# APPENDIX D

## Detailed AQUIRE Results for Studies

## Selected to Develop Effects Thresholds

Appendix D. Detailed AQUIRE Results for Studies Selected to Develop Effects Thresholds.

| Analyte | Scientific Name | Common Name | Test Duration | Duration Units | Exposure Type | Endpoint | Effect | Conc | Units | Effects Threshold[1] | Author | Year | Title | Ref Source | Chem Method | Control Type | Doc Code | CAS # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2,4-D | *Myriophyllum spicatum* | Eurasian watermilfoil | 11 | WK | F | LOEC | GRO | 30 | ug/L | 30 | Westerdahl, H.E., and J.F. Hall | 1983 | Threshold 2,4-D Concentrations for Control of Eurasian Watermilfoil and Sago Pondweed | J.Aquat.Plant Manage. 21:22-25 | M | S | M | 94757 |
| 2,6-Dichlorobenzamide | *Oncorhynchus mykiss* | Rainbow trout,donaldson trout | 60 | D | R | MATC | GRO | 13416 | ug/L | 13416 | Van Leeuwen, C.J., and H. Maas | 1985 | The Aquatic Toxicity of 2,6-Dichlorobenzamide (BAM), a Degradation Product of the Herbicide Dichlobenil | Environ.Pollut.Ser.A Ecol.Biol. 37(2):105-115 | U | I | M | 2008584 |
| 4,4'-DDT | *Hyalella azteca* | Scud | 10 | D | F | LC50 | MOR | 0.07 | ug/L | 0.035 | Hoke, R.A., G.T. Ankley, A.M. Cotter, T. Goldenstein, P.A. Kosian, G.L. Phipps, and F.M. Vandermeiden | 1994 | 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 | M | C | M | 50293 |
| 4,4'-DDE | *Hyalella azteca* | Scud | 10 | D | F | LC50 | MOR | 1.66 | ug/L | 0.83 | Hoke, R.A., G.T. Ankley, A.M. Cotter, T. Goldenstein, P.A. Kosian, G.L. Phipps, and F.M. Vandermeiden | 1994 | 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 | M | C | M | 72559 |
| 4,4'-DDD | *Chironomus tentans* | Midge | 10 | D | F | LC50 | MOR | 0.18 | ug/L | 0.09 | Phipps, G.L., V.R. Mattson, and G.T. Ankley | 1995 | Relative Sensitivity of Three Freshwater Benthic Macroinvertebrates to Ten Contaminants | Arch.Environ.Contam.Toxicol. 28(3):281-286 | M | C | M | 72548 |
| 4-Nitrophenol | *Oncorhynchus mykiss* | Rainbow trout,donaldson trout | 85 | D | F | MATC | GRO | 989 | µg/L | 989 | Hodson, P.V., R. Parisella, B. Blunt, B. Gray, and K.L.E. Kaiser | 1991 | Quantitative Structure-Activity Relationships for Chronic Toxicity of Phenol, p-Chlorophenol, 2,4-Dichlorophenol, Pentachlorophenol, p-Nitrophenol, | Can.Tech.Rep.Fish.Aquat.Sci. 1784:55 | M | S | C | 100027 |
| Atrazine | *Chlamydomonas reinhardtii* | Green algae | 4 | D | F | NOEC | POP | 3.4 | ug/L | 3.4 | Schafer, H., H. Hettler, U. Fritsche, G. Pitzen, G. Roderer, and A. Wenzel | 1994 | Biotests Using Unicellular Algae and Ciliates for Predicting Long-Term Effects of Toxicants | Ecotoxicol.Environ.Saf. 27(1):64-81 | M | K | C | 1912249 |
| Barium | *Daphnia magna* | Water flea | 21 | D | R | EC50* | REP | 8900 | ug/L | 4450 | Biesinger, K.E., and G.M. Christensen | 1972 | Effects of Various Metals on Survival, Growth, Reproduction and Metabolism of Daphnia magna | J Fish Res Board Can 29:1691-1700 | U | I | C | 10361372 |
| Benzoic Acid | *Gambusia affinis* | Western mosquitofish | 48 | H | S | LC50* | MOR | 225000 | ug/L | 112500 | Wallen, I.E., W.C. Greer, and R. Lasater | 1957 | Toxicity to Gambusia affinis of Certain Pure Chemicals in Turbid Waters | Sewage Ind.Wastes 29(6):695-711 | U | I | C | 65850 |
| Bromacil | *Selenastrum capricornutum* | Green algae | 96 | H | S | NOEC | POP | 10 | ug/L | 10 | Garten, C.T.J. | 1990 | Multispecies Methods of testing for Toxicity: Use of the Rhizobium-Legume Symbiosis in Nitrogen Fixation and Correlations Between Responses by Algae and Terrestrial Plants | In: W.Wang, J.W.Gorsuch, and W.R.Lower (Eds.), Plants for Toxicity Assessment, ASTM STP 1091, Philadelphia, PA :69-84 | U | C | C | 314409 |
| Caffeine | *Pimephales promelas* | Fathead minnow | 120 | H | S | LOEC | GRO | 20000 | ug/L | 20000 | DeYoung, D.J., J.A. Bantle, M.A. Hull, and S.L. Burks | 1996 | Differences in Sensitivity to Developmental Toxicants as seen in Xenopus and Pimephales Embryos | Bull.Environ.Contam.Toxicol. 56(1):143-150 | U | C | C | 58082 |
| Carbaryl | *Daphnia magna* | Water flea | 48 | H | F | EC50 | ITX | 6.66 | ppb | 3.33 | Office of Pesticide Programs | 1995 | Environmental Effects Database (EEDB) | Environmental Fate and Effects Division, U.S.EPA, Washington, D.C. | NR | K | M | 63252 |
| Cobalt | *Daphnia magna* | Water flea | 28 | D | R | MATC | REP | 5.1 | ug/L | 5.1 | Kimball, G. | 1978 | The Effects of Lesser Known Metals and One Organic to Fathead Minnows (Pimephales promelas) and Daphnia magna | Manuscript, Dep.of Entomology, Fisheries and Wildlife, University of Minnesota, Minneapolis, M N:88 | U | I | C | 10124433 |
| Dicamba | *Anabaena flosaquae* | Blue-green algae | 5 | D | S | EC50 | ITX | 61 | µg/L | 30.5 | Office of Pesticide Programs | 1995 | Environmental Effects Database (EEDB) | Environmental Fate and Effects Division, U.S.EPA, Washington, D.C. | NR | K | M | 1918009 |
| Dichlobenil | *Daphnia magna* | Water flea | 48 | H | S | EC50 | ITX | 6200 | µg/L | 3100 | Office of Pesticide Programs | 1995 | Environmental Effects Database (EEDB) | Environmental Fate and Effects Division, U.S.EPA, Washington, D.C. | NR | K | M | 1194656 |
| Dichlorprop | *Oncorhynchus mykiss* | Rainbow trout,donaldson trout | 96 | H | S | LC50 | MOR | 2700 | µg/L | 1350 | Office of Pesticide Programs | 1995 | Environmental Effects Database (EEDB) | Environmental Fate and Effects Division, U.S.EPA, Washington, D.C. | NR | K | M | 120365 |
| MCPA | *Lemna minor* | Duckweed | 24 | H | S | LOEC | POP | 1400 | ug/L | 1400 | Peterson, H.G., C. Boutin, P.A. Martin, K.E. Freemark, N.J. Ruecker, and M.J. Moody | 1994 | Aquatic Phyto-Toxicity of 23 Pesticides Applied at Expected Environmental Concentrations | Aquat.Toxicol. 28(3/4):275-292 | U | C | M | 94746 |
| MCPP | *Lemna minor* | Duckweed | 10 | D | R | EC50 | POP | 5147 | ug/L | 2573.5 | Kirby, M.F., and D.A. Sheahan | 1994 | Effects of Atrazine, Isoproturon, and Mecoprop on the Macrophyte Lemna minor and the Alga Scenedesmus subspicatus | Bull.Environ.Contam.Toxicol. 53(1):120-126 | U | S | M | 93652 |
| Metolachlor | *Selenastrum capricornutum* | Green algae | 5 | D | S | EC50 | ITX | 10 | µg/L | 5 | Office of Pesticide Programs | 1995 | Environmental Effects Database (EEDB) | Environmental Fate and Effects Division, U.S.EPA, Washington, D.C. | NR | K | M | 51218452 |
| Molybdenum | *Daphnia magna* | Water flea | 28 | D | R | MATC | REP | 880 | ug/L | 880 | Kimball, G. | 1978 | The Effects of Lesser Known Metals and One Organic to Fathead Minnows (Pimephales promelas) and Daphnia magna | Manuscript, Dep.of Entomology, Fisheries and Wildlife, University of Minnesota, Minneapolis, M N:88 | U | S | C | 1313275 |
| Napropamide | *Selenastrum capricornutum* | Green algae | 96 | H | S | EC50 | ITX | 3400 | µg/L | 1700 | Office of Pesticide Programs | 1995 | Environmental Effects Database (EEDB) | Environmental Fate and Effects Division, U.S.EPA, Washington, D.C. | NR | K | M | 15299997 |
| Prometon | *Selenastrum capricornutum* | Green algae | 5 | D | S | EC50 | ITX | 98 | ppb | 49 | Office of Pesticide Programs | 1995 | Environmental Effects Database (EEDB) | Environmental Fate and Effects Division, U.S.EPA, Washington, D.C. | NR | K | M | 1610180 |
| Simazine | *Selenastrum capricornutum* | Green algae | | WK | S | EC50 | POP | 0.614 | ug/L | 0.307 | Turbak, S.C., S.B. Olson, and G.A. McFeters | 1986 | Comparison of Algal Assay Systems for Detecting Waterborne Herbicides and Metals | Water Res. 20(1):91-96 | U | S | C | 122349 |
| Trichlopyr | *Oncorhynchus keta* | Chum salmon | 96 | H | S | LC50 | MOR | 300 | ug/L | 150 | Wan, M.T., D.J. Moul, and R.G. Watts | 1987 | Acute Toxicity to Juvenile Pacific Salmonids of Garlon 3A, Garlon 4 | Bull.Environ.Contam.Toxicol. 39(4):721-728 | M | S | C | 55335063 |
| Trifluralin | *Pimephales promelas* | Fathead minnow | 427 | D/ | F | MATC | REP | 3.154 | ug/L | 3.154 | Macek, K.J., M.A. Lindberg, S. Sauter, K.S. Buxton, and P.A. Costa | 1976 | Toxicity of Four Pesticides to Water Fleas and Fathead Minnows | EPA-600/3-76-099, Environ.Res.Lab., U.S.Environ.Prot.Agency, Duluth, M N:68 | M | U | M | 1582098 |
| Vanadium | *Jordanella floridae* | Flagfish | 96 | D | F | MATC | GRO | 80 | ug/L | 80 | Holdway, D.A., and J.B. Sprague | 1979 | Chronic Toxicity of Vanadium to Flagfish | Water Res. 13(9):905-910 | M | S | M | 1314621 |