Office of Pesticide Programs	Pesticide Ecotoxicity Database (Formerly: Environmental Effects Database (EEDB))	Environmental Fate and Effects Division, U.S.EPA, Washington, D.C.(): -	2000
139	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Oncorhynchus tshawytscha	Chinook Salmon	Fish	LC50	MOR	MORT	0.0416667	d	D	34600	FW	Kreutzweiser, D.P., S.B. Holmes, and D.C. Eichenberg	Influence of Exposure Duration on the Toxicity of Triclopyr Ester to Fish and Aquatic Insects	Arch.Environ.Contam.Toxicol. 26(1):124-129	1994
140	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Hydropsyche sp.	Caddisfly	Insects/Spiders	LC50	MOR	MORT	0.375	d	D	37000	FW	Kreutzweiser, D.P., S.B. Holmes, and D.C. Eichenberg	Influence of Exposure Duration on the Toxicity of Triclopyr Ester to Fish and Aquatic Insects	Arch.Environ.Contam.Toxicol. 26(1):124-129	1994
141	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Lepidostoma unicolor	Caddisfly	Insects/Spiders	LC50	MOR	MORT	4	d	D	45000	FW	Peterson, J.L., P.C. Jepson, and J.J. Jenkins	A Test System to Evaluate the Susceptibility of Oregon, USA, Native Stream Invertebrates to Triclopyr and Carbaryl	Environ.Toxicol.Chem. 20(10):2205-2214	2001
142	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Tubifex tubifex	Tubificid Worm	Worms	LOEL	MOR	SURV	28	d	D	86400	FW	Perkins, M.J.	Effects of Two Formulations of Glyphosate and Triclopyr on Four Non-target Aquatic Species: Xenopus laevis, Myriophyllum sibiricum, Lemna gibba and Tubifex tubifex	M.S.Thesis, Univ.of Guelph, Canada :110 p. (Publ In Part As 53090) (UMI# AADMM-20515)	1997
143	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Tubifex tubifex	Tubificid Worm	Worms	LOEL	REP	PROG	28	d	D	86400	FW	Perkins, M.J.	Effects of Two Formulations of Glyphosate and Triclopyr on Four Non-target Aquatic Species: Xenopus laevis, Myriophyllum sibiricum, Lemna gibba and Tubifex tubifex	M.S.Thesis, Univ.of Guelph, Canada :110 p. (Publ In Part As 53090) (UMI# AADMM-20515)	1997
144	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Tubifex tubifex	Tubificid Worm	Worms	NR-LETH	MOR	MORT	28	d	D	86400	FW	Perkins, M.J.	Effects of Two Formulations of Glyphosate and Triclopyr on Four Non-target Aquatic Species: Xenopus laevis, Myriophyllum sibiricum, Lemna gibba and Tubifex tubifex	M.S.Thesis, Univ.of Guelph, Canada :110 p. (Publ In Part As 53090) (UMI# AADMM-20515)	1997
145	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid compd. with N,N-diethylethanamine (1:1)	Pimephales promelas	Fathead Minnow	Fish	MATC	MOR	MORT	31	d	D	91000	FW	Mayes, M.A., D.C. Dill, K.M. Bodner, and C.G. Mendoza	Triclopyr Triethylamine Salt Toxicity to Life Stages of the Fathead Minnow (Pimephales promelas Rafinesque)	Bull.Environ.Contam.Toxicol. 33(3):339-347	1984
146	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	D	117000	FW	Haagsma, T.	Dowco 233 Herbicide-A Possible New Tool in Vegetation Management	Down Earth 30:22-24	1975
147	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	4	d	D	148000	FW	Haagsma, T.	Dowco 233 Herbicide-A Possible New Tool in Vegetation Management	Down Earth 30:22-24	1975
148	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Tubifex tubifex	Tubificid Worm	Worms	LOEL	REP	PROG	28	d	D	172800	FW	Perkins, M.J.	Effects of Two Formulations of Glyphosate and Triclopyr on Four Non-target Aquatic Species: Xenopus laevis, Myriophyllum sibiricum, Lemna gibba and Tubifex tubifex	M.S.Thesis, Univ.of Guelph, Canada :110 p. (Publ In Part As 53090) (UMI# AADMM-20515)	1997
149	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid compd. with N,N-diethylethanamine (1:1)	Oncorhynchus mykiss	Rainbow Trout	Fish	LOEC	BEH	GBHV	1	d	D	200000	FW	Morgan, J.D., G.A. Vigers, A.P. Farrell, D.M. Janz, and J.F. Manville	Acute Avoidance Reactions and Behavioral Responses of Juvenile Rainbow Trout (Oncorhynchus mykiss) to Garlon 4, Garlon 3A, And Vision Herbicides	Environ.Toxicol.Chem. 10(1):73-79	1991
150	[(3,5,6-Trichloro-2-pyridinyl)oxy]acetic acid, 2-Butoxyethyl ester	Pteronarcys sp.	Stonefly	Insects/Spiders	LC50	MOR	MORT	0.0416667	d	D	290000	FW	Kreutzweiser, D.P., S.B. Holmes, and D.J. Behmer	Effects of the Herbicides Hexazinone and Triclopyr Ester on Aquatic Insects	Ecotoxicol.Environ.Saf. 23(3):364-374 (OECDG Data File)	1992
151	((3,5,6-Trichloro-2-pyridinyl)oxy)acetic acid compd. with N,N-diethylethanamine (1:1)	Oncorhynchus mykiss	Rainbow Trout	Fish	LOEC	AVO	CHEM	0.0416667	d	D	800000	FW	Morgan, J.D., G.A. Vigers, A.P. Farrell, D.M. Janz, and J.F. Manville	Acute Avoidance Reactions and Behavioral Responses of Juvenile Rainbow Trout (Oncorhynchus mykiss) to Garlon 4, Garlon 3A, And Vision Herbicides	Environ.Toxicol.Chem. 10(1):73-79	1991

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
1	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LOEC	REP	PROG	42	d	A	0.0331	FW	Giesy, J.P., S.L. Pierens, E.M. Snyder, S. Miles-Richardson, V.J. Kramer, S.A. Snyder, K.M. Nichols, and D.A. Villeneuve	Effects of 4-Nonylphenol on Fecundity and Biomarkers of Estrogenicity in Fathead Minnows (Pimephales promelas)	Environ.Toxicol.Chem. 19(5):1368-1377	2000
2	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LOEC	HRM	ESDL	42	d	A	0.0485	FW	Giesy, J.P., S.L. Pierens, E.M. Snyder, S. Miles-Richardson, V.J. Kramer, S.A. Snyder, K.M. Nichols, and D.A. Villeneuve	Effects of 4-Nonylphenol on Fecundity and Biomarkers of Estrogenicity in Fathead Minnows (Pimephales promelas)	Environ.Toxicol.Chem. 19(5):1368-1377	2000
3	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LOEC	HRM	ESDL	42	d	A	0.1543	FW	Giesy, J.P., S.L. Pierens, E.M. Snyder, S. Miles-Richardson, V.J. Kramer, S.A. Snyder, K.M. Nichols, and D.A. Villeneuve	Effects of 4-Nonylphenol on Fecundity and Biomarkers of Estrogenicity in Fathead Minnows (Pimephales promelas)	Environ.Toxicol.Chem. 19(5):1368-1377	2000
4	4-Nonylphenol	Rana sphenocephala	Leopard Frog	Amphibians	LC50	MOR	MORT	4	d	A	0.34	FW	Bridges, C.M., F.J. Dwyer, D.K. Hardesty, and D.W. Whites	Comparative Contaminant Toxicity: Are Amphibian Larvae More Sensitive than Fish?	Bull.Environ.Contam.Toxicol. 69(4):562-569	2002
5	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Hyalella azteca	Scud	Crustaceans	LC50	MOR	MORT	4	d	F	1	FW	Collyard, S.A., G.T. Ankley, R.A. Hoke, and T. Goldenstein	Influence of Age on the Relative Sensitivity of Hyalella azteca to Diazinon, Alkylphenol Ethoxylates, Copper, Cadmium, and Zinc	Arch.Environ.Contam.Toxicol. 26(1):110-113	1994
6	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LOEC	HIS	GHIS	42	d	A	1.1020	FW	Giesy, J.P., S.L. Pierens, E.M. Snyder, S. Miles-Richardson, V.J. Kramer, S.A. Snyder, K.M. Nichols, and D.A. Villeneuve	Effects of 4-Nonylphenol on Fecundity and Biomarkers of Estrogenicity in Fathead Minnows (Pimephales promelas)	Environ.Toxicol.Chem. 19(5):1368-1377	2000
7	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Hyalella azteca	Scud	Crustaceans	LC50	MOR	MORT	4	d	F	1.5	FW	Collyard, S.A., G.T. Ankley, R.A. Hoke, and T. Goldenstein	Influence of Age on the Relative Sensitivity of Hyalella azteca to Diazinon, Alkylphenol Ethoxylates, Copper, Cadmium, and Zinc	Arch.Environ.Contam.Toxicol. 26(1):110-113	1994
8	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Thamnocephalus platyurus	Fairy Shrimp	Crustaceans	LC50	MOR	MORT	2	d	F	2.6	FW	Brausch, J.M., and P.N. Smith	Toxicity of Three Polyethoxylated Tallowamine Surfactant Formulations to Laboratory and Field Collected Fairy Shrimp, Thamnocephalus platyurus	Arch.Environ.Contam.Toxicol. 52(2):217-221	2007
9	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LOEC	BCM	HMCT	42	d	A	3.3059	FW	Giesy, J.P., S.L. Pierens, E.M. Snyder, S. Miles-Richardson, V.J. Kramer, S.A. Snyder, K.M. Nichols, and D.A. Villeneuve	Effects of 4-Nonylphenol on Fecundity and Biomarkers of Estrogenicity in Fathead Minnows (Pimephales promelas)	Environ.Toxicol.Chem. 19(5):1368-1377	2000
10	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LOEC	BCM	VITE	42	d	A	3.3059	FW	Giesy, J.P., S.L. Pierens, E.M. Snyder, S. Miles-Richardson, V.J. Kramer, S.A. Snyder, K.M. Nichols, and D.A. Villeneuve	Effects of 4-Nonylphenol on Fecundity and Biomarkers of Estrogenicity in Fathead Minnows (Pimephales promelas)	Environ.Toxicol.Chem. 19(5):1368-1377	2000
11	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LOEC	MOR	SURV	42	d	A	3.3059	FW	Giesy, J.P., S.L. Pierens, E.M. Snyder, S. Miles-Richardson, V.J. Kramer, S.A. Snyder, K.M. Nichols, and D.A. Villeneuve	Effects of 4-Nonylphenol on Fecundity and Biomarkers of Estrogenicity in Fathead Minnows (Pimephales promelas)	Environ.Toxicol.Chem. 19(5):1368-1377	2000
12	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LOEC	MPH	GMPH	42	d	A	3.3059	FW	Giesy, J.P., S.L. Pierens, E.M. Snyder, S. Miles-Richardson, V.J. Kramer, S.A. Snyder, K.M. Nichols, and D.A. Villeneuve	Effects of 4-Nonylphenol on Fecundity and Biomarkers of Estrogenicity in Fathead Minnows (Pimephales promelas)	Environ.Toxicol.Chem. 19(5):1368-1377	2000

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
13	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Thamnocephalus platyurus	Fairy Shrimp	Crustaceans	LC50	MOR	MORT	2	d	F	3.68	FW	Brausch, J.M., and P.N. Smith	Toxicity of Three Polyethoxylated Tallowamine Surfactant Formulations to Laboratory and Field Collected Fairy Shrimp, Thamnocephalus platyurus	Arch.Environ.Contam.Toxicol. 52(2):217-221	2007
14	4-Nonylphenol	Gobiocypris rarus	Chinese Rare Minnow	Fish	LOEC	BCM	VITE	21	d	A	4.52	FW	Zha, J., L. Sun, P.A. Spear, and Z. Wang	Comparison of Ethinylestradiol and Nonylphenol Effects on Reproduction of Chinese Rare Minnows (Gobiocypris rarus)	Ecotoxicol.Environ.Saf. 71(2):390-399	2008
15	4-Nonylphenol	Gobiocypris rarus	Chinese Rare Minnow	Fish	LOEC	HIS	LESI	21	d	A	4.52	FW	Zha, J., L. Sun, P.A. Spear, and Z. Wang	Comparison of Ethinylestradiol and Nonylphenol Effects on Reproduction of Chinese Rare Minnows (Gobiocypris rarus)	Ecotoxicol.Environ.Saf. 71(2):390-399	2008
16	4-Nonylphenol	Gobiocypris rarus	Chinese Rare Minnow	Fish	LOEC	MPH	SMIX	21	d	A	4.52	FW	Zha, J., L. Sun, P.A. Spear, and Z. Wang	Comparison of Ethinylestradiol and Nonylphenol Effects on Reproduction of Chinese Rare Minnows (Gobiocypris rarus)	Ecotoxicol.Environ.Saf. 71(2):390-399	2008
17	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Thamnocephalus platyurus	Fairy Shrimp	Crustaceans	LC50	MOR	MORT	2	d	F	4.82	FW	Brausch, J.M., and P.N. Smith	Toxicity of Three Polyethoxylated Tallowamine Surfactant Formulations to Laboratory and Field Collected Fairy Shrimp, Thamnocephalus platyurus	Arch.Environ.Contam.Toxicol. 52(2):217-221	2007
18	4-Nonylphenol	Salmo salar	Atlantic Salmon	Fish	LOEC	GEN	AHMR	3	d	F	5	FW	Meucci, V., and A. Arukwe	The Xenoestrogen 4-Nonylphenol Modulates Hepatic Gene Expression of Pregnane X Receptor, Aryl Hydrocarbon Receptor, CYP3A and CYP1A1 in Juvenile Atlantic Salmon (Salmo salar)	Comp.Biochem.Physiol.C 142(1/2):142-150	2006
19	4-Nonylphenol	Salmo salar	Atlantic Salmon	Fish	LOEC	GEN	CA1M	3	d	F	5	FW	Meucci, V., and A. Arukwe	The Xenoestrogen 4-Nonylphenol Modulates Hepatic Gene Expression of Pregnane X Receptor, Aryl Hydrocarbon Receptor, CYP3A and CYP1A1 in Juvenile Atlantic Salmon (Salmo salar)	Comp.Biochem.Physiol.C 142(1/2):142-150	2006
20	4-Nonylphenol	Salmo salar	Atlantic Salmon	Fish	LOEC	GEN	ERBR	3	d	F	5	FW	Meucci, V., and A. Arukwe	Transcriptional Modulation of Brain and Hepatic Estrogen Receptor and P450arom Isotypes in Juvenile Atlantic Salmon (Salmo salar) After Waterborne Exposure to the Xenoestrogen, 4-Nonylphenol	Aquat.Toxicol. 77(2):167-177	2006
21	4-Nonylphenol	Salmo salar	Atlantic Salmon	Fish	LOEC	GEN	VMRN	3	d	F	5	FW	Meucci, V., and A. Arukwe	Transcriptional Modulation of Brain and Hepatic Estrogen Receptor and P450arom Isotypes in Juvenile Atlantic Salmon (Salmo salar) After Waterborne Exposure to the Xenoestrogen, 4-Nonylphenol	Aquat.Toxicol. 77(2):167-177	2006

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
22	4-Nonylphenol	Salmo salar	Atlantic Salmon	Fish	LOEC	GEN	AHMR	7	d	F	5	FW	Meucci, V., and A. Arukwe	The Xenoestrogen 4-Nonylphenol Modulates Hepatic Gene Expression of Pregnane X Receptor, Aryl Hydrocarbon Receptor, CYP3A and CYP1A1 in Juvenile Atlantic Salmon (Salmo salar)	Comp.Biochem.Physiol.C 142(1/2):142-150	2006
23	4-Nonylphenol	Salmo salar	Atlantic Salmon	Fish	LOEC	GEN	AMRN	7	d	F	5	FW	Meucci, V., and A. Arukwe	Transcriptional Modulation of Brain and Hepatic Estrogen Receptor and P450arom Isotypes in Juvenile Atlantic Salmon (Salmo salar) After Waterborne Exposure to the Xenoestrogen, 4-Nonylphenol	Aquat.Toxicol. 77(2):167-177	2006
24	4-Nonylphenol	Salmo salar	Atlantic Salmon	Fish	LOEC	GEN	CA1M	7	d	F	5	FW	Meucci, V., and A. Arukwe	The Xenoestrogen 4-Nonylphenol Modulates Hepatic Gene Expression of Pregnane X Receptor, Aryl Hydrocarbon Receptor, CYP3A and CYP1A1 in Juvenile Atlantic Salmon (Salmo salar)	Comp.Biochem.Physiol.C 142(1/2):142-150	2006
25	4-Nonylphenol	Salmo salar	Atlantic Salmon	Fish	LOEC	GEN	ERAM	7	d	F	5	FW	Meucci, V., and A. Arukwe	Transcriptional Modulation of Brain and Hepatic Estrogen Receptor and P450arom Isotypes in Juvenile Atlantic Salmon (Salmo salar) After Waterborne Exposure to the Xenoestrogen, 4-Nonylphenol	Aquat.Toxicol. 77(2):167-177	2006
26	4-Nonylphenol	Salmo salar	Atlantic Salmon	Fish	LOEC	GEN	ERAM	7	d	F	5	FW	Meucci, V., and A. Arukwe	Transcriptional Modulation of Brain and Hepatic Estrogen Receptor and P450arom Isotypes in Juvenile Atlantic Salmon (Salmo salar) After Waterborne Exposure to the Xenoestrogen, 4-Nonylphenol	Aquat.Toxicol. 77(2):167-177	2006
27	4-Nonylphenol	Salmo salar	Atlantic Salmon	Fish	LOEC	GEN	ERBR	7	d	F	5	FW	Meucci, V., and A. Arukwe	Transcriptional Modulation of Brain and Hepatic Estrogen Receptor and P450arom Isotypes in Juvenile Atlantic Salmon (Salmo salar) After Waterborne Exposure to the Xenoestrogen, 4-Nonylphenol	Aquat.Toxicol. 77(2):167-177	2006
28	4-Nonylphenol	Salmo salar	Atlantic Salmon	Fish	LOEC	GEN	MRNA	7	d	F	5	FW	Meucci, V., and A. Arukwe	The Xenoestrogen 4-Nonylphenol Modulates Hepatic Gene Expression of Pregnane X Receptor, Aryl Hydrocarbon Receptor, CYP3A and CYP1A1 in Juvenile Atlantic Salmon (Salmo salar)	Comp.Biochem.Physiol.C 142(1/2):142-150	2006

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
29	4-Nonylphenol	Salmo salar	Atlantic Salmon	Fish	LOEC	GEN	P3AM	7	d	F	5	FW	Meucci, V., and A. Arukwe	The Xenoestrogen 4-Nonylphenol Modulates Hepatic Gene Expression of Pregnane X Receptor, Aryl Hydrocarbon Receptor, CYP3A and CYP1A1 in Juvenile Atlantic Salmon (Salmo salar)	Comp.Biochem.Physiol.C 142(1/2):142-150	2006
30	4-Nonylphenol	Salmo salar	Atlantic Salmon	Fish	LOEC	GEN	VMRN	7	d	F	5	FW	Meucci, V., and A. Arukwe	Transcriptional Modulation of Brain and Hepatic Estrogen Receptor and P450arom Isotypes in Juvenile Atlantic Salmon (Salmo salar) After Waterborne Exposure to the Xenoestrogen, 4-Nonylphenol	Aquat.Toxicol. 77(2):167-177	2006
31	4-Nonylphenol	Salmo salar	Atlantic Salmon	Fish	LOEC	GEN	ZRMR	7	d	F	5	FW	Meucci, V., and A. Arukwe	Transcriptional Modulation of Brain and Hepatic Estrogen Receptor and P450arom Isotypes in Juvenile Atlantic Salmon (Salmo salar) After Waterborne Exposure to the Xenoestrogen, 4-Nonylphenol	Aquat.Toxicol. 77(2):167-177	2006
32	4-Nonylphenol, Branched	Salmo salar	Atlantic Salmon	Fish	LOEC	GEN	VMRN	7	d	F	5	FW	Mortensen, A.S., and A. Arukwe	Effects of 17alpha-Ethynylestradiol on Hormonal Responses and Xenobiotic Biotransformation System of Atlantic Salmon (Salmo salar)	Aquat.Toxicol. 85:113-123	2007
33	4-tert-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LOEC	BCM	VITE	14	d	A	6.1	FW	Thorpe, K.L., T.H. Hutchinson, M.J. Hetheridge, M. Scholze, J.P. Sumpter, and C.R. Tyler	Assessing the Biological Potency of Binary Mixtures of Environmental Estrogens Using Vitellogenin Induction in Juvenile Rainbow Trout (Oncorhynchus mykiss)	Environ.Sci.Technol. 35(12):2476-2481	2001
34	4-tert-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LOEC	BCM	VITE	14	d	A	6.4	FW	Thorpe, K.L., T.H. Hutchinson, M.J. Hetheridge, M. Scholze, J.P. Sumpter, and C.R. Tyler	Assessing the Biological Potency of Binary Mixtures of Environmental Estrogens Using Vitellogenin Induction in Juvenile Rainbow Trout (Oncorhynchus mykiss)	Environ.Sci.Technol. 35(12):2476-2481	2001
35	4-Nonylphenol, Branched	Salmo salar	Atlantic Salmon	Fish	LOEC	HRM	CRTS	21	d	A	6.9	FW	Lerner, D.T., B.T. Bjornsson, and S.D. McCormick	Aqueous Exposure to 4-Nonylphenol and 17beta-Estradiol Increases Stress Sensitivity and Disrupts Ion Regulatory Ability of Juvenile Atlantic Salmon	Environ.Toxicol.Chem. 26(7):1433-1440	2007
36	4-tert-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	EC50	BCM	VITE	14	d	F	7.02	FW	Brian, J.V., C.A. Harris, M. Scholze, T. Backhaus, P. Booy, M. Lamoree, G. Pojana, N. Jonkers, T. Runnalls, A. Bonfa, A.	Accurate Prediction of the Response of Freshwater Fish to a Mixture of Estrogenic Chemicals	Environ.Health Perspect. 113(6):721-728	2005
37	4-Nonylphenol	Gobiocypris rarus	Chinese Rare Minnow	Fish	LOEC	HIS	LESI	21	d	A	9.13	FW	Zha, J., L. Sun, P.A. Spear, and Z. Wang	Comparison of Ethinylestradiol and Nonylphenol Effects on Reproduction of Chinese Rare Minnows (Gobiocypris rarus)	Ecotoxicol.Environ.Saf. 71(2):390-399	2008

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
38	4-Nonylphenol	Gobiocypris rarus	Chinese Rare Minnow	Fish	LOEC	MPH	SMIX	21	d	A	9.13	FW	Zha, J., L. Sun, P.A. Spear, and Z. Wang	Comparison of Ethinylestradiol and Nonylphenol Effects on Reproduction of Chinese Rare Minnows (Gobiocypris rarus)	Ecotoxicol.Environ.Saf. 71(2):390-399	2008
39	Nonylphenol	Chironomus tentans	Midge	Insects/Spiders	LOEC	GRO	WGHT	2	d	F	10	FW	Ha, M.H., and J. Choi	Chemical-Induced Alteration of Hemoglobin Expression in the 4th Instar Larvae of Chironomus tentans Mg. (Diptera: Chironomidae)	Environ.Toxicol.Pharmacol. 25(3):393-398	2008
40	4-Nonylphenol	Gobiocypris rarus	Chinese Rare Minnow	Fish	LOEC	BCM	VITE	28	d	A	10	FW	Zha, J., Z. Wang, N. Wang, and C. Ingersoll	Histological Alternation and Vitellogenin Induction in Adult Rare Minnow (Gobiocypris rarus) After Exposure to Ethynylestradiol and Nonylphenol	Chemosphere 66(3):488-495	2007
41	4-Nonylphenol	Gobiocypris rarus	Chinese Rare Minnow	Fish	LOEC	MPH	SMIX	28	d	A	10	FW	Zha, J., Z. Wang, N. Wang, and C. Ingersoll	Histological Alternation and Vitellogenin Induction in Adult Rare Minnow (Gobiocypris rarus) After Exposure to Ethynylestradiol and Nonylphenol	Chemosphere 66(3):488-495	2007
42	4-Nonylphenol	Gobiocypris rarus	Chinese Rare Minnow	Fish	LOEC	MPH	SMIX	28	d	A	10	FW	Zha, J., Z. Wang, N. Wang, and C. Ingersoll	Histological Alternation and Vitellogenin Induction in Adult Rare Minnow (Gobiocypris rarus) After Exposure to Ethynylestradiol and Nonylphenol	Chemosphere 66(3):488-495	2007
43	Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LOEC	GRO	DWGT	91	d	A	10.3	FW	Brooke, L.T.	Acute and Chronic Toxicity of Nonylphenol to Ten Species of Aquatic Organisms	Contract No.68-C1-0034, U.S.EPA, Duluth, MN :36 p.	1993
44	Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LOEC	GRO	LGTH	91	d	A	10.3	FW	Brooke, L.T.	Acute and Chronic Toxicity of Nonylphenol to Ten Species of Aquatic Organisms	Contract No.68-C1-0034, U.S.EPA, Duluth, MN :36 p.	1993
45	Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LOEC	GRO	WWGT	91	d	A	10.3	FW	Brooke, L.T.	Acute and Chronic Toxicity of Nonylphenol to Ten Species of Aquatic Organisms	Contract No.68-C1-0034, U.S.EPA, Duluth, MN :36 p.	1993
46	4-tert-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	EC50	BCM	VITE	14	d	A	13	FW	Thorpe, K.L., T.H. Hutchinson, J.P. Hetheridge, J.P. Sumpter, and C.R. Tyler	Development of an In Vivo Screening Assay for Estrogenic Chemicals Using Juvenile Rainbow Trout (Oncorhynchus mykiss)	Environ.Toxicol.Chem. 19(11):2812-2820	2000
47	4-Nonylphenol, Branched	Pimephales promelas	Fathead Minnow	Fish	LOEC	MOR	MORT	33	d	A	14	FW	Ward, T.J., and R.L. Boeri	Early Life Stage Toxicity of Nonylphenol to the Fathead Minnow, Pimephales promelas	Final Rep., Chem.Manuf.Assoc., Washington, DC :59 p.	1991
48	Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	EC50	GEN	VMRN	3	d	F	14.14	FW	Lech, J.J., S.K. Lewis, and L. Ren	In Vivo Estrogenic Activity of Nonylphenol in Rainbow Trout	Fundam.Appl.Toxicol. 30(2):229-232	1996
49	4-Nonylphenol	Eurytemora affinis	Calanoid Copepod	Crustaceans	LOEC	MOR	SURV	10	d	F	15	FW	Forget-Leray, J., I. Landriau, C. Minier, and F. Leboulenger	Impact of Endocrine Toxicants on Survival, Development, and Reproduction of the Estuarine Copepod Eurytemora affinis (Poppe)	Ecotoxicol.Environ.Saf. 60(3):288-294	2005

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
50	4-Nonylphenol	Salmo salar	Atlantic Salmon	Fish	LOEC	BCM	VITE	3	d	F	15	FW	Meucci, V., and A. Arukwe	Transcriptional Modulation of Brain and Hepatic Estrogen Receptor and P450arom Isotypes in Juvenile Atlantic Salmon (Salmo salar) After Waterborne Exposure to the Xenoestrogen, 4-Nonylphenol	Aquat.Toxicol. 77(2):167-177	2006
51	4-Nonylphenol	Salmo salar	Atlantic Salmon	Fish	LOEC	GEN	ERAM	3	d	F	15	FW	Meucci, V., and A. Arukwe	Transcriptional Modulation of Brain and Hepatic Estrogen Receptor and P450arom Isotypes in Juvenile Atlantic Salmon (Salmo salar) After Waterborne Exposure to the Xenoestrogen, 4-Nonylphenol	Aquat.Toxicol. 77(2):167-177	2006
52	4-Nonylphenol	Salmo salar	Atlantic Salmon	Fish	LOEC	GEN	ERAM	3	d	F	15	FW	Meucci, V., and A. Arukwe	Transcriptional Modulation of Brain and Hepatic Estrogen Receptor and P450arom Isotypes in Juvenile Atlantic Salmon (Salmo salar) After Waterborne Exposure to the Xenoestrogen, 4-Nonylphenol	Aquat.Toxicol. 77(2):167-177	2006
53	4-Nonylphenol	Salmo salar	Atlantic Salmon	Fish	LOEC	GEN	ZRMR	3	d	F	15	FW	Meucci, V., and A. Arukwe	Transcriptional Modulation of Brain and Hepatic Estrogen Receptor and P450arom Isotypes in Juvenile Atlantic Salmon (Salmo salar) After Waterborne Exposure to the Xenoestrogen, 4-Nonylphenol	Aquat.Toxicol. 77(2):167-177	2006
54	4-Nonylphenol	Salmo salar	Atlantic Salmon	Fish	LOEC	BCM	VITE	7	d	F	15	FW	Meucci, V., and A. Arukwe	Transcriptional Modulation of Brain and Hepatic Estrogen Receptor and P450arom Isotypes in Juvenile Atlantic Salmon (Salmo salar) After Waterborne Exposure to the Xenoestrogen, 4-Nonylphenol	Aquat.Toxicol. 77(2):167-177	2006
55	4-tert-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LOEC	BCM	VITE	14	d	A	16.3	FW	Tyler, C.R., R. Van Aerle, M.V. Nilsen, R. Blackwell, S. Maddix, B.M. Nilsen, K. Berg, T.H. Hutchinson, and A. Goksoyr	Monoclonal Antibody Enzyme-Linked Immunosorbent Assay to Quantify Vitellogenin for Studies on Environmental Estrogens in the Rainbow Trout (Oncorhynchus mykiss)	Environ.Toxicol.Chem. 21(1):47-54	2002
56	4-Nonylphenol	Gobiocypris rarus	Chinese Rare Minnow	Fish	LOEC	MPH	IMPS	21	d	A	18.53	FW	Zha, J., L. Sun, P.A. Spear, and Z. Wang	Comparison of Ethinylestradiol and Nonylphenol Effects on Reproduction of Chinese Rare Minnows (Gobiocypris rarus)	Ecotoxicol.Environ.Saf. 71(2):390-399	2008
57	4-Nonylphenol	Microcystis aeruginosa	Blue-Green Algae	Algae, Moss, Fungi	LOEC	BCM	MCYS	12	d	A	20	FW	Wang, J., P. Xie, and N. Guo	Effects of Nonylphenol on the Growth and Microcystin Production of Microcystis Strains	Environ. Res.103(1): 70-78	2007
58	Nonylphenol	Hyalella azteca	Scud	Crustaceans	EC50	ITX	IMBL	4	d	A	20.7	FW	Brooke, L.T.	Acute and Chronic Toxicity of Nonylphenol to Ten Species of Aquatic Organisms	Contract No.68-C1-0034, U.S.EPA, Duluth, MN :36 p.	1993
59	Nonylphenol	Hyalella azteca	Scud	Crustaceans	LC50	MOR	MORT	4	d	A	20.7	FW	Brooke, L.T.	Acute and Chronic Toxicity of Nonylphenol to Ten Species of Aquatic Organisms	Contract No.68-C1-0034, U.S.EPA, Duluth, MN :36 p.	1993

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
60	4-Nonylphenol, Branched	Pimephales promelas	Fathead Minnow	Fish	LOEC	MOR	SURV	2	d	A	23	FW	Ward, T.J., and R.L. Boeri	Early Life Stage Toxicity of Nonylphenol to the Fathead Minnow, Pimephales promelas	Final Rep., Chem.Manuf.Assoc., Washington, DC :59 p.	1991
61	4-Nonylphenol, Branched	Pimephales promelas	Fathead Minnow	Fish	LOEC	FDB	FCNS	4	d	A	23	FW	Ward, T.J., and R.L. Boeri	Early Life Stage Toxicity of Nonylphenol to the Fathead Minnow, Pimephales promelas	Final Rep., Chem.Manuf.Assoc., Washington, DC :59 p.	1991
62	4-Nonylphenol, Branched	Pimephales promelas	Fathead Minnow	Fish	LOEC	BEH	GBHV	33	d	A	23	FW	Ward, T.J., and R.L. Boeri	Early Life Stage Toxicity of Nonylphenol to the Fathead Minnow, Pimephales promelas	Final Rep., Chem.Manuf.Assoc., Washington, DC :59 p.	1991
63	4-Nonylphenol, Branched	Pimephales promelas	Fathead Minnow	Fish	LOEC	GRO	LGTH	33	d	A	23	FW	Ward, T.J., and R.L. Boeri	Early Life Stage Toxicity of Nonylphenol to the Fathead Minnow, Pimephales promelas	Final Rep., Chem.Manuf.Assoc., Washington, DC :59 p.	1991
64	4-Nonylphenol, Branched	Pimephales promelas	Fathead Minnow	Fish	LOEC	GRO	WGHT	33	d	A	23	FW	Ward, T.J., and R.L. Boeri	Early Life Stage Toxicity of Nonylphenol to the Fathead Minnow, Pimephales promelas	Final Rep., Chem.Manuf.Assoc., Washington, DC :59 p.	1991
65	Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LOEC	MOR	SURV	91	d	A	23.1	FW	Brooke, L.T.	Acute and Chronic Toxicity of Nonylphenol to Ten Species of Aquatic Organisms	Contract No.68-C1-0034, U.S.EPA, Duluth, MN :36 p.	1993
66	4-Nonylphenol	Eurytemora affinis	Calanoid Copepod	Crustaceans	LC50	MOR	MORT	4	d	F	38	FW	Forget-Leray, J., I. Landriau, C. Minier, and F. Leboulenger	Impact of Endocrine Toxicants on Survival, Development, and Reproduction of the Estuarine Copepod Eurytemora affinis (Poppe)	Ecotoxicol.Environ.Saf. 60(3):288-294	2005
67	4-Nonylphenol, Branched	Chironomus tentans	Midge	Insects/Spiders	LOEC	GRO	WWGT	14	d	A	39	FW	England, D.C., and J.B. Bussard	Toxicity of Nonylphenol to the Midge Chironomus tentans	Final Rep.40597, ABS Lab.Inc., Columbia, MO :160 p.	1993
68	4-Nonylphenol	Melosira varians	Diatom	Algae, Moss, Fungi	LOEC	BCM	LCAR	10	d	F	40	FW	Julius, M.L., J. Stepanek, O. Tedrow, C. Gamble, and H.L. Schoenfuss	Estrogen-Receptor Independent Effects of Two Ubiquitous Environmental Estrogens on Melosira varians Agardh, a Common Component of the Aquatic Primary Production Community	Aquat. Toxicol.85(1): 19-27	2007
69	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LOEC	FDB	FCNS	5	d	F	40	FW	Ward, A.J.W., A.J. Duff, and S. Currie	The Effects of the Endocrine Disrupter 4-Nonylphenol on the Behaviour of Juvenile Rainbow Trout (Oncorhynchus mykiss)	Can.J.Fish.Aquat.Sci. 63(2):377-382	2006
70	4-Nonylphenol, Branched	Chironomus tentans	Midge	Insects/Spiders	EC50	MOR	SURV	14	d	A	41	FW	England, D.C., and J.B. Bussard	Toxicity of Nonylphenol to the Midge Chironomus tentans	Final Rep.40597, ABS Lab.Inc., Columbia, MO :160 p.	1993
71	4-Nonylphenol	Alosa sapidissima	American Shad	Fish	LC50	MOR	MORT	2	d	F	50	FW	Dwyer, F.J., D.K. Hardesty, C.G. Ingersoll, J.L. Kunz, and D.W. Whites	Assessing Contaminant Sensitivity of American Shad, Atlantic Sturgeon and Shortnose Strugeon, Final Report - February 2000	Final Rep., U.S.Geol.Surv., Columbia Environ.Res.Ctr., Columbia, MO :30 p.	2000
72	4-Nonylphenol	Acipenser oxyrhynchus	Atlantic Sturgeon	Fish	LC50	MOR	MORT	4	d	A	50	FW	Dwyer, F.J., F.L. Mayer, L.C. Sappington, D.R. Buckler, C.M. Bridges, I.E. Greer, D.K. Hardesty, C.E. Henke, C.G. Ingers	Assessing Contaminant Sensitivity of Endangered and Threatened Aquatic Species: Part I. Acute Toxicity of Five Chemicals	Arch.Environ.Contam.Toxicol. 48(2):143-154	2005
73	Nonylphenol	Brachionus calyciflorus	Rotifer	Invertebrates	LOEC	REP	FERZ	4	d	F	50	FW	Preston, B.L., T.W. Snell, T.L. Robertson, and B.J. Dingmann	Use of Freshwater Rotifer Brachionus calyciflorus in Screening Assay for Potential Endocrine Disruptors	Environ.Toxicol.Chem. 19(12):2923-2928	2000
74	Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LOEC	GRO	BMAS	91	d	A	53	FW	Brooke, L.T.	Acute and Chronic Toxicity of Nonylphenol to Ten Species of Aquatic Organisms	Contract No.68-C1-0034, U.S.EPA, Duluth, MN :36 p.	1993

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75	4-Nonylphenol, Branched	Salmo salar	Atlantic Salmon	Fish	LOEC	BCM	NACO	21	d	A	73.9	FW	Lerner, D.T., B.T. Bjornsson, and S.D. McCormick	Aqueous Exposure to 4-Nonylphenol and 17beta-Estradiol Increases Stress Sensitivity and Disrupts Ion Regulatory Ability of Juvenile Atlantic Salmon	Environ.Toxicol.Chem. 26(7):1433-1440	2007
76	4-Nonylphenol, Branched	Chironomus tentans	Midge	Insects/Spiders	LC50	MOR	SURV	14	d	A	75	FW	England, D.C., and J.B. Bussard	Toxicity of Nonylphenol to the Midge Chironomus tentans	Final Rep.40597, ABS Lab.Inc., Columbia, MO :160 p.	1993
77	4-Nonylphenol	Acipenser oxyrhynchus	Atlantic Sturgeon	Fish	LC50	MOR	MORT	2	d	F	80	FW	Dwyer, F.J., D.K. Hardesty, C.G. Ingersoll, J.L. Kunz, and D.W. Whites	Assessing Contaminant Sensitivity of American Shad, Atlantic Sturgeon and Shortnose Strugeon, Final Report - February 2000	Final Rep., U.S.Geol.Surv., Columbia Environ.Res.Ctr., Columbia, MO :30 p.	2000
78	4-Nonylphenol	Acipenser oxyrhynchus	Atlantic Sturgeon	Fish	LC50	MOR	MORT	2	d	F	80	FW	Dwyer, F.J., D.K. Hardesty, C.G. Ingersoll, J.L. Kunz, and D.W. Whites	Assessing Contaminant Sensitivity of American Shad, Atlantic Sturgeon and Shortnose Strugeon, Final Report - February 2000	Final Rep., U.S.Geol.Surv., Columbia Environ.Res.Ctr., Columbia, MO :30 p.	2000
79	4-Nonylphenol	Acipenser brevirostrum	Shortnose Sturgeon	Fish	LC50	MOR	MORT	4	d	A	80	FW	Dwyer, F.J., F.L. Mayer, L.C. Sappington, D.R. Buckler, C.M. Bridges, I.E. Greer, D.K. Hardesty, C.E. Henke, C.G. Ingers	Assessing Contaminant Sensitivity of Endangered and Threatened Aquatic Species: Part I. Acute Toxicity of Five Chemicals	Arch.Environ.Contam.Toxicol. 48(2):143-154	2005
80	4-Nonylphenol	Erimonax monachus	Spotfin Chub	Fish	LC50	MOR	MORT	4	d	A	80	FW	Dwyer, F.J., F.L. Mayer, L.C. Sappington, D.R. Buckler, C.M. Bridges, I.E. Greer, D.K. Hardesty, C.E. Henke, C.G. Ingers	Assessing Contaminant Sensitivity of Endangered and Threatened Aquatic Species: Part I. Acute Toxicity of Five Chemicals	Arch.Environ.Contam.Toxicol. 48(2):143-154	2005
81	4-Nonylphenol, Branched	Chironomus tentans	Midge	Insects/Spiders	LOEC	MOR	SURV	14	d	A	81	FW	England, D.C., and J.B. Bussard	Toxicity of Nonylphenol to the Midge Chironomus tentans	Final Rep.40597, ABS Lab.Inc., Columbia, MO :160 p.	1993
82	4-Nonylphenol	Daphnia magna	Water Flea	Crustaceans	EC50	DVP	MOLT	1	d	F	90	FW	Brennan, S.J., C.A. Brougham, J.J. Roche, and A.M. Fogarty	Multi-generational Effects of Four Selected Environmental Oestrogens on Daphnia magna	Chemosphere 64:49-55	2006
83	4-Nonylphenol, Branched	Chironomus tentans	Midge	Insects/Spiders	EC50	GRO	WWGT	14	d	A	95	FW	England, D.C., and J.B. Bussard	Toxicity of Nonylphenol to the Midge Chironomus tentans	Final Rep.40597, ABS Lab.Inc., Columbia, MO :160 p.	1993
84	4-Nonylphenol, Branched	Chironomus tentans	Midge	Insects/Spiders	EC50	MOR	SURV	14	d	A	95	FW	England, D.C., and J.B. Bussard	Toxicity of Nonylphenol to the Midge Chironomus tentans	Final Rep.40597, ABS Lab.Inc., Columbia, MO :160 p.	1993
85	Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	EC50	BEH	EQUL	4	d	A	96	FW	Brooke, L.T.	Acute and Chronic Toxicity of Nonylphenol to Ten Species of Aquatic Organisms	Contract No.68-C1-0034, U.S.EPA, Duluth, MN :36 p.	1993
86	Nonylphenol	Chironomus riparius	Midge	Insects/Spiders	LOEC	GEN	GEXP	1	d	F	100	FW	Ha, M.H., and J. Choi	Effects of Environmental Contaminants on Hemoglobin of Larvae of Aquatic Midge, Chironomus riparius (Diptera: Chironomidae): A Potential Biomarker for Ecotoxicity Monitoring	Chemosphere 71(10):1928-1936	2008
87	Nonylphenol	Chironomus riparius	Midge	Insects/Spiders	LOEC	GEN	GEXP	1	d	F	100	FW	Ha, M.H., and J. Choi	Effects of Environmental Contaminants on Hemoglobin of Larvae of Aquatic Midge, Chironomus riparius (Diptera: Chironomidae): A Potential Biomarker for Ecotoxicity Monitoring	Chemosphere 71(10):1928-1936	2008

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88	4-Nonylphenol	Microcystis aeruginosa	Blue-Green Algae	Algae, Moss, Fungi	LOEC	BCM	MCYS	12	d	A	100	FW	Wang, J., P. Xie, and N. Guo	Effects of Nonylphenol on the Growth and Microcystin Production of Microcystis Strains	Environ. Res.103(1): 70-78	2007
89	Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	EC50	BEH	GBHV	4	d	A	109	FW	Brooke, L.T.	Acute and Chronic Toxicity of Nonylphenol to Ten Species of Aquatic Organisms	Contract No.68-C1-0034, U.S.EPA, Duluth, MN :36 p.	1993
90	4-Nonylphenol	Etheostoma fonticola	Fountain Darter	Fish	LC50	MOR	MORT	4	d	A	110	FW	Dwyer, F.J., F.L. Mayer, L.C. Sappington, D.R. Buckler, C.M. Bridges, I.E. Greer, D.K. Hardesty, C.E. Henke, C.G. Ingers	Assessing Contaminant Sensitivity of Endangered and Threatened Aquatic Species: Part I. Acute Toxicity of Five Chemicals	Arch.Environ.Contam.Toxicol. 48(2):143-154	2005
91	4-Nonylphenol	Etheostoma rubrum	Bayou Darter	Fish	LC50	MOR	MORT	4	d	F	110	FW	Dwyer, F.J., D.K. Hardesty, C.E. Henke, C.G. Ingersoll, D.W. Whites, D.R. Mount, and C.M. Bridges	Assessing Contaminant Sensitivity of Endangered and Threatened Species: Toxicant Classes	EPA 600/R-99/098, U.S.EPA, Washington, D.C.: :15 p.	1999
92	4-Nonylphenol, Branched	Chironomus tentans	Midge	Insects/Spiders	LC50	MOR	MORT	14	d	A	119	FW	England, D.C., and J.B. Bussard	Toxicity of Nonylphenol to the Midge Chironomus tentans	Final Rep.40597, ABS Lab.Inc., Columbia, MO :160 p.	1993
93	4-Nonylphenol, Branched	Chironomus tentans	Midge	Insects/Spiders	LC50	MOR	SURV	14	d	A	119	FW	England, D.C., and J.B. Bussard	Toxicity of Nonylphenol to the Midge Chironomus tentans	Final Rep.40597, ABS Lab.Inc., Columbia, MO :160 p.	1993
94	4-Nonylphenol	Bufo boreas	Western Toad	Amphibians	LC50	MOR	MORT	0.5	d	F	120	FW	Dwyer, F.J., D.K. Hardesty, C.E. Henke, C.G. Ingersoll, D.W. Whites, D.R. Mount, and C.M. Bridges	Assessing Contaminant Sensitivity of Endangered and Threatened Species: Toxicant Classes	EPA 600/R-99/098, U.S.EPA, Washington, D.C.: :15 p.	1999
95	4-Nonylphenol	Bufo boreas	Western Toad	Amphibians	LC50	MOR	MORT	1	d	F	120	FW	Dwyer, F.J., D.K. Hardesty, C.E. Henke, C.G. Ingersoll, D.W. Whites, D.R. Mount, and C.M. Bridges	Assessing Contaminant Sensitivity of Endangered and Threatened Species: Toxicant Classes	EPA 600/R-99/098, U.S.EPA, Washington, D.C.: :15 p.	1999
96	4-Nonylphenol	Bufo boreas	Western Toad	Amphibians	LC50	MOR	MORT	2	d	F	120	FW	Dwyer, F.J., D.K. Hardesty, C.E. Henke, C.G. Ingersoll, D.W. Whites, D.R. Mount, and C.M. Bridges	Assessing Contaminant Sensitivity of Endangered and Threatened Species: Toxicant Classes	EPA 600/R-99/098, U.S.EPA, Washington, D.C.: :15 p.	1999
97	4-Nonylphenol	Bufo boreas	Western Toad	Amphibians	LC50	MOR	MORT	3	d	F	120	FW	Dwyer, F.J., D.K. Hardesty, C.E. Henke, C.G. Ingersoll, D.W. Whites, D.R. Mount, and C.M. Bridges	Assessing Contaminant Sensitivity of Endangered and Threatened Species: Toxicant Classes	EPA 600/R-99/098, U.S.EPA, Washington, D.C.: :15 p.	1999
98	4-Nonylphenol	Bufo boreas	Western Toad	Amphibians	LC50	MOR	MORT	4	d	F	120	FW	Dwyer, F.J., D.K. Hardesty, C.E. Henke, C.G. Ingersoll, D.W. Whites, D.R. Mount, and C.M. Bridges	Assessing Contaminant Sensitivity of Endangered and Threatened Species: Toxicant Classes	EPA 600/R-99/098, U.S.EPA, Washington, D.C.: :15 p.	1999
99	4-Nonylphenol	Bufo boreas ssp. boreas	Boreal Toad	Amphibians	LC50	MOR	MORT	4	d	A	120	FW	Dwyer, F.J., F.L. Mayer, L.C. Sappington, D.R. Buckler, C.M. Bridges, I.E. Greer, D.K. Hardesty, C.E. Henke, C.G. Ingers	Assessing Contaminant Sensitivity of Endangered and Threatened Aquatic Species: Part I. Acute Toxicity of Five Chemicals	Arch.Environ.Contam.Toxicol. 48(2):143-154	2005
100	4-Nonylphenol, Branched	Lepomis macrochirus	Bluegill	Fish	LOEC	MOR	MORT	28	d	A	126	FW	Brooke, L.T.	Nonylphenol Toxicity: Accumulation and Lethality for Two Freshwater Fishes (Fathead Minnow and Bluegill) to Nonylphenol	Rep.to the U.S.EPA for Work Assignment No.1-12 of U.S.EPA Contract No.68-C1-0034, Lake Superior Res.Inst., September 30, Univ.of Wisconsin-Superior, Superior, WI :50 p.	1993
101	Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	A	128	FW	Brooke, L.T.	Acute and Chronic Toxicity of Nonylphenol to Ten Species of Aquatic Organisms	Contract No.68-C1-0034, U.S.EPA, Duluth, MN :36 p.	1993

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102	4-Nonylphenol	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	F	130	FW	Brennan, S.J., C.A. Brougham, J.J. Roche, and A.M. Fogarty	Multi-generational Effects of Four Selected Environmental Oestrogens on Daphnia magna	Chemosphere 64:49-55	2006
103	4-Nonylphenol	Etheostoma rubrum	Bayou Darter	Fish	LC50	MOR	MORT	3	d	F	130	FW	Dwyer, F.J., D.K. Hardesty, C.E. Henke, C.G. Ingersoll, D.W. Whites, D.R. Mount, and C.M. Bridges	Assessing Contaminant Sensitivity of Endangered and Threatened Species: Toxicant Classes	EPA 600/R-99/098, U.S.EPA, Washington, D.C.: :15 p.	1999
104	4-Nonylphenol	Scaphirhynchus platorynchus	Shovelnose Sturgeon	Fish	LC50	MOR	MORT	3	d	F	130	FW	Dwyer, F.J., D.K. Hardesty, C.E. Henke, C.G. Ingersoll, D.W. Whites, D.R. Mount, and C.M. Bridges	Assessing Contaminant Sensitivity of Endangered and Threatened Species: Toxicant Classes	EPA 600/R-99/098, U.S.EPA, Washington, D.C.: :15 p.	1999
105	4-Nonylphenol	Scaphirhynchus platorynchus	Shovelnose Sturgeon	Fish	LC50	MOR	MORT	4	d	A	130	FW	Dwyer, F.J., F.L. Mayer, L.C. Sappington, D.R. Buckler, C.M. Bridges, I.E. Greer, D.K. Hardesty, C.E. Henke, C.G. Ingers	Assessing Contaminant Sensitivity of Endangered and Threatened Aquatic Species: Part I. Acute Toxicity of Five Chemicals	Arch.Environ.Contam.Toxicol. 48(2):143-154	2005
106	4-Nonylphenol	Scaphirhynchus platorynchus	Shovelnose Sturgeon	Fish	LC50	MOR	MORT	4	d	F	130	FW	Dwyer, F.J., D.K. Hardesty, C.E. Henke, C.G. Ingersoll, D.W. Whites, D.R. Mount, and C.M. Bridges	Assessing Contaminant Sensitivity of Endangered and Threatened Species: Toxicant Classes	EPA 600/R-99/098, U.S.EPA, Washington, D.C.: :15 p.	1999
107	Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	A	135	FW	Holcombe, G.W., G.L. Phipps, M.L. Knuth, and T. Felhaber	The Acute Toxicity of Selected Substituted Phenols, Benzenes and Benzoic Acid Esters to Fathead Minnows Pimephales promelas	Environ.Pollut.Ser.A 35(4):367-381 (OECDG Data File)	1984
108	4-Nonylphenol, Branched	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	4	d	A	135.1	FW	Brooke, L.T.	Nonylphenol Toxicity: Accumulation and Lethality for Two Freshwater Fishes (Fathead Minnow and Bluegill) to Nonylphenol	Rep.to the U.S.EPA for Work Assignment No.1-12 of U.S.EPA Contract No.68-C1-0034, Lake Superior Res.Inst., September 30, Univ.of Wisconsin-Superior, Superior, WI :50 p.	1993
109	Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	3	d	A	137	FW	Holcombe, G.W., G.L. Phipps, M.L. Knuth, and T. Felhaber	The Acute Toxicity of Selected Substituted Phenols, Benzenes and Benzoic Acid Esters to Fathead Minnows Pimephales promelas	Environ.Pollut.Ser.A 35(4):367-381 (OECDG Data File)	1984
110	4-Nonylphenol, Branched	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	A	138.25	FW	Brooke, L.T.	Nonylphenol Toxicity: Accumulation and Lethality for Two Freshwater Fishes (Fathead Minnow and Bluegill) to Nonylphenol	Rep.to the U.S.EPA for Work Assignment No.1-12 of U.S.EPA Contract No.68-C1-0034, Lake Superior Res.Inst., September 30, Univ.of Wisconsin-Superior, Superior, WI :50 p.	1993
111	4-Nonylphenol	Daphnia magna	Water Flea	Crustaceans	EC50	DVP	MOLT	2	d	F	140	FW	Brennan, S.J., C.A. Brougham, J.J. Roche, and A.M. Fogarty	Multi-generational Effects of Four Selected Environmental Oestrogens on Daphnia magna	Chemosphere 64:49-55	2006
112	4-Nonylphenol	Daphnia pulex	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	A	140	FW	Ernst, B., G. Julien, K. Doe, and R. Parker	Environmental Investigations of the 1980 Spruce Budworm Spray Program in New Brunswick	EPS 5-AR-81-3, Environment Canada, Halifax, Nova Scotia :46 p.	1980
113	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	3	d	F	140	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
114	4-Nonylphenol	Notropis mekistocholas	Cape Fear Shiner	Fish	LC50	MOR	MORT	4	d	A	140	FW	Dwyer, F.J., F.L. Mayer, L.C. Sappington, D.R. Buckler, C.M. Bridges, I.E. Greer, D.K. Hardesty, C.E. Henke, C.G. Ingers	Assessing Contaminant Sensitivity of Endangered and Threatened Aquatic Species: Part I. Acute Toxicity of Five Chemicals	Arch.Environ.Contam.Toxicol. 48(2):143-154	2005
115	4-Nonylphenol	Oncorhynchus clarki ssp. henshawi	Lahontan Cutthroat Trout	Fish	LC50	MOR	MORT	4	d	F	140	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
116	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	F	140	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
117	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	A	140	FW	Geiger, D.L., C.E. Northcott, D.J. Call, and L.T. Brooke	Acute Toxicities of Organic Chemicals to Fathead Minnows (Pimephales promelas), Vol. 2	Ctr.for Lake Superior Environ.Stud., Univ.of Wisconsin-Superior, Superior, WI :326 p.	1985
118	4-Nonylphenol, Branched	Chironomus tentans	Midge	Insects/Spiders	NR-LETH	MOR	SURV	14	d	A	146	FW	England, D.C., and J.B. Bussard	Toxicity of Nonylphenol to the Midge Chironomus tentans	Final Rep.40597, ABS Lab.Inc., Columbia, MO :160 p.	1993
119	4-Nonylphenol, Branched	Chironomus tentans	Midge	Insects/Spiders	NR-LETH	MOR	SURV	14	d	A	146	FW	England, D.C., and J.B. Bussard	Toxicity of Nonylphenol to the Midge Chironomus tentans	Final Rep.40597, ABS Lab.Inc., Columbia, MO :160 p.	1993
120	4-Nonylphenol, Branched	Chironomus tentans	Midge	Insects/Spiders	NR-LETH	MOR	SURV	14	d	A	146	FW	England, D.C., and J.B. Bussard	Toxicity of Nonylphenol to the Midge Chironomus tentans	Final Rep.40597, ABS Lab.Inc., Columbia, MO :160 p.	1993
121	4-Nonylphenol, Branched	Chironomus tentans	Midge	Insects/Spiders	LOEC	GRO	WWGT	14	d	A	150	FW	England, D.C., and J.B. Bussard	Toxicity of Nonylphenol to the Midge Chironomus tentans	Final Rep.40597, ABS Lab.Inc., Columbia, MO :160 p.	1993
122	4-Nonylphenol, Branched	Chironomus tentans	Midge	Insects/Spiders	LOEC	MOR	SURV	14	d	A	150	FW	England, D.C., and J.B. Bussard	Toxicity of Nonylphenol to the Midge Chironomus tentans	Final Rep.40597, ABS Lab.Inc., Columbia, MO :160 p.	1993
123	4-Nonylphenol	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	1	d	F	150	FW	Brennan, S.J., C.A. Brougham, J.J. Roche, and A.M. Fogarty	Multi-generational Effects of Four Selected Environmental Oestrogens on Daphnia magna	Chemosphere 64:49-55	2006
124	4-Nonylphenol	Oncorhynchus clarkii ssp. stomias	Greenback Cutthroat Trout	Fish	LC50	MOR	MORT	4	d	A	150	FW	Dwyer, F.J., F.L. Mayer, L.C. Sappington, D.R. Buckler, C.M. Bridges, I.E. Greer, D.K. Hardesty, C.E. Henke, C.G. Ingers	Assessing Contaminant Sensitivity of Endangered and Threatened Aquatic Species: Part I. Acute Toxicity of Five Chemicals	Arch.Environ.Contam.Toxicol. 48(2):143-154	2005
125	4-Nonylphenol	Oncorhynchus clarkii ssp. stomias	Greenback Cutthroat Trout	Fish	LC50	MOR	MORT	4	d	F	150	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
126	4-Nonylphenol	Oncorhynchus clarkii ssp. stomias	Greenback Cutthroat Trout	Fish	LC50	MOR	MORT	4	d	F	150	FW	Sappington, L.C., F.L. Mayer, F.J. Dwyer, D.R. Buckler, J.R. Jones, and M.R. Ellersieck	Contaminant Sensitivity of Threatened and Endangered Fishes Compared to Standard Surrogate Species	Environ.Toxicol.Chem. 20(12):2869-2876	2001
127	4-Nonylphenol, Branched	Hyalella azteca	Scud	Crustaceans	EC50	ITX	IMBL	4	d	A	150	FW	England, D.C., and J.B. Bussard	Toxicity of Nonylphenol to the Amphipod Hyallela azteca (Saussure)	Final Rep.No.41569, Chemical Manufacturers Assoc., Washington, DC :176 p. (NTIS/OTS0573519)	1994
128	4-Nonylphenol	Oncorhynchus clarki ssp. henshawi	Lahontan Cutthroat Trout	Fish	LC50	MOR	MORT	3	d	F	160	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
129	4-Nonylphenol	Oncorhynchus gilae ssp. apache	Apache Trout	Fish	LC50	MOR	MORT	3	d	F	160	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995

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130	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	3	d	F	160	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
131	4-Nonylphenol	Oncorhynchus gilae ssp. apache	Apache Trout	Fish	LC50	MOR	MORT	4	d	F	160	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
132	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	F	160	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
133	4-Nonylphenol	Xyrauchen texanus	Razorback Sucker	Fish	LC50	MOR	MORT	4	d	F	160	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
134	Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	2	d	A	164	FW	Holcombe, G.W., G.L. Phipps, M.L. Knuth, and T. Felhaber	The Acute Toxicity of Selected Substituted Phenols, Benzenes and Benzoic Acid Esters to Fathead Minnows Pimephales promelas	Environ.Pollut.Ser.A 35(4):367-381 (OECDG Data File)	1984
135	4-Nonylphenol	Etheostoma rubrum	Bayou Darter	Fish	LC50	MOR	MORT	2	d	F	170	FW	Dwyer, F.J., D.K. Hardesty, C.E. Henke, C.G. Ingersoll, D.W. Whites, D.R. Mount, and C.M. Bridges	Assessing Contaminant Sensitivity of Endangered and Threatened Species: Toxicant Classes	EPA 600/R-99/098, U.S.EPA, Washington, D.C.: :15 p.	1999
136	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	2	d	F	170	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
137	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	2	d	F	170	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
138	4-Nonylphenol	Oncorhynchus clarkii ssp. stomias	Greenback Cutthroat Trout	Fish	LC50	MOR	MORT	3	d	F	170	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
139	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	3	d	F	170	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
140	4-Nonylphenol	Oncorhynchus gilae ssp. apache	Apache Trout	Fish	LC50	MOR	MORT	4	d	A	170	FW	Dwyer, F.J., F.L. Mayer, L.C. Sappington, D.R. Buckler, C.M. Bridges, I.E. Greer, D.K. Hardesty, C.E. Henke, C.G. Ingers	Assessing Contaminant Sensitivity of Endangered and Threatened Aquatic Species: Part I. Acute Toxicity of Five Chemicals	Arch.Environ.Contam.Toxicol. 48(2):143-154	2005
141	4-Nonylphenol	Oncorhynchus gilae ssp. apache	Apache Trout	Fish	LC50	MOR	MORT	4	d	F	170	FW	Sappington, L.C., F.L. Mayer, F.J. Dwyer, D.R. Buckler, J.R. Jones, and M.R. Ellersieck	Contaminant Sensitivity of Threatened and Endangered Fishes Compared to Standard Surrogate Species	Environ.Toxicol.Chem. 20(12):2869-2876	2001
142	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	F	170	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995

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143	4-Nonylphenol	Xyrauchen texanus	Razorback Sucker	Fish	LC50	MOR	MORT	4	d	A	170	FW	Dwyer, F.J., F.L. Mayer, L.C. Sappington, D.R. Buckler, C.M. Bridges, I.E. Greer, D.K. Hardesty, C.E. Henke, C.G. Ingers	Assessing Contaminant Sensitivity of Endangered and Threatened Aquatic Species: Part I. Acute Toxicity of Five Chemicals	Arch.Environ.Contam.Toxicol. 48(2):143-154	2005
144	4-Nonylphenol	Xyrauchen texanus	Razorback Sucker	Fish	LC50	MOR	MORT	4	d	F	170	FW	Sappington, L.C., F.L. Mayer, F.J. Dwyer, D.R. Buckler, J.R. Jones, and M.R. Ellersieck	Contaminant Sensitivity of Threatened and Endangered Fishes Compared to Standard Surrogate Species	Environ.Toxicol.Chem. 20(12):2869-2876	2001
145	4-Nonylphenol, Branched	Hyalella azteca	Scud	Crustaceans	LC50	MOR	MORT	4	d	A	170	FW	England, D.C., and J.B. Bussard	Toxicity of Nonylphenol to the Amphipod Hyallela azteca (Saussure)	Final Rep.No.41569, Chemical Manufacturers Assoc., Washington, DC :176 p. (NTIS/OTS0573519)	1994
146	4-Nonylphenol	Daphnia pulex	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	A	176	FW	Ernst, B., G. Julien, K. Doe, and R. Parker	Environmental Investigations of the 1980 Spruce Budworm Spray Program in New Brunswick	EPS 5-AR-81-3, Environment Canada, Halifax, Nova Scotia :46 p.	1980
147	4-Nonylphenol	Oncorhynchus clarki ssp. henshawi	Lahontan Cutthroat Trout	Fish	LC50	MOR	MORT	2	d	F	180	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
148	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	2	d	F	180	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
149	4-Nonylphenol	Xyrauchen texanus	Razorback Sucker	Fish	LC50	MOR	MORT	3	d	F	180	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
150	4-Nonylphenol	Oncorhynchus clarki ssp. henshawi	Lahontan Cutthroat Trout	Fish	LC50	MOR	MORT	4	d	A	180	FW	Dwyer, F.J., F.L. Mayer, L.C. Sappington, D.R. Buckler, C.M. Bridges, I.E. Greer, D.K. Hardesty, C.E. Henke, C.G. Ingers	Assessing Contaminant Sensitivity of Endangered and Threatened Aquatic Species: Part I. Acute Toxicity of Five Chemicals	Arch.Environ.Contam.Toxicol. 48(2):143-154	2005
151	4-Nonylphenol	Oncorhynchus clarki ssp. henshawi	Lahontan Cutthroat Trout	Fish	LC50	MOR	MORT	4	d	F	180	FW	Sappington, L.C., F.L. Mayer, F.J. Dwyer, D.R. Buckler, J.R. Jones, and M.R. Ellersieck	Contaminant Sensitivity of Threatened and Endangered Fishes Compared to Standard Surrogate Species	Environ.Toxicol.Chem. 20(12):2869-2876	2001
152	4-Nonylphenol	Oncorhynchus gilae ssp. apache	Apache Trout	Fish	LC50	MOR	MORT	4	d	F	180	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
153	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	F	180	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
154	4-Nonylphenol	Oryzias latipes	Medaka, High-Eyes	Fish	NR-LETH	MOR	MORT	10	d	A	183	FW	Yokota, H., M. Seki, M. Maeda, Y. Oshima, H. Tadokoro, T. Honjo, and K. Kobayashi	Life-Cycle Toxicity of 4-Nonylphenol to Medaka (Oryzias latipes)	Environ.Toxicol.Chem. 20(11):2552-2560	2001
155	4-Nonylphenol	Bufo boreas	Western Toad	Amphibians	LC50	MOR	MORT	0.25	d	F	190	FW	Dwyer, F.J., D.K. Hardesty, C.E. Henke, C.G. Ingersoll, D.W. Whites, D.R. Mount, and C.M. Bridges	Assessing Contaminant Sensitivity of Endangered and Threatened Species: Toxicant Classes	EPA 600/R-99/098, U.S.EPA, Washington, D.C.: :15 p.	1999
156	4-Nonylphenol	Daphnia pulex	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	A	190	FW	Ernst, B., G. Julien, K. Doe, and R. Parker	Environmental Investigations of the 1980 Spruce Budworm Spray Program in New Brunswick	EPS 5-AR-81-3, Environment Canada, Halifax, Nova Scotia :46 p.	1980

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157	4-Nonylphenol	Oncorhynchus clarkii ssp. stomias	Greenback Cutthroat Trout	Fish	LC50	MOR	MORT	2	d	F	190	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
158	4-Nonylphenol	Oncorhynchus gilae ssp. apache	Apache Trout	Fish	LC50	MOR	MORT	2	d	F	190	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
159	4-Nonylphenol	Xyrauchen texanus	Razorback Sucker	Fish	LC50	MOR	MORT	2	d	F	190	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
160	Nonylphenol	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	2	d	A	190	FW	Comber, M.H.I., T.D. Williams, and K.M. Stewart	The Effects of Nonylphenol on Daphnia magna	Water Res. 27(2):273-276	1993
161	4-Nonylphenol	Oncorhynchus gilae ssp. apache	Apache Trout	Fish	LC50	MOR	MORT	3	d	F	190	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
162	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	3	d	F	190	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
163	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	3	d	F	190	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
164	4-Nonylphenol	Etheostoma lepidum	Greenthroat Darter	Fish	LC50	MOR	MORT	4	d	A	190	FW	Dwyer, F.J., F.L. Mayer, L.C. Sappington, D.R. Buckler, C.M. Bridges, I.E. Greer, D.K. Hardesty, C.E. Henke, C.G. Ingers	Assessing Contaminant Sensitivity of Endangered and Threatened Aquatic Species: Part I. Acute Toxicity of Five Chemicals	Arch.Environ.Contam.Toxicol. 48(2):143-154	2005
165	4-Nonylphenol	Etheostoma lepidum	Greenthroat Darter	Fish	LC50	MOR	MORT	4	d	F	190	FW	Dwyer, F.J., D.K. Hardesty, C.E. Henke, C.G. Ingersoll, D.W. Whites, D.R. Mount, and C.M. Bridges	Assessing Contaminant Sensitivity of Endangered and Threatened Species: Toxicant Classes	EPA 600/R-99/098, U.S.EPA, Washington, D.C.: :15 p.	1999
166	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	A	190	FW	Dwyer, F.J., F.L. Mayer, L.C. Sappington, D.R. Buckler, C.M. Bridges, I.E. Greer, D.K. Hardesty, C.E. Henke, C.G. Ingers	Assessing Contaminant Sensitivity of Endangered and Threatened Aquatic Species: Part I. Acute Toxicity of Five Chemicals	Arch.Environ.Contam.Toxicol. 48(2):143-154	2005
167	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	F	190	FW	Sappington, L.C., F.L. Mayer, F.J. Dwyer, D.R. Buckler, J.R. Jones, and M.R. Ellersieck	Contaminant Sensitivity of Threatened and Endangered Fishes Compared to Standard Surrogate Species	Environ.Toxicol.Chem. 20(12):2869-2876	2001
168	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	F	190	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
169	4-Nonylphenol	Xyrauchen texanus	Razorback Sucker	Fish	LC50	MOR	MORT	4	d	F	190	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
170	4-Nonylphenol, Branched	Pimephales promelas	Fathead Minnow	Fish	LOEC	MOR	MORT	28	d	A	193	FW	Brooke, L.T.	Nonylphenol Toxicity: Accumulation and Lethality for Two Freshwater Fishes (Fathead Minnow and Bluegill) to Nonylphenol	Rep.to the U.S.EPA for Work Assignment No.1-12 of U.S.EPA Contract No.68-C1-0034, Lake Superior Res.Inst., September 30, Univ.of Wisconsin-Superior, Superior, WI :50 p.	1993
171	Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	3	d	F	193.65	FW	Lech, J.J., S.K. Lewis, and L. Ren	In Vivo Estrogenic Activity of Nonylphenol in Rainbow Trout	Fundam.Appl.Toxicol. 30(2):229-232	1996
172	4-Nonylphenol	Melosira varians	Diatom	Algae, Moss, Fungi	LOEC	BCM	LCAR	10	d	F	200	FW	Julius, M.L., J. Stepanek, O. Tedrow, C. Gamble, and H.L. Schoenfuss	Estrogen-Receptor Independent Effects of Two Ubiquitous Environmental Estrogens on Melosira varians Agardh, a Common Component of the Aquatic Primary Production Community	Aquat. Toxicol.85(1): 19-27	2007
173	4-Nonylphenol	Melosira varians	Diatom	Algae, Moss, Fungi	LOEC	POP	ABND	10	d	F	200	FW	Julius, M.L., J. Stepanek, O. Tedrow, C. Gamble, and H.L. Schoenfuss	Estrogen-Receptor Independent Effects of Two Ubiquitous Environmental Estrogens on Melosira varians Agardh, a Common Component of the Aquatic Primary Production Community	Aquat. Toxicol.85(1): 19-27	2007
174	4-Nonylphenol	Melosira varians	Diatom	Algae, Moss, Fungi	LOEC	POP	CHLA	10	d	F	200	FW	Julius, M.L., J. Stepanek, O. Tedrow, C. Gamble, and H.L. Schoenfuss	Estrogen-Receptor Independent Effects of Two Ubiquitous Environmental Estrogens on Melosira varians Agardh, a Common Component of the Aquatic Primary Production Community	Aquat. Toxicol.85(1): 19-27	2007
175	4-Nonylphenol	Ceriodaphnia dubia	Water Flea	Crustaceans	LC50	MOR	MORT	1	d	F	200	FW	Milam, C.D., J.L. Farris, F.J. Dwyer, and D.K. Hardesty	Acute Toxicity of Six Freshwater Mussel Species (Glochidia) to Six Chemicals: Implications for Daphnids and Utterbackia imbecillis as Surrogates for Protection of Freshwater Mussels (Unionidae)	Arch.Environ.Contam.Toxicol. 48(2):166-173	2005
176	4-Nonylphenol	Scaphirhynchus platorynchus	Shovelnose Sturgeon	Fish	LC50	MOR	MORT	1	d	F	200	FW	Dwyer, F.J., D.K. Hardesty, C.E. Henke, C.G. Ingersoll, D.W. Whites, D.R. Mount, and C.M. Bridges	Assessing Contaminant Sensitivity of Endangered and Threatened Species: Toxicant Classes	EPA 600/R-99/098, U.S.EPA, Washington, D.C.: :15 p.	1999
177	4-Nonylphenol	Scaphirhynchus platorynchus	Shovelnose Sturgeon	Fish	LC50	MOR	MORT	2	d	F	200	FW	Dwyer, F.J., D.K. Hardesty, C.E. Henke, C.G. Ingersoll, D.W. Whites, D.R. Mount, and C.M. Bridges	Assessing Contaminant Sensitivity of Endangered and Threatened Species: Toxicant Classes	EPA 600/R-99/098, U.S.EPA, Washington, D.C.: :15 p.	1999
178	4-Nonylphenol	Etheostoma lepidum	Greenthroat Darter	Fish	LC50	MOR	MORT	3	d	F	200	FW	Dwyer, F.J., D.K. Hardesty, C.E. Henke, C.G. Ingersoll, D.W. Whites, D.R. Mount, and C.M. Bridges	Assessing Contaminant Sensitivity of Endangered and Threatened Species: Toxicant Classes	EPA 600/R-99/098, U.S.EPA, Washington, D.C.: :15 p.	1999
179	4-Nonylphenol	Xyrauchen texanus	Razorback Sucker	Fish	LC50	MOR	MORT	3	d	F	200	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
180	4-Nonylphenol, Branched	Chironomus tentans	Midge	Insects/Spiders	NR-LETH	MOR	MORT	6	d	F	200	FW	England, D.C., and J.B. Bussard	Toxicity of Nonylphenol to the Midge Chironomus tentans	Final Rep.40597, ABS Lab.Inc., Columbia, MO :160 p.	1993

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
181	Nonylphenol	Lepomis macrochirus	Bluegill	Fish	EC50	BEH	EQUL	4	d	A	203	FW	Brooke, L.T.	Acute and Chronic Toxicity of Nonylphenol to Ten Species of Aquatic Organisms	Contract No.68-C1-0034, U.S.EPA, Duluth, MN :36 p.	1993
182	Nonylphenol	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	4	d	A	209	FW	Brooke, L.T.	Acute and Chronic Toxicity of Nonylphenol to Ten Species of Aquatic Organisms	Contract No.68-C1-0034, U.S.EPA, Duluth, MN :36 p.	1993
183	4-Nonylphenol	Daphnia magna	Water Flea	Crustaceans	LC50	MOR	MORT	1	d	F	210	FW	Milam, C.D., J.L. Farris, F.J. Dwyer, and D.K. Hardesty	Acute Toxicity of Six Freshwater Mussel Species (Glochidia) to Six Chemicals: Implications for Daphnids and Utterbackia imbecillis as Surrogates for Protection of Freshwater Mussels (Unionidae)	Arch.Environ.Contam.Toxicol. 48(2):166-173	2005
184	4-Nonylphenol	Etheostoma rubrum	Bayou Darter	Fish	LC50	MOR	MORT	1	d	F	210	FW	Dwyer, F.J., D.K. Hardesty, C.E. Henke, C.G. Ingersoll, D.W. Whites, D.R. Mount, and C.M. Bridges	Assessing Contaminant Sensitivity of Endangered and Threatened Species: Toxicant Classes	EPA 600/R-99/098, U.S.EPA, Washington, D.C.: :15 p.	1999
185	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	1	d	F	210	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
186	4-Nonylphenol	Xyrauchen texanus	Razorback Sucker	Fish	LC50	MOR	MORT	1	d	F	210	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
187	4-Nonylphenol	Oncorhynchus gilae ssp. apache	Apache Trout	Fish	LC50	MOR	MORT	2	d	F	210	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
188	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	F	210	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
189	4-Nonylphenol, Branched	Lepomis macrochirus	Bluegill	Fish	LOEC	MOR	MORT	4	d	A	211	FW	Brooke, L.T.	Nonylphenol Toxicity: Accumulation and Lethality for Two Freshwater Fishes (Fathead Minnow and Bluegill) to Nonylphenol	Rep.to the U.S.EPA for Work Assignment No.1-12 of U.S.EPA Contract No.68-C1-0034, Lake Superior Res.Inst., September 30, Univ.of Wisconsin-Superior, Superior, WI :50 p.	1993
190	4-Nonylphenol, Branched	Lepomis macrochirus	Bluegill	Fish	NR-LETH	MOR	MORT	4	d	A	211	FW	Brooke, L.T.	Nonylphenol Toxicity: Accumulation and Lethality for Two Freshwater Fishes (Fathead Minnow and Bluegill) to Nonylphenol	Rep.to the U.S.EPA for Work Assignment No.1-12 of U.S.EPA Contract No.68-C1-0034, Lake Superior Res.Inst., September 30, Univ.of Wisconsin-Superior, Superior, WI :50 p.	1993
191	4-Nonylphenol	Oncorhynchus gilae ssp. apache	Apache Trout	Fish	LC50	MOR	MORT	1	d	F	220	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
192	4-Nonylphenol	Xyrauchen texanus	Razorback Sucker	Fish	LC50	MOR	MORT	1	d	F	220	FW	Sappington, L.C., F.L. Mayer, F.J. Dwyer, D.R. Buckler, J.R. Jones, and M.R. Ellersieck	Contaminant Sensitivity of Threatened and Endangered Fishes Compared to Standard Surrogate Species	Environ.Toxicol.Chem. 20(12):2869-2876	2001

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
193	4-Nonylphenol	Etheostoma lepidum	Greenthroat Darter	Fish	LC50	MOR	MORT	2	d	F	220	FW	Dwyer, F.J., D.K. Hardesty, C.E. Henke, C.G. Ingersoll, D.W. Whites, D.R. Mount, and C.M. Bridges	Assessing Contaminant Sensitivity of Endangered and Threatened Species: Toxicant Classes	EPA 600/R-99/098, U.S.EPA, Washington, D.C.: :15 p.	1999
194	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	2	d	F	220	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
195	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	2	d	F	220	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
196	4-Nonylphenol	Xyrauchen texanus	Razorback Sucker	Fish	LC50	MOR	MORT	2	d	F	220	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
197	4-Nonylphenol	Oncorhynchus clarki ssp. henshawi	Lahontan Cutthroat Trout	Fish	LC50	MOR	MORT	4	d	F	220	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
198	Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	A	221	FW	Brooke, L.T.	Acute and Chronic Toxicity of Nonylphenol to Ten Species of Aquatic Organisms	Contract No.68-C1-0034, U.S.EPA, Duluth, MN :36 p.	1993
199	4-Nonylphenol, Branched	Pimephales promelas	Fathead Minnow	Fish	LOEC	MOR	MORT	4	d	A	230	FW	Brooke, L.T.	Nonylphenol Toxicity: Accumulation and Lethality for Two Freshwater Fishes (Fathead Minnow and Bluegill) to Nonylphenol	Rep.to the U.S.EPA for Work Assignment No.1-12 of U.S.EPA Contract No.68-C1-0034, Lake Superior Res.Inst., September 30, Univ.of Wisconsin-Superior, Superior, WI :50 p.	1993
200	4-Nonylphenol	Oncorhynchus gilae ssp. apache	Apache Trout	Fish	LC50	MOR	MORT	0.75	d	F	230	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
201	4-Nonylphenol	Xyrauchen texanus	Razorback Sucker	Fish	LC50	MOR	MORT	0.75	d	F	230	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
202	4-Nonylphenol	Etheostoma lepidum	Greenthroat Darter	Fish	LC50	MOR	MORT	1	d	F	230	FW	Dwyer, F.J., D.K. Hardesty, C.E. Henke, C.G. Ingersoll, D.W. Whites, D.R. Mount, and C.M. Bridges	Assessing Contaminant Sensitivity of Endangered and Threatened Species: Toxicant Classes	EPA 600/R-99/098, U.S.EPA, Washington, D.C.: :15 p.	1999
203	4-Nonylphenol	Oncorhynchus clarki ssp. henshawi	Lahontan Cutthroat Trout	Fish	LC50	MOR	MORT	1	d	F	230	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
204	4-Nonylphenol	Xyrauchen texanus	Razorback Sucker	Fish	LC50	MOR	MORT	1	d	F	230	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
205	4-Nonylphenol	Oncorhynchus clarki ssp. henshawi	Lahontan Cutthroat Trout	Fish	LC50	MOR	MORT	3	d	F	230	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
206	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	3	d	F	230	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
207	4-Nonylphenol	Poeciliopsis occidentalis	Gila Topminnow	Fish	LC50	MOR	MORT	4	d	A	230	FW	Dwyer, F.J., F.L. Mayer, L.C. Sappington, D.R. Buckler, C.M. Bridges, I.E. Greer, D.K. Hardesty, C.E. Henke, C.G. Ingers	Assessing Contaminant Sensitivity of Endangered and Threatened Aquatic Species: Part I. Acute Toxicity of Five Chemicals	Arch.Environ.Contam.Toxicol. 48(2):143-154	2005
208	4-Nonylphenol	Poeciliopsis occidentalis	Gila Topminnow	Fish	LC50	MOR	MORT	4	d	F	230	FW	Dwyer, F.J., D.K. Hardesty, C.E. Henke, C.G. Ingersoll, D.W. Whites, D.R. Mount, and C.M. Bridges	Assessing Contaminant Sensitivity of Endangered and Threatened Species: Toxicant Classes	EPA 600/R-99/098, U.S.EPA, Washington, D.C.: :15 p.	1999
209	4-Nonylphenol, Branched	Pimephales promelas	Fathead Minnow	Fish	NR-LETH	MOR	MORT	4	d	A	230	FW	Brooke, L.T.	Nonylphenol Toxicity: Accumulation and Lethality for Two Freshwater Fishes (Fathead Minnow and Bluegill) to Nonylphenol	Rep.to the U.S.EPA for Work Assignment No.1-12 of U.S.EPA Contract No.68-C1-0034, Lake Superior Res.Inst., September 30, Univ.of Wisconsin-Superior, Superior, WI :50 p.	1993
210	4-Nonylphenol	Oncorhynchus clarki ssp. henshawi	Lahontan Cutthroat Trout	Fish	LC50	MOR	MORT	0.75	d	F	240	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
211	4-Nonylphenol	Oncorhynchus gilae ssp. apache	Apache Trout	Fish	LC50	MOR	MORT	1	d	F	240	FW	Sappington, L.C., F.L. Mayer, F.J. Dwyer, D.R. Buckler, J.R. Jones, and M.R. Ellersieck	Contaminant Sensitivity of Threatened and Endangered Fishes Compared to Standard Surrogate Species	Environ.Toxicol.Chem. 20(12):2869-2876	2001
212	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	2	d	F	240	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
213	4-Nonylphenol	Ptychocheilus lucius	Colorado Squawfish	Fish	LC50	MOR	MORT	4	d	F	240	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
214	4-Nonylphenol, Branched	Chironomus tentans	Midge	Insects/Spiders	NR-LETH	MOR	MORT	7	d	F	240	FW	England, D.C., and J.B. Bussard	Toxicity of Nonylphenol to the Midge Chironomus tentans	Final Rep.40597, ABS Lab.Inc., Columbia, MO :160 p.	1993
215	4-Nonylphenol	Algae	Algae	Algae, Moss, Fungi	LOEC	POP	BMAS	121.76	d	A	243	FW	Liber, K., M.L. Knuth, and F.S. Stay	An Integrated Evaluation of the Persistence and Effects of 4-Nonylphenol in an Experimental Littoral Ecosystem	Environ. Toxicol. Chem.18(3): 357-362	1999
216	4-Nonylphenol	Plantae	Plant Kingdom	Miscellaneous	LOEC	POP	ABND	121.76	d	A	243	FW	Liber, K., M.L. Knuth, and F.S. Stay	An Integrated Evaluation of the Persistence and Effects of 4-Nonylphenol in an Experimental Littoral Ecosystem	Environ. Toxicol. Chem.18(3): 357-362	1999
217	4-Nonylphenol	Aquatic community	Aquatic Community	Miscellaneous	LOEC	POP	ABND	20	d	A	243	FW	O'Halloran, S.L., K. Liber, J.A. Gangl, and M.L. Knuth	Effects of Repeated Exposure to 4-Nonylphenol on the Zooplankton Community in Littoral Enclosures	Environ. Toxicol. Chem.18(3): 376-385	1999
218	4-Nonylphenol	Algae	Algae	Algae, Moss, Fungi	MATC	POP	BMAS	121.76	d	A	243	FW	Liber, K., M.L. Knuth, and F.S. Stay	An Integrated Evaluation of the Persistence and Effects of 4-Nonylphenol in an Experimental Littoral Ecosystem	Environ. Toxicol. Chem.18(3): 357-362	1999

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219	4-Nonylphenol	Plantae	Plant Kingdom	Miscellaneous	MATC	POP	ABND	121.76	d	A	243	FW	Liber, K., M.L. Knuth, and F.S. Stay	An Integrated Evaluation of the Persistence and Effects of 4-Nonylphenol in an Experimental Littoral Ecosystem	Environ. Toxicol. Chem.18(3): 357-362	1999
220	Nonylphenol	Daphnia magna	Water Flea	Crustaceans	NR-LETH	MOR	MORT	1	d	A	248	FW	Brooke, L.T.	Acute and Chronic Toxicity of Nonylphenol to Ten Species of Aquatic Organisms	Contract No.68-C1-0034, U.S.EPA, Duluth, MN :36 p.	1993
221	4-Nonylphenol	Etheostoma lepidum	Greenthroat Darter	Fish	LC50	MOR	MORT	0.25	d	F	250	FW	Dwyer, F.J., D.K. Hardesty, C.E. Henke, C.G. Ingersoll, D.W. Whites, D.R. Mount, and C.M. Bridges	Assessing Contaminant Sensitivity of Endangered and Threatened Species: Toxicant Classes	EPA 600/R-99/098, U.S.EPA, Washington, D.C.: :15 p.	1999
222	4-Nonylphenol	Etheostoma rubrum	Bayou Darter	Fish	LC50	MOR	MORT	0.25	d	F	250	FW	Dwyer, F.J., D.K. Hardesty, C.E. Henke, C.G. Ingersoll, D.W. Whites, D.R. Mount, and C.M. Bridges	Assessing Contaminant Sensitivity of Endangered and Threatened Species: Toxicant Classes	EPA 600/R-99/098, U.S.EPA, Washington, D.C.: :15 p.	1999
223	4-Nonylphenol	Poeciliopsis occidentalis	Gila Topminnow	Fish	LC50	MOR	MORT	0.25	d	F	250	FW	Dwyer, F.J., D.K. Hardesty, C.E. Henke, C.G. Ingersoll, D.W. Whites, D.R. Mount, and C.M. Bridges	Assessing Contaminant Sensitivity of Endangered and Threatened Species: Toxicant Classes	EPA 600/R-99/098, U.S.EPA, Washington, D.C.: :15 p.	1999
224	4-Nonylphenol	Etheostoma lepidum	Greenthroat Darter	Fish	LC50	MOR	MORT	0.5	d	F	250	FW	Dwyer, F.J., D.K. Hardesty, C.E. Henke, C.G. Ingersoll, D.W. Whites, D.R. Mount, and C.M. Bridges	Assessing Contaminant Sensitivity of Endangered and Threatened Species: Toxicant Classes	EPA 600/R-99/098, U.S.EPA, Washington, D.C.: :15 p.	1999
225	4-Nonylphenol	Etheostoma rubrum	Bayou Darter	Fish	LC50	MOR	MORT	0.5	d	F	250	FW	Dwyer, F.J., D.K. Hardesty, C.E. Henke, C.G. Ingersoll, D.W. Whites, D.R. Mount, and C.M. Bridges	Assessing Contaminant Sensitivity of Endangered and Threatened Species: Toxicant Classes	EPA 600/R-99/098, U.S.EPA, Washington, D.C.: :15 p.	1999
226	4-Nonylphenol	Poeciliopsis occidentalis	Gila Topminnow	Fish	LC50	MOR	MORT	0.5	d	F	250	FW	Dwyer, F.J., D.K. Hardesty, C.E. Henke, C.G. Ingersoll, D.W. Whites, D.R. Mount, and C.M. Bridges	Assessing Contaminant Sensitivity of Endangered and Threatened Species: Toxicant Classes	EPA 600/R-99/098, U.S.EPA, Washington, D.C.: :15 p.	1999
227	4-Nonylphenol	Scaphirhynchus platorynchus	Shovelnose Sturgeon	Fish	LC50	MOR	MORT	0.5	d	F	250	FW	Dwyer, F.J., D.K. Hardesty, C.E. Henke, C.G. Ingersoll, D.W. Whites, D.R. Mount, and C.M. Bridges	Assessing Contaminant Sensitivity of Endangered and Threatened Species: Toxicant Classes	EPA 600/R-99/098, U.S.EPA, Washington, D.C.: :15 p.	1999
228	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	0.75	d	F	250	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
229	4-Nonylphenol	Xyrauchen texanus	Razorback Sucker	Fish	LC50	MOR	MORT	0.75	d	F	250	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
230	4-Nonylphenol	Oncorhynchus clarki ssp. henshawi	Lahontan Cutthroat Trout	Fish	LC50	MOR	MORT	1	d	F	250	FW	Sappington, L.C., F.L. Mayer, F.J. Dwyer, D.R. Buckler, J.R. Jones, and M.R. Ellersieck	Contaminant Sensitivity of Threatened and Endangered Fishes Compared to Standard Surrogate Species	Environ.Toxicol.Chem. 20(12):2869-2876	2001
231	4-Nonylphenol	Oncorhynchus gilae ssp. apache	Apache Trout	Fish	LC50	MOR	MORT	1	d	F	250	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
232	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	1	d	F	250	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
233	4-Nonylphenol	Poeciliopsis occidentalis	Gila Topminnow	Fish	LC50	MOR	MORT	1	d	F	250	FW	Dwyer, F.J., D.K. Hardesty, C.E. Henke, C.G. Ingersoll, D.W. Whites, D.R. Mount, and C.M. Bridges	Assessing Contaminant Sensitivity of Endangered and Threatened Species: Toxicant Classes	EPA 600/R-99/098, U.S.EPA, Washington, D.C.: :15 p.	1999
234	4-Nonylphenol	Poeciliopsis occidentalis	Gila Topminnow	Fish	LC50	MOR	MORT	2	d	F	250	FW	Dwyer, F.J., D.K. Hardesty, C.E. Henke, C.G. Ingersoll, D.W. Whites, D.R. Mount, and C.M. Bridges	Assessing Contaminant Sensitivity of Endangered and Threatened Species: Toxicant Classes	EPA 600/R-99/098, U.S.EPA, Washington, D.C.: :15 p.	1999
235	4-Nonylphenol	Poeciliopsis occidentalis	Gila Topminnow	Fish	LC50	MOR	MORT	3	d	F	250	FW	Dwyer, F.J., D.K. Hardesty, C.E. Henke, C.G. Ingersoll, D.W. Whites, D.R. Mount, and C.M. Bridges	Assessing Contaminant Sensitivity of Endangered and Threatened Species: Toxicant Classes	EPA 600/R-99/098, U.S.EPA, Washington, D.C.: :15 p.	1999
236	4-Nonylphenol	Ptychocheilus lucius	Colorado Squawfish	Fish	LC50	MOR	MORT	3	d	F	250	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
237	4-Nonylphenol	Oncorhynchus gilae ssp. apache	Apache Trout	Fish	LC50	MOR	MORT	0.75	d	F	260	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
238	4-Nonylphenol	Oncorhynchus clarki ssp. henshawi	Lahontan Cutthroat Trout	Fish	LC50	MOR	MORT	2	d	F	260	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
239	4-Nonylphenol	Ptychocheilus lucius	Colorado Squawfish	Fish	LC50	MOR	MORT	2	d	F	260	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
240	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	3	d	F	260	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
241	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	F	260	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
242	4-Nonylphenol	Ptychocheilus lucius	Colorado Squawfish	Fish	LC50	MOR	MORT	4	d	A	260	FW	Dwyer, F.J., F.L. Mayer, L.C. Sappington, D.R. Buckler, C.M. Bridges, I.E. Greer, D.K. Hardesty, C.E. Henke, C.G. Ingers	Assessing Contaminant Sensitivity of Endangered and Threatened Aquatic Species: Part I. Acute Toxicity of Five Chemicals	Arch.Environ.Contam.Toxicol. 48(2):143-154	2005
243	4-Nonylphenol	Ptychocheilus lucius	Colorado Squawfish	Fish	LC50	MOR	MORT	4	d	F	260	FW	Sappington, L.C., F.L. Mayer, F.J. Dwyer, D.R. Buckler, J.R. Jones, and M.R. Ellersieck	Contaminant Sensitivity of Threatened and Endangered Fishes Compared to Standard Surrogate Species	Environ.Toxicol.Chem. 20(12):2869-2876	2001
244	Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	NR-LETH	MOR	MORT	3	d	A	264	FW	Brooke, L.T.	Acute and Chronic Toxicity of Nonylphenol to Ten Species of Aquatic Organisms	Contract No.68-C1-0034, U.S.EPA, Duluth, MN :36 p.	1993
245	Nonylphenol	Lumbriculus variegatus	Oligochaete, Worm	Worms	EC50	BEH	ACTV	4	d	A	268	FW	Brooke, L.T.	Acute and Chronic Toxicity of Nonylphenol to Ten Species of Aquatic Organisms	Contract No.68-C1-0034, U.S.EPA, Duluth, MN :36 p.	1993
246	4-Nonylphenol	Oncorhynchus clarki ssp. henshawi	Lahontan Cutthroat Trout	Fish	LC50	MOR	MORT	0.5	d	F	270	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
247	4-Nonylphenol	Oncorhynchus gilae ssp. apache	Apache Trout	Fish	LC50	MOR	MORT	0.5	d	F	270	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
248	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.5	d	F	270	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
249	4-Nonylphenol	Xyrauchen texanus	Razorback Sucker	Fish	LC50	MOR	MORT	0.5	d	F	270	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
250	4-Nonylphenol	Oncorhynchus clarki ssp. henshawi	Lahontan Cutthroat Trout	Fish	LC50	MOR	MORT	0.75	d	F	270	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
251	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.75	d	F	270	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
252	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	0.75	d	F	270	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
253	4-Nonylphenol	Oncorhynchus clarki ssp. henshawi	Lahontan Cutthroat Trout	Fish	LC50	MOR	MORT	1	d	F	270	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
254	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	1	d	F	270	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
255	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	2	d	F	270	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
256	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	2	d	F	270	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
257	4-Nonylphenol	Ptychocheilus lucius	Colorado Squawfish	Fish	LC50	MOR	MORT	2	d	F	270	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
258	4-Nonylphenol	Gila elegans	Bonytail	Fish	LC50	MOR	MORT	3	d	F	270	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
259	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	3	d	F	270	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
260	4-Nonylphenol	Ptychocheilus lucius	Colorado Squawfish	Fish	LC50	MOR	MORT	3	d	F	270	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
261	4-Nonylphenol	Gila elegans	Bonytail	Fish	LC50	MOR	MORT	4	d	F	270	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
262	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	F	270	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
263	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	A	270	FW	Dwyer, F.J., F.L. Mayer, L.C. Sappington, D.R. Buckler, C.M. Bridges, I.E. Greer, D.K. Hardesty, C.E. Henke, C.G. Ingers	Assessing Contaminant Sensitivity of Endangered and Threatened Aquatic Species: Part I. Acute Toxicity of Five Chemicals	Arch.Environ.Contam.Toxicol. 48(2):143-154	2005
264	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	F	270	FW	Sappington, L.C., F.L. Mayer, F.J. Dwyer, D.R. Buckler, J.R. Jones, and M.R. Ellersieck	Contaminant Sensitivity of Threatened and Endangered Fishes Compared to Standard Surrogate Species	Environ.Toxicol.Chem. 20(12):2869-2876	2001
265	4-Nonylphenol	Ptychocheilus lucius	Colorado Squawfish	Fish	LC50	MOR	MORT	4	d	F	270	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
266	4-Nonylphenol	Oncorhynchus clarki ssp. henshawi	Lahontan Cutthroat Trout	Fish	LC50	MOR	MORT	0.375	d	F	280	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
267	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.375	d	F	280	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
268	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	0.5	d	F	280	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
269	4-Nonylphenol	Ptychocheilus lucius	Colorado Squawfish	Fish	LC50	MOR	MORT	1	d	F	280	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
270	4-Nonylphenol	Ptychocheilus lucius	Colorado Squawfish	Fish	LC50	MOR	MORT	1	d	F	280	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
271	4-Nonylphenol	Ptychocheilus lucius	Colorado Squawfish	Fish	LC50	MOR	MORT	1	d	F	280	FW	Sappington, L.C., F.L. Mayer, F.J. Dwyer, D.R. Buckler, J.R. Jones, and M.R. Ellersieck	Contaminant Sensitivity of Threatened and Endangered Fishes Compared to Standard Surrogate Species	Environ.Toxicol.Chem. 20(12):2869-2876	2001
272	4-Nonylphenol	Xyrauchen texanus	Razorback Sucker	Fish	LC50	MOR	MORT	0.375	d	F	290	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
273	4-Nonylphenol	Oncorhynchus clarki ssp. henshawi	Lahontan Cutthroat Trout	Fish	LC50	MOR	MORT	0.5	d	F	290	FW	Sappington, L.C., F.L. Mayer, F.J. Dwyer, D.R. Buckler, J.R. Jones, and M.R. Ellersieck	Contaminant Sensitivity of Threatened and Endangered Fishes Compared to Standard Surrogate Species	Environ.Toxicol.Chem. 20(12):2869-2876	2001
274	4-Nonylphenol	Xyrauchen texanus	Razorback Sucker	Fish	LC50	MOR	MORT	0.5	d	F	290	FW	Sappington, L.C., F.L. Mayer, F.J. Dwyer, D.R. Buckler, J.R. Jones, and M.R. Ellersieck	Contaminant Sensitivity of Threatened and Endangered Fishes Compared to Standard Surrogate Species	Environ.Toxicol.Chem. 20(12):2869-2876	2001
275	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.75	d	F	290	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
276	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	1	d	F	290	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
277	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	1	d	F	290	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
278	4-Nonylphenol	Gila elegans	Bonytail	Fish	LC50	MOR	MORT	4	d	A	290	FW	Dwyer, F.J., F.L. Mayer, L.C. Sappington, D.R. Buckler, C.M. Bridges, I.E. Greer, D.K. Hardesty, C.E. Henke, C.G. Ingers	Assessing Contaminant Sensitivity of Endangered and Threatened Aquatic Species: Part I. Acute Toxicity of Five Chemicals	Arch.Environ.Contam.Toxicol. 48(2):143-154	2005
279	4-Nonylphenol	Gila elegans	Bonytail	Fish	LC50	MOR	MORT	4	d	F	290	FW	Sappington, L.C., F.L. Mayer, F.J. Dwyer, D.R. Buckler, J.R. Jones, and M.R. Ellersieck	Contaminant Sensitivity of Threatened and Endangered Fishes Compared to Standard Surrogate Species	Environ.Toxicol.Chem. 20(12):2869-2876	2001
280	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	F	290	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
281	4-Nonylphenol	Oncorhynchus clarki ssp. henshawi	Lahontan Cutthroat Trout	Fish	LC50	MOR	MORT	0.25	d	F	300	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
282	4-Nonylphenol	Oncorhynchus clarki ssp. henshawi	Lahontan Cutthroat Trout	Fish	LC50	MOR	MORT	0.5	d	F	300	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
283	4-Nonylphenol	Oncorhynchus gilae ssp. apache	Apache Trout	Fish	LC50	MOR	MORT	0.5	d	F	300	FW	Sappington, L.C., F.L. Mayer, F.J. Dwyer, D.R. Buckler, J.R. Jones, and M.R. Ellersieck	Contaminant Sensitivity of Threatened and Endangered Fishes Compared to Standard Surrogate Species	Environ.Toxicol.Chem. 20(12):2869-2876	2001
284	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	0.5	d	F	300	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
285	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.75	d	F	300	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
286	4-Nonylphenol	Oncorhynchus clarkii ssp. stomias	Greenback Cutthroat Trout	Fish	LC50	MOR	MORT	1	d	F	300	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
287	4-Nonylphenol	Oncorhynchus clarkii ssp. stomias	Greenback Cutthroat Trout	Fish	LC50	MOR	MORT	1	d	F	300	FW	Sappington, L.C., F.L. Mayer, F.J. Dwyer, D.R. Buckler, J.R. Jones, and M.R. Ellersieck	Contaminant Sensitivity of Threatened and Endangered Fishes Compared to Standard Surrogate Species	Environ.Toxicol.Chem. 20(12):2869-2876	2001
288	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	1	d	F	300	FW	Sappington, L.C., F.L. Mayer, F.J. Dwyer, D.R. Buckler, J.R. Jones, and M.R. Ellersieck	Contaminant Sensitivity of Threatened and Endangered Fishes Compared to Standard Surrogate Species	Environ.Toxicol.Chem. 20(12):2869-2876	2001
289	Nonylphenol	Daphnia magna	Water Flea	Crustaceans	EC50	ITX	IMBL	1	d	A	300	FW	Comber, M.H.I., T.D. Williams, and K.M. Stewart	The Effects of Nonylphenol on Daphnia magna	Water Res. 27(2):273-276	1993
290	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	3	d	F	300	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
291	4-Nonylphenol	Oncorhynchus clarki ssp. henshawi	Lahontan Cutthroat Trout	Fish	LC50	MOR	MORT	0.375	d	F	310	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
292	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	0.375	d	F	310	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
293	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.5	d	F	310	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
294	4-Nonylphenol	Xyrauchen texanus	Razorback Sucker	Fish	LC50	MOR	MORT	0.5	d	F	310	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
295	4-Nonylphenol	Oncorhynchus clarkii ssp. stomias	Greenback Cutthroat Trout	Fish	LC50	MOR	MORT	0.75	d	F	310	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
296	4-Nonylphenol	Ptychocheilus lucius	Colorado Squawfish	Fish	LC50	MOR	MORT	0.75	d	F	310	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
297	4-Nonylphenol	Ptychocheilus lucius	Colorado Squawfish	Fish	LC50	MOR	MORT	0.75	d	F	310	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
298	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	1	d	F	310	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
299	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	2	d	F	310	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
300	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	3	d	F	310	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
301	4-Nonylphenol	Gila elegans	Bonytail	Fish	LC50	MOR	MORT	4	d	F	310	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
302	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	F	310	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
303	4-Nonylphenol	Oncorhynchus gilae ssp. apache	Apache Trout	Fish	LC50	MOR	MORT	0.375	d	F	320	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
304	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.5	d	F	320	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
305	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	1	d	F	320	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
306	4-Nonylphenol, Branched	Chironomus tentans	Midge	Insects/Spiders	NR-LETH	MOR	SURV	14	d	A	320	FW	England, D.C., and J.B. Bussard	Toxicity of Nonylphenol to the Midge Chironomus tentans	Final Rep.40597, ABS Lab.Inc., Columbia, MO :160 p.	1993
307	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.75	d	F	330	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
308	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	1	d	F	330	FW	Sappington, L.C., F.L. Mayer, F.J. Dwyer, D.R. Buckler, J.R. Jones, and M.R. Ellersieck	Contaminant Sensitivity of Threatened and Endangered Fishes Compared to Standard Surrogate Species	Environ.Toxicol.Chem. 20(12):2869-2876	2001
309	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	F	330	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
310	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	0.375	d	F	340	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
311	4-Nonylphenol	Oncorhynchus gilae ssp. apache	Apache Trout	Fish	LC50	MOR	MORT	0.5	d	F	340	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
312	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.75	d	F	340	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
313	4-Nonylphenol	Gila elegans	Bonytail	Fish	LC50	MOR	MORT	2	d	F	340	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
314	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	2	d	F	340	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
315	Nonylphenol	Lumbriculus variegatus	Oligochaete, Worm	Worms	LC50	MOR	MORT	4	d	A	342	FW	Brooke, L.T.	Acute and Chronic Toxicity of Nonylphenol to Ten Species of Aquatic Organisms	Contract No.68-C1-0034, U.S.EPA, Duluth, MN :36 p.	1993
316	Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	NR-LETH	MOR	MORT	4	d	A	344	FW	Brooke, L.T.	Acute and Chronic Toxicity of Nonylphenol to Ten Species of Aquatic Organisms	Contract No.68-C1-0034, U.S.EPA, Duluth, MN :36 p.	1993
317	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.5	d	F	350	FW	Sappington, L.C., F.L. Mayer, F.J. Dwyer, D.R. Buckler, J.R. Jones, and M.R. Ellersieck	Contaminant Sensitivity of Threatened and Endangered Fishes Compared to Standard Surrogate Species	Environ.Toxicol.Chem. 20(12):2869-2876	2001
318	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	1	d	F	350	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
319	4-Nonylphenol	Gila elegans	Bonytail	Fish	LC50	MOR	MORT	3	d	F	350	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
320	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	3	d	F	350	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
321	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.125	d	F	360	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
322	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	2	d	F	360	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
323	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	3	d	F	360	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
324	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	4	d	F	360	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
325	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.375	d	F	370	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
326	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.75	d	F	370	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
327	Nonylphenol	Physa virgata	Snail	Molluscs	EC50	BEH	FOOT	4	d	A	378	FW	Brooke, L.T.	Acute and Chronic Toxicity of Nonylphenol to Ten Species of Aquatic Organisms	Contract No.68-C1-0034, U.S.EPA, Duluth, MN :36 p.	1993

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
328	4-Nonylphenol	Scaphirhynchus platorynchus	Shovelnose Sturgeon	Fish	LC50	MOR	MORT	0.25	d	F	380	FW	Dwyer, F.J., D.K. Hardesty, C.E. Henke, C.G. Ingersoll, D.W. Whites, D.R. Mount, and C.M. Bridges	Assessing Contaminant Sensitivity of Endangered and Threatened Species: Toxicant Classes	EPA 600/R-99/098, U.S.EPA, Washington, D.C.: :15 p.	1999
329	4-Nonylphenol	Oncorhynchus clarkii ssp. stomias	Greenback Cutthroat Trout	Fish	LC50	MOR	MORT	0.5	d	F	380	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
330	4-Nonylphenol	Oncorhynchus clarkii ssp. stomias	Greenback Cutthroat Trout	Fish	LC50	MOR	MORT	0.5	d	F	380	FW	Sappington, L.C., F.L. Mayer, F.J. Dwyer, D.R. Buckler, J.R. Jones, and M.R. Ellersieck	Contaminant Sensitivity of Threatened and Endangered Fishes Compared to Standard Surrogate Species	Environ.Toxicol.Chem. 20(12):2869-2876	2001
331	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	0.5	d	F	380	FW	Sappington, L.C., F.L. Mayer, F.J. Dwyer, D.R. Buckler, J.R. Jones, and M.R. Ellersieck	Contaminant Sensitivity of Threatened and Endangered Fishes Compared to Standard Surrogate Species	Environ.Toxicol.Chem. 20(12):2869-2876	2001
332	4-Nonylphenol	Gila elegans	Bonytail	Fish	LC50	MOR	MORT	0.75	d	F	380	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
333	4-Nonylphenol	Gila elegans	Bonytail	Fish	LC50	MOR	MORT	1	d	F	380	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
334	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	1	d	F	380	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
335	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	1	d	F	380	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
336	4-Nonylphenol	Gila elegans	Bonytail	Fish	LC50	MOR	MORT	2	d	F	380	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
337	Nonylphenol	Lepomis macrochirus	Bluegill	Fish	NR-LETH	MOR	MORT	3	d	A	384	FW	Brooke, L.T.	Acute and Chronic Toxicity of Nonylphenol to Ten Species of Aquatic Organisms	Contract No.68-C1-0034, U.S.EPA, Duluth, MN :36 p.	1993
338	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.25	d	F	390	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
339	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.5	d	F	390	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
340	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	0.75	d	F	390	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
341	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	1	d	F	390	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
342	4-Nonylphenol, Branched	Hyalella azteca	Scud	Crustaceans	NR-LETH	MOR	MORT	4	d	A	390	FW	England, D.C., and J.B. Bussard	Toxicity of Nonylphenol to the Amphipod Hyallela azteca (Saussure)	Final Rep.No.41569, Chemical Manufacturers Assoc., Washington, DC :176 p. (NTIS/OTS0573519)	1994
343	4-Nonylphenol	Melosira varians	Diatom	Algae, Moss, Fungi	LOEC	POP	ABND	10	d	F	400	FW	Julius, M.L., J. Stepanek, O. Tedrow, C. Gamble, and H.L. Schoenfuss	Estrogen-Receptor Independent Effects of Two Ubiquitous Environmental Estrogens on Melosira varians Agardh, a Common Component of the Aquatic Primary Production Community	Aquat. Toxicol.85(1): 19-27	2007
344	4-Nonylphenol	Melosira varians	Diatom	Algae, Moss, Fungi	LOEC	POP	CHLA	10	d	F	400	FW	Julius, M.L., J. Stepanek, O. Tedrow, C. Gamble, and H.L. Schoenfuss	Estrogen-Receptor Independent Effects of Two Ubiquitous Environmental Estrogens on Melosira varians Agardh, a Common Component of the Aquatic Primary Production Community	Aquat. Toxicol.85(1): 19-27	2007
345	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	0.25	d	F	400	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
346	4-Nonylphenol	Oncorhynchus clarkii ssp. stomias	Greenback Cutthroat Trout	Fish	LC50	MOR	MORT	0.375	d	F	400	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
347	4-Nonylphenol	Oncorhynchus gilae ssp. apache	Apache Trout	Fish	LC50	MOR	MORT	0.375	d	F	400	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
348	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.5	d	F	400	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
349	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	0.75	d	F	400	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
350	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	2	d	F	400	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
351	4-Nonylphenol, Branched	Chironomus tentans	Midge	Insects/Spiders	NR-LETH	MOR	MORT	7	d	F	400	FW	England, D.C., and J.B. Bussard	Toxicity of Nonylphenol to the Midge Chironomus tentans	Final Rep.40597, ABS Lab.Inc., Columbia, MO :160 p.	1993
352	4-Nonylphenol, Branched	Chironomus tentans	Midge	Insects/Spiders	NR-LETH	MOR	MORT	7	d	F	400	FW	England, D.C., and J.B. Bussard	Toxicity of Nonylphenol to the Midge Chironomus tentans	Final Rep.40597, ABS Lab.Inc., Columbia, MO :160 p.	1993
353	4-Nonylphenol	Oncorhynchus clarki ssp. henshawi	Lahontan Cutthroat Trout	Fish	LC50	MOR	MORT	0.25	d	F	410	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
354	4-Nonylphenol	Oncorhynchus gilae ssp. apache	Apache Trout	Fish	LC50	MOR	MORT	0.25	d	F	410	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
355	4-Nonylphenol	Xyrauchen texanus	Razorback Sucker	Fish	LC50	MOR	MORT	0.25	d	F	410	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
356	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.375	d	F	410	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
357	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	1	d	F	410	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
358	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	0.25	d	F	420	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
359	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	0.5	d	F	420	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
360	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	0.5	d	F	420	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
361	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	0.75	d	F	420	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
362	4-Nonylphenol	Oncorhynchus clarki ssp. henshawi	Lahontan Cutthroat Trout	Fish	LC50	MOR	MORT	0.125	d	F	430	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
363	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.375	d	F	430	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
364	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	0.375	d	F	430	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
365	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	0.75	d	F	430	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
366	4-Nonylphenol	Oncorhynchus gilae ssp. apache	Apache Trout	Fish	LC50	MOR	MORT	0.25	d	F	440	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
367	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	0.375	d	F	440	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
368	4-Nonylphenol	Xyrauchen texanus	Razorback Sucker	Fish	LC50	MOR	MORT	0.375	d	F	440	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
369	4-Nonylphenol	Gila elegans	Bonytail	Fish	LC50	MOR	MORT	0.5	d	F	440	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
370	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.5	d	F	440	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
371	4-Nonylphenol	Ptychocheilus lucius	Colorado Squawfish	Fish	LC50	MOR	MORT	0.5	d	F	440	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
372	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.25	d	F	450	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
373	4-Nonylphenol	Gila elegans	Bonytail	Fish	LC50	MOR	MORT	0.375	d	F	450	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
374	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.375	d	F	450	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
375	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	0.5	d	F	450	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
376	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	0.5	d	F	450	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
377	4-Nonylphenol	Ptychocheilus lucius	Colorado Squawfish	Fish	LC50	MOR	MORT	0.5	d	F	450	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
378	4-Nonylphenol	Ptychocheilus lucius	Colorado Squawfish	Fish	LC50	MOR	MORT	0.5	d	F	450	FW	Sappington, L.C., F.L. Mayer, F.J. Dwyer, D.R. Buckler, J.R. Jones, and M.R. Ellersieck	Contaminant Sensitivity of Threatened and Endangered Fishes Compared to Standard Surrogate Species	Environ.Toxicol.Chem. 20(12):2869-2876	2001
379	4-Nonylphenol	Gila elegans	Bonytail	Fish	LC50	MOR	MORT	0.25	d	F	460	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
380	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.25	d	F	460	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
381	4-Nonylphenol	Cyprinodon variegatus	Sheepshead Minnow	Fish	LC50	MOR	MORT	4	d	A	460	FW	Dwyer, F.J., F.L. Mayer, L.C. Sappington, D.R. Buckler, C.M. Bridges, I.E. Greer, D.K. Hardesty, C.E. Henke, C.G. Ingers	Assessing Contaminant Sensitivity of Endangered and Threatened Aquatic Species: Part I. Acute Toxicity of Five Chemicals	Arch.Environ.Contam.Toxicol. 48(2):143-154	2005
382	4-Nonylphenol	Oncorhynchus clarkii ssp. stomias	Greenback Cutthroat Trout	Fish	LC50	MOR	MORT	0.25	d	F	470	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
383	4-Nonylphenol	Ptychocheilus lucius	Colorado Squawfish	Fish	LC50	MOR	MORT	0.375	d	F	470	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
384	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	0.25	d	F	480	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
385	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	0.375	d	F	480	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
386	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	0.375	d	F	480	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
387	4-Nonylphenol	Ptychocheilus lucius	Colorado Squawfish	Fish	LC50	MOR	MORT	0.375	d	F	480	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
388	4-Nonylphenol	Cyprinodon bovinus	Leon Springs Pupfish	Fish	LC50	MOR	MORT	4	d	A	480	FW	Dwyer, F.J., F.L. Mayer, L.C. Sappington, D.R. Buckler, C.M. Bridges, I.E. Greer, D.K. Hardesty, C.E. Henke, C.G. Ingers	Assessing Contaminant Sensitivity of Endangered and Threatened Aquatic Species: Part I. Acute Toxicity of Five Chemicals	Arch.Environ.Contam.Toxicol. 48(2):143-154	2005
389	Nonylphenol	Chironomus riparius	Midge	Insects/Spiders	LC10	MOR	MORT	1	d	F	484	FW	Ha, M.H., and J. Choi	Effects of Environmental Contaminants on Hemoglobin of Larvae of Aquatic Midge, Chironomus riparius (Diptera: Chironomidae): A Potential Biomarker for Ecotoxicity Monitoring	Chemosphere 71(10):1928-1936	2008
390	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.375	d	F	490	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
391	4-Nonylphenol	Gila elegans	Bonytail	Fish	LC50	MOR	MORT	1	d	F	490	FW	Sappington, L.C., F.L. Mayer, F.J. Dwyer, D.R. Buckler, J.R. Jones, and M.R. Ellersieck	Contaminant Sensitivity of Threatened and Endangered Fishes Compared to Standard Surrogate Species	Environ.Toxicol.Chem. 20(12):2869-2876	2001

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
392	4-Nonylphenol	Lampsilis siliquoidea	Lamp-Mussel	Molluscs	LC50	MOR	MORT	1	d	F	490	FW	Milam, C.D., J.L. Farris, F.J. Dwyer, and D.K. Hardesty	Acute Toxicity of Six Freshwater Mussel Species (Glochidia) to Six Chemicals: Implications for Daphnids and Utterbackia imbecillis as Surrogates for Protection of Freshwater Mussels (Unionidae)	Arch.Environ.Contam.Toxicol. 48(2):166-173	2005
393	4-Nonylphenol	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	BMAS	3	d	A	500	FW	Graff, L., P. Isnard, P. Cellier, J. Bastide, J.P. Cambon, J.F. Narbonne, H. Budzinski, and P. Vasseur	Toxicity of Chemicals to Microalgae in River and in Standard Waters	Environ. Toxicol. Chem.22(6): 1368-1379	2003
394	4-Nonylphenol	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	BMAS	3	d	A	530	FW	Graff, L., P. Isnard, P. Cellier, J. Bastide, J.P. Cambon, J.F. Narbonne, H. Budzinski, and P. Vasseur	Toxicity of Chemicals to Microalgae in River and in Standard Waters	Environ. Toxicol. Chem.22(6): 1368-1379	2003
395	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.25	d	F	540	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
396	4-Nonylphenol	Oncorhynchus clarkii ssp. stomias	Greenback Cutthroat Trout	Fish	LC50	MOR	MORT	0.125	d	F	550	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
397	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	0.25	d	F	550	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
398	4-Nonylphenol	Oncorhynchus clarki ssp. henshawi	Lahontan Cutthroat Trout	Fish	LC50	MOR	MORT	0.125	d	F	560	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
399	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.25	d	F	560	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
400	4-Nonylphenol	Gila elegans	Bonytail	Fish	LC50	MOR	MORT	0.5	d	F	560	FW	Sappington, L.C., F.L. Mayer, F.J. Dwyer, D.R. Buckler, J.R. Jones, and M.R. Ellersieck	Contaminant Sensitivity of Threatened and Endangered Fishes Compared to Standard Surrogate Species	Environ.Toxicol.Chem. 20(12):2869-2876	2001
401	4-Nonylphenol	Megalonaias nervosa	Washboard Mussel	Molluscs	LC50	MOR	MORT	1	d	F	560	FW	Milam, C.D., J.L. Farris, F.J. Dwyer, and D.K. Hardesty	Acute Toxicity of Six Freshwater Mussel Species (Glochidia) to Six Chemicals: Implications for Daphnids and Utterbackia imbecillis as Surrogates for Protection of Freshwater Mussels (Unionidae)	Arch.Environ.Contam.Toxicol. 48(2):166-173	2005
402	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	A	560	FW	Ernst, B., G. Julien, K. Doe, and R. Parker	Environmental Investigations of the 1980 Spruce Budworm Spray Program in New Brunswick	EPS 5-AR-81-3, Environment Canada, Halifax, Nova Scotia :46 p.	1980

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403	4-Nonylphenol	Leptodea fragilis	Fragile Papershell	Molluscs	LC50	MOR	MORT	1	d	F	570	FW	Milam, C.D., J.L. Farris, F.J. Dwyer, and D.K. Hardesty	Acute Toxicity of Six Freshwater Mussel Species (Glochidia) to Six Chemicals: Implications for Daphnids and Utterbackia imbecillis as Surrogates for Protection of Freshwater Mussels (Unionidae)	Arch.Environ.Contam.Toxicol. 48(2):166-173	2005
404	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	0.25	d	F	580	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
405	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.25	d	F	590	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
406	Nonylphenol	Ophiogomphus sp.	Dragonfly	Insects/Spiders	EC50	BEH	EQUL	4	d	A	596	FW	Brooke, L.T.	Acute and Chronic Toxicity of Nonylphenol to Ten Species of Aquatic Organisms	Contract No.68-C1-0034, U.S.EPA, Duluth, MN :36 p.	1993
407	4-Nonylphenol	Oncorhynchus gilae ssp. apache	Apache Trout	Fish	LC50	MOR	MORT	0.125	d	F	600	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
408	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.125	d	F	600	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
409	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.125	d	F	600	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
410	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.125	d	F	600	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
411	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.125	d	F	600	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
412	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	0.25	d	F	610	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
413	4-Nonylphenol	Gila elegans	Bonytail	Fish	LC50	MOR	MORT	1	d	F	620	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
414	4-Nonylphenol	Gila elegans	Bonytail	Fish	LC50	MOR	MORT	0.125	d	F	630	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
415	4-Nonylphenol	Ptychocheilus lucius	Colorado Squawfish	Fish	LC50	MOR	MORT	0.25	d	F	630	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

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416	4-Nonylphenol	Ptychocheilus lucius	Colorado Squawfish	Fish	LC50	MOR	MORT	0.25	d	F	630	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
417	4-Nonylphenol	Xyrauchen texanus	Razorback Sucker	Fish	LC50	MOR	MORT	0.25	d	F	630	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
418	4-Nonylphenol	Oncorhynchus gilae ssp. apache	Apache Trout	Fish	LC50	MOR	MORT	0.125	d	F	670	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
419	4-Nonylphenol	Microcystis aeruginosa	Blue-Green Algae	Algae, Moss, Fungi	EC50	POP	BMAS	12	d	A	670	FW	Wang, J., P. Xie, and N. Guo	Effects of Nonylphenol on the Growth and Microcystin Production of Microcystis Strains	Environ. Res.103(1): 70-78	2007
420	4-Nonylphenol	Gila elegans	Bonytail	Fish	LC50	MOR	MORT	0.75	d	F	680	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
421	Nonylphenol	Chironomus riparius	Midge	Insects/Spiders	LC50	MOR	MORT	1	d	F	688	FW	Ha, M.H., and J. Choi	Effects of Environmental Contaminants on Hemoglobin of Larvae of Aquatic Midge, Chironomus riparius (Diptera: Chironomidae): A Potential Biomarker for Ecotoxicity Monitoring	Chemosphere 71(10):1928-1936	2008
422	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	0.125	d	F	710	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
423	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	0.125	d	F	720	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
424	4-Nonylphenol	Gila elegans	Bonytail	Fish	LC50	MOR	MORT	0.5	d	F	720	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
425	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	0.125	d	F	730	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
426	4-Nonylphenol	Xyrauchen texanus	Razorback Sucker	Fish	LC50	MOR	MORT	0.125	d	F	730	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
427	Nonylphenol	Chironomus tentans	Midge	Insects/Spiders	LC10	MOR	MORT	1	d	F	736	FW	Ha, M.H., and J. Choi	Chemical-Induced Alteration of Hemoglobin Expression in the 4th Instar Larvae of Chironomus tentans Mg. (Diptera: Chironomidae)	Environ.Toxicol.Pharmacol. 25(3):393-398	2008
428	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	0.125	d	F	740	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

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429	4-Nonylphenol	Gila elegans	Bonytail	Fish	LC50	MOR	MORT	0.375	d	F	740	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
430	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	0.125	d	F	750	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
431	4-Nonylphenol	Scenedesmus subspicatus	Green Algae	Algae, Moss, Fungi	EC03	HIS	PRLF	7	d	F	750	FW	Trenel, J., and R. Kuhn	Bewertung Wassergefahrdender Stoffe im Hinblick auf Lagerung, Umschlag und Transport	Umweltforschungsplan des Bundesministers des Innern(): -	1982
432	4-Nonylphenol	Ptychocheilus lucius	Colorado Squawfish	Fish	LC50	MOR	MORT	0.125	d	F	770	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
433	4-Nonylphenol	Utterbackia imbecillis	Paper Pondshell	Molluscs	LC50	MOR	MORT	1	d	F	770	FW	Milam, C.D., J.L. Farris, F.J. Dwyer, and D.K. Hardesty	Acute Toxicity of Six Freshwater Mussel Species (Glochidia) to Six Chemicals: Implications for Daphnids and Utterbackia imbecillis as Surrogates for Protection of Freshwater Mussels (Unionidae)	Arch.Environ.Contam.Toxicol. 48(2):166-173	2005
434	Nonylphenol	Physa virgata	Snail	Molluscs	LC50	MOR	MORT	4	d	A	774	FW	Brooke, L.T.	Acute and Chronic Toxicity of Nonylphenol to Ten Species of Aquatic Organisms	Contract No.68-C1-0034, U.S.EPA, Duluth, MN :36 p.	1993
435	4-Nonylphenol	Gila elegans	Bonytail	Fish	LC50	MOR	MORT	0.25	d	F	780	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
436	4-Nonylphenol	Melosira varians	Diatom	Algae, Moss, Fungi	LOEC	BCM	LCAR	10	d	F	800	FW	Julius, M.L., J. Stepanek, O. Tedrow, C. Gamble, and H.L. Schoenfuss	Estrogen-Receptor Independent Effects of Two Ubiquitous Environmental Estrogens on Melosira varians Agardh, a Common Component of the Aquatic Primary Production Community	Aquat. Toxicol.85(1): 19-27	2007
437	4-Nonylphenol	Melosira varians	Diatom	Algae, Moss, Fungi	LOEC	POP	ABND	10	d	F	800	FW	Julius, M.L., J. Stepanek, O. Tedrow, C. Gamble, and H.L. Schoenfuss	Estrogen-Receptor Independent Effects of Two Ubiquitous Environmental Estrogens on Melosira varians Agardh, a Common Component of the Aquatic Primary Production Community	Aquat. Toxicol.85(1): 19-27	2007
438	4-Nonylphenol	Melosira varians	Diatom	Algae, Moss, Fungi	LOEC	POP	CHLA	10	d	F	800	FW	Julius, M.L., J. Stepanek, O. Tedrow, C. Gamble, and H.L. Schoenfuss	Estrogen-Receptor Independent Effects of Two Ubiquitous Environmental Estrogens on Melosira varians Agardh, a Common Component of the Aquatic Primary Production Community	Aquat. Toxicol.85(1): 19-27	2007
439	4-Nonylphenol	Ptychocheilus lucius	Colorado Squawfish	Fish	LC50	MOR	MORT	0.125	d	F	800	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995

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440	4-Nonylphenol, Branched	Chironomus tentans	Midge	Insects/Spiders	NR-LETH	MOR	MORT	6	d	F	800	FW	England, D.C., and J.B. Bussard	Toxicity of Nonylphenol to the Midge Chironomus tentans	Final Rep.40597, ABS Lab.Inc., Columbia, MO :160 p.	1993
441	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	0.125	d	F	820	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
442	4-Nonylphenol	Pimephales promelas	Fathead Minnow	Fish	LC50	MOR	MORT	0.125	d	F	870	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
443	4-Nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	A	920	FW	Ernst, B., G. Julien, K. Doe, and R. Parker	Environmental Investigations of the 1980 Spruce Budworm Spray Program in New Brunswick	EPS 5-AR-81-3, Environment Canada, Halifax, Nova Scotia :46 p.	1980
444	Nonylphenol	Chironomus riparius	Midge	Insects/Spiders	LC90	MOR	MORT	1	d	F	978	FW	Ha, M.H., and J. Choi	Effects of Environmental Contaminants on Hemoglobin of Larvae of Aquatic Midge, Chironomus riparius (Diptera: Chironomidae): A Potential Biomarker for Ecotoxicity Monitoring	Chemosphere 71(10):1928-1936	2008
445	Nonylphenol	Oryzias latipes	Medaka, High-Eyes	Fish	LOEC	BCM	FLRS	1	d	F	991.8	FW	Kurauchi, K., Y. Nakaguchi, M. Tsutsumi, H. Hori, R. Kurihara, S. Hashimoto, R. Ohnuma, Y. Yamamoto, S. Matsuoka, S. Kaw	In Vivo Visual Reporter System for Detection of Estrogen-Like Substances by Transgenic Medaka	Environ.Sci.Technol. 39(8):2762-2768	2005
446	4-Nonylphenol	Gila elegans	Bonytail	Fish	LC50	MOR	MORT	0.125	d	F	1000	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
447	4-Nonylphenol	Xyrauchen texanus	Razorback Sucker	Fish	LC50	MOR	MORT	0.125	d	F	1000	FW	Dwyer, F.J., L.C. Sappington, D.R. Buckler, and S.B. Jones	Use of Surrogate Species in Assessing Contaminant Risk to Endangered and Threatened Fishes	EPA/600/R-96/029, U.S.EPA, Washington, DC :78 p.	1995
448	4-Nonylphenol, Branched	Chironomus tentans	Midge	Insects/Spiders	NR-LETH	MOR	MORT	4	d	F	1000	FW	England, D.C., and J.B. Bussard	Toxicity of Nonylphenol to the Midge Chironomus tentans	Final Rep.40597, ABS Lab.Inc., Columbia, MO :160 p.	1993
449	4-Nonylphenol	Microcystis aeruginosa	Blue-Green Algae	Algae, Moss, Fungi	LOEC	BCM	CARC	12	d	A	1000	FW	Wang, J., P. Xie, and N. Guo	Effects of Nonylphenol on the Growth and Microcystin Production of Microcystis Strains	Environ. Res.103(1): 70-78	2007
450	4-Nonylphenol	Microcystis aeruginosa	Blue-Green Algae	Algae, Moss, Fungi	LOEC	BCM	PRCO	12	d	A	1000	FW	Wang, J., P. Xie, and N. Guo	Effects of Nonylphenol on the Growth and Microcystin Production of Microcystis Strains	Environ. Res.103(1): 70-78	2007
451	4-Nonylphenol	Microcystis aeruginosa	Blue-Green Algae	Algae, Moss, Fungi	LOEC	POP	CHLA	12	d	A	1000	FW	Wang, J., P. Xie, and N. Guo	Effects of Nonylphenol on the Growth and Microcystin Production of Microcystis Strains	Environ. Res.103(1): 70-78	2007
452	Nonylphenol	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	MATC	POP	DBMS	4	d	A	1013	FW	Brooke, L.T.	Acute and Chronic Toxicity of Nonylphenol to Ten Species of Aquatic Organisms	Contract No.68-C1-0034, U.S.EPA, Duluth, MN(): -	1993
453	4-Nonylphenol	Ligumia subrostrata	Pondmussel	Molluscs	LC50	MOR	MORT	1	d	F	1040	FW	Milam, C.D., J.L. Farris, F.J. Dwyer, and D.K. Hardesty	Acute Toxicity of Six Freshwater Mussel Species (Glochidia) to Six Chemicals: Implications for Daphnids and Utterbackia imbecillis as Surrogates for Protection of Freshwater Mussels (Unionidae)	Arch.Environ.Contam.Toxicol. 48(2):166-173	2005

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454	Nonylphenol	Physa virgata	Snail	Molluscs	NR-LETH	MOR	MORT	2	d	A	1130	FW	Brooke, L.T.	Acute and Chronic Toxicity of Nonylphenol to Ten Species of Aquatic Organisms	Contract No.68-C1-0034, U.S.EPA, Duluth, MN :36 p.	1993
455	4-Nonylphenol	Lampsilis cardium	Plain Pocketbook	Molluscs	LC50	MOR	MORT	1	d	F	1190	FW	Milam, C.D., J.L. Farris, F.J. Dwyer, and D.K. Hardesty	Acute Toxicity of Six Freshwater Mussel Species (Glochidia) to Six Chemicals: Implications for Daphnids and Utterbackia imbecillis as Surrogates for Protection of Freshwater Mussels (Unionidae)	Arch.Environ.Contam.Toxicol. 48(2):166-173	2005
456	Nonylphenol	Chironomus tentans	Midge	Insects/Spiders	LC50	MOR	MORT	1	d	F	1271	FW	Ha, M.H., and J. Choi	Chemical-Induced Alteration of Hemoglobin Expression in the 4th Instar Larvae of Chironomus tentans Mg. (Diptera: Chironomidae)	Environ.Toxicol.Pharmacol. 25(3):393-398	2008
457	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	4	d	A	1300	FW	Macek, K.J., and S.F. Krzeminski	Susceptibility of Bluegill Sunfish (Lepomis macrochirus) to Nonionic Surfactants	Bull.Environ.Contam.Toxicol. 13(3):377-384	1975
458	Nonylphenol	Lemna minor	Duckweed	Flowers, Trees, Shrubs, Ferns	MATC	GRO	BMAS	4	d	A	1369	FW	Brooke, L.T.	Acute and Chronic Toxicity of Nonylphenol to Ten Species of Aquatic Organisms	Contract No.68-C1-0034, U.S.EPA, Duluth, MN(): -	1993
459	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	2	d	A	1400	FW	Yoshimura, K.	Biodegradation and Fish Toxicity of Nonionic Surfactants	J.Am.Oil Chem.Soc. 63(12):1590-1596	1986
460	Nonylphenol	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	LOEC	POP	DBMS	4	d	A	1480	FW	Brooke, L.T.	Acute and Chronic Toxicity of Nonylphenol to Ten Species of Aquatic Organisms	Contract No.68-C1-0034, U.S.EPA, Duluth, MN(): -	1993
461	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	1	d	A	1500	FW	Macek, K.J., and S.F. Krzeminski	Susceptibility of Bluegill Sunfish (Lepomis macrochirus) to Nonionic Surfactants	Bull.Environ.Contam.Toxicol. 13(3):377-384	1975
462	4-Nonylphenol	Microcystis aeruginosa	Blue-Green Algae	Algae, Moss, Fungi	EC50	POP	BMAS	12	d	A	1660	FW	Wang, J., P. Xie, and N. Guo	Effects of Nonylphenol on the Growth and Microcystin Production of Microcystis Strains	Environ. Res.103(1): 70-78	2007
463	4-Nonylphenol	Microcystis aeruginosa	Blue-Green Algae	Algae, Moss, Fungi	LOEC	BCM	PRCO	12	d	A	2000	FW	Wang, J., P. Xie, and N. Guo	Effects of Nonylphenol on the Growth and Microcystin Production of Microcystis Strains	Environ. Res.103(1): 70-78	2007
464	Nonylphenol	Oryzias latipes	Medaka, High-Eyes	Fish	NR-LETH	MOR	MORT	1	d	F	2006	FW	Kurauchi, K., Y. Nakaguchi, M. Tsutsumi, H. Hori, R. Kurihara, S. Hashimoto, R. Ohnuma, Y. Yamamoto, S. Matsuoka, S. Kaw	In Vivo Visual Reporter System for Detection of Estrogen-Like Substances by Transgenic Medaka	Environ.Sci.Technol. 39(8):2762-2768	2005
465	Nonylphenol	Lemna minor	Duckweed	Flowers, Trees, Shrubs, Ferns	LOEC	GRO	BMAS	4	d	A	2080	FW	Brooke, L.T.	Acute and Chronic Toxicity of Nonylphenol to Ten Species of Aquatic Organisms	Contract No.68-C1-0034, U.S.EPA, Duluth, MN(): -	1993
466	Nonylphenol	Chironomus tentans	Midge	Insects/Spiders	LC90	MOR	MORT	1	d	F	2195	FW	Ha, M.H., and J. Choi	Chemical-Induced Alteration of Hemoglobin Expression in the 4th Instar Larvae of Chironomus tentans Mg. (Diptera: Chironomidae)	Environ.Toxicol.Pharmacol. 25(3):393-398	2008

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
467	4-Nonylphenol	Microcystis aeruginosa	Blue-Green Algae	Algae, Moss, Fungi	EC50	POP	BMAS	12	d	A	2600	FW	Wang, J., P. Xie, and N. Guo	Effects of Nonylphenol on the Growth and Microcystin Production of Microcystis Strains	Environ. Res.103(1): 70-78	2007
468	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	1	d	A	2800	FW	Macek, K.J., and S.F. Krzeminski	Susceptibility of Bluegill Sunfish (Lepomis macrochirus) to Nonionic Surfactants	Bull.Environ.Contam.Toxicol. 13(3):377-384	1975
469	4-Nonylphenol	Microcystis aeruginosa	Blue-Green Algae	Algae, Moss, Fungi	EC50	POP	BMAS	12	d	A	2960	FW	Wang, J., P. Xie, and N. Guo	Effects of Nonylphenol on the Growth and Microcystin Production of Microcystis Strains	Environ. Res.103(1): 70-78	2007
470	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	14	d	A	4000	FW	Calamari, D., and R. Marchetti	The Toxicity of Mixtures of Metals and Surfactants to Rainbow Trout (Salmo gairdneri Rich.)	Water Res. 7(10):1453-1464	1973
471	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	14	d	A	4250	FW	Calamari, D., and R. Marchetti	The Toxicity of Mixtures of Metals and Surfactants to Rainbow Trout (Salmo gairdneri Rich.)	Water Res. 7(10):1453-1464	1973
472	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	4	d	A	4700	FW	Calamari, D., and R. Marchetti	The Toxicity of Mixtures of Metals and Surfactants to Rainbow Trout (Salmo gairdneri Rich.)	Water Res. 7(10):1453-1464	1973
473	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Daphnia pulex	Water Flea	Crustaceans	LC50*	MOR	MORT	2	d	F	4800	FW	Benijts-Claus, C., and G. Persoone	Toxicity of Three Herbicides in the Aquatic Ecosystem (La Toxicite de Trois Herbicides sur L'Ecosysteme Aquatique)	La Tribune Du Ceredeau 28(383):340-346 (FRE)	1975
474	2-Chloro-4-nonylphenol	Oncorhynchus mykiss	Rainbow Trout	Fish	NR-LETH	NOC	MULT	0.0416667	d	F	5000	FW	Applegate, V.C., J.H. Howell, A.E. Hall Jr., and M.A. Smith	Toxicity of 4,346 Chemicals to Larval Lampreys and Fishes	Spec.Sci.Rep.Fish.No.207, Fish Wildl.Serv., U.S.D.I., Washington, DC :157 p.	1957
475	2-Chloro-4-nonylphenol	Lepomis macrochirus	Bluegill	Fish	NR-LETH	NOC	MULT	0.5833333	d	F	5000	FW	Applegate, V.C., J.H. Howell, A.E. Hall Jr., and M.A. Smith	Toxicity of 4,346 Chemicals to Larval Lampreys and Fishes	Spec.Sci.Rep.Fish.No.207, Fish Wildl.Serv., U.S.D.I., Washington, DC :157 p.	1957
476	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Danio rerio	Zebra Danio	Fish	LC50*	MOR	MORT	1	d	F	5000	FW	Benijts-Claus, C., and G. Persoone	Toxicity of Three Herbicides in the Aquatic Ecosystem (La Toxicite de Trois Herbicides sur L'Ecosysteme Aquatique)	La Tribune Du Ceredeau 28(383):340-346 (FRE)	1975
477	2-Chloro-4-nonylphenol	Petromyzon marinus	Sea Lamprey	Fish	NR-LETH	NOC	MULT	1	d	F	5000	FW	Applegate, V.C., J.H. Howell, A.E. Hall Jr., and M.A. Smith	Toxicity of 4,346 Chemicals to Larval Lampreys and Fishes	Spec.Sci.Rep.Fish.No.207, Fish Wildl.Serv., U.S.D.I., Washington, DC :157 p.	1957
478	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Danio rerio	Zebra Danio	Fish	EC50*	ITX	IMBL	2	d	F	5000	FW	Benijts-Claus, C., and G. Persoone	The Influence of the Formulation of the Herbicide Paraquat on its Toxicity for Aquatic Organisms	Meded.Fac.Landbouwwet.Rijksuniv.Gent 40(2, Pt.2):1161-1173	1975
479	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Danio rerio	Zebra Danio	Fish	LC50*	MOR	MORT	4	d	F	5000	FW	Benijts-Claus, C., and G. Persoone	Toxicity of Three Herbicides in the Aquatic Ecosystem (La Toxicite de Trois Herbicides sur L'Ecosysteme Aquatique)	La Tribune Du Ceredeau 28(383):340-346 (FRE)	1975
480	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	1	d	A	5500	FW	Calamari, D., and R. Marchetti	The Toxicity of Mixtures of Metals and Surfactants to Rainbow Trout (Salmo gairdneri Rich.)	Water Res. 7(10):1453-1464	1973
481	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	8	d	F	6300	FW	Macek, K.J., and S.F. Krzeminski	Susceptibility of Bluegill Sunfish (Lepomis macrochirus) to Nonionic Surfactants	Bull.Environ.Contam.Toxicol. 13(3):377-384	1975

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Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
482	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Daphnia pulex	Water Flea	Crustaceans	LC50*	MOR	MORT	1	d	F	6600	FW	Benijts-Claus, C., and G. Persoone	Toxicity of Three Herbicides in the Aquatic Ecosystem (La Toxicite de Trois Herbicides sur L'Ecosysteme Aquatique)	La Tribune Du Ceredeau 28(383):340-346 (FRE)	1975
483	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	4	d	A	7600	FW	Macek, K.J., and S.F. Krzeminski	Susceptibility of Bluegill Sunfish (Lepomis macrochirus) to Nonionic Surfactants	Bull.Environ.Contam.Toxicol. 13(3):377-384	1975
484	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	1	d	A	7800	FW	Macek, K.J., and S.F. Krzeminski	Susceptibility of Bluegill Sunfish (Lepomis macrochirus) to Nonionic Surfactants	Bull.Environ.Contam.Toxicol. 13(3):377-384	1975
485	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	4	d	A	7900	FW	Macek, K.J., and S.F. Krzeminski	Susceptibility of Bluegill Sunfish (Lepomis macrochirus) to Nonionic Surfactants	Bull.Environ.Contam.Toxicol. 13(3):377-384	1975
486	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Oncorhynchus mykiss	Rainbow Trout	Fish	LC50	MOR	MORT	1	d	F	8500	FW	Muller, R.	Fish Toxicity and Surface Tension on Non-Ionic Surfactants: Investigations of Antifoam Agents	J.Fish Biol. 16(5):585-589	1980
487	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Daphnia pulex	Water Flea	Crustaceans	LC50*	MOR	MORT	2	d	F	8500	FW	Benijts-Claus, C., and G. Persoone	Toxicity of Three Herbicides in the Aquatic Ecosystem (La Toxicite de Trois Herbicides sur L'Ecosysteme Aquatique)	La Tribune Du Ceredeau 28(383):340-346 (FRE)	1975
488	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	1	d	A	8900	FW	Macek, K.J., and S.F. Krzeminski	Susceptibility of Bluegill Sunfish (Lepomis macrochirus) to Nonionic Surfactants	Bull.Environ.Contam.Toxicol. 13(3):377-384	1975
489	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	1	d	F	10000	FW	Macek, K.J., and S.F. Krzeminski	Susceptibility of Bluegill Sunfish (Lepomis macrochirus) to Nonionic Surfactants	Bull.Environ.Contam.Toxicol. 13(3):377-384	1975
490	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	4	d	F	10000	FW	Macek, K.J., and S.F. Krzeminski	Susceptibility of Bluegill Sunfish (Lepomis macrochirus) to Nonionic Surfactants	Bull.Environ.Contam.Toxicol. 13(3):377-384	1975
491	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Daphnia pulex	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	F	10950	FW	Moore, S.B., R.A. Diehl, J.M. Barnhardt, and G.B. Avery	Aquatic Toxicities of Textile Surfactants	Text.Chem.Color. 19(5):29-32	1987
492	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Daphnia pulex	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	F	11180	FW	Moore, S.B., R.A. Diehl, J.M. Barnhardt, and G.B. Avery	Aquatic Toxicities of Textile Surfactants	Text.Chem.Color. 19(5):29-32	1987
493	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	MATC	POP	BMAS	4	d	A	11300	FW	Dorn, P.B., J.P. Salanitro, S.H. Evans, and L. Kravetz	Assessing the Aquatic Hazard of Some Branched and Linear Nonionic Surfactants by Biodegradation and Toxicity	Environ. Toxicol. Chem.12(10): 1751-1762	1993
494	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Daphnia pulex	Water Flea	Crustaceans	LC50*	MOR	MORT	1	d	F	11500	FW	Benijts-Claus, C., and G. Persoone	Toxicity of Three Herbicides in the Aquatic Ecosystem (La Toxicite de Trois Herbicides sur L'Ecosysteme Aquatique)	La Tribune Du Ceredeau 28(383):340-346 (FRE)	1975

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

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495	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	EC50	POP	BMAS	4	d	A	12000	FW	Dorn, P.B., J.P. Salanitro, S.H. Evans, and L. Kravetz	Assessing the Aquatic Hazard of Some Branched and Linear Nonionic Surfactants by Biodegradation and Toxicity	Environ. Toxicol. Chem.12(10): 1751-1762	1993
496	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Daphnia magna	Water Flea	Crustaceans	EC50*	ITX	IMBL	2	d	F	12200	FW	Benijts-Claus, C., and G. Persoone	The Influence of the Formulation of the Herbicide Paraquat on its Toxicity for Aquatic Organisms	Meded.Fac.Landbouwwet.Rijksuniv.Gent 40(2, Pt.2):1161-1173	1975
497	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Daphnia magna	Water Flea	Crustaceans	LC50*	MOR	MORT	2	d	F	12200	FW	Benijts-Claus, C., and G. Persoone	Toxicity of Three Herbicides in the Aquatic Ecosystem (La Toxicite de Trois Herbicides sur L'Ecosysteme Aquatique)	La Tribune Du Ceredeau 28(383):340-346 (FRE)	1975
498	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Poecilia reticulata	Guppy	Fish	EC50*	ITX	IMBL	2	d	F	13500	FW	Benijts-Claus, C., and G. Persoone	The Influence of the Formulation of the Herbicide Paraquat on its Toxicity for Aquatic Organisms	Meded.Fac.Landbouwwet.Rijksuniv.Gent 40(2, Pt.2):1161-1173	1975
499	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	0.25	d	A	14000	FW	Kikuchi, M., and M. Wakabayashi	Lethal Response of Some Surfactants to Medaka Oryzias latipes with Relation to Chemical Structure	Bull.Jpn.Soc.Sci.Fish. 50(7):1235-1240	1984
500	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	1	d	A	14000	FW	Kikuchi, M., and M. Wakabayashi	Lethal Response of Some Surfactants to Medaka Oryzias latipes with Relation to Chemical Structure	Bull.Jpn.Soc.Sci.Fish. 50(7):1235-1240	1984
501	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Daphnia magna	Water Flea	Crustaceans	LC50*	MOR	MORT	1	d	F	14200	FW	Benijts-Claus, C., and G. Persoone	Toxicity of Three Herbicides in the Aquatic Ecosystem (La Toxicite de Trois Herbicides sur L'Ecosysteme Aquatique)	La Tribune Du Ceredeau 28(383):340-346 (FRE)	1975
502	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Daphnia pulex	Water Flea	Crustaceans	LC50	MOR	MORT	2	d	F	15430	FW	Moore, S.B., R.A. Diehl, J.M. Barnhardt, and G.B. Avery	Aquatic Toxicities of Textile Surfactants	Text.Chem.Color. 19(5):29-32	1987
503	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Pseudokirchneriella subcapitata	Green Algae	Algae, Moss, Fungi	LOEC	POP	BMAS	4	d	A	16000	FW	Dorn, P.B., J.P. Salanitro, S.H. Evans, and L. Kravetz	Assessing the Aquatic Hazard of Some Branched and Linear Nonionic Surfactants by Biodegradation and Toxicity	Environ. Toxicol. Chem.12(10): 1751-1762	1993
504	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Daphnia magna	Water Flea	Crustaceans	EC50*	ITX	IMBL	2	d	F	17000	FW	Benijts-Claus, C., and G. Persoone	The Influence of the Formulation of the Herbicide Paraquat on its Toxicity for Aquatic Organisms	Meded.Fac.Landbouwwet.Rijksuniv.Gent 40(2, Pt.2):1161-1173	1975
505	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Daphnia magna	Water Flea	Crustaceans	LC50*	MOR	MORT	2	d	F	17000	FW	Benijts-Claus, C., and G. Persoone	Toxicity of Three Herbicides in the Aquatic Ecosystem (La Toxicite de Trois Herbicides sur L'Ecosysteme Aquatique)	La Tribune Du Ceredeau 28(383):340-346 (FRE)	1975
506	4-Nonylphenol, Branched	Pimephales promelas	Fathead Minnow	Fish	LOEC	MOR	HTCH	NR	d	A	23000	FW	Ward, T.J., and R.L. Boeri	Early Life Stage Toxicity of Nonylphenol to the Fathead Minnow, Pimephales promelas	Final Rep., Chem.Manuf.Assoc., Washington, DC :59 p.	1991
507	4-Nonylphenol, Branched	Pimephales promelas	Fathead Minnow	Fish	LOEC	MOR	HTCH	NR	d	A	23000	FW	Ward, T.J., and R.L. Boeri	Early Life Stage Toxicity of Nonylphenol to the Fathead Minnow, Pimephales promelas	Final Rep., Chem.Manuf.Assoc., Washington, DC :59 p.	1991
508	4-Nonylphenol, Branched	Pimephales promelas	Fathead Minnow	Fish	LOEC	MOR	HTCH	NR	d	A	23000	FW	Ward, T.J., and R.L. Boeri	Early Life Stage Toxicity of Nonylphenol to the Fathead Minnow, Pimephales promelas	Final Rep., Chem.Manuf.Assoc., Washington, DC :59 p.	1991

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509	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	1	d	A	33000	FW	Kikuchi, M., and M. Wakabayashi	Lethal Response of Some Surfactants to Medaka Oryzias latipes with Relation to Chemical Structure	Bull.Jpn.Soc.Sci.Fish. 50(7):1235-1240	1984
510	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Oryzias latipes	Medaka, High-Eyes	Fish	LC50	MOR	MORT	0.25	d	A	40000	FW	Kikuchi, M., and M. Wakabayashi	Lethal Response of Some Surfactants to Medaka Oryzias latipes with Relation to Chemical Structure	Bull.Jpn.Soc.Sci.Fish. 50(7):1235-1240	1984
511	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Daphnia magna	Water Flea	Crustaceans	LC50*	MOR	MORT	1	d	F	49000	FW	Benijts-Claus, C., and G. Persoone	Toxicity of Three Herbicides in the Aquatic Ecosystem (La Toxicite de Trois Herbicides sur L'Ecosysteme Aquatique)	La Tribune Du Ceredeau 28(383):340-346 (FRE)	1975
512	4-Nonylphenol	Scenedesmus subspicatus	Green Algae	Algae, Moss, Fungi	EC50	POP	PSYN	NR	d	F	424000	FW	Nendza, M., and A. Wenzel	Discriminating Toxicant Classes by Mode of Action 1. (Eco)toxicity Profiles	Environ. Sci. Pollut. Res.(): 1-12	2006
513	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	1	d	A	1E+06	FW	Macek, K.J., and S.F. Krzeminski	Susceptibility of Bluegill Sunfish (Lepomis macrochirus) to Nonionic Surfactants	Bull.Environ.Contam.Toxicol. 13(3):377-384	1975
514	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Lepomis macrochirus	Bluegill	Fish	LC50	MOR	MORT	4	d	A	1E+06	FW	Macek, K.J., and S.F. Krzeminski	Susceptibility of Bluegill Sunfish (Lepomis macrochirus) to Nonionic Surfactants	Bull.Environ.Contam.Toxicol. 13(3):377-384	1975
515	4-Nonylphenol, Branched	Americamysis bahia	Opossum Shrimp	Crustaceans	LOEC	GRO	LGTH	28	d	A	6.7	SW	Ward, T.J., and R.L. Boeri	Chronic Toxicity of Nonylphenol to the Mysid, Mysidopsis bahia	EnviroSystems Study No.8977-CMA, EnviroSystems Div.Resour.Anal.Inc., Hampton, NH :61 p.	1991
516	4-Nonylphenol, Branched	Americamysis bahia	Opossum Shrimp	Crustaceans	LOEC	MOR	SURV	28	d	A	6.7	SW	Ward, T.J., and R.L. Boeri	Chronic Toxicity of Nonylphenol to the Mysid, Mysidopsis bahia	EnviroSystems Study No.8977-CMA, EnviroSystems Div.Resour.Anal.Inc., Hampton, NH :61 p.	1991
517	4-Nonylphenol, Branched	Americamysis bahia	Opossum Shrimp	Crustaceans	LOEC	REP	PROG	28	d	A	9.1	SW	Ward, T.J., and R.L. Boeri	Chronic Toxicity of Nonylphenol to the Mysid, Mysidopsis bahia	EnviroSystems Study No.8977-CMA, EnviroSystems Div.Resour.Anal.Inc., Hampton, NH :61 p.	1991
518	4-Nonylphenol, Branched	Pleuronectes americanus	Winter Flounder	Fish	LC50	MOR	MORT	4	d	A	17	SW	Lussier, S.M., D. Champlin, J. LiVolsi, S. Poucher, and R.J. Pruell	Acute Toxicity of para-Nonylphenol to Saltwater Animals	Environ.Toxicol.Chem. 19(3):617-621	2000
519	4-Nonylphenol, Branched	Americamysis bahia	Opossum Shrimp	Crustaceans	LOEC	BEH	GBHV	28	d	A	21	SW	Ward, T.J., and R.L. Boeri	Chronic Toxicity of Nonylphenol to the Mysid, Mysidopsis bahia	EnviroSystems Study No.8977-CMA, EnviroSystems Div.Resour.Anal.Inc., Hampton, NH :61 p.	1991
520	4-Nonylphenol, Branched	Americamysis bahia	Opossum Shrimp	Crustaceans	LOEC	DVP	COLR	28	d	A	21	SW	Ward, T.J., and R.L. Boeri	Chronic Toxicity of Nonylphenol to the Mysid, Mysidopsis bahia	EnviroSystems Study No.8977-CMA, EnviroSystems Div.Resour.Anal.Inc., Hampton, NH :61 p.	1991
521	Nonylphenol	Gadus morhua	Atlantic Cod	Fish	LOEC	BCM	PRCO	21	d	A	29	SW	Larsen, B.K., A. Bjornstad, R.C. Sundt, I.C. Taban, D.M. Pampanin, and O.K. Andersen	Comparison of Protein Expression in Plasma from Nonylphenol and Bisphenol A-Exposed Atlantic Cod (Gadus morhua) and Turbot (Scophthalmus maximus) by use of SELDI-TOF	Aquat.Toxicol. 78S(Suppl. 1):S25-S33	2006

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522	Nonylphenol	Gadus morhua	Atlantic Cod	Fish	LOEC	BCM	PRCO	21	d	A	29	SW	Larsen, B.K., A. Bjornstad, R.C. Sundt, I.C. Taban, D.M. Pampanin, and O.K. Andersen	Comparison of Protein Expression in Plasma from Nonylphenol and Bisphenol A-Exposed Atlantic Cod (Gadus morhua) and Turbot (Scophthalmus maximus) by use of SELDI-TOF	Aquat.Toxicol. 78S(Suppl. 1):S25-S33	2006
523	Nonylphenol	Gadus morhua	Atlantic Cod	Fish	LOEC	BCM	VITE	21	d	A	29	SW	Larsen, B.K., A. Bjornstad, R.C. Sundt, I.C. Taban, D.M. Pampanin, and O.K. Andersen	Comparison of Protein Expression in Plasma from Nonylphenol and Bisphenol A-Exposed Atlantic Cod (Gadus morhua) and Turbot (Scophthalmus maximus) by use of SELDI-TOF	Aquat.Toxicol. 78S(Suppl. 1):S25-S33	2006
524	Nonylphenol	Gadus morhua	Atlantic Cod	Fish	LOEC	BCM	ZPRO	21	d	A	29	SW	Larsen, B.K., A. Bjornstad, R.C. Sundt, I.C. Taban, D.M. Pampanin, and O.K. Andersen	Comparison of Protein Expression in Plasma from Nonylphenol and Bisphenol A-Exposed Atlantic Cod (Gadus morhua) and Turbot (Scophthalmus maximus) by use of SELDI-TOF	Aquat.Toxicol. 78S(Suppl. 1):S25-S33	2006
525	Nonylphenol	Gadus morhua	Atlantic Cod	Fish	LOEC	BCM	ZPRO	21	d	A	29	SW	Larsen, B.K., A. Bjornstad, R.C. Sundt, I.C. Taban, D.M. Pampanin, and O.K. Andersen	Comparison of Protein Expression in Plasma from Nonylphenol and Bisphenol A-Exposed Atlantic Cod (Gadus morhua) and Turbot (Scophthalmus maximus) by use of SELDI-TOF	Aquat.Toxicol. 78S(Suppl. 1):S25-S33	2006
526	Nonylphenol	Psetta maxima	Left-Eyed Flounder, Turbot	Fish	LOEC	BCM	PRCO	21	d	A	29	SW	Larsen, B.K., A. Bjornstad, R.C. Sundt, I.C. Taban, D.M. Pampanin, and O.K. Andersen	Comparison of Protein Expression in Plasma from Nonylphenol and Bisphenol A-Exposed Atlantic Cod (Gadus morhua) and Turbot (Scophthalmus maximus) by use of SELDI-TOF	Aquat.Toxicol. 78S(Suppl. 1):S25-S33	2006
527	Nonylphenol	Psetta maxima	Left-Eyed Flounder, Turbot	Fish	LOEC	BCM	PRCO	21	d	A	29	SW	Larsen, B.K., A. Bjornstad, R.C. Sundt, I.C. Taban, D.M. Pampanin, and O.K. Andersen	Comparison of Protein Expression in Plasma from Nonylphenol and Bisphenol A-Exposed Atlantic Cod (Gadus morhua) and Turbot (Scophthalmus maximus) by use of SELDI-TOF	Aquat.Toxicol. 78S(Suppl. 1):S25-S33	2006
528	Nonylphenol	Psetta maxima	Left-Eyed Flounder, Turbot	Fish	LOEC	BCM	PRCO	21	d	A	29	SW	Larsen, B.K., A. Bjornstad, R.C. Sundt, I.C. Taban, D.M. Pampanin, and O.K. Andersen	Comparison of Protein Expression in Plasma from Nonylphenol and Bisphenol A-Exposed Atlantic Cod (Gadus morhua) and Turbot (Scophthalmus maximus) by use of SELDI-TOF	Aquat.Toxicol. 78S(Suppl. 1):S25-S33	2006

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
529	Nonylphenol	Psetta maxima	Left-Eyed Flounder, Turbot	Fish	LOEC	BCM	PRCO	21	d	A	29	SW	Larsen, B.K., A. Bjornstad, R.C. Sundt, I.C. Taban, D.M. Pampanin, and O.K. Andersen	Comparison of Protein Expression in Plasma from Nonylphenol and Bisphenol A-Exposed Atlantic Cod (Gadus morhua) and Turbot (Scophthalmus maximus) by use of SELDI-TOF	Aquat.Toxicol. 78S(Suppl. 1):S25-S33	2006
530	Nonylphenol	Psetta maxima	Left-Eyed Flounder, Turbot	Fish	LOEC	BCM	PRCO	21	d	A	29	SW	Larsen, B.K., A. Bjornstad, R.C. Sundt, I.C. Taban, D.M. Pampanin, and O.K. Andersen	Comparison of Protein Expression in Plasma from Nonylphenol and Bisphenol A-Exposed Atlantic Cod (Gadus morhua) and Turbot (Scophthalmus maximus) by use of SELDI-TOF	Aquat.Toxicol. 78S(Suppl. 1):S25-S33	2006
531	Nonylphenol	Psetta maxima	Left-Eyed Flounder, Turbot	Fish	LOEC	BCM	PRCO	21	d	A	29	SW	Larsen, B.K., A. Bjornstad, R.C. Sundt, I.C. Taban, D.M. Pampanin, and O.K. Andersen	Comparison of Protein Expression in Plasma from Nonylphenol and Bisphenol A-Exposed Atlantic Cod (Gadus morhua) and Turbot (Scophthalmus maximus) by use of SELDI-TOF	Aquat.Toxicol. 78S(Suppl. 1):S25-S33	2006
532	Nonylphenol	Psetta maxima	Left-Eyed Flounder, Turbot	Fish	LOEC	BCM	VITE	21	d	A	29	SW	Larsen, B.K., A. Bjornstad, R.C. Sundt, I.C. Taban, D.M. Pampanin, and O.K. Andersen	Comparison of Protein Expression in Plasma from Nonylphenol and Bisphenol A-Exposed Atlantic Cod (Gadus morhua) and Turbot (Scophthalmus maximus) by use of SELDI-TOF	Aquat.Toxicol. 78S(Suppl. 1):S25-S33	2006
533	Nonylphenol	Psetta maxima	Left-Eyed Flounder, Turbot	Fish	LOEC	BCM	ZPRO	21	d	A	29	SW	Larsen, B.K., A. Bjornstad, R.C. Sundt, I.C. Taban, D.M. Pampanin, and O.K. Andersen	Comparison of Protein Expression in Plasma from Nonylphenol and Bisphenol A-Exposed Atlantic Cod (Gadus morhua) and Turbot (Scophthalmus maximus) by use of SELDI-TOF	Aquat.Toxicol. 78S(Suppl. 1):S25-S33	2006
534	Nonylphenol	Psetta maxima	Left-Eyed Flounder, Turbot	Fish	LOEC	BCM	ZPRO	21	d	A	29	SW	Larsen, B.K., A. Bjornstad, R.C. Sundt, I.C. Taban, D.M. Pampanin, and O.K. Andersen	Comparison of Protein Expression in Plasma from Nonylphenol and Bisphenol A-Exposed Atlantic Cod (Gadus morhua) and Turbot (Scophthalmus maximus) by use of SELDI-TOF	Aquat.Toxicol. 78S(Suppl. 1):S25-S33	2006
535	Nonylphenol	Psetta maxima	Left-Eyed Flounder, Turbot	Fish	LOEC	BCM	ZPRO	21	d	A	29	SW	Larsen, B.K., A. Bjornstad, R.C. Sundt, I.C. Taban, D.M. Pampanin, and O.K. Andersen	Comparison of Protein Expression in Plasma from Nonylphenol and Bisphenol A-Exposed Atlantic Cod (Gadus morhua) and Turbot (Scophthalmus maximus) by use of SELDI-TOF	Aquat.Toxicol. 78S(Suppl. 1):S25-S33	2006
536	4-Nonylphenol	Gadus morhua	Atlantic Cod	Fish	LOEC	ENZ	UDGT	21	d	A	29	SW	Martin-Skilton, R., R. Thibaut, and C. Porte	Endocrine Alteration in Juvenile Cod and Turbot Exposed to Dispersed Crude Oil and Alkylphenols	Aquat.Toxicol. 78(Suppl. 1):S57-S64	2006

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
537	4-Nonylphenol	Psetta maxima	Left-Eyed Flounder, Turbot	Fish	LOEC	ENZ	ARMT	21	d	A	29	SW	Martin-Skilton, R., R. Thibaut, and C. Porte	Endocrine Alteration in Juvenile Cod and Turbot Exposed to Dispersed Crude Oil and Alkylphenols	Aquat.Toxicol. 78(Suppl. 1):S57-S64	2006
538	4-Nonylphenol	Psetta maxima	Left-Eyed Flounder, Turbot	Fish	LOEC	ENZ	UDGT	21	d	A	29	SW	Martin-Skilton, R., R. Thibaut, and C. Porte	Endocrine Alteration in Juvenile Cod and Turbot Exposed to Dispersed Crude Oil and Alkylphenols	Aquat.Toxicol. 78(Suppl. 1):S57-S64	2006
539	4-Nonylphenol	Psetta maxima	Left-Eyed Flounder, Turbot	Fish	LOEC	ENZ	UDGT	21	d	A	29	SW	Martin-Skilton, R., R. Thibaut, and C. Porte	Endocrine Alteration in Juvenile Cod and Turbot Exposed to Dispersed Crude Oil and Alkylphenols	Aquat.Toxicol. 78(Suppl. 1):S57-S64	2006
540	4-Nonylphenol	Psetta maxima	Left-Eyed Flounder, Turbot	Fish	LOEC	GRO	WGHT	21	d	A	29	SW	Martin-Skilton, R., R. Thibaut, and C. Porte	Endocrine Alteration in Juvenile Cod and Turbot Exposed to Dispersed Crude Oil and Alkylphenols	Aquat.Toxicol. 78(Suppl. 1):S57-S64	2006
541	4-Nonylphenol	Psetta maxima	Left-Eyed Flounder, Turbot	Fish	LOEC	HRM	ESDL	21	d	A	29	SW	Martin-Skilton, R., R. Thibaut, and C. Porte	Endocrine Alteration in Juvenile Cod and Turbot Exposed to Dispersed Crude Oil and Alkylphenols	Aquat.Toxicol. 78(Suppl. 1):S57-S64	2006
542	4-Nonylphenol	Psetta maxima	Left-Eyed Flounder, Turbot	Fish	LOEC	HRM	TSTR	21	d	A	29	SW	Martin-Skilton, R., R. Thibaut, and C. Porte	Endocrine Alteration in Juvenile Cod and Turbot Exposed to Dispersed Crude Oil and Alkylphenols	Aquat.Toxicol. 78(Suppl. 1):S57-S64	2006
543	4-Nonylphenol	Psetta maxima	Left-Eyed Flounder, Turbot	Fish	LOEC	MPH	COND	21	d	A	29	SW	Martin-Skilton, R., R. Thibaut, and C. Porte	Endocrine Alteration in Juvenile Cod and Turbot Exposed to Dispersed Crude Oil and Alkylphenols	Aquat.Toxicol. 78(Suppl. 1):S57-S64	2006
544	4-Nonylphenol	Psetta maxima	Left-Eyed Flounder, Turbot	Fish	LOEC	MPH	SMIX	21	d	A	29	SW	Martin-Skilton, R., R. Thibaut, and C. Porte	Endocrine Alteration in Juvenile Cod and Turbot Exposed to Dispersed Crude Oil and Alkylphenols	Aquat.Toxicol. 78(Suppl. 1):S57-S64	2006
545	4-Nonylphenol, Branched	Americamysis bahia	Opossum Shrimp	Crustaceans	LC50	MOR	MORT	4	d	A	43	SW	Ward, T.J., and R.L. Boeri	Acute Flow Through Toxicity of Nonylphenol to the Mysid, Mysidopsis bahia	EnviroSystems Study No.8974-CMA, EnviroSystems Div.Resour.Anal.Inc., Hampton, NH :7 p.	1990
546	4-Nonylphenol, Branched	Americamysis bahia	Opossum Shrimp	Crustaceans	LC50	MOR	MORT	3	d	A	44	SW	Ward, T.J., and R.L. Boeri	Acute Flow Through Toxicity of Nonylphenol to the Mysid, Mysidopsis bahia	EnviroSystems Study No.8974-CMA, EnviroSystems Div.Resour.Anal.Inc., Hampton, NH :7 p.	1990
547	4-Nonylphenol, Branched	Americamysis bahia	Opossum Shrimp	Crustaceans	LC50	MOR	MORT	1	d	A	47	SW	Ward, T.J., and R.L. Boeri	Acute Flow Through Toxicity of Nonylphenol to the Mysid, Mysidopsis bahia	EnviroSystems Study No.8974-CMA, EnviroSystems Div.Resour.Anal.Inc., Hampton, NH :7 p.	1990
548	4-Nonylphenol, Branched	Americamysis bahia	Opossum Shrimp	Crustaceans	LC50	MOR	MORT	2	d	A	47	SW	Ward, T.J., and R.L. Boeri	Acute Flow Through Toxicity of Nonylphenol to the Mysid, Mysidopsis bahia	EnviroSystems Study No.8974-CMA, EnviroSystems Div.Resour.Anal.Inc., Hampton, NH :7 p.	1990
549	4-Nonylphenol, Branched	Mulinia lateralis	Clam	Molluscs	EC50	MOR	MORT	1	d	F	50	SW	Lussier, S.M., D. Champlin, J. LiVolsi, S. Poucher, and R.J. Pruell	Acute Toxicity of para-Nonylphenol to Saltwater Animals	Environ.Toxicol.Chem. 19(3):617-621	2000
550	4-Nonylphenol, Branched	Leptocheirus plumulosus	Amphipod	Crustaceans	LC50	MOR	MORT	6	d	A	50	SW	Lussier, S.M., D. Champlin, J. LiVolsi, S. Poucher, and R.J. Pruell	Acute Toxicity of para-Nonylphenol to Saltwater Animals	Environ.Toxicol.Chem. 19(3):617-621	2000

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
551	4-Nonylphenol, Branched	Palaemonetes vulgaris	Marsh Grass Shrimp	Crustaceans	LC50	MOR	MORT	4	d	A	59.4	SW	Lussier, S.M., D. Champlin, J. LiVolsi, S. Poucher, and R.J. Pruell	Acute Toxicity of para-Nonylphenol to Saltwater Animals	Environ.Toxicol.Chem. 19(3):617-621	2000
552	4-Nonylphenol, Branched	Americamysis bahia	Opossum Shrimp	Crustaceans	LC50	MOR	MORT	4	d	A	60.6	SW	Lussier, S.M., D. Champlin, J. LiVolsi, S. Poucher, and R.J. Pruell	Acute Toxicity of para-Nonylphenol to Saltwater Animals	Environ.Toxicol.Chem. 19(3):617-621	2000
553	4-Nonylphenol, Branched	Leptocheirus plumulosus	Amphipod	Crustaceans	LC50	MOR	MORT	4	d	A	61.6	SW	Lussier, S.M., D. Champlin, J. LiVolsi, S. Poucher, and R.J. Pruell	Acute Toxicity of para-Nonylphenol to Saltwater Animals	Environ.Toxicol.Chem. 19(3):617-621	2000
554	4-Nonylphenol, Branched	Menidia beryllina	Inland Silverside	Fish	LC50	MOR	MORT	4	d	A	70	SW	Lussier, S.M., D. Champlin, J. LiVolsi, S. Poucher, and R.J. Pruell	Acute Toxicity of para-Nonylphenol to Saltwater Animals	Environ.Toxicol.Chem. 19(3):617-621	2000
555	4-Nonylphenol, Branched	Menidia beryllina	Inland Silverside	Fish	LC50	MOR	MORT	5	d	A	70	SW	Lussier, S.M., D. Champlin, J. LiVolsi, S. Poucher, and R.J. Pruell	Acute Toxicity of para-Nonylphenol to Saltwater Animals	Environ.Toxicol.Chem. 19(3):617-621	2000
556	4-Nonylphenol, Branched	Menidia beryllina	Inland Silverside	Fish	LC50	MOR	MORT	6	d	A	70	SW	Lussier, S.M., D. Champlin, J. LiVolsi, S. Poucher, and R.J. Pruell	Acute Toxicity of para-Nonylphenol to Saltwater Animals	Environ.Toxicol.Chem. 19(3):617-621	2000
557	4-Nonylphenol, Branched	Menidia beryllina	Inland Silverside	Fish	LC50	MOR	MORT	7	d	A	70	SW	Lussier, S.M., D. Champlin, J. LiVolsi, S. Poucher, and R.J. Pruell	Acute Toxicity of para-Nonylphenol to Saltwater Animals	Environ.Toxicol.Chem. 19(3):617-621	2000
558	4-Nonylphenol, Branched	Eohaustorius estuarius	Amphipod	Crustaceans	EC50	BEH	BBBH	0.0416667	d	F	109	SW	Hecht, S., and B.L. Boese	Sensitivity of an Infaunal Amphipod, Eohaustorius estuarius, to Acute Waterborne Exposures of 4-Nonylphenol: Evidence of a Toxic Hangover	Environ.Toxicol.Chem. 21(4):816-819	2002
559	4-Nonylphenol, Branched	Eohaustorius estuarius	Amphipod	Crustaceans	EC50	BEH	BBBH	0.0416667	d	F	123	SW	Hecht, S., and B.L. Boese	Sensitivity of an Infaunal Amphipod, Eohaustorius estuarius, to Acute Waterborne Exposures of 4-Nonylphenol: Evidence of a Toxic Hangover	Environ.Toxicol.Chem. 21(4):816-819	2002
560	4-Nonylphenol, Branched	Eohaustorius estuarius	Amphipod	Crustaceans	EC50	BEH	BBBH	1	d	F	132	SW	Hecht, S., and B.L. Boese	Sensitivity of an Infaunal Amphipod, Eohaustorius estuarius, to Acute Waterborne Exposures of 4-Nonylphenol: Evidence of a Toxic Hangover	Environ.Toxicol.Chem. 21(4):816-819	2002
561	4-Nonylphenol, Branched	Eohaustorius estuarius	Amphipod	Crustaceans	EC50	BEH	BBBH	1	d	F	135	SW	Hecht, S., and B.L. Boese	Sensitivity of an Infaunal Amphipod, Eohaustorius estuarius, to Acute Waterborne Exposures of 4-Nonylphenol: Evidence of a Toxic Hangover	Environ.Toxicol.Chem. 21(4):816-819	2002
562	4-Nonylphenol, Branched	Eohaustorius estuarius	Amphipod	Crustaceans	EC50	BEH	BBBH	2	d	F	137	SW	Hecht, S., and B.L. Boese	Sensitivity of an Infaunal Amphipod, Eohaustorius estuarius, to Acute Waterborne Exposures of 4-Nonylphenol: Evidence of a Toxic Hangover	Environ.Toxicol.Chem. 21(4):816-819	2002
563	4-Nonylphenol, Branched	Eohaustorius estuarius	Amphipod	Crustaceans	EC50	BEH	BBBH	1	d	F	139	SW	Hecht, S., and B.L. Boese	Sensitivity of an Infaunal Amphipod, Eohaustorius estuarius, to Acute Waterborne Exposures of 4-Nonylphenol: Evidence of a Toxic Hangover	Environ.Toxicol.Chem. 21(4):816-819	2002
564	4-Nonylphenol, Branched	Cyprinodon variegatus	Sheepshead Minnow	Fish	LC50	MOR	MORT	4	d	A	142	SW	Lussier, S.M., D. Champlin, J. LiVolsi, S. Poucher, and R.J. Pruell	Acute Toxicity of para-Nonylphenol to Saltwater Animals	Environ.Toxicol.Chem. 19(3):617-621	2000

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
565	4-Nonylphenol, Branched	Cyprinodon variegatus	Sheepshead Minnow	Fish	LC50	MOR	MORT	3	d	A	150	SW	Lussier, S.M., D. Champlin, J. LiVolsi, S. Poucher, and R.J. Pruell	Acute Toxicity of para-Nonylphenol to Saltwater Animals	Environ.Toxicol.Chem. 19(3):617-621	2000
566	4-Nonylphenol, Branched	Eohaustorius estuarius	Amphipod	Crustaceans	EC50	BEH	BBBH	0.0416667	d	F	182	SW	Hecht, S., and B.L. Boese	Sensitivity of an Infaunal Amphipod, Eohaustorius estuarius, to Acute Waterborne Exposures of 4-Nonylphenol: Evidence of a Toxic Hangover	Environ.Toxicol.Chem. 21(4):816-819	2002
567	4-Nonylphenol, Branched	Eohaustorius estuarius	Amphipod	Crustaceans	LC50	MOR	MORT	4	d	F	189	SW	Hecht, S., and B.L. Boese	Sensitivity of an Infaunal Amphipod, Eohaustorius estuarius, to Acute Waterborne Exposures of 4-Nonylphenol: Evidence of a Toxic Hangover	Environ.Toxicol.Chem. 21(4):816-819	2002
568	4-Nonylphenol, Branched	Eohaustorius estuarius	Amphipod	Crustaceans	LC50	MOR	MORT	4	d	F	194	SW	Hecht, S., and B.L. Boese	Sensitivity of an Infaunal Amphipod, Eohaustorius estuarius, to Acute Waterborne Exposures of 4-Nonylphenol: Evidence of a Toxic Hangover	Environ.Toxicol.Chem. 21(4):816-819	2002
569	4-Nonylphenol, Branched	Dyspanopeus sayi	Say Mud Crab	Crustaceans	LC50	MOR	MORT	4	d	A	195	SW	Lussier, S.M., D. Champlin, J. LiVolsi, S. Poucher, and R.J. Pruell	Acute Toxicity of para-Nonylphenol to Saltwater Animals	Environ.Toxicol.Chem. 19(3):617-621	2000
570	4-Nonylphenol, Branched	Eohaustorius estuarius	Amphipod	Crustaceans	EC50	BEH	BBBH	1	d	F	221	SW	Hecht, S., and B.L. Boese	Sensitivity of an Infaunal Amphipod, Eohaustorius estuarius, to Acute Waterborne Exposures of 4-Nonylphenol: Evidence of a Toxic Hangover	Environ.Toxicol.Chem. 21(4):816-819	2002
571	4-Nonylphenol, Branched	Eohaustorius estuarius	Amphipod	Crustaceans	LC50	MOR	MORT	4	d	F	299	SW	Hecht, S., and B.L. Boese	Sensitivity of an Infaunal Amphipod, Eohaustorius estuarius, to Acute Waterborne Exposures of 4-Nonylphenol: Evidence of a Toxic Hangover	Environ.Toxicol.Chem. 21(4):816-819	2002
572	4-Nonylphenol, Branched	Cyprinodon variegatus	Sheepshead Minnow	Fish	LC50	MOR	MORT	3	d	A	320	SW	Ward, T.J., and R.L. Boeri	Acute Flow Through Toxicity of Nonylphenol to the Sheepshead Minnow, Cyprinodon variegatus	Final Rep., Chemical Manufacturers Assoc., Washington, DC :34 p.	1990
573	4-Nonylphenol, Branched	Cyprinodon variegatus	Sheepshead Minnow	Fish	LC50	MOR	MORT	4	d	A	320	SW	Ward, T.J., and R.L. Boeri	Acute Flow Through Toxicity of Nonylphenol to the Sheepshead Minnow, Cyprinodon variegatus	Final Rep., Chemical Manufacturers Assoc., Washington, DC :34 p.	1990
574	4-Nonylphenol	Platichthys flesus	Starry, European Flounder	Fish	LOEC	BCM	VITE	10	d	F	330	SW	Kirby, M.F., A.J. Smith, J. Rooke, P. Neall, A.P. Scott, and I. Katsiadaki	Ethoxyresorufin-O-Deethylase (EROD) and Vitellogenin (VTG) in Flounder (Platichthys flesus): System Interaction, Crosstalk and Implications for Monitoring	Aquat.Toxicol. 81(3):233-244	2007
575	4-Nonylphenol, Branched	Cyprinodon variegatus	Sheepshead Minnow	Fish	LC50	MOR	MORT	2	d	A	340	SW	Ward, T.J., and R.L. Boeri	Acute Flow Through Toxicity of Nonylphenol to the Sheepshead Minnow, Cyprinodon variegatus	Final Rep., Chemical Manufacturers Assoc., Washington, DC :34 p.	1990
576	4-Nonylphenol, Branched	Cyprinodon variegatus	Sheepshead Minnow	Fish	LC50	MOR	MORT	1	d	A	420	SW	Ward, T.J., and R.L. Boeri	Acute Flow Through Toxicity of Nonylphenol to the Sheepshead Minnow, Cyprinodon variegatus	Final Rep., Chemical Manufacturers Assoc., Washington, DC :34 p.	1990
577	4-Nonylphenol, Branched	Cyprinodon variegatus	Sheepshead Minnow	Fish	LOEC	MOR	SURV	4	d	A	420	SW	Ward, T.J., and R.L. Boeri	Acute Flow Through Toxicity of Nonylphenol to the Sheepshead Minnow, Cyprinodon variegatus	Final Rep., Chemical Manufacturers Assoc., Washington, DC :34 p.	1990
578	4-Nonylphenol	Cyprinodon variegatus	Sheepshead Minnow	Fish	LC50	MOR	MORT	4	d	F	460	SW	Sappington, L.C., F.L. Mayer, F.J. Dwyer, D.R. Buckler, J.R. Jones, and M.R. Ellersieck	Contaminant Sensitivity of Threatened and Endangered Fishes Compared to Standard Surrogate Species	Environ.Toxicol.Chem. 20(12):2869-2876	2001

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579	4-Nonylphenol	Cyprinodon bovinus	Leon Springs Pupfish	Fish	LC50	MOR	MORT	4	d	F	480	SW	Sappington, L.C., F.L. Mayer, F.J. Dwyer, D.R. Buckler, J.R. Jones, and M.R. Ellersieck	Contaminant Sensitivity of Threatened and Endangered Fishes Compared to Standard Surrogate Species	Environ.Toxicol.Chem. 20(12):2869-2876	2001
580	4-Nonylphenol, Branched	Cyprinodon variegatus	Sheepshead Minnow	Fish	NR-LETH	MOR	SURV	3	d	F	500	SW	Ward, T.J., and R.L. Boeri	Acute Flow Through Toxicity of Nonylphenol to the Sheepshead Minnow, Cyprinodon variegatus	Final Rep., Chemical Manufacturers Assoc., Washington, DC :34 p.	1990
581	4-Nonylphenol	Cyprinodon variegatus	Sheepshead Minnow	Fish	LC50	MOR	MORT	1	d	F	700	SW	Sappington, L.C., F.L. Mayer, F.J. Dwyer, D.R. Buckler, J.R. Jones, and M.R. Ellersieck	Contaminant Sensitivity of Threatened and Endangered Fishes Compared to Standard Surrogate Species	Environ.Toxicol.Chem. 20(12):2869-2876	2001
582	4-Nonylphenol	Dicentrarchus labrax	Sea Bass	Fish	LOEC	ENZ	P450	0.0833333	d	F	892.6	SW	Teles, M., C. Gravato, M. Pacheco, and M.A. Santos	Juvenile Sea Bass Biotransformation, Genotoxic and Endocrine Responses to beta-Naphthoflavone, 4-Nonylphenol and 17beta-Estradiol Individual and Combined Exposures	Chemosphere 57(2):147-158	2004
583	4-Nonylphenol	Dicentrarchus labrax	Sea Bass	Fish	LOEC	ENZ	P450	0.3333333	d	F	892.6	SW	Teles, M., C. Gravato, M. Pacheco, and M.A. Santos	Juvenile Sea Bass Biotransformation, Genotoxic and Endocrine Responses to beta-Naphthoflavone, 4-Nonylphenol and 17beta-Estradiol Individual and Combined Exposures	Chemosphere 57(2):147-158	2004
584	4-Nonylphenol	Dicentrarchus labrax	Sea Bass	Fish	LOEC	GEN	NABN	1	d	F	892.6	SW	Teles, M., C. Gravato, M. Pacheco, and M.A. Santos	Juvenile Sea Bass Biotransformation, Genotoxic and Endocrine Responses to beta-Naphthoflavone, 4-Nonylphenol and 17beta-Estradiol Individual and Combined Exposures	Chemosphere 57(2):147-158	2004
585	4-Nonylphenol, Branched	Americamysis bahia	Opossum Shrimp	Crustaceans	NR-LETH	MOR	SURV	4	d	F	1000	SW	Ward, T.J., and R.L. Boeri	Acute Flow Through Toxicity of Nonylphenol to the Mysid, Mysidopsis bahia	EnviroSystems Study No.8974-CMA, EnviroSystems Div.Resour.Anal.Inc., Hampton, NH :7 p.	1990
586	4-Nonylphenol, Branched	Cyprinodon variegatus	Sheepshead Minnow	Fish	NR-LETH	MOR	SURV	4	d	F	1000	SW	Ward, T.J., and R.L. Boeri	Acute Flow Through Toxicity of Nonylphenol to the Sheepshead Minnow, Cyprinodon variegatus	Final Rep., Chemical Manufacturers Assoc., Washington, DC :34 p.	1990
587	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Scolelepis fulginosa	Spionid Polychaete	Worms	LC50*	MOR	MORT	4	d	F	2100	SW	Stora, G.	Median Lethal Concentration (CL 50) of Detergents on Marine Invertebrates	Tethys 4(3):597-644 (FRE) (ENG ABS) (Author Communication Used)	1972
588	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Scolelepis fulginosa	Spionid Polychaete	Worms	LC50*	MOR	MORT	4	d	F	2120	SW	Stora, G.	Median Lethal Concentration (CL 50) of Detergents on Marine Invertebrates	Tethys 4(3):597-644 (FRE) (ENG ABS) (Author Communication Used)	1972
589	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Scolelepis fulginosa	Spionid Polychaete	Worms	LC50*	MOR	MORT	2	d	F	2500	SW	Stora, G.	Median Lethal Concentration (CL 50) of Detergents on Marine Invertebrates	Tethys 4(3):597-644 (FRE) (ENG ABS) (Author Communication Used)	1972
590	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Scolelepis fulginosa	Spionid Polychaete	Worms	LC50*	MOR	MORT	2	d	F	2570	SW	Stora, G.	Median Lethal Concentration (CL 50) of Detergents on Marine Invertebrates	Tethys 4(3):597-644 (FRE) (ENG ABS) (Author Communication Used)	1972

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
591	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Scolelepis fulginosa	Spionid Polychaete	Worms	LC50*	MOR	MORT	2	d	F	2600	SW	Stora, G.	Median Lethal Concentration (CL 50) of Detergents on Marine Invertebrates	Tethys 4(3):597-644 (FRE) (ENG ABS) (Author Communication Used)	1972
592	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Acartia tonsa	Calanoid Copepod	Crustaceans	LC50	MOR	MORT	2	d	A	2800	SW	Andersen, H.R., L. Wollenberger, B. Halling-Sorensen, and K.O. Kusk	Development of Copepod Nauplii to Copepodites - a Parameter for Chronic Toxicity Including Endocrine Disruption	Environ.Toxicol.Chem. 20(12):2821-2829	2001
593	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Capitella capitata	Polychaete Worm	Worms	LC50*	MOR	MORT	4	d	F	3020	SW	Stora, G.	Median Lethal Concentration (CL 50) of Detergents on Marine Invertebrates	Tethys 4(3):597-644 (FRE) (ENG ABS) (Author Communication Used)	1972
594	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Capitella capitata	Polychaete Worm	Worms	LC50*	MOR	MORT	4	d	F	3020	SW	Stora, G.	Median Lethal Concentration (CL 50) of Detergents on Marine Invertebrates	Tethys 4(3):597-644 (FRE) (ENG ABS) (Author Communication Used)	1972
595	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Capitella capitata	Polychaete Worm	Worms	LC50*	MOR	MORT	2	d	F	3260	SW	Stora, G.	Median Lethal Concentration (CL 50) of Detergents on Marine Invertebrates	Tethys 4(3):597-644 (FRE) (ENG ABS) (Author Communication Used)	1972
596	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Capitella capitata	Polychaete Worm	Worms	LC50*	MOR	MORT	2	d	F	3330	SW	Stora, G.	Median Lethal Concentration (CL 50) of Detergents on Marine Invertebrates	Tethys 4(3):597-644 (FRE) (ENG ABS) (Author Communication Used)	1972
597	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Capitella capitata	Polychaete Worm	Worms	LC50*	MOR	MORT	2	d	F	3500	SW	Stora, G.	Median Lethal Concentration (CL 50) of Detergents on Marine Invertebrates	Tethys 4(3):597-644 (FRE) (ENG ABS) (Author Communication Used)	1972
598	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Aequipecten opercularis	Queen Scallop	Molluscs	LC50	ITX	IMBL	4	d	F	4000	SW	Swedmark, M., A. Granmo, and S. Kollberg	Effects of Oil Dispersants and Oil Emulsions on Marine Animals	Water Res. 7(11):1649-1672	1973
599	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Aequipecten opercularis	Queen Scallop	Molluscs	LC50	ITX	IMBL	4	d	F	4000	SW	Swedmark, M., A. Granmo, and S. Kollberg	Effects of Oil Dispersants and Oil Emulsions on Marine Animals	Water Res. 7(11):1649-1672	1973
600	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Capitella capitata	Polychaete Worm	Worms	LC50*	MOR	MORT	4	d	F	4190	SW	Stora, G.	Median Lethal Concentration (CL 50) of Detergents on Marine Invertebrates	Tethys 4(3):597-644 (FRE) (ENG ABS) (Author Communication Used)	1972
601	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Capitella capitata	Polychaete Worm	Worms	LC50*	MOR	MORT	4	d	F	4210	SW	Stora, G.	Median Lethal Concentration (CL 50) of Detergents on Marine Invertebrates	Tethys 4(3):597-644 (FRE) (ENG ABS) (Author Communication Used)	1972
602	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Capitella capitata	Polychaete Worm	Worms	LC50*	MOR	MORT	2	d	F	4500	SW	Stora, G.	Median Lethal Concentration (CL 50) of Detergents on Marine Invertebrates	Tethys 4(3):597-644 (FRE) (ENG ABS) (Author Communication Used)	1972
603	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Capitella capitata	Polychaete Worm	Worms	LC50*	MOR	MORT	2	d	F	4540	SW	Stora, G.	Median Lethal Concentration (CL 50) of Detergents on Marine Invertebrates	Tethys 4(3):597-644 (FRE) (ENG ABS) (Author Communication Used)	1972

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
604	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Capitella capitata	Polychaete Worm	Worms	LC50*	MOR	MORT	2	d	F	4540	SW	Stora, G.	Median Lethal Concentration (CL 50) of Detergents on Marine Invertebrates	Tethys 4(3):597-644 (FRE) (ENG ABS) (Author Communication Used)	1972
605	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Gadus morhua	Atlantic Cod	Fish	LC50	MOR	MORT	4	d	F	5000	SW	Swedmark, M., A. Granmo, and S. Kollberg	Effects of Oil Dispersants and Oil Emulsions on Marine Animals	Water Res. 7(11):1649-1672	1973
606	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Cerastoderma edule	Cockle	Molluscs	LC50	ITX	IMBL	4	d	F	5000	SW	Swedmark, M., A. Granmo, and S. Kollberg	Effects of Oil Dispersants and Oil Emulsions on Marine Animals	Water Res. 7(11):1649-1672	1973
607	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Scolelepis fulginosa	Spionid Polychaete	Worms	LC50*	MOR	MORT	4	d	F	5590	SW	Stora, G.	Median Lethal Concentration (CL 50) of Detergents on Marine Invertebrates	Tethys 4(3):597-644 (FRE) (ENG ABS) (Author Communication Used)	1972
608	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Scolelepis fulginosa	Spionid Polychaete	Worms	LC50	MOR	MORT	4	d	F	5630	SW	Stora, G.	Contribution a L'Etude De La Notion De Concentration Lethale. Limite Moyenne Appliquee a Des Invertebres Marins. II. CL 50 et Determination .	Rev.Int.Oceanogr.Med. 37/38:97-123 (FRE) (ENG ABS) (Author Communication Used)	1975
609	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Scolelepis fulginosa	Spionid Polychaete	Worms	LC50*	MOR	MORT	4	d	F	5630	SW	Stora, G.	Median Lethal Concentration (CL 50) of Detergents on Marine Invertebrates	Tethys 4(3):597-644 (FRE) (ENG ABS) (Author Communication Used)	1972
610	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Scolelepis fulginosa	Spionid Polychaete	Worms	LC50	MOR	MORT	4	d	F	5690	SW	Stora, G.	Contribution a L'Etude De La Notion De Concentration Lethale. Limite Moyenne Appliquee a Des Invertebres Marins. II. CL 50 et Determination .	Rev.Int.Oceanogr.Med. 37/38:97-123 (FRE) (ENG ABS) (Author Communication Used)	1975
611	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Scolelepis fulginosa	Spionid Polychaete	Worms	LC50*	MOR	MORT	4	d	F	5690	SW	Stora, G.	Median Lethal Concentration (CL 50) of Detergents on Marine Invertebrates	Tethys 4(3):597-644 (FRE) (ENG ABS) (Author Communication Used)	1972
612	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Scolelepis fulginosa	Spionid Polychaete	Worms	LC50*	MOR	MORT	4	d	F	5800	SW	Stora, G.	Median Lethal Concentration (CL 50) of Detergents on Marine Invertebrates	Tethys 4(3):597-644 (FRE) (ENG ABS) (Author Communication Used)	1972
613	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Gadus morhua	Atlantic Cod	Fish	LC50	MOR	MORT	4	d	F	6000	SW	Swedmark, M., A. Granmo, and S. Kollberg	Effects of Oil Dispersants and Oil Emulsions on Marine Animals	Water Res. 7(11):1649-1672	1973
614	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Cerastoderma edule	Cockle	Molluscs	LC50	ITX	IMBL	4	d	F	6000	SW	Swedmark, M., A. Granmo, and S. Kollberg	Effects of Oil Dispersants and Oil Emulsions on Marine Animals	Water Res. 7(11):1649-1672	1973
615	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Scolelepis fulginosa	Spionid Polychaete	Worms	LC50	MOR	MORT	2	d	F	6710	SW	Stora, G.	Contribution a L'Etude De La Notion De Concentration Lethale. Limite Moyenne Appliquee a Des Invertebres Marins. II. CL 50 et Determination .	Rev.Int.Oceanogr.Med. 37/38:97-123 (FRE) (ENG ABS) (Author Communication Used)	1975

Appendix D-9, Table 13. ECOTOX effects values for nonylphenol in fresh and marine waters.

Record	Chemical Name	Species Scientific Name	Species Common Name	Species Group	Endpoint	Effect	Effect Measure-ment	Exposure Duration (Days)	Duration Units (Days)	Conc Type	Conc (ug/L)	Media Type	Author	Title	Source	Publication Year
616	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Scolelepis fulginosa	Spionid Polychaete	Worms	LC50*	MOR	MORT	2	d	F	6710	SW	Stora, G.	Median Lethal Concentration (CL 50) of Detergents on Marine Invertebrates	Tethys 4(3):597-644 (FRE) (ENG ABS) (Author Communication Used)	1972
617	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Scolelepis fulginosa	Spionid Polychaete	Worms	LC50*	MOR	MORT	2	d	F	6730	SW	Stora, G.	Median Lethal Concentration (CL 50) of Detergents on Marine Invertebrates	Tethys 4(3):597-644 (FRE) (ENG ABS) (Author Communication Used)	1972
618	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Scolelepis fulginosa	Spionid Polychaete	Worms	LC50*	MOR	MORT	2	d	F	7700	SW	Stora, G.	Median Lethal Concentration (CL 50) of Detergents on Marine Invertebrates	Tethys 4(3):597-644 (FRE) (ENG ABS) (Author Communication Used)	1972
619	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Scolelepis fulginosa	Spionid Polychaete	Worms	LC50	MOR	MORT	2	d	F	7720	SW	Stora, G.	Contribution a L'Etude De La Notion De Concentration Lethale. Limite Moyenne Appliquee a Des Invertebres Marins. II. CL 50 et Determination .	Rev.Int.Oceanogr.Med. 37/38:97-123 (FRE) (ENG ABS) (Author Communication Used)	1975
620	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Scolelepis fulginosa	Spionid Polychaete	Worms	LC50*	MOR	MORT	2	d	F	7720	SW	Stora, G.	Median Lethal Concentration (CL 50) of Detergents on Marine Invertebrates	Tethys 4(3):597-644 (FRE) (ENG ABS) (Author Communication Used)	1972
621	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Mytilus edulis	Common Bay Mussel,Blue Mussel	Molluscs	LC50	ITX	IMBL	4	d	F	10000	SW	Swedmark, M., A. Granmo, and S. Kollberg	Effects of Oil Dispersants and Oil Emulsions on Marine Animals	Water Res. 7(11):1649-1672	1973
622	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Mytilus edulis	Common Bay Mussel,Blue Mussel	Molluscs	LC50	ITX	IMBL	4	d	F	12000	SW	Swedmark, M., A. Granmo, and S. Kollberg	Effects of Oil Dispersants and Oil Emulsions on Marine Animals	Water Res. 7(11):1649-1672	1973
623	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Metapenaeopsis barbata	Shrimp	Crustaceans	LC50	MOR	MORT	4	d	F	100000	SW	Swedmark, M., A. Granmo, and S. Kollberg	Effects of Oil Dispersants and Oil Emulsions on Marine Animals	Water Res. 7(11):1649-1672	1973
624	alpha-(Nonylphenyl)-omega-hydroxypoly(oxy-1,2-ethanediyl)	Metapenaeopsis barbata	Shrimp	Crustaceans	LC50	MOR	MORT	4	d	F	100000	SW	Swedmark, M., A. Granmo, and S. Kollberg	Effects of Oil Dispersants and Oil Emulsions on Marine Animals	Water Res. 7(11):1649-1672	1973

Appendix D-9, Table 14. Effects Values for Petroleum in Freshwater

Form	Effect	Concentration (mg/L)	Test Species	Citation
Lube oil	Mortality	0.38	*Daphnia magna*	API
Lube oil	Mortality	2.38	*Daphnia magna*	API
Lube oil	Mortality	2.5	*Pimephales promelas*	API
Lube oil	Mortality	2.7	*Pimephales promelas*	API
Lube oil	Physiology	0.3	*Daphnia magna*	API
Lube oil	Physiology	1.5	*Daphnia magna*	API
Lube oil	Physiology	0.92	*Daphnia magna*	API
Lube oil	Physiology	2.4	*Daphnia magna*	API
Gasoline	Mortality	13.5	*Daphnia magna*	API
Gasoline	Mortality	50.3	*Daphnia magna*	API
Gasoline	Physiology	5.4	*Daphnia magna*	API
Gasoline	Physiology	6.25	*Daphnia magna*	API
Gasoline	Physiology	4.9	*Daphnia magna*	API
Gasoline	Physiology	4.91	*Daphnia magna*	API
Diesel	Mortality	7.16	*Daphnia magna*	API
Diesel	Mortality	7.95	*Daphnia magna*	API
Diesel	Mortality	26.6	*Daphnia magna*	API
Diesel	Mortality	71.9	*Daphnia magna*	API
Diesel	Mortality	2.18	*Daphnia magna*	API
Diesel	Mortality	7.4	*Pimephales promelas*	API
Diesel	Mortality	7.6	*Pimephales promelas*	API
Diesel	Mortality	5.4	*Pimephales promelas*	API
Diesel	Mortality	7.2	*Pimephales promelas*	API
Diesel	Physiology	4.07	*Daphnia magna*	API
Diesel	Physiology	9.5	*Daphnia magna*	API
Diesel	Physiology	1.9	*Daphnia magna*	API
Diesel	Physiology	9	*Daphnia magna*	API
Bunker/Heavy	Mortality	4.45	*Daphnia magna*	API
Bunker/Heavy	Mortality	4.7	*Pimephales promelas*	API
Bunker/Heavy	Mortality	7	*Pimephales promelas*	API
Bunker/Heavy	Physiology	4.14	*Daphnia magna*	API
Bunker/Heavy	Physiology	4.5	*Daphnia magna*	API

American Petroleum Institute (API). 1994. A Critical Review of Toxicity Values and an Evaluation of the Persistence of Petroleum Products for Use in Natural Resource Damage Assessments. API Publication 4594.