Appendix C – Ecotoxicity Bibliography and Study Summaries

Azinphos-Methyl
Papers that Were Accepted for ECOTOX

NOTE: The following studies were not used to calculate risk quotients in this assessment because 1) the endpoint determined in the study was less sensitive than the endpoint selected to estimate risk or 2) the effects described in the study cannot be quantitatively linked to an assessment endpoint. Summaries of studies that were considered in this risk assessment follow the bibliography.

Acceptable for ECOTOX and OPP

Ackley, J. A., Wilson, H. P., and Hines, T. E. (1996). Weed Management Programs in Potato (Solanum tuberosum) with Rimsulfuron. *Weed Technol.* 10: 354-358.

EcoReference No.: 73746
User Define 2: WASH
Chemical of Concern: AZ,MTL,RIM,LNR,MBZ,DMT,MTM; Habitat: T; Effect Codes: POP; Rejection Code: LITE EVAL CODED(DMT).

Adelman, I. R. and Smith, L. L. Jr. (1976). Standard Test Fish Development. Part I. Fathead Minnows (Pimephales promelas) and Goldfish (Carassius auratus) as Standard Fish in Bioassays and Their Reaction to Potential Reference Toxicants. *EPA-600/3-76-061A, U.S.EPA, Duluth, MN* 77 p.

EcoReference No.: 2145
Chemical of Concern: AZ,Cr,NaPCP; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(NaPCP,AZ),OK(ALL CHEMS).

Adelman, I. R. and Smith, L. L. Jr. (1976). Standard Test Fish Development Part II. Chronic Toxicity of Guthion to the Fathead Minnow (Pimephales promelas Refinesque). *EPA-600/3-76-061B, U.S.EPA, Duluth, MN* 22 .

EcoReference No.: 5300
Chemical of Concern: AZ; Habitat: A; Effect Codes: MOR,REP,GRO; Rejection Code: LITE EVAL CODED(AZ).

Adelman, I. R., Smith, L. L. Jr., and Siesennop, G. D. (1976). Acute Toxicity of Sodium Chloride, Pentachlorophenol, Guthion, and Hexavalent Chromium to Fathead Minnows (Pimephales promelas) and Goldfish (Carassius auratus). *J.Fish.Res.Board Can.* 33: 203-208.

EcoReference No.: 5230
Chemical of Concern: AZ,NaPCP,Cr; Habitat: A; Effect Codes: MOR,PHY; Rejection Code: LITE EVAL CODED(AZ,NaPCP),OK(ALL CHEMS).

Adelman, I. R., Smith, L. L. Jr., and Siesennop, G. D. (1976). Chronic Toxicity of Guthion to the Fathead Minnow (Pimephales promelas Rafinesque). *Bull.Environ.Contam.Toxicol.* 15: 726-733.

EcoReference No.: 453
Chemical of Concern: AZ; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ).

Adelman, I. R. Jr. (1976). Standard Test Fish Development. Part I. Fathead Minnows (Pimephales

promelas) and Goldfish (Carassius auratus) as Standard Fish in. *EPA-600/3-76-061A, U.S.EPA, Duluth, MN* 77 p.

EcoReference No.: 2145
Chemical of Concern: AZ,Cr,NaPCP; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(NaPCP).

Agnello, A. M., Spangler, S. M., Reissig, W. H., Lawson, D. S., and Weires, R. W. (1992). Seasonal Development and Management Strategies for Comstock Mealybug (Homoptera: Pseudococcidae) in New York Pear Orchards. *J.Econ.Entomol.* 85: 212-225 .

EcoReference No.: 73713
Chemical of Concern: MOM,CPY,CBL,MP,AZ,ES,RSM,EFV,MVP; Habitat: T; Effect Codes: POP,MOR; Rejection Code: OK(MOM),TARGET(RSM).

Ahammad-Sahib, K. I., Hollingworth, R. M., Whalon, M. E., Ioannidis, P. M., and Grafius, E. J. (1994). Polysubstrate Monooxygenases and Other Xenobiotic-Metabolizing Enzymes in Susceptible and Resistant Colorado Potato Beetle. *Pestic.Biochem.Physiol.* 49: 1-12.

EcoReference No.: 74890
Chemical of Concern: PPB,AZ; Habitat: T; Effect Codes: MOR,CEL; Rejection Code: LITE EVAL CODED(PPB).

Ahmad, M., Hollingworth, R. M., and Wise, J. C. (2002). Broad-Spectrum Insecticide Resistance in Obliquebanded Leafroller _Choristoneura rosaceana_ (Lepidoptera: Tortricidae) from Michigan. *Pest Manag.Sci.* 58: 834-838.

EcoReference No.: 70966
Chemical of Concern:
IDC,CFP,EMMB,MFZ,TUZ,BFT,ZCYP,AZ,CPY,PSM,CYP,DM,EFV,ES,TDC,MOM,CBL,SS; Habitat: T; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ,IDC,CFP,EMMB,MFZ,TUZ,BFT,ZCYP,CPY,PSM,CYP,DM,EFV,ES,TDC,MOM,CBL,SS),OK(ALL CHEMS)//PHASE II COMPLETE.

Allen, R. L. and Snipes, C. E. (1995). Interactions of Foliar Insecticides Applied with Pyrithiobac. *Weed Technol.* 9: 512-517.

EcoReference No.: 64055
Chemical of Concern: ACP,PTB,AZ,BFT,CPY,DCTP,EFV,MLN,MOM,OML,TDC; Habitat: T; Effect Codes: PHY,GRO,POP; Rejection Code: LITE EVAL CODED(EFV),OK(MLN,PTB),NO MIXTURE(ACP,AZ,BFT,CPY,DCTP,MOM,OML,TDC).

Ankley, G. T. and Collyard, S. A. (1995). Influence of Piperonyl Butoxide on the Toxicity of Organophosphate Insecticides to Three Species of Freshwater Benthic Invertebrates. *Comp.Biochem.Physiol.C* 110: 149-155.

EcoReference No.: 352
User Define 2: ECOTOX MED,WASH,CALF,CORE
Chemical of Concern: AZ,CPY,DZ,PPB; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(PPB).

Babcock, J. M. and Tanigoshi, L. K. (1988). Resistance Levels of Typhlodromus occidentalis (Acari: Phytoseiidae) from Washington Apple Orchards to Ten Pesticides. *Exp.Appl.Acarol.* 4: 151-157.

EcoReference No.: 74105
User Define 2: WASHT

Chemical of Concern: CHX,FTT,PPG,AZ,DZ,MOM,CBL,FNV,ES,MDT; Habitat: T; Effect Codes: MOR; Rejection Code: OK .

Baticados, M. C. L. and Tendencia, E. A. (1991). Effects of Gusathion A on the Survival and Shell Quality of Juvenile Penaeus monodon. *Aquaculture* 93: 9-19.

EcoReference No.: 3795
Chemical of Concern: AZ; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ).

Bellows, T. S. Jr. and Morse, J. G. (1993). Toxicity of Insecticides Used in Citrus to Aphytis Melinus debach (Hymenoptera: Aphelinidae) and Rhizobius lophanthae (Blaisd.) (Coleoptera: Coccinellidae). *Can.Entomol.* 125: 987-994.

EcoReference No.: 59334
Chemical of Concern: MOM,AZ,BFT,EFV,FPP,FVL,CBL,TDC,MVP,Naled,TCF; Habitat: T; Effect Codes: MOR; Rejection Code: OK(MOM),TARGET(FVL).

Borchert, D. M., Stinner, R. E., Walgenbach, J. F., and Kennedy, G. G. (2004). Oriental Fruit Moth (Lepidoptera: Tortricidae) Phenology and Management with Methoxyfenozide in North Carolina Apples. *J.Econ.Entomol.* 97: 1353-1364.

EcoReference No.: 82543
Chemical of Concern: MFZ,AZ; Habitat: T; Effect Codes: POP; Rejection Code: LITE EVAL CODED(AZ,MFZ),OK(ALL CHEMS)//PHASE II COMPLETE.

Brunner, J. F., Dunley, J. E., Doerr, M. D., and Beers, E. H. (2001). Effect of Pesticides on Colpoclypeus florus (Hymenoptera: Eulophidae) and Trichogramma platneri (Hymenoptera: Trichogrammatidae), Parasitoids of Leafrollers in Washington. *J.Econ.Entomol.* 94: 1075-1084.

EcoReference No.: 63713
Chemical of Concern: AZ,CYP,DZ,DMT,MP,MDT,PSM,OML,CBL,FTT,AMZ,PMR,ES,EFV,IMC,SS,PPG,DFZ,FYC,TUZ,MFZ,AZD; Habitat: T; Effect Codes: MOR,BEH,REP; Rejection Code: LITE EVAL CODED(AZ,DZ,CYP,DMT,MP,MDT,PSM,OML,CBL,FTT,AMZ,PMR,ES,EFV,IMC,SS,PPG,DFZ,FYC,TUZ,MFZ,AZD),OK(ALL CHEMS)//PHASE II COMPLETE,TARGET(CBL).

Bues, R., Boudinhon, L., Toubon, J. F., and Faivre D'Arcier, F. (1999). Geographic and Seasonal Variability of Resistance to Insecticides in Cacopsylla pyri L. (Hom., Psyllidae). *J.Appl.Entomol.* 123: 289-297.

EcoReference No.: 72767
Chemical of Concern: AZ,CPY,CYP,PSM,MLN,MP,MOM,AMZ,PRN,PIM,CPYM,FNV,MVP,DM,PSM; Habitat: T; Effect Codes: MOR; Rejection Code: OK,TARGET(MLN,CYP).

Burgess, N. M., Hunt, K. A., Bishop, C., and Weseloh, D. V. (1999). Cholinesterase Inhibition in Tree Swawllows (Tachycineta bicolor) and Eastern Bluebirds (Sailia sialis) Exposed to Organophosphorus Insecticides in Apple Orchards in Ontario, Canada. *Environ.Toxicol.Chem.* 18: 708-716.

EcoReference No.: 47897
Chemical of Concern: DZ,AZ; Habitat: T; Effect Codes: PHY; Rejection Code: LITE EVAL CODED(DZ),OK(AZ).

Butler, P. A. (1964). Commercial Fishery Investigations. *In: Pesticide-Wildlife Studies, 1963, U.S.D.I.,*

Fish and Wildl.Serv.,Circ.199 28 p.(Author Communication Used).

EcoReference No.: 646
Chemical of Concern:
AZ,DS,HCCH,MLN,MP,Naled,PRT,24DXY,CMPH,DMT,DU,PEB,PSM,NTP,TXP,CBL;
Habitat: A; Effect Codes: BEH,POP,MOR,GRO,ACC,SYS; Rejection Code: LITE EVAL CODED(AZ, PRT),NO ENDPOINT(DMT).

Carter, F. L. (1971). In Vivo Studies of Brain Acetylcholinesterase Inhibition by Organophosphate and Carbamate Insecticides in Fish. *Ph.D.Thesis, Louisiana State Univ.and Agric.and Mechanical College:202 p.; Diss.Abstr.Int.B Sci.Eng.* 32: 2772-2773 (Publ in Part As 942).

EcoReference No.: 14034
Chemical of Concern: CPY,MOM,CBF,AZ,ADC,DCTP,MP,MLN,CBL; Habitat: A; Effect Codes: BCM,GRO,MOR; Rejection Code: LITE EVAL CODED(AZ,CBL,CBF,MOM,ADC,MLN),OK(ALL CHEMS).

Cochran, R. E. and Burnett, L. E. (1996). Respiratory Responses of the Salt Marsh Animals, Fundulus heteroclitus, Leiostomus xanthurus, and Palaemonetes pugio to Environmental Hypoxia and Hypercapnia and to the Organophosphate Pesticide, Azinphosmethyl. *J.Exp.Mar.Biol.Ecol.* 195: 125-144.

EcoReference No.: 18719
Chemical of Concern: AZ; Habitat: A; Effect Codes: BCM,PHY; Rejection Code: LITE EVAL CODED(AZ).

Coeurdassier, M., Saint-Denis, M., Gomot-De Vaufleury, A., Ribera, D., and Badot, P. M. (2001). The Garden Snail (Helix aspersa) as a Bioindicator of Organophosphorus Exposure: Effects of Dimethoate on Survival, Growth, and Acetylcholinesterase Activity. *Environ.Toxicol.Chem.* 20: 1951-1957.

EcoReference No.: 63387
User Define 2: WASHT
Chemical of Concern: DMT,AZ,CBL,MP,TCF; Habitat: T; Effect Codes: BEH,MOR,GRO,ACC,BCM; Rejection Code: LITE EVAL CODED(DMT).

Cripe, G. M., Goodman, L. R., and Hansen, D. J. (1984). Effect of Chronic Exposure to EPN and to Guthion on the Critical Swimming Speed and Brain Acetylcholinesterase Activity of Cyprinodon variegatus. *Aquat.Toxicol.* 5: 255-266.

EcoReference No.: 11316
Chemical of Concern: AZ; Habitat: A; Effect Codes: REP,BEH,BCM,GRO; Rejection Code: LITE EVAL CODED(AZ).

Culley, D. D. J. and Ferguson, D. E. (1969). Patterns of Insecticide Resistance in the Mosquitofish, Gambusia affinis. *J.Fish.Res.Board Can.* 26: 2395-2401.

EcoReference No.: 3664
Chemical of Concern: AZ,CMPH,CPY,HCCH,MLN,MP,DZ,MVC,EN,DLD,CHD,PRN,DDT ;
Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(DZ),OK(ALL CHEMS).

Culley, D. D. Jr. and Ferguson, D. E. (1969). Patterns of Insecticide Resistance in the Mosquitofish, Gambusia affinis. *J.Fish.Res.Board Can.* 26: 2395-2401.

EcoReference No.: 3664

Chemical of Concern: AZ,CMPH,CPY,MLN,MP,MVC,EN,DLD,HCCH,CHD,PRN,DDT,DZ ; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ,DZ),OK(ALL CHEMS).

Dalla Venezia, L., Galindo Reyes, J. G., and Burgueno Juarez, E. (1999). Influence of Organophosphorus Pesticides on Oxygen Consumption in the Shrimp Penaeus vannamei. *Riv.Ital.Acquacolt.* 34: 23-26.

EcoReference No.: 85634
Chemical of Concern: DZ,AZ; Habitat: A; Effect Codes: PHY; Rejection Code: LITE EVAL CODED(AZ,DZ).

Davis, H. C. and Hidu, H. (1969). Effects of Pesticides on Embryonic Development of Clams and Oysters and on Survival and Growth of the Larvae. *Fish.Bull.* 67: 393-404 .

EcoReference No.: 2400
Chemical of Concern: EDT,24DXY,AZ,CBL,CMPH,DS,DU,MLN,PCP,NaPCP,DBAC,HCCH,PRN,DDT,DZ,DCB; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ,DCB,DZ,PCP,NaPCP,DBAC),OK(ALL CHEMS).

Day, K. E. and Scott, I. M. (1990). Use of Acetylcholinesterase Activity to Detect Sublethal Toxicity in Stream Invertebrates Exposed to Low Concentrations of Organophosphate Insecticides. *Aquat.Toxicol.* 18: 101-113.

EcoReference No.: 3549
Chemical of Concern: AZ,CPY,FNT; Habitat: A; Effect Codes: BCM; Rejection Code: LITE EVAL CODED(CPY,FNT,AZ).

De Maeyer, L., Schmidt, H. W., and Peeters, D. (2002). Envidor - A New Acaricide for IPM in Pomefruit Orchards. *Pflanzenschutz-Nachr.Bayer* 55: 211-236.

EcoReference No.: 75880
Chemical of Concern: SDF,AZ,AMZ,OMT,CYF,MFZ,TFY,FO; Habitat: T; Effect Codes: MOR,POP; Rejection Code: LITE EVAL CODED(SDF),OK(TFY,CYF),NO ENDPOINT(MFZ,OMT,AMZ).

Degraeve, N., Chollet, M. C., and Moutschen, J. (1984). Cytogenetic Effects Induced by Organophosphorus Pesticides in Mouse Spermatocytes. *Toxicol.Lett.* 21: 315-319 .

EcoReference No.: 74873
Chemical of Concern: DMT,MP,DDVP,FNT,MLN,TCF,AZ; Habitat: T; Effect Codes: CEL; Rejection Code: LITE EVAL CODED(DMT),OK(ALL CHEMS).

Dela Cruz, C. R. and Cagauan, A. G. (1981). Preliminary Study on the Bioassay of Seven Pesticides and Five Weedicides with Tilapia, Carps, Clam and Shrimp as Test Species. *Fish.Res.J.Philipp.* 6: 11-18.

EcoReference No.: 3241
Chemical of Concern: AZ,BTC,MCPA,24DXY,CYP,PMR,MP,CBL; Habitat: A; Effect Codes: PHY; Rejection Code: LITE EVAL CODED(CYP),OK(ALL CHEMS).

DiPinto, L. M. (1996). Trophic Transfer of a Sediment-Associated Organophosphate Pesticide from Meiobenthos to Bottom Feeding Fish. *Arch.Environ.Contam.Toxicol.* 30: 459-466.

EcoReference No.: 17778

Chemical of Concern: AZ; Habitat: A; Effect Codes: BCM,ACC; Rejection Code: LITE EVAL CODED(AZ).

Doerr, M. D., Brunner, J. F., and Schrader, L. E. (2004). Integrated Pest Management Approach for a New Pest, Lacanobia subjuncta (Lepidoptera: Noctuidae), in Washington Apple Orchards. *Pest Manag.Sci.* 60: 1025-1034.

EcoReference No.: 82540
Chemical of Concern: EMMB,MFZ,TUZ,CBL,TDC,MOM,ES,TMX,ACT,TAP,SS,AZD,AZ,CPY,PSM,MLN,IDC,EFV, KLN; Habitat: T; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ,EMMB,MFZ,TUZ,CBL,TDC,MOM,ES,TMX,ACT,TAP,SS,AZD,CPY,PSM,MLN,IDC,EFV,KLN),OK(ALL CHEMS)//PHASE II COMPLETE,TARGET(CBL).

Dortland, R. J. (1980). Toxicological Evaluation of Parathion and Azinphosmethyl in Freshwater Model Ecosystems. *Versl.Landbouwkd.Onderz* 898: 1-112 (Author Communication Used).

EcoReference No.: 6449
Chemical of Concern: AZ,DZ,MLN,MP,PRN; Habitat: A; Effect Codes: POP,MOR,BEH,PHY,REP; Rejection Code: LITE EVAL CODED(AZ,DZ),OK(ALL CHEMS).

Durda, J. L., Powell, R. A., and Barthalmus, G. T. (1989). Physiological and Behavioral Effects of Guthion on Pine Voles, Microtus pinetorum. *Bull.Environ.Contam.Toxicol.* 43: 80-86.

EcoReference No.: 87450
Chemical of Concern: AZ; Habitat: T; Effect Codes: PHY,GRO,BEH; Rejection Code: LITE EVAL CODED(AZ).

Duso, C., Camporese, P., and Van der Geest, L. P. S. (1992). Toxicity of a Number of Pesticides to Strains of Typhlodromus pyri and Amblyseius andersoni (Acari: Phytoseiidae). *Entomophaga* 37: 363-372.

EcoReference No.: 73088
User Define 2: NEW CSC,WASHT,CALFT
Chemical of Concern: PRN,CBL,ACP,AZ,CPY,MDT,MOM,DM,CPYM,FNT,TCF,CBL; Habitat: T; Effect Codes: MOR,REP; Rejection Code: OK.

Forget, J., Pavillon, J. F., Menasria, M. R., and Bocquene, G. (1998). Mortality and LC50 Values for Several Stages of the Marine Copepod Tigriopus brevicornis (Muller) Exposed to the Metals Arsenic and Cadmium and the. *Ecotoxicol.Environ.Saf.* 40: 239-244.

Cadmium 2001//Atrazine 2001//
EcoReference No.: 19281
User Define 2: ECOTOX MED,WASH,CALF
Chemical of Concern: ATZ,CBF,MLN,DOVP,As,Cd,AZ
Endpoint: MOR; Habitat: A; Rejection Code: LITE EVAL CODED(CBF).

Forget, J., Pavillon, J. F., Menasria, M. R., and Bocquene, G. (1998). Mortality and LC50 Values for Several Stages of the Marine Copepod Tigriopus brevicornis (Muller) Exposed to the Metals Arsenic and Cadmium and the. *Ecotoxicol.Environ.Saf.* 40: 239-244.

EcoReference No.: 19281
Chemical of Concern: ATZ,CBF,MLN,DOVP,As,Cd,AZ; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(ATZ,CBF).

Fournier, M., Bernier, J., Flipo, D., and Krzystyniak, K. (1986). Evaluation of Pesticide Effects on Humoral

Response to Sheep Erythrocytes and Mouse Hepatitis Virus 3 by Immunosorbent Analysis. *Pestic.Biochem.Physiol.* 26: 353-364.

EcoReference No.: 75357
Chemical of Concern: DLD,MLN,CBF,MOM,CBL,AZ; Habitat: T; Effect Codes: CEL,PHY; Rejection Code: LITE EVAL CODED(CBL,AZ),OK(ALL CHEMS).

Frear, D. E. H. and Boyd, J. E. (1967). Use of Daphnia magna for the Microbioassay of Pesticides. I. Development of Standardized Techniques for Rearing Daphnia and Preparation of Dosage-Mortality Curves for Pesticides. *J.Econ.Entomol.* 60: 1228-1236.

EcoReference No.: 2820
Chemical of Concern: FBM,PPHD,Zineb,DEM,TXP,DOD,PRO,ATZ,HPT,ETN,AND,Naled,PRT,MP,NaDC,Ziram,THM,Captan,MLN,DCF,AZ,HPT,MXC,DMT,DDT,TCF,CMPH,PRN,HCCH,DLD,EN,ES,MTAS; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ,PRO,ATZ,DMT,DOD,PRT),OK(ALL CHEMS).

Fulton, M. H. and Scott, G. I. (1991). The Effect of Certain Intrinsic and Extrinsic Variables on the Acute Toxicity of Selected Organophosphorus Insecticides to the Mummichog, Fundulus heteroclitus. *J.Environ.Sci.Health* B26(5/6): 459-478.

EcoReference No.: 6924
Chemical of Concern: ACP,ES,FNV,AZ; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(ACP,ES,FNV,AZ).

Gaaboub, I. A., El-Gayar, F. M., and Abdel-Gawaad, A. A. (1973). Comparative Studies on the Sensitivity of Culex pipiens fatigans Wied. Mosquito Larvae and the Microcrustacean Adults of Daphnia magna Straus as Microbioassay Test Organisms for Screening Certain Soil Insecticides Applied to Cotton Cultivations in Egypt. *Bull.Entomol.Soc.Egypt.Econ.Ser.* 7: 193-199.

EcoReference No.: 2646
Chemical of Concern: AZ,DS,HCCH,PRT,EN; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ,PRT),OK(ALL CHEMS).

Galindo-Reyes, J. G., Dalla Venezia, L., Lazcano-Alvarez, G., and Rivas-Mendoza, H. (2000). Enzymatic and Osmoregulative Alterations in White Shrimp Litopenaeus vannamei Exposed to Pesticides. *Chemosphere* 40: 233-237.

EcoReference No.: 49408
Chemical of Concern: DDT,HCCH,CHD,CPY,DZ,AZ; Habitat: A; Effect Codes: PHY,CEL; Rejection Code: LITE EVAL CODED(AZ,DZ),OK(ALL CHEMS).

Gaufin, A. R., Jensen, L. D., Nebeker, A. V., Nelson, T., and Teel, R. W. (1965). The Toxicity of Ten Organic Insecticides to Various Aquatic Invertebrates. *Water Sewage Works* 12: 276-279.

EcoReference No.: 528
Chemical of Concern: AZ,DS,MLN,EN,PRN,DLD,AND,DDT; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED (AZ), OK(ALL CHEMS).

Geiger, D. L., Brooke, L. T., and Call, D. J. (1990). Acute Toxicities of Organic Chemicals to Fathead Minnows (Pimephales promelas). *Ctr.for Lake Superior Environ.Stud., Univ.of Wisconsin-Superior, Superior, WI* 5: 332 p.

EcoReference No.: 3217
Chemical of Concern:

CBF,ADC,RTN,NaN3,RSM,PCP,AMSV,ACL,ASCN,C8OH,AN,AZ,BNZ,TBTO,CTC,CF,MCR E,DEM,DPA,ETHB,FNV,FYT,FML,ISO,LIM,OML,PL,TBO,TOL,ACD,EAC,TEAM,DPDP,AL, Cd,Co,Fe,Pb,Mn,Ni,Zn,Cr; Habitat: A; Effect Codes: MOR,BEH,PHY,GRO; Rejection Code: LITE EVAL CODED(AZ,C8OH,ASCN,CBF,ADC,RTN,NaN3,RSM,PCP,AMSV,ACL),OK(ALL CHEMS).

Giddings, J. M., Biever, R. C., Helm, R. L., Howick, G. L., and De Noyelles, F. J. Jr. (1994). The Fate and Effects of Guthion (Azinphos Methyl) in Mesocosms. *In: R.L.Graney, J.H.Kennedy, and J.H.Rogers (Eds.), Aquatic Mesocosm Studies in Ecological Risk Assessment, Chapter 25, Lewis Publishers, Boca Raton, FL* 469-495.

EcoReference No.: 16678
Chemical of Concern: AZ; Habitat: A; Effect Codes: GRO,POP,SYS; Rejection Code: LITE EVAL CODED(AZ).

Gill, H., Wilson, L. K., Cheng, K. M., Trudeau, S., and Elliott, J. E. (2000). Effects of Azinphos-Methyl on American Robins Breeding in Fruit Orchards. *Bull.Environ.Contam.Toxicol.* 65: 756-763.

EcoReference No.: 58731
Chemical of Concern: AZ; Habitat: T; Effect Codes: PHY,MOR,REP; Rejection Code: LITE EVAL CODED(AZ).

Gough, B. J., Escuriex, L. A., and Shellenberger, T. E. (1967). A Comparative Toxicologic Study of a Phosphorodithioate in Japanese and Bobwhite Quail. *Toxicol.Appl.Pharmacol.* 10: 12-19.

EcoReference No.: 87634
Chemical of Concern: AZ; Habitat: T; Effect Codes: BCM,REP,GRO,MOR; Rejection Code: LITE EVAL CODED(AZ).

Guzzella, L., Gronda, A., and Colombo, L. (1997). Acute Toxicity of Organophosphorus Insecticides to Marine Invertebrates. *Bull.Environ.Contam.Toxicol.* 59: 313-320.

EcoReference No.: 18363
Chemical of Concern: AZ,CPY,DMT,DZ,MLN,MP,PRT,PRN,FNF,OMT; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ,DZ,OMT,DMT,PRT),OK(ALL CHEMS).

Hardersen, S. and Wratten, S. D. (1996). The Sensitivity of the Nymphs of Two New Zealand Damselfly Species (Odonata: Zygoptera) to Azinphos-Methyl and Carbaryl. *Aust.J.Ecotoxicol.* 2: 55-60.

EcoReference No.: 67674
Chemical of Concern: AZ,CBL; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED (AZ,CBL),OK(ALL CHEMS).

Harris, C. R., Turnbull, S. A., and McLeod, D. G. R. (1985). Contact Toxicity of Twenty-One Insecticides to Adults of the Carrot Rust Fly (Diptera: Psilidae). *Can.Entomol.* 117: 1025-1027.

EcoReference No.: 72206
Chemical of Concern:
DZ,DDT,AND,PRN,CPY,PSM,PMR,Naled,MOM,MLN,DM,CYP,CBF,AZ,FNV,FNF,ACP,AN D; Habitat: T; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(CBF),OK(MOM),TARGET(CYP,MLN).

Harris, M. L., Bishop, C. A., Struger, J., Ripley, B., and Bogart, J. P. (1998). The Functional Integrity of Northern Leopard Frog (Rana pipiens) and Green Frog (Rana clamitans) Populations in Orchard Wetlands. II. Effects of Pesticides and Eutrophic Conditions on Early Life Stage Development.

Environ.Toxicol.Chem. 17: 1351-1363.

EcoReference No.: 19300
Chemical of Concern: DZ,PSM,MYC,MZB,ES,AZ; Habitat: A; Effect Codes: MOR,GRO; Rejection Code: LITE EVAL CODED(AZ),NO COC(ATZ),OK(MYC,MZB,PSM,DZ,ES).

Harris, M. L., Chora, L., Bishop, C. A., and Bogart, J. P. (2000). Species-and Age-Related Differences in Susceptibility to Pesticide Exposure for Two Amphibians, Rana pipiens, and Bufo americanus. *Bull.Environ.Contam.Toxicol.* 64: 263-270.

EcoReference No.: 49995
Chemical of Concern: AZ,ES,MZB; Habitat: A; Effect Codes: GRO,MOR; Rejection Code: LITE EVAL CODED(AZ,ES,MZB).

Helson, B. V., De Groot, P., Turgeon, J. J., and Kettela, E. G. (1989). Toxicity of Insecticides to First-Instar Larvae of the Spruce Budmoth, Zeiraphera canadensis Mut. and Free. (Lepidoptera: Tortricidae): Laboratory and Field Studies. *Can.Entomol.* 121: 81-91.

EcoReference No.: 73595
User Define 2: WASHT,CALFT,CORE
Chemical of Concern: MOM,ACP,AZ,CPY,FNT,PMR,SPS,TDC,TCF; Habitat: T; Effect Codes: MOR; Rejection Code: OK.

Hemmer, M. J., Middaugh, D. P., and Comparetta, V. (1992). Comparative Acute Sensitivity of Larval Topsmelt, Atherinops affinis, and Inland Silverside, Menidia beryllina, to 11 Chemicals. *Environ.Toxicol.Chem.* 11: 401-408 (OECDG Data File).

EcoReference No.: 13112
Chemical of Concern: NaLS,4NP,FNV,ES,MXC,AZ,CPY,TBO,PMR; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ),OK(ALL CHEMS).

Hill, E. F., Heath, R. G., Spann, J. W., and Williams, J. D. (1975). Lethal Dietary Toxicities of Environmental Pollutants to Birds. *U.S.Fish and Wildlife Service, Special Scientific Report-Wildlife* 191: 1-61.

EcoReference No.: 35243
Chemical of Concern: 24DXY,ABT,ADC,AMTL,AND,ATZ,Captan,CBF,CBL,Cd,Cr,DDT,DLD,DMT,DS,DU,DZ,ES,ETN,FNT,HCCH,Hg,HPT,MCPB,MLN,MP,MRX,MTAS,MXC,Naled,Pb,PCB,PCL,PCP,PQT,PRN,PRT,PYN,RSM,RTN,SZ,TFM,THM,TVP,TXP,Zn,ZnP,As,AZ; Habitat : T; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ,DZ,ATZ,CBF,ADC,MOM,DMT,SZ,ZnP,RTN,RSM,MCPB,PCP,PRT),OK(ALL CHEMS).

Hilsenhoff, W. L. (1959). The Evaluation of Insecticides for the Control of Tendipes plumosus (Linnaeus). *J.Econ.Entomol.* 52: 331-332.

EcoReference No.: 2904
Chemical of Concern: AZ,DZ,MP,PRT,PAN; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ,DZ,PRT),OK(ALL CHEMS).

Hogmire, H. W., Brown, M. W., and Crim, V. L. (1990). Toxicity of Slide Dip Application of Five Insecticides to Apple Aphid and Spirea Aphid (Homoptera: Aphididae). *J.Entomol.Sci.* 25: 10-15.

EcoReference No.: 74108

User Define 2: WASHT
Chemical of Concern: MOM,EFV,ES,AZ,CPY; Habitat: T; Effect Codes: MOR; Rejection Code: OK.

Holcombe, G. W., Phipps, G. L., Sulaiman, A. H., and Hoffman, A. D. (1987). Simultaneous Multiple Species Testing: Acute Toxicity of 13 Chemicals to 12 Diverse Freshwater Amphibian, Fish, and Invertebrate Families. *Arch.Environ.Contam.Toxicol.* 16: 697-710 (OECDG Data File).

EcoReference No.: 12665
Chemical of Concern: ACL,AZ,RTN,DEM,Ag,CPH,PL,AMSV; Habitat: A; Effect Codes: MOR,PHY; Rejection Code: LITE EVAL CODED(AZ,RTN,AMSV,ACL),OK(ALL CHEMS).

Hulzebos, E. M., Adema, D. M. M., E.M.Dirven-Van Breemen, Henzen, L., W.A.Van Dis, Herbold, H. A., Hoekstra, J. A., Baerselman, R., and C.A.M.Van Gestel (1993). Phytotoxicity Studies with Lactuca sativa in Soil and Nutrient Solution. *Environ.Toxicol.Chem.* 12: 1079-1094.

EcoReference No.: 46533
Chemical of Concern: PCP,PAH,AZ,AMSV,NAPH,DCB; Habitat: T; Effect Codes: POP; Rejection Code: LITE EVAL CODED(AZ,DCB,NAPH,PCP,AMSV),OK(ALL CHEMS)//OK(EcoSSL).

Idris, A. B. and Grafius, E. (1993). Pesticides Affect Immature Stages on Diadegma insulare (Hymenoptera: Ichneumonidae) and Its Host, the Diamondback Moth (Lepidoptera: Plutellidae). *J.Econ.Entomol.* 86: 1203-1212.

EcoReference No.: 73706
User Define 2: WASHT,CORE
Chemical of Concern: MOM,CTN,PMR,AZ; Habitat: T; Effect Codes: GRO,MOR; Rejection Code: OK.

Jacobson, R. M. and Thriugnanam, M. (1990). New Selective Systemic Aphicides. *In: D.R.Baker, J.G.Fenyes, and W.K.Moberg (Eds.), ACS (Am.Chem.Soc) Symp.Ser.No.443, Chapter 26, Synthesis and Chemistry of Agrichemicals, Washington, D.C.* 322-339.

EcoReference No.: 74350
Chemical of Concern:
PIM,CPY,DMT,ACP,PPHD,FNV,PHSL,MOM,ADC,MLN,DEM,DS,OML,AZ,ES; Habitat: T; Rejection Code: OK TARGET(DMT,MLN).

James, D. G. and Rayner, M. (1995). Toxicity of Viticultural Pesticides to the Predatory Mites Amblyseius victoriensis and Typhlodromus doreenae. *Plant Prot.Q.* 10: 99-102.

EcoReference No.: 67984
Chemical of Concern:
CaPS,BMY,CBD,CTN,MZB,FRM,IPD,MLX,Cu,PCZ,TDM,VCZ,Zineb,Ziram,CuOH,AZ,CBL,CPY,DZ,DMT,ES,MLN,MDT,DCF; Habitat: T; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(CaPS),OK(ALL CHEMS).

Jensen, L. D. and Gaufin, A. R. (1966). Acute and Long-Term Effects of Organic Insecticides on Two Species of Stonefly Naiads. *J.Water Pollut.Control.Fed.* 38: 1273-1286.

EcoReference No.: 604
Chemical of Concern: AZ,EN,DLD,AND; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED (AZ).

Jensen, L. D. and Gaufin, A. R. (1964). Effects of Ten Organic Insecticides on Two Species of Stonefly

Naiads. *Trans.Am.Fish.Soc.* 93: 27-34.

EcoReference No.: 2667
Chemical of Concern: AND,AZ,DLD,PRN,DDT,MLN; Habitat: A; Effect Codes: MOR,BEH; Rejection Code: LITE EVAL CODED(AZ),OK(ALL CHEMS).

Katz, M. (1961). Acute Toxicity of some Organic Insecticides to Three Species of Salmonids and to the Threespine Stickleback. *Trans.Am.Fish.Soc.* 90: 264-268.

EcoReference No.: 522
Chemical of Concern: AZ,CBL,CMPH,HCCH,MLN,TXP,AND,DLD,DDT,MXC,HPT,CHD,EN; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ).

Key, P. B., Fulton, M. H., Layman, S. L., and Scott, G. I. (1998). Azinphosmethyl Exposure to Grass Shrimp (Palaemonetes pugio) Life Stages with Emphasis on Larval Acetylcholinesterase Activity. *Bull.Environ.Contam.Toxicol.* 60: 645-650.

EcoReference No.: 18739
Chemical of Concern: AZ; Habitat: A; Effect Codes: MOR,BCM; Rejection Code: LITE EVAL CODED(AZ).

Knight, A. L. and Hull, L. A. (1992). Linking Insecticide Bioassays with Residue Analyses to Evaluate Control of Platynota idaeusalis (Lepidoptera: Tortricidae) Neonates on Apple: Single Spray. *J.Econ.Entomol.* 85: 926-931.

EcoReference No.: 73712
User Define 2: WASH,CORE
Chemical of Concern: MOM,AZ,CYP,MP; Habitat: T; Effect Codes: ACC,MOR; Rejection Code: LITE EVAL CODED(MOM).

Knight, A. L. and Hull, L. A. (1992). Linking Insecticide Bioassays with Residue Analyses to Evaluate Control of Platynota idaeusalis (Lepidoptera: Tortricidae) Neonates on Apple: Seasonal Spray Program. *J.Econ.Entomol.* 85: 932-938.

EcoReference No.: 74134
Chemical of Concern: MOM,AZ,CPY,MP; Habitat: T; Effect Codes: ACC,MOR,PHY; Rejection Code: LITE EVAL CODED(AZ,MOM),OK(ALL CHEMS).

Knight, A. L. and Hull, L. A. (1989). Response of Tufted Apple Bud Moth (Lepidoptera: Tortricidae) Neonates to Selected Insecticides. *J.Econ.Entomol.* 82: 1027-1032.

EcoReference No.: 74117
User Define 2: WASHT
Chemical of Concern: FNV,MOM,CPY,MP,AZ,TDC,PSM,PHSL; Habitat: T; Effect Codes: MOR; Rejection Code: OK .

Kristoff, G., Guerrero, N. V., De D'Angelo, A. M. P., and Cochon, A. C. (2006). Inhibition of Cholinesterase Activity by Azinphos-Methyl in Two Freshwater Invertebrates: Biomphalaria glabrata and Lumbriculus variegatus. *Toxicology* 222: 185-194.

EcoReference No.: 87448
Chemical of Concern: AZ; Habitat: A; Effect Codes: PHY,BEH; Rejection Code: LITE EVAL CODED(AZ).

Lagnaoui, A., Connelly, M. S., Longtine, C. A., Flanders, K. L., and Radcliffe, E. B. (1992). Control of Colorado Potato Beetle and Potato Leafhopper, 1991. *In: A.K.Burditt,Jr.(Ed.), Insecticide and*

Acaricide Tests, Volume 17, Entomol.Soc.of Am., Lanham, MD 128-130.

EcoReference No.: 79768
Chemical of Concern: AZD,CBF,EFV,ES,AZ,MP; Habitat: T; Effect Codes: POP; Rejection Code: LITE EVAL CODED(AZ,EFV),OK(ALL CHEMS).

Landrum, P. F., Fisher, S. W., Hwang, H., and Hickey, J. (1999). Hazard Evaluation of Ten Organophosphorus Insecticides Against the Midge, Chironomus riparius via QSAR. *SAR QSAR Environ.Res.* 10: 423-450.

EcoReference No.: 67687
Chemical of Concern: FNF,TBO,CMPH,DCTP,FNTH,AZ,CPY,DZ,DS; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(DZ),OK(ALL CHEMS).

Lari, L., Massi, A., Fossi, M. C., Casini, S., Leonzio, C., and Focardi, S. (1994). Evaluation of Toxic Effects of the Organophosphorus Insecticide Azinphos-Methyl in Experimentally and Naturally Exposed Birds. *Arch.Environ.Contam.Toxicol.* 26: 234-239.

EcoReference No.: 39611
Chemical of Concern: AZ; Habitat: T; Effect Codes: POP,PHY; Rejection Code: LITE EVAL CODED(AZ).

Lauth, J. R., Scott, G. I., Cherry, D. S., and Buikema, A. L. Jr. (1996). A Modular Estuarine Mesocosm. *Environ.Toxicol.Chem.* 15: 630-637.

EcoReference No.: 16725
Chemical of Concern: AZ; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ).

Le, D. P., Thirugnanam, M., Lidert, Z., Carlson, G. R., and Ryan, J. B. (1996). RH-2485: A New Selective Insecticide for Caterpillar Control. *In:Proc.Int.Conf.held at Farnham, Surrey: Br.Crop Prot.Conf.* 2 : 481-486.

EcoReference No.: 82537
Chemical of Concern: MFZ,CBL,FNV,EFV,CPY,MP,AZ; Habitat: T; Effect Codes: MOR,POP,PHY; Rejection Code: LITE EVAL CODED(MFZ),OK(ALL CHEMS) .

Lydy, M. J. and Austin, K. R. (2005). Toxicity Assessment of Pesticide Mixtures Typical of the Sacramento-San Joaquin Delta Using Chironomus tentans. *Arch.Environ.Contam.Toxicol.* 48: 49-55.

EcoReference No.: 79402
Chemical of Concern: HXZ,MDT,SZ,DU,DZ,DDT,CZE,AZ,CPY; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ,DZ,SZ),OK(ALL CHEMS).

Macek, K. J. and McAllister, W. A. (1970). Insecticide Susceptibility of Some Common Fish Family Representatives. *Trans.Am.Fish.Soc.* 99: 20-27 (Publ in Part As 6797).

EcoReference No.: 610
Chemical of Concern: AZ,CBL,HCCH,MLN,MP,TXP; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED (AZ), OK(ALL CHEMS).

Malone, C. R. and Blaylock, B. G. (1970). Toxicity of Insecticide Formulations to Carp Embryos Reared In Vitro. *J.Wildl.Manag.* 34: 460-463.

EcoReference No.: 9629

Chemical of Concern: AZ,DZ,DDT,CHD,EN; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ),NO ENDPOINT(DZ),OK(DDT,CHD,EN).

Martinez, D. G. and Pienkowski, R. L. (1983). Comparative Toxicities of Several Insecticides to an Insect Predator, a Nonpest Prey Species, and a Pest Prey Species. *J.Econ.Entomol.* 76: 933-935.

EcoReference No.: 37837
Chemical of Concern: MDT,AZ,CBF,MOM,CBL,MLN; Habitat: T; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ,CBF,MOM),TARGET(MLN),OK(MDT,CBL).

Matida, Y. and Kawasaki, N. (1958). Study on the Toxicity of Agricultural Control Chemicals in Relation to Freshwater Fisheries Management No. 2. Toxicity of Agricultulural Insecticides. *Bull.Freshwater Fish Res.Lab.(Kenkyusho Kenkyu Hokoku)* 8: 1-6.

EcoReference No.: 14767
Chemical of Concern: DDT,AND,DDVP,DZ,EPRN,HCCH,MLN,DLD,EN,HPT,TCF,AZ; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(DZ),OK(ALL CHEMS).

Matz, A. C., Bennett, R. S., and Landis, W. G. (1998). Effects of Azinphos-Methyl on Northern Bobwhite: A Comparison of Laboratory and Field Results. *Environ.Toxicol.Chem.* 17: 1364-1370.

EcoReference No.: 52007
Chemical of Concern: AZ; Habitat: T; Effect Codes: MOR,PHY,GRO; Rejection Code: LITE EVAL CODED(AZ).

Mayer, F. L. J. and Ellersieck, M. R. (1986). Manual of Acute Toxicity: Interpretation and Data Base for 410 Chemicals and 66 Species of Freshwater Animals. *Resour.Publ.No.160, U.S.Dep.Interior, Fish Wildl.Serv., Washington, DC* 505 p. (USGS Data File).

EcoReference No.: 6797
User Define 2: REPS,WASH,CALF,CORE,SENT
Chemical of Concern:
EDT,RSM,SZ,24DXY,ACP,ACR,ADC,ATZ,AZ,BS,Captan,CBF,CBL,CMPH,CPY,Cu,CuS,DBN,DFZ,DMB,DMT,DOD,DPDP,DS,DU,DZ,FO,GYP,HCCH,HXZ,LNR,MBZ,MDT,MLN,MLT,MOM,MP,MTL,Naled,OYZ,PEB,PAQT,PRT,PSM,Folpet,PYN,CYT,DMM,EFS,NAA,NTP,PMR,PPB,TFN,WFN,RTN; Habitat: A; Effect Codes: MOR,PHY; Rejection Code: LITE EVAL CODED(MTL,MLT,CBF,ADC,MOM,PPB,SZ,DMT,WFN),OK(ALL CHEMS).

Mayer, F. L. Jr. and Ellersieck, M. R. (1986). Manual of Acute Toxicity: Interpretation and Data Base for 410 Chemicals and 66 Species of Freshwater Animals. *Resour.Publ.No.160, U.S.Dep.Interior, Fish Wildl.Serv., Washington, DC* 505 p. (USGS Data File).

EcoReference No.: 6797
Chemical of Concern:
EDT,RSM,SZ,24DXY,ACP,ACR,ADC,ATM,ATN,ATZ,AZ,BS,CaPS,Captan,CBF,CBL,CMPH,CQTC,CPY,CuS,DBN,DFZ,DMB,DMT,DOD,DPDP,DS,DU,DZ,FO,GYP,HCCH,HXZ,IGS,LNR,MBZ,MCPB,MDT,MLN,MLT,MOM,MP,MTL,NaN3,Naled,OYZ,PCP,PEB,PAQT,PRT,PSM,Folpet,PYN,CYT,DMM,EFS,NAA,NTP,PMR,PPB,TFN,WFN,RSM,RTN,ALSV,Se,DBAC; Habitat: A; Effect Codes: MOR,PHY; Rejection Code: LITE EVAL CODED(ATZ,MTL,MLT,CBF,ADC,MOM,PPB,SZ,DMT,WFN,RTN,CuS,DOD,NaN3,DMB,RSM,CaPS,MCPB, NaPCP,PCP,AMSV,ALSV,PRT,ATM,CQTC,ATN,DBAC),OK(ALL CHEMS).

Mayer, F. L. Jr. and Ellersieck, M. R. (1986). Manual of Acute Toxicity: Interpretation and Data Base for 410 Chemicals and 66 Species of Freshwater Animals. *Resour.Publ.No.160, U.S.Dep.Interior, Fish Wildl.Serv., Washington, DC* 505 p. (USGS Data File).

EcoReference No.: 6797
Chemical of Concern:
EDT,RSM,SZ,24DXY,ACP,ACR,ADC,ATM,ATN,ATZ,AZ,BS,CaPS,Captan,CBF,CBL,CMPH,
CQTC,CPY,CuS,DBN,DFZ,DMB,DMT,DOD,DPDP,DS,DU,DZ,FO,GYP,HCCH,HXZ,LNR,MB
Z,MCPB,MDT,MLN,MLT,MOM,MP,MTL,NaN3,Naled,OYZ,PCP,PEB,PAQT,PRT,PSM,Folpet
,PYN,CYT,DMM,EFS,NAA,NTP,PMR,PPB,TFN,WFN,RSM,RTN,ALSV,Se,DBAC; Habitat:
A; Effect Codes: MOR,PHY; Rejection Code: LITE EVAL
CODED(MTL,MLT,CBF,ADC,MOM,PPB,SZ,DMT,WFN,RTN,CuS,DOD,NaN3,DMB,RSM,Ca
PS,MCPB, NaPCP.

Mayer, F. L. Jr. and Ellersieck, M. R. (1986). Manual of Acute Toxicity: Interpretation and Data Base for 410 Chemicals and 66 Species of Freshwater Animals. *Resour.Publ.No.160, U.S.Dep.Interior, Fish Wildl.Serv., Washington, DC* 505 p. (USGS Data File).

EcoReference No.: 6797
Chemical of Concern:
EDT,RSM,SZ,24DXY,ACP,ACR,ADC,ATM,ATN,ATZ,AZ,BS,CaPS,Captan,CBF,CBL,CMPH,
CQTC,CPY,CuS,DBN,DFZ,DMB,DMT,DOD,DPDP,DS,DU,DZ,FO,GYP,HCCH,HXZ,IGS,LNR
,MBZ,MCPB,MDT,MLN,MLT,MOM,MP,MTL,NaN3,Naled,OYZ,PCP,PEB,PAQT,PRT,PSM,F
olpet,PYN,CYT,DMM,EFS,NAA,NTP,PMR,PPB,TFN,WFN,RSM,RTN,ALSV,Se,DBAC;
Habitat: A; Effect Codes: MOR,PHY; Rejection Code: LITE EVAL
CODED(IGS,ATZ,MTL,MLT,CBF,ADC,MOM,PPB,SZ,DMT,WFN,RTN,CuS,DOD,NaN3,DM
B,RSM,CaPS,MCPB, NaPCP,PCP,AMSV,ALSV,PRT,ATM,CQTC,ATN,DBAC),OK(ALL
CHEMS).

Mayer, F. L. Jr. and Ellersieck, M. R. (1986). Manual of Acute Toxicity: Interpretation and Data Base for 410 Chemicals and 66 Species of Freshwater Animals. *Resour.Publ.No.160, U.S.Dep.Interior, Fish Wildl.Serv., Washington, DC* 505 p. (USGS Data File).

EcoReference No.: 6797
Chemical of Concern:
EDT,RSM,SZ,24DXY,ACP,ACR,ADC,ATM,ATN,ATZ,AZ,BS,CaPS,Captan,CBF,CBL,CMPH,
CQTC,CPY,CuS,DBN,DFZ,DMB,DMT,DOD,DPDP,DS,DU,DZ,FO,GYP,HCCH,HXZ,IGS,LNR
,MBZ,MCPB,MDT,MLN,MLT,MOM,MP,MTL,NaN3,Naled,OYZ,PCP,PEB,PAQT,PRT,PSM,F
olpet,PYN,CYT,DMM,EFS,NAA,NTP,PMR,PPB,TFN,WFN,RSM,RTN,ALSV,Se,DBAC,Zn,As,
MTPN,DCB,MTAS; Habitat: A; Effect Codes: MOR,PHY; Rejection Code: LITE EVAL
CODED(AZ,MTPN,DCB,DZ,IGS,ATZ,MTL,MLT,CBF,ADC,MOM,PPB,SZ,DMT,WFN,RTN,
CuS, DOD,NaN3,DMB,RSM,CaPS,MCPB,
NaPCP,PCP,AMSV,ALSV,PRT,ATM,CQTC,ATN,DBAC),OK(ALL CHEMS).

McDonald, S. (1967). Oral Toxicity of 23 Insecticides to Grasshoppers in the Laboratory and the Influence of Species, Pretreatment, and Geographical Distribution. *J.Econ.Entomol.* 60: 844-849.

EcoReference No.: 71105
User Define 2: WASHT,CALFT
Chemical of Concern: ALD,DLD,HPT,EN,CHD,MP,Naled,DMT,AZ,MLN,CBL; Habitat: T;
Effect Codes: MOR; Rejection Code: OK(ALL CHEMS),OK TARGET(DMT,MLN).

Meyers, S. M. and Wolff, J. O. (1994). Comparative Toxicity of Azinphos-Methyl to House Mice, Laboratory Mice, Deer Mice, and Gray-Tailed Voles. *Arch.Environ.Contam.Toxicol.* 26: 478-482.

EcoReference No.: 40206
Chemical of Concern: AZ; Habitat: T; Effect Codes: MOR,BEH,GRO,PHY; Rejection Code:
LITE EVAL CODED(AZ).

Mobay Chemical Corporation (1978). Acute Toxicity of Guthion 2S to Bluegill and Rainbow Trout. *Mobay Chemical Corporation, Rep.No.66046, Chemagro Agricultural Division, Kansas City, MO* 1-5.

EcoReference No.: 19559
Chemical of Concern: AZ; Habitat: A; Effect Codes: MOR,BEH; Rejection Code: LITE EVAL CODED(AZ).

Moore, D. W. (1988). An Integrated Laboratory and Field Study of Nonpoint Source Agricultural Insecticide Runoff and Its Effects on the Grass Shrimp, Palaemonetes pugio (Holthius). *Ph.D Thesis, Univ.of South Carolina: 323 p., Diss.Abstr.Int.B Sci.Eng.1989* 50: 482-483.

EcoReference No.: 8613
Chemical of Concern: AZ,ES,FNV; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ)OK(ALL CHEMS).

Moore, D. W., Schluchter, M. D., and Scott, G. I. (1990). Use of Hazard Models in Evaluating the Effect of Exposure Duration on the Acute Toxicity of Three Pesticides. *In: W.G.Landis and W.H.Van der Schalie (Eds.), Aquatic Toxicology and Risk Assessment, 13th Volume, ASTM STP 1096, Philadelphia, PA* 247-263.

EcoReference No.: 18932
Chemical of Concern: FNV,ES,AZ; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ),OK(ALL CHEMS).

Morton, M. G., Mayer, F. L. Jr., Dickson, K. L., Waller, W. T., and Moore, J. C. (1997). Acute and Chronic Toxicity of Azinphos-Methyl to Two Estuarine Species, Mysidopsis bahia and Cyprinodon variegatus. *Arch.Environ.Contam.Toxicol.* 32: 436-441.

EcoReference No.: 18410
Chemical of Concern: AZ; Habitat: A; Effect Codes: MOR,REP,GRO; Rejection Code: LITE EVAL CODED(AZ).

Mulla, M. S., Amant, J. St, and Anderson, L. D. (1967). Evaluation of Organic Pesticides for Possible Use As Fish Toxicants. *Prog.Fish-Cult.* 29: 36-42.

EcoReference No.: 2131
Chemical of Concern: AZ; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ).

Murphy, S. D., Lauwerys, R. R., and Cheever, K. L. (1968). Comparative Anticholinesterase Action of Organophosphorus Insecticides in Vertebrates. *Toxicol.Appl.Pharmacol.* 12: 22-35.

EcoReference No.: 2669
Chemical of Concern: AZ,MLN,PRN; Habitat: AT; Effect Codes: MOR,BCM; Rejection Code: LITE EVAL CODED(MLN,PRN,AZ).

Murphy, S. D. and Porter, S. (1966). Effects of Toxic Chemicals on Some Adaptive Liver Enzymes, Liver Glycogen, and Blood Glucose in Fasted Rats. *Biochem.Pharmacol.* 15: 1665-1676.

EcoReference No.: 87635
Chemical of Concern: AZ,ACL; Habitat: T; Effect Codes: BCM,PHY; Rejection Code: LITE EVAL CODED(AZ),OK(ALL CHEMS).

Naqvi, S. M. and Ferguson, D. E. (1970). Levels of Insecticide Resistance in Fresh-Water Shrimp, Palaemonetes kadiakensis. *Trans.Am.Fish.Soc.* 99: 696-699.

EcoReference No.: 2665
Chemical of Concern: AZ,CBL,HCCH,DDT,EN,CHD,PRN,HPT,TXP,MO; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ),OK(ALL CHEMS).

Naqvi, S. M. and Ferguson, D. E. (1968). Pesticide Tolerances of Selected Freshwater Invertebrates. *J.Miss.Acad.Sci.* 14: 121-127.

EcoReference No.: 2093
Chemical of Concern: AZ,CBL,CPY,HCCH,MLN,MP,DZ; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ,DZ),OK(ALL CHEMS).

Nebeker, A. V. and Gaufin, A. R. (1964). Bioassays to Determine Pesticide Toxicity to the Amphipod Crustacean, Gammarus lacustris. *Proc.Utah Acad.Sci.* 4: 64-67.

EcoReference No.: 2094
Chemical of Concern: EDT,AZ,DS,MLN,RTN,EN,DLD,PRN,DDT,AND,Cu; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ,RTN,OW-TRV-Cu),OK(ALL CHEMS).

Nebeker, A. V., Schuytema, G. S., Griffis, W. L., and Cataldo, A. (1998). Impact of Guthion on Survival and Growth of the Frog Pseudacris regilla and the Salamanders Ambystoma gracile and Ambystoma maculatum. *Arch.Environ.Contam.Toxicol.* 35: 48-51.

EcoReference No.: 19308
Chemical of Concern: AZ; Habitat: A; Effect Codes: GRO,MOR; Rejection Code: LITE EVAL CODED(AZ).

Nord, J. C. (1990). Toxicities of Insecticide Residues on Loblolly Pine Foliage to Leaffooted Pine Seed Bug Adults (Heteroptera: Coreidae). *J.Entomol.Sci.* 25: 3-9.

EcoReference No.: 64390
Chemical of Concern: MOM,FNV,DM,AZ,PRM,PSM,FNT,PPX,TCF,MLN,CPYM,CPY,DMT; Habitat: T; Effect Codes: MOR; Rejection Code: OK TARGET(DMT,MLN) .

Oruc, E. O. and Uner, N. (2000). Combined Effects of 2,4-D and Azinphosmethyl on Antioxidant Enzymes and Lipid Peroxidation in Liver of Oreochromis niloticus. *Comp.Biochem.Physiol.C* 127: 291-296.

EcoReference No.: 60050
Chemical of Concern: 24DXY,AZ; Habitat: A; Effect Codes: PHY; Rejection Code: LITE EVAL CODED (AZ),OK(ALL CHEMS).

Oruc, E. O. and Uner, N. (1998). Effects of Azinphosmethyl on Some Biochemical Parameters in Blood, Muscle, and Liver Tissues of Cyprinus carpio (L.). *Pestic.Biochem.Physiol.* 62: 65-71.

EcoReference No.: 87449
Chemical of Concern: AZ; Habitat: A; Effect Codes: PHY,BCM; Rejection Code: LITE EVAL CODED(AZ).

Oruc, E. O., Uner, N., and Tamer, L. (2002). Comparison of Na+K+-ATPase Activities and Malondialdehyde Contents in Liver Tissue for Three Fish Species Exposed to Azinphosmethyl. *Bull.Environ.Contam.Toxicol.* 69: 271-277.

EcoReference No.: 65867
Chemical of Concern: AZ; Habitat: A; Effect Codes: PHY,MOR; Rejection Code: LITE EVAL

CODED(AZ).

Oteifa, B. A., Mousa, A. H., Abou-El-Hassan, A. A., Mohamed, A. M., and El-Emam, M. A. (1975). Effect of Certain Insecticides in the Control of the Fresh Water Snails, Biomphalaria alexandrina and Bulinus truncatus. *Egypt.J.Bilharz.* 2: 221-242.

EcoReference No.: 66106
Chemical of Concern: DCTP,HCCH,MP,DMT,AZ,FNTH,PHSL,NP,NSM,DDT,EN; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED (AZ),OK(ALL CHEMS).

Ozmen, M., Dominguez, S. E., and Fairbrother, A. (1998). Effects of Dietary Azinphos Methyl on Selected Plasma and Tissue Biomarkers of the Gray-Tailed Vole. *Bull.Environ.Contam.Toxicol.* 60: 194-201.

EcoReference No.: 52910
Chemical of Concern: AZ; Habitat: T; Effect Codes: PHY,BEH,GRO,MOR,BCM; Rejection Code: LITE EVAL CODED(AZ).

Ozmen, M., Sener, S., Mete, A., and Kucukbay, H. (1999). In Vitro and In Vivo Acetylcholinesterase-Inhibiting Effect of New Classes of Organophosphorus Compounds. *Environ.Toxicol.Chem.* 18: 241-246.

EcoReference No.: 15315
Chemical of Concern: AZ,CdCl; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ).

Pantani, C., Pannunzio, G., De Cristofaro, M., Novelli, A. A., and Salvatori, M. (1997). Comparative Acute Toxicity of Some Pesticides, Metals, and Surfactants to Gammarus italicus Goedm. and Echinogammarus tibaldii Pink. and Stock. *Bull.Environ.Contam.Toxicol.* 59: 963-967.

EcoReference No.: 18621
Chemical of Concern: ACR,ATZ,AZ,CBF,CBL,DMT,FMP,HCCH,MLT,MOM,MP,Cd,ADC,DDT,MXC,OML,TBC,CuCl,Cr,PPX,Zn,Hg; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(MLT,CBF,ADC,MOM,DMT,CuCl),OK(ALL CHEMS).

Pantani, C., Pannunzio, G., De Cristofaro, M., Novelli, A. A., and Salvatori, M. (1997). Comparative Acute Toxicity of Some Pesticides, Metals, and Surfactants to Gammarus italicus Goedm. and Echinogammarus tibaldii Pink. and Stock (Crustacea: Amphipoda). *Bull.Environ.Contam.Toxicol.* 59: 963-967.

EcoReference No.: 18621
Chemical of Concern: CBF,ADC,DDT,MP,MXC,FMP,HCCH,DMT,AZ,PPX,OML,TBC,MOM,CBL,ACR,ATZ,MLT,CD,Zn,CuCl,Hg,Cr; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ,ATZ,MLT,CBF,ADC,MOM,DMT,CuCl),OK(ALL CHEMS).

Pasquet, J., Mazuret, A., Fournel, J., and Koenig, F. H. (1976). Acute Oral and Percutaneous Toxicity of Phosalone in the Rat, in Comparison with Azinphosmethyl and Parathion. *Toxicol.Appl.Pharmacol.* 37: 85-92.

EcoReference No.: 38256
Chemical of Concern: PHSL,AZ,PRN; Habitat: T; Effect Codes: MOR,PHY; Rejection Code: LITE EVAL CODED(AZ),OK(ALL CHEMS).

Portmann, J. E. (1972). 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).

EcoReference No.: 9258
Chemical of Concern:
Maneb,Zn,NYP,Fe,Cr,Cu,ACY,MLN,FML,SZ,DDT,PL,PRN,MCRE,HCCH,ATZ,DLD,PAQT,AZ,Hg,DQT,Br,ES,Ni; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ,ATZ,SZ,Cu,Cr),OK(ALL CHEMS).

Portmann, J. E. and Wilson, K. W. (1971). The Toxicity of 140 Substances to the Brown Shrimp and Other Marine Animals. *Shellfish Information Leaflet No.22 (2nd Ed.), Ministry of Agric.Fish.Food, Fish.Lab.Burnham-on-Crouch, Essex, and Fish Exp.Station Conway, North Wales* 12 p.

EcoReference No.: 906
Chemical of Concern:
SZ,24DXY,ATZ,AZ,DBN,DMT,MLN,CuS,CrAC,SFL,HgCl2,NYP,Cd,Pb,Maneb,DDT,FML,PRN,EPRN,DLD,DPDP,PAQT,PL,ACY,ES,HCCH,MCRE,Tl; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ,ATZ,SZ,DMT,CuS,CrAC),OK(ALL CHEMS).

Roberts, B. L. and Dorough, H. W. (1984). Relative Toxicities of Chemicals to the Earthworm Eisenia foetida. *Environ.Toxicol.Chem.* 3: 67-78.

EcoReference No.: 40531
Chemical of Concern:
ACP,ADC,BMY,BNZ,Captan,CBD,CBF,CBL,Cd,CH3I,CPY,CTC,CuS,CYP,DCTP,DDT,DMM,DU,ES,FML,FNF,FNV,IDM,MBZ,MLN,MOM,NCTN,NHN,PAH,PAQT,Pb,PMR,PMSM,PPB,PPX,PRN,TFN,TPM,NaNO3,AZ,24DXY,NP,Du,AZ; Habitat: T; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ,ADC,NCTN,CBF,MOM,PPB,CuS,CYP)OK(ALL CHEMS).

Roberts, J. E., Chisholm, R. D., and Koblitsky, L. (1962). Persistence of Insecticides in Soil and Their Effects on Cotton in Georgia. *J.Econ.Entomol.* 55: 153-155 .

EcoReference No.: 41196
Chemical of Concern: HCCH,MLN,DDT,AZ; Habitat: T; Effect Codes: GRO; Rejection Code: LITE EVAL CODED(AZ),OK(ALL CHEMS).

Samsoe-Petersen, L. (1987). Laboratory Method for Testing Side-Effects of Pesticides on the Rove Beetle Aleochara bilineata - Adults. *Entomophaga* 32: 73-81.

EcoReference No.: 70278
Chemical of Concern: SZ,CBL,ACP,AMZ,AZ,DM,FNT,THM,MZB,BMC,CQTC; Habitat: T; Effect Codes: MOR,REP; Rejection Code: LITE EVAL CODED(SZ,CQTC),OK(ALL CHEMS).

Sanchez-Fortun, S., Sanz-Barrera, F., and Barahona-Gomariz, M. V. (1995). Acute Toxicities of Selected Insecticides to the Aquatic Arthropod Artemia salina. *Bull.Environ.Contam.Toxicol.* 54: 76-82.

EcoReference No.: 14997
Chemical of Concern: CMPH,AZ,DDVP,DDT,DLD,HCCH; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ),OK(ALL CHEMS).

Sanders, H. O. (1970). 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).

EcoReference No.: 2891

User Define 2: REPS,WASH,CALF,CORE,SENT
Chemical of Concern:
EDT,24DXY,AZ,HCCH,MLN,MLT,Naled,PAQT,PPB,TFN,TXP,AND,HPT,DLD,PRN,EN,DDT,MXC; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(MLT,PPB),OK(ALL CHEMS).

Sanders, H. O. (1969). Toxicity of Pesticides to the Crustacean Gammarus lacustris. *Tech.Pap.No.25, U.S.D.I., Bur.Sports Fish.Wildl., Fish Wildl.Serv., Washington, D.C.* 18 p. (Author Communication Used)(Used with Reference 732) (Publ in Part As 6797).

EcoReference No.: 885
Chemical of Concern:
SZ,EDT,24DXY,AZ,CBL,CMPH,CPY,DBN,DMB,DMT,DS,DU,DZ,HCCH,MLN,MLT,Naled,PAQT,PRT,TFN,RTN,NaN3,ATN; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ,DZ,MLT,SZ,DMT,RTN,NaN3,DMB,PRT,ATN),OK(ALL CHEMS).

Sanders, H. O. (1972). 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).

EcoReference No.: 887
Chemical of Concern: AZ,MLN,CBL,CMPH,CPY,DS,HCCH,MLN,Naled,PRT,PSM,ATN,DZ; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ,DZ,PRT,ATN),OK(ALL CHEMS).

Sanders, H. O. and Cope, O. B. (1968). The Relative Toxicities of Several Pesticides to Naiads of Three Species of Stoneflies. *Limnol.Oceanogr.* 13: 112-117 (Author Communication Used) (Publ in Part As 6797).

EcoReference No.: 889
Chemical of Concern:
24DXY,AZ,CBL,CPY,DBN,DMT,DS,DU,DZ,HCCH,MLN,MLT,Naled,PYN,TFN,RTN,As,NaN3; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(MLT,DMT,RTN,NaN3),OK(ALL CHEMS).

Sanders, H. O. and Cope, O. B. (1968). The Relative Toxicities of Several Pesticides to Naiads of Three Species of Stoneflies. *Limnol.Oceanogr.* 13: 112-117 (Author Communication Used) (Publ in Part As 6797).

EcoReference No.: 889
Chemical of Concern:
24DXY,AZ,CBL,CPY,DBN,DMT,DS,DU,DZ,HCCH,MLN,MLT,Naled,PYN,TFN,RTN,As,NaN3,ATN; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(DZ,MLT,DMT,RTN,NaN3,ATN),OK(ALL CHEMS).

Schuytema, G. S., Nebeker, A. V., and Griffis, W. L. (1995). Comparative Toxicity of Guthion and Guthion 2S to Xenopus laevis and Pseudacris regilla Tadpoles. *Bull.Environ.Contam.Toxicol.* 54: 382-388.

EcoReference No.: 14957
Chemical of Concern: AZ; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ).

Schuytema, G. S., Nebeker, A. V., and Griffis, W. L. (1994). Toxicity of Guthion and Guthion 2S to Xenopus laevis Embryos. *Arch.Environ.Contam.Toxicol.* 27: 250-255 .

EcoReference No.: 13686
Chemical of Concern: AZ; Habitat: A; Effect Codes: MOR,GRO; Rejection Code: LITE EVAL CODED(AZ).

Schwartz, A. and Capatos, D. (1990). An Evaluation of Chemicals for the Toxicity to Brown Snail (Helix aspersa Muller) on Grapevines. *S.Afr.J.Enol.Vitic.* 11: 55-58.

EcoReference No.: 77496
Chemical of Concern: CYP,ACYP,CuS,AZ,MAL; Habitat: T; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ),OK(CS,MAL,ACYP,CYP).

Scott, G. I., Fulton, M. H., Crosby, M. C., Key, P. B., Daugomah, J. W., Waldren, J. T., Strozier, E. D., Louden, C. J., Chandler, G. T., Bidleman, T. F., Jackson, K. L., Hampton, T. W., Huffman, T., Shylz, A., and Bradford, M. (1994). Agricultural Insecticide Runoff Effects on Estuarine Organisms: Correlating Laboratory and Filed Toxicity Tests, Ecophysiology Bioassays, and Ecotoxicological Biomonitoring. *EPA 600/R-94-004, U.S.EPA, Gulf Breeze, FL* 288 p.

EcoReference No.: 3726
Chemical of Concern: AZ,ES,FNV,MP; Habitat: A; Effect Codes: MOR,ACC,PHY; Rejection Code: LITE EVAL CODED(AZ),OK(ALL CHEMS),NO COC(ACP) .

Serrano, L., Miracle, M. R., and Serra, M. (1986). Differential Response of Brachionus plicatilis (Rotifera) Ecotypes to Various Insecticides. *J.Environ.Biol.* 7: 259-275.

EcoReference No.: 12646
Chemical of Concern: AZ,ES,TCF,MDT,FNT; Habitat: A; Effect Codes: MOR,GRO,REP; Rejection Code: LITE EVAL CODED(AZ).

Shearer, P. W. and Usmani, K. A. (2001). Sex-Related Response to Organophosphorus and Carbamate Insecticides in Adult Oriental Fruit Moth, Grapholita molesta. *Pest Manag.Sci.* 57: 822-826.

EcoReference No.: 64299
User Define 2: WASHT
Chemical of Concern: MOM,MLN,PRN,AZ; Habitat: T; Effect Codes: MOR; Rejection Code: OK.

Shoemaker, R. C. and Ihrke, C. A. (1983). Effects of Pesticides, Captan, Folpet, Guthion and Dichlorvos, on Recombination in Maize (Zea mays). *Environ.Exp.Bot.* 23: 45-52.

EcoReference No.: 25375
Chemical of Concern: Captan,Folpet,AZ,DDVP; Habitat: T; Effect Codes: CEL; Rejection Code: LITE EVAL CODED(AZ),OK(ALL CHEMS).

Sierszen, M. E. and Lozano, S. J. (1998). Zooplankton Population and Community Responses to the Pesticide Azinphos-Methyl in Freshwater Littoral Enclosures. *Environ.Toxicol.Chem.* 17: 907-914.

EcoReference No.: 19205
Chemical of Concern: AZ; Habitat: A; Effect Codes: POP; Rejection Code: LITE EVAL CODED(AZ).

Sklar, F. H. (1985). Crustacea (Procambarus clarkii) Response to an Organophosphate Diet. *Environ.Pollut.Ser.A* 39: 131-140.

EcoReference No.: 11654
Chemical of Concern: AZ; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL

CODED(AZ).

Smirle, M. J., Lowery, D. T., and Zurowski, C. L. (2002). Resistance and Cross-Resistance to Four Insecticides in Populations of Obliquebanded Leafroller (Lepidoptera: Tortricidae). *J.Econ.Entomol.* 95: 820-825.

EcoReference No.: 71293
Chemical of Concern: MFZ,IDC,TUZ,AZ; Habitat: T; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ,MFZ,IDC,TUZ),OK(ALL CHEMS)//PHASE II COMPLETE.

Solon, J. M. and Nair III, J. H. (1970). The Effect of a Sublethal Concentration of LAS on the Acute Toxicity of Various Phosphate Pesticides to the Fathead Minnow (Pimephales promelas Rafinesque). *Bull.Environ.Contam.Toxicol.* 5: 408-413 (Author Communication Used).

EcoReference No.: 605
Chemical of Concern: AZ,MP,PRN; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ),OK(ALL CHEMS).

Springborn Life Sciences Inc (1987). Acute Toxicity of Guthion 50 WP to Daphnids, Daphnia magna, Under Flow-Through Conditions. *Guideline Reference Number 72-2, Report #87-8-2466, Springborn Life Sciences, Inc., Wareham, MA* 33 p.

EcoReference No.: 19359
Chemical of Concern: AZ; Habitat: A; Effect Codes: MOR,BEH; Rejection Code: LITE EVAL CODED(AZ).

Springborn Life Sciences Inc (1987). Acute Toxicity of Technical Azinphos-Methyl (Trade Name Guthion) to Eastern Oysters (Crassostrea virginica) Under Flow-Through Conditions. *Guideline Ref.No.72-3, SLS Rep.No.87-11-2564, Springborn Life Sciences Inc., Wareham, MA* 32 p.

EcoReference No.: 19260
Chemical of Concern: AZ; Habitat: A; Effect Codes: GRO,MOR; Rejection Code: LITE EVAL CODED(AZ).

Springborn Life Sciences Inc (1988). Acute Toxicity of Technical Grade Azinphos-Methyl (Trade Name Guthion) to Mysid Shrimp (Mysidopsis bahia) Under Flow-Through Conditions. *Guideline Reference No.72-3, SLS Rep.No.#87-9-2513, Springborn Life Sciences, Inc., Wareham, MA* 1-55.

EcoReference No.: 19361
Chemical of Concern: AZ; Habitat: A; Effect Codes: MOR,BEH,PHY; Rejection Code: LITE EVAL CODED(AZ).

Springborn Life Sciences Inc (1988). Acute Toxicity of Technical Grade Azinphos-Methyl (Trade Name Guthion) to Sheepshead Minnow (Cyprinodon variegatus) Under Flow-Through Conditions. *Guideline Reference No.72-3, SLS Rep.No.#87-5-2504, Springborn Life Sciences, Inc., Wareham, MA* 22 p.

EcoReference No.: 19360
Chemical of Concern: AZ; Habitat: A; Effect Codes: MOR,BEH,PHY; Rejection Code: LITE EVAL CODED(AZ).

Springborn Life Sciences Inc (1988). The Toxicity of Technical Grade Azinphos-Methyl (Trade Name Guthion) to Rainbow Trout (Salmo gairdneri) Embryos and Larvae. *Guideline Ref.No.72-4, Rep.No.87-11-2561, Springborn Life Sciences Inc., Wareham, MA* 54 p.

EcoReference No.: 19259

Chemical of Concern: AZ; Habitat: A; Effect Codes: MOR,GRO,BEH; Rejection Code: LITE EVAL CODED(AZ).

Springett, J. A. and Gray, R. A. J. (1992). Effect of Repeated Low Doses of Biocides on the Earthworm Aporrectodea caliginosa in Laboratory Culture. *Soil Biol.Biochem.* 24: 1739-1744.

EcoReference No.: 87461
Chemical of Concern: Captan,AZ,GYP; Habitat: T; Effect Codes: GRO,MOR; Rejection Code: LITE EVAL CODED(AZ),OK(ALL CHEMS).

Stay, F. S. and Jarvinen, A. W. (1995). Use of Microcosm and Fish Toxicity Data to Select Mesocosm Treatment Concentrations. *Arch.Environ.Contam.Toxicol.* 28: 451-458 .

EcoReference No.: 14914
Chemical of Concern: AZ,EFV; Habitat: A; Effect Codes: POP,PRS,MOR; Rejection Code: LITE EVAL CODED(AZ,EFV),OK(ALL CHEMS).

Sultatos, L. G. and Woods, L. (1988). The Role of Glutathione in the Detoxification of the Insecticides Methyl Parathion and Azinphos-Methyl in the Mouse. *Toxicol.Appl.Pharmacol.* 96: 168-174.

EcoReference No.: 87619
Chemical of Concern: AZ,MP; Habitat: T; Effect Codes: MOR,BCM; Rejection Code: LITE EVAL CODED(AZ),OK(MP).

Tanner, D. K. and Knuth, M. L. (1995). Effects of Azinphos-Methyl on the Reproductive Success of the Bluegill Sunfish, Lepomis macrochirus, in Littoral Enclosures. *Ecotoxicol.Environ.Saf.* 32: 184-193.

EcoReference No.: 4918
Chemical of Concern: AZ; Habitat: A; Effect Codes: BEH,REP,MOR,GRO,POP; Rejection Code: LITE EVAL CODED(AZ).

Tillman, P. G. and Scott, W. (1997). Susceptibility of Cotesia marginiventris (Cresson) (Hymenoptera: Braconidae) to Field Rates of Selected Cotton Insecticides. *J.Entomol.Sci.* 32: 303-310.

EcoReference No.: 64166
Chemical of Concern: MOM,ACP,AZ,BFT,CYH,CYP,ES,EFV,FPN,MP,OML,PFF,TDC ;
Habitat: T; Effect Codes: MOR; Rejection Code: OK(MOM),TARGET(CYP).

Trimble, R. M. and Pree, D. J. (1987). Relative Toxicity of Six Insecticides to Male and Female Pholetesor ornigis (Weed) (Hymenoptera: Braconidae), a Parasite of the Spotted tentiform Leafminer, Phyllonorycter blancardella (Fabr.) (Lepidoptera: Gracillariidae). *Can.Entomol.* 119: 153-157.

EcoReference No.: 73594
User Define 2: WASHT,CORE
Chemical of Concern: MOM,PMR,FVT,DM,AZ,PSM; Habitat: T; Effect Codes: MOR; Rejection Code: OK.

Vaadeland, J. R., Longtine, C. A., Flanders, K. L., Lagnaoui, A., and Radcliffe, E. B. (1992). Control of Colorado Potato Beetle, Potato Leafhopper, and Green Peach Aphid, 1991. *In: A.K.Burditt,Jr.(Ed.), Insecticide and Acaricide Tests, Volume 17, Entomol.Soc.of Am., Lanham, MD* 147-150.

EcoReference No.: 79792
Chemical of Concern: AZD,EFV,CBF,ES,CYT,AZ; Habitat: T; Effect Codes: POP; Rejection Code: LITE EVAL CODED(AZ,EFV),OK(ALL CHEMS).

Van der Heever, J. A. and Grobbelaar, J. U. (1998). In Vivo Chlorophyll a Fluorescence of Selenastrum capricornutum as a Screening Bioassay in Toxicity Studies. *Arch.Environ.Contam.Toxicol.* 35: 281-286.

EcoReference No.: 19800
Chemical of Concern: ATZ,AZ,CuCl,PL,Hg,Cd; Habitat: A; Effect Codes: BCM; Rejection Code: LITE EVAL CODED(CuCl),OK(ALL CHEMS).

Van der Heever, J. A. and Grobbelaar, J. U. (1997). The Use of Oxygen Evolution to Assess the Short-Term Effects of Toxicants on Algal Photosynthetic Rates. *Water S.A.* 23: 233-237.

EcoReference No.: 19854
Chemical of Concern: ATZ,AZ,Cu,PL,Cd,Hg; Habitat: A; Effect Codes: PHY; Rejection Code: LITE EVAL CODED(AZ,ATZ,Cu),OK(ALL CHEMS).

Van der Heever, J. A. and Grobbelaar, J. U. (1996). The Use of Selenastrum capricornutum Growth Potential as a Measure of Toxicity of a Few Selected Compounds. *Water S.A.* 22: 183-191.

EcoReference No.: 18440
Chemical of Concern: ATZ,AZ,Cu; Habitat: A; Effect Codes: POP; Rejection Code: LITE EVAL CODED(Cu).

Van Dolah, R. F., Maier, P. P., Fulton, M. H., and Scott, G. I. (1997). Comparison of Azinphosmethyl Toxicity to Juvenile Red Drum (Sciaenops ocellatus) and the Mummmichog (Fundulus heteroclitus). *Environ.Toxicol.Chem.* 16: 1488-1493.

EcoReference No.: 18098
Chemical of Concern: AZ; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ).

Vigfusson, N. V., Vyse, E. R., Pernsteiner, C. A., and Dawson, R. J. (1983). In Vivo Induction of Sister-Chromatid Exchange in Umbra limi by the Insecticides Endrin, Chlordane, Diazinon and Guthion. *Mutat.Res.* 118: 61-68.

EcoReference No.: 11628
Chemical of Concern: AZ,DZ,EN,CHD; Habitat: A; Effect Codes: CEL; Rejection Code: LITE EVAL CODED(AZ,DZ),OK(ALL CHEMS).

Vos, J. G., Krajnc, E. I., Beekhof, P. K., and Van Logten, M. J. (1983). Methods for Testing Immune Effects of Toxic Chemicals: Evaluation of the Immunotoxicity of Various Pesticides in the Rat. *In: J.Miyamoto and P.C.Kearney (Eds.), Pesticide Chemistry: Human Welfare and the Environment, Volume 3, Pergamon Press, Oxford, England* 497-504.

EcoReference No.: 70803
Chemical of Concern: PNB,ATZ,DDT,EN,Pb,AZ,BMY,Captan,DU,ES,Zineb,HCB,TPTH; Habitat: T; Effect Codes: GRO,BCM,PHY,CEL; Rejection Code: LITE EVAL CODED(ATZ,AZ),OK(ALL CHEMS).

Wan, M. T., Watts, R. G., and Moul, D. J. (1994). Impact of Chemigation on Selected Non-Target Aquatic Organisms in Cranberry Bogs of British Columbia. *Bull.Environ.Contam.Toxicol.* 53: 828-835.

EcoReference No.: 13735
Chemical of Concern: AZ,PRN; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(AZ,PRN).

Weiss, C. M. (1961). Physiological Effect of Organic Phosphorus Insecticides on Several Species of Fish.

Trans.Am.Fish.Soc. 90: 143-152.

EcoReference No.: 2134
Chemical of Concern: PRN,CMPH,DS,AZ,DZ,MLN; Habitat: A; Effect Codes: MOR,PHY; Rejection Code: LITE EVAL CODED(AZ,DZ),OK(ALL CHEMS).

Westlake, G. E., Hardy, A. R., and Stevenson, J. H. (1985). Effects of Storage and Pesticide Treatments on Honey Bee Brain Acetyl Cholinesterase Activities. *Bull.Environ.Contam.Toxicol.* 34: 668-675.

EcoReference No.: 35515
Chemical of Concern: CYP,PMR,DM,PHSL,AZ,CBL,DMT; Habitat: T; Effect Codes: BCM; Rejection Code: LITE EVAL CODED(AZ,DMT,CYP).

Wong, S. W. and Chapman, R. B. (1979). Toxicity of Synthetic Pyrethroid Insecticides to Predaceous Phytoseiid Mites and Their Prey. *Aust.J.Agric.Res.* 30: 497-501.

EcoReference No.: 71049
Chemical of Concern: CYP,AZ,PYT; Habitat: T; Effect Codes: MOR; Rejection Code: TARGET(CYP).

Wood, B. and Payne, J. (1984). Influence of Single Applications of Insecticides on Net Photosynthesis of Pecan. *Hortscience* 19: 265-266.

EcoReference No.: 44270
Chemical of Concern: PHSL,MOM,CBL,AZ,FNV,DMT; Habitat: T; Effect Codes: PHY; Rejection Code: LITE EVAL CODED(AZ,DMT,MOM),OK(PHSL,CBL,FNV).

Worden, A. N., Wheldon, G. H., Noel, P. R. B., and Mawdesley-Thomas, L. E. (1973). Toxicity of Gusathion for the Rat and Dog. *Toxicol.Appl.Pharmacol.* 24: 405-412.

EcoReference No.: 35528
Chemical of Concern: AZ; Habitat: T; Effect Codes: BCM; Rejection Code: LITE EVAL CODED(AZ).

Acceptable for ECOTOX but not OPP

Adema, D. M. M. and Henzen, L. (2001). De Invloed van 50 Prioritaire Stoffen op de Groei van Lactuca sativa (sla.). *TNO-Rapport No.21003, TNO, Delft, Netherlands (OECDG Data File).*

EcoReference No.: 56443
Chemical of Concern: AZ,PCP,NAPH,DCB; Habitat: T; Effect Codes: GRO,MOR; Rejection Code: NO FOREIGN.

Agnello, A. M., Spangler, S. M., Reissig, W. H., Lawson, D. S., and Weires, R. W. (1992). Seasonal Development and Management Strategies for Comstock Mealybug (Homoptera: Pseudococcidae) in New York Pear Orchards. *J.Econ.Entomol.* 85: 212-225 .

EcoReference No.: 73713
Chemical of Concern: MOM,CPY,CBL,MP,AZ,ES,RSM,EFV,MVP; Habitat: T; Effect Codes: POP,MOR; Rejection Code: OK(MOM),TARGET(RSM,EFV).

Ahmad, M., Hollingworth, R. M., and Wise, J. C. (2002). Broad-Spectrum Insecticide Resistance in Obliquebanded Leafroller _Choristoneura rosaceana_ (Lepidoptera: Tortricidae) from Michigan. *Pest Manag.Sci.* 58: 834-838.

EcoReference No.: 70966

Chemical of Concern:
IDC,CFP,EMMB,MFZ,TUZ,BFT,ZCYP,AZ,CPY,PSM,CYP,DM,EFV,ES,TDC,MOM,MZ,CBL,
SS; Habitat: T; Effect Codes: MOR; Rejection Code: OK(MOM),TARGET(CYP,BFT,EFV).

Allen, R. L. and Snipes, C. E. (1995). Interactions of Foliar Insecticides Applied with Pyrithiobac. *Weed Technol.* 9: 512-517.

EcoReference No.: 64055
Chemical of Concern: ACP,PTB,AZ,BFT,CPY,DCTP,EFV,MLN,MOM,OML,TDC; Habitat: T;
Effect Codes: PHY,GRO,POP; Rejection Code: LITE EVAL
CODED(EFV),OK(MLN,PTB),NO MIXTURE(ACP,AZ,BFT,CPY,DCTP,MOM,OML,TDC).

Babcock, J. M. and Tanigoshi, L. K. (1988). Resistance Levels of Typhlodromus occidentalis (Acari: Phytoseiidae) from Washington Apple Orchards to Ten Pesticides. *Exp.Appl.Acarol.* 4: 151-157.

EcoReference No.: 74105
Chemical of Concern: CHX,FTT,PPG,AZ,DZ,MOM,CBL,FNV,ES,MDT; Habitat: T; Effect
Codes: MOR; Rejection Code: TARGET(DZ).

Bellows, T. S. Jr. and Morse, J. G. (1993). Toxicity of Insecticides Used in Citrus to Aphytis Melinus debach (Hymenoptera: Aphelinidae) and Rhizobius lophanthae (Blaisd.) (Coleoptera: Coccinellidae). *Can.Entomol.* 125: 987-994.

EcoReference No.: 59334
Chemical of Concern: MOM,AZ,BFT,EFV,FPP,FVL,CBL,TDC,MVP,Naled,TCF; Habitat: T;
Effect Codes: MOR; Rejection Code: OK(MOM),TARGET(FVL,BFT,EFV).

Brunner, J. F., Beers, E. H., Dunley, J. E., Doerr, M., and Granger, K. (2005). Role of Neonicotinyl Insecticides in Washington Apple Integrated Pest Management. Part I. Control of Lepidopteran Pests. *J.Insect Sci.* 5: 1-10.

EcoReference No.: 83354
Chemical of Concern: AZ,PSM,ACT,EFV,TAP,TMX,IMC; Habitat: T; Effect Codes: POP;
Rejection Code: OK(ALL CHEMS),NO COC(NCTN).

Butler, P. A. (1963). Commercial Fisheries Investigatinons. *Circ.No.167, Fish Wildl.Serv., Washington, D.C.* 11-25.

EcoReference No.: 2188
Chemical of Concern:
AZ,CBL,DZ,HCCH,MLN,Naled,PSM,24DXY,DS,DU,PEB,Folpet,RTN,FBM,CHD,DEM,TXP,
MRX,ETN,DZ,AND,MCPA,HPT,DDT,DDVP,EN,CBL,MXC; Habitat: A; Effect Codes:
NOC,GRO,MOR,BEH,PHY; Rejection Code: NO CONTROL(ALL CHEMS).

Butler, P. A. (1963). Commercial Fisheries Investigations. *Circ.No.167, Fish Wildl.Serv., Washington, D.C.* 11-25.

EcoReference No.: 2188
Chemical of Concern:
AZ,CBL,DZ,HCCH,MLN,Naled,PSM,24DXY,DS,DU,PEB,Folpet,RTN,FBM,CHD,DEM,TXP,
MRX,ETN,DZ,AND,MCPA,HPT,DDT,DDVP,EN,CBL,MXC; Habitat: A; Effect Codes:
NOC,GRO,MOR,BEH,PHY; Rejection Code: NO CONTROL(ALL CHEMS).

Butler, P. A. (1964). Commercial Fishery Investigations. *In: Pesticide-Wildlife Studies, 1963.U.S.D.I Fish and Wildl.Serv.Circular 199* 28 p.(Author Communication Used).

EcoReference No.: 646
User Define 2: ECOTOX MED,WASH,CALF,CORE
Chemical of Concern:
AZ,DS,HCCH,MLN,MP,Naled,PRT,24DXY,CMPH,DMT,DU,PEB,PSM,NTP,TXP,CBL;
Habitat: A; Effect Codes: BEH,POP,MOR,GRO,ACC,SYS; Rejection Code: NO ENDPOINT(DMT).

De Maeyer, L., Schmidt, H. W., and Peeters, D. (2002). Envidor - A New Acaricide for IPM in Pomefruit Orchards. *Pflanzenschutz-Nachr.Bayer* 55: 211-236.

EcoReference No.: 75880
Chemical of Concern: SDF,AZ,AMZ,OMT,CYF,MFZ,TFY,FO; Habitat: T; Effect Codes: MOR,POP; Rejection Code: LITE EVAL CODED(SDF),OK(TFY),NO ENDPOINT(MFZ,OMT,AMZ),OK TARGET(CYF).

De Maeyer, L., Schmidt, H. W., and Peeters, D. (2002). Envidor - A New Acaricide for IPM in Pomefruit Orchards. *Pflanzenschutz-Nachr.Bayer* 55: 211-236.

EcoReference No.: 75880
Chemical of Concern: SDF,AZ,AMZ,OMT,CYF,MFZ,TFY,FO; Habitat: T; Effect Codes: MOR,POP; Rejection Code: LITE EVAL CODED(SDF),OK(TFY),NO ENDPOINT(MFZ,OMT,AMZ),OK TARGET(CYF).

Deneer, J. W., Budde, B. J., and Weijers, A. (1999). Variations in the Lethal Body Burdens of Organophosphorus Compounds in the Guppy. *Chemosphere* 38: 1671-1683.

EcoReference No.: 20106
Chemical of Concern: AZ,CPY,DZ,MDT,MP,PRN,FNT,FNTH; Habitat: A; Effect Codes: ACC; Rejection Code: NO CONTROL(ALL CHEMS).

Dive, D., Leclerc, H., and Persoone, G. (1980). Pesticide Toxicity on the Ciliate Protozoan Colpidium campylum: Possible Consequences of the Effect of Pesticides in the Aquatic Environment. *Ecotoxicol.Environ.Saf.* 4: 129-133 (Author Communication Used).

EcoReference No.: 5941
Chemical of Concern:
PNB,24DXY,AZ,CBL,DMT,HCCH,MLN,MP,THM,PCP,PCB,EPRN,MCPB,MCPA,AND,DDT, FNT,EN,ES,DLD; Habitat: A; Effect Codes: POP; Rejection Code: NO ENDPOINT(ALL CHEMS).

Duso, C. (1994). Comparison Between Field and Laboratory Testing Methods to Evaluate the Pesticide Side-Effects on the Predatory Mites Amblyseius andersoni and Typhlodromus pyri. *IOBC/WPRS Bull.* 17: 7-19.

EcoReference No.: 73145
Chemical of Concern: PRN,CBL,AZ,ACP,DM; Habitat: T; Effect Codes: POP; Rejection Code: TARGET(ACP,AZ,CBL).

Duso, C., Camporese, P., and Van der Geest, L. P. S. (1992). Toxicity of a Number of Pesticides to Strains of Typhlodromus pyri and Amblyseius andersoni (Acari: Phytoseiidae). *Entomophaga* 37: 363-372.

EcoReference No.: 73088
Chemical of Concern: PRN,CBL,ACP,AZ,CPY,MDT,MOM,DM,CPYM,FNT,TCF,CBL;
Habitat: T; Effect Codes: MOR,REP; Rejection Code: OK TARGET(ACP,AZ,CBL).

Easterbrook, M. A., Solomon, M. G., Cranham, J. E., and Souter, E. F. (1985). Trials of an Integrated Pest Management Programme Based on Selective Pesticides in English Apple Orchards. *Crop Prot.* 4: 215-230.

EcoReference No.: 76518
Chemical of Concern: DFZ,PIM,Captan,ES,CBL,AZ,CHX,CPY,PHSL,DOD; Habitat: T; Effect Codes: POP; Rejection Code: NO ENDPOINT,CONTROL(ALL CHEMS).

Hagley, E. A. C., Pree, D. J., Simpson, C. M., and Hikichi, A. (1981). Toxicity of Insecticides to Parasites of the Spotted Tentiform Leafminer (Lepidoptera: Gracillariidae). *Can.Entomol.* 113: 899-906.

EcoReference No.: 36955
Chemical of Concern: AZ,ES,PMR,FNV,CYP,MOM; Habitat: T; Effect Codes: MOR; Rejection Code: NO DURATION(LAB)(ALL CHEMS),MIXTURE,ENDPOINT(FIELD)(ALL CHEMS).

Harris, C. R. and Svec, H. J. (1970). Laboratory Studies on the Contact Toxicity of Some Insecticides to Honeybees. *Pestic.Prog.* 8: 25-28.

EcoReference No.: 70979
Chemical of Concern:
PRN,CBL,DLD,AND,DZ,EN,CHD,DDT,ES,HPT,MLN,MOM,CPY,CBF,Naled,AZ,DMT;
Habitat: T; Effect Codes: MOR; Rejection Code: NO ENDPOINT(ALL CHEMS).

Harris, C. R., Turnbull, S. A., and McLeod, D. G. R. (1985). Contact Toxicity of Twenty-One Insecticides to Adults of the Carrot Rust Fly (Diptera: Psilidae). *Can.Entomol.* 117: 1025-1027.

EcoReference No.: 72206
Chemical of Concern:
DZ,DDT,AND,PRN,CPY,PSM,PMR,Naled,MOM,MLN,DM,CYP,CBF,AZ,FNV,FNF,ACP,AN D,MVP; Habitat: T; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(CBF),OK(ALL CHEMS),OK TARGET(DZ,CYP,MLN).

Heinicke, D. R. and Foott, J. W. (1966). The Effect of Several Phosphate Insecticides on Photosynthesis of Red Delicious Apple Leaves. *Can.J.Plant Sci.* 46: 589-591 .

EcoReference No.: 42425
Chemical of Concern: DZ,AZ; Habitat: T; Effect Codes: PHY; Rejection Code: NO ENDPOINT,CONTROL(ALL CHEMS).

Helson, B. V., De Groot, P., Turgeon, J. J., and Kettela, E. G. (1989). Toxicity of Insecticides to First-Instar Larvae of the Spruce Budmoth, Zeiraphera canadensis Mut. and Free. (Lepidoptera: Tortricidae): Laboratory and Field Studies. *Can.Entomol.* 121: 81-91.

EcoReference No.: 73595
Chemical of Concern: MOM,ACP,AZ,CPY,FNT,PMR,SPS,TDC,TCF; Habitat: T; Effect Codes: MOR; Rejection Code: OK TARGET(ACP,AZ).

Hogmire, H. W., Brown, M. W., and Crim, V. L. (1990). Toxicity of Slide Dip Application of Five Insecticides to Apple Aphid and Spirea Aphid (Homoptera: Aphididae). *J.Entomol.Sci.* 25: 10-15.

EcoReference No.: 74108
Chemical of Concern: MOM,EFV,ES,AZ,CPY; Habitat: T; Effect Codes: MOR; Rejection Code: OK(MOM),TARGET(EFV).

Hulzebos, E. M., Dirven-Van Breemen, E. M., Van Dis, W. A., Van Gestel, C. A. N., and et al. (1989). Toxiciteit van het RIVM-Aandeel in Het Proj. Fytotoxiciteit 2. *RIVM Rapport Nr.718710002, RIVM, Netherlands (OECDG Data Files)*.

EcoReference No.: 56351
Chemical of Concern: AZ,HCCH,PCP,AMSV; Habitat: T; Effect Codes: GRO,REP,REP; Rejection Code: NO FOREIGN.

Jacobson, R. M. and Thriugnanam, M. (1990). New Selective Systemic Aphicides. *In: D.R.Baker, J.G.Fenyes, and W.K.Moberg (Eds.), ACS (Am.Chem.Soc) Symp.Ser.No.443, Chapter 26, Synthesis and Chemistry of Agrichemicals, Washington, D.C.* 322-339.

EcoReference No.: 74350
Chemical of Concern:
PIM,CPY,DMT,ACP,PPHD,FNV,PHSL,MOM,ADC,MLN,DEM,DS,OML,AZ,ES; Habitat: T; Rejection Code: OK TARGET(ADC,DMT,MLN,ACP,AZ).

James, D. G. and Rayner, M. (1995). Toxicity of Viticultural Pesticides to the Predatory Mites Amblyseius victoriensis and Typhlodromus doreenae. *Plant Prot.Q.* 10: 99-102.

EcoReference No.: 67984
Chemical of Concern:
CaPS,BMY,CBD,CTN,MZB,FRM,IPD,MLX,Cu,PCZ,TDM,VCZ,Zineb,Ziram,CuOH,AZ,CBL,CPY,DZ,DMT,ES,MLN,MDT,DCF; Habitat: T; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(CaPS),OK(ALL CHEMS),OK TARGET(DZ).

Johnson, J. W., Kriegel, R. D., and Wise, J. C. (1996). Grape Season-Long Broad-Spectrum Control, 1995. *In: A.K.Burditt,Jr.(Ed.), Arthropod Management Tests, Volume 21, Entomol.Soc.of Am., Lanham, MD* 63-64.

EcoReference No.: 77611
Chemical of Concern: TDF,CBL,AZ; Habitat: T; Effect Codes: POP; Rejection Code: OK(CBL,AZ),NO CONC(TDF).

Jokanovic, M. and Maksimovic, M. (1995). A Comparison of Trimedoxime, Obidoxime, Pralidoxime and HI-6 in the Treatment of Oral Organophosphorus Insecticide Poisoning in the Rat. *Arch.Toxicol.* 70: 119-123.

EcoReference No.: 74883
Chemical of Concern:
DMT,DDVP,FNT,PPHD,FNTH,TCF,PRIM,DZ,PRT,DEM,AZ,DPY,PSM,PHSL,MLN; Habitat: T; Effect Codes: MOR; Rejection Code: NO CONTROL(ALL CHEMS).

Jones, A. L. (1973). Phytotoxicity of Dodine and Azinphosmethyl to Cherry Fruit. *Plant Dis.Rep.* 57: 428-431.

EcoReference No.: 41727
Chemical of Concern: AZ,DOD; Habitat: T; Rejection Code: NO IN VITRO(ALL CHEMS).

Jones, K. H., Sanderson, D. M., and Noakes, D. N. (1968). Acute Toxicity Data for Pesticides (1968). *World Rev.Pest Control* 7: 135-143.

EcoReference No.: 70074
Chemical of Concern:
24DXY,ABT,ACL,ADC,AMTL,AMTR,AND,ASM,ATN,ATZ,AZ,BFL,BMC,BMN,BS,BTY,Captan,CBL,CCA,CHD,CMPH,CPP,CPY,CQTC,CTHM,Cu,CuFRA,DBN,DCB,DCNA,DDD,DDT,

DDVP,DEM,DINO,DLD,DMB,DMT,DOD,DPP1,DQTBr,DS,DU,DZ,DZM,EDT,EN,EP,EPTC,ES,ETN,FLAC,FMU,FNF,FNT,FNTH,Folpet,HCCH,HPT,LNR,Maneb,MCB,MCPA,MCPB,MCPP1MDT,MLH,MLN,MLT,MRX,MTM,MVP,MXC,Naled,NPM,PB,PCH,PCL,PCP,PEB,PHMD,PHSL,PMT,PPHD,PPN,PPX,PPZ,PQT,PRN,PRO,PRT,PYN,PYZ,RTN,SFT,SID,SZ,TCF,TFN,THM,TRB,TRL,TXP,VNT,Zineb; Habitat: T; Effect Codes: MOR; Rejection Code: NO PUBLAS(24DXY,ABT,ACL,AMTL,AMTR,ASM,ATN,AZ,BFL,BMC,BMN,BS,BTY,CCA,CMPH,CPP,CPY,CQTC,CTHM,DBN,DCB,DCNA,DDT,DINO,DOD,DPP1,DQTBr,DU,DZM,EP,EPTC,ES,FMU,FNF,FNT,Folpet,HCCH,HPT,LNR,MCB,MCPP1,MLT,MP,MRX,MTM,MXC,Naled,NPM,Pb,PCH,PCL,PEB,PHSL,PPN,PPZ,PQT,PRO,PYN,PYZ,RTN,RYA,SFT,SID,TFN,THM,TRL,VNT),NO CONTROL,DURATION(ALL CHEMS).

Khan, M. A. Q. (1977). Elimination of Pesticides by Aquatic Animals. *In: M.A.Q.Khan (Ed.), Pesticides in Aquatic Environments, Plenum Press, NY* 107-125.

EcoReference No.: 4929
Chemical of Concern:
24DXY,DZ,CPY,AZ,PRN,MXC,EDT,HPT,DDT,DLD,HCCH,CHD,SZ,MLN,As; Habitat: A; Effect Codes: ACC; Rejection Code: NO CONTROL(ALL CHEMS).

Knowles, C. O., Errampalli, D. D., and El-Sayed, G. N. (1988). Comparative Toxicities of Selected Pesticides to Bulb Mite (Acari: Acaridae) and Twospotted Spider Mite (Acari: Tetranychidae). *J.Econ.Entomol.* 81: 1586-1591.

EcoReference No.: 81104
Chemical of Concern: FNV,AZ,PFF,DZ,MP,DMT,CYF,BFT,ADC,MOM; Habitat: T; Effect Codes: MOR; Rejection Code: NO COC(DBAC),ENDPOINT(CYF),REVIEW(BFT),OK(FNV,AZ,PFF,MP,DMT,ADC,MOM),OK TARGET(DZ).

Lichtenstein, E. P. (1966). Increase of Persistence and Toxicity of Parathion and Diazinon in Soils with Detergents. *J.Econ.Entomol.* 59: 985-993.

EcoReference No.: 65456
Chemical of Concern: DZ,PRN,AND,AZ,HCCH; Habitat: T; Effect Codes: MOR; Rejection Code: NO ENDPOINT(ALL CHEMS).

Loeb, H. A. and Kelly, W. H. (1963). Acute Oral Toxicity of 1,496 Chemicals Force-fed to Carp. *U.S.Fish.Wildl.Serv., Sp.Sci.Rep.-Fish.No.471, Washington, D.C.* 124 p.

EcoReference No.: 15898
Chemical of Concern:
AZ,Captan,CBL,CMPH,HCCH,MLN,Naled,SZ,PNB,ACL,WFN,FUR,DPC,RTN,NaN3,PCP,NaPCP,AsAC,ACL,ATZ,Se,Zn,DZ; Habitat: A; Effect Codes: MOR,BEH; Rejection Code: NO CONTROL(ALL CHEMS).

Malone, C. R. and Blaylock, B. G. (1970). Toxicity of Insecticide Formulations to Carp Embryos Reared In Vitro. *J.Wildl.Manag.* 34: 460-463.

EcoReference No.: 9629
Chemical of Concern: AZ,DZ; Habitat: A; Effect Codes: MOR; Rejection Code: NO ENDPOINT(DZ).

Marking, L. L. and Mauck, W. L. (1975). Toxicity of Paired Mixtures of Candidate Forest Insecticides to Rainbow Trout. *Bull.Environ.Contam.Toxicol.* 13: 518-523.

EcoReference No.: 501

Chemical of Concern: AZ,PYN,RSM,TCF; Habitat: A; Effect Codes: MOR; Rejection Code: NO CONTROL(ALL CHEMS).

Menzie, C. (1983). Acute Toxicity of Some Organophosphorus Pesticides Against Fish and Aquatics: Sumithion. *U.S.EPA-OPP Registration Standard*.

EcoReference No.: 13003
Chemical of Concern: AZ,DMT,DZ,MLN,MP,FNTH,EPRN,DDVP,FNT; Habitat: A; Effect Codes: MOR; Rejection Code: NO DURATION(ALL CHEMS).

Meyers, S. P., Gambrell, R. P., and Day, J. W. Jr. (1982). Determination of the Environmental Impact of Several Substitute Chemicals in Agriculturally-Affected Wetlands. *EPA 600/4-82-052, U.S.EPA, Gulf Breeze, FL* 136 p.(U.S.NTIS PB82-242017).

Went to EPA for correction (,Jr.)//Has been corrected//
EcoReference No.: 4184
User Define 2: ECOTOX MED,WASH
Chemical of Concern: AZ,CBF,MP,TFN
Endpoint: POP ; Habitat: A; Rejection Code: NO ENDPOINT(CBF).

Mulla, M. S., Isaak, L. W., and Axelrod, H. (1963). Field Studies on the Effects of Insecticides on Some Aquatic Wildlife Species. *J.Econ.Entomol.* 56: 184-188.

EcoReference No.: 2090
Chemical of Concern: AZ,DZ,MP,Naled; Habitat: A; Effect Codes: MOR; Rejection Code: NO CONTROL(ALL CHEMS).

Mulla, M. S., Metcalf, R. L., and Isaak, L. W. (1962). Some New and Highly Effective Mosquito Larvicides. *Mosq.News* 22: 231-238.

EcoReference No.: 14106
Chemical of Concern: DMT,AZ,DZ,MLN,MP,PSM; Habitat: A; Effect Codes: POP; Rejection Code: NO ENDPOINT(ALL CHEMS).

Norland, R. L., Mulla, M. S., Pelsue, F. W., and Ikeshoji, T. (1974). Conventional and New Insecticides for the Control of Chironomid Midges. *Proc.Ann.Conf.Calif.Mosq.Control Assoc.* 42: 181-183.

EcoReference No.: 5817
Chemical of Concern: AZM,HCCH,DZ,MLN,EIN,AZ,MOM,BRSM,RSM; Habitat: A; Effect Codes: MOR; Rejection Code: NO ENDPOINT(MOM),NO CONTROL(DZ,BRSM,RSM).

Office of Pesticide Programs (2000). Pesticide Ecotoxicity Database (Formerly: Environmental Effects Database (EEDB)). *Environmental Fate and Effects Division, U.S.EPA, Washington, D.C.*

EcoReference No.: 344
Chemical of Concern:
4AP,24DXY,ACL,ACP,ACR,Ag,AKTMD,ALSV,APAC,AQS,AsAC,ASCN,ATM,ATN,ATZ,AZ,BBN,BDF,BFT,BMC,BML,BMN,Br2,BrCl,BRSM,BS,BT,CaPS,Captan,CBF,CBL,CFE,CFE,CFRM,CLNB,CLP,CMPH,CPC,CPY,CQTC,CrACCTN,CTZ,Cu,CuFRA,CuO,CuOT,CuTE,CuS,CYD,CYF,CYP,CYT,DBN,DCNA,DBAC,DDAC,DFT,DFZ,DIIS,DKGNa,DM,DMB,DMM,DMP,DMT,DOD,DPC,DPDP,DPP1,DPP2,DS,DSP,DU,DZ,DZM,EFL,EFS,EFV,EP,FHX,FAME,FMP,FO,Folpet,FPN,FPP,FTN,FVL,GTN,GYP,HCCH,HXZ,IGS,IODN,IPD,IZP,KMFD,LNR,MAL,MB,MBZ,MCPP1,MCPP2,MDT,MFDD,MFX,MFZ,MGK,MLN,MLT,MOM,MP,MTC,MTL,MTM,NAA,NaBr,Naled,NAPH,NFZ,NPP,NTP,OTN,OXF,OXT,OYZ,PCP,PCZ,PDM,PEB,PHMD,PMR,PMT,PNB,PPB,PPG,PPMH,PPZ,PQT,PRB,PRT,PSM,PYN,PYZ,RSM,RTN,SMM,SMT,SS,SXD,SZ,TBC,TBD,TCMTB,TDC,TDF,TDZ,TET,TFN,TFR,TMT,TPR,TRB,WFN,ZnP,PRO;

Habitat: AT; Effect Codes: MOR,POP,PHY,GRO,REP; Rejection Code: NO EFED (344).

Ohayo-Mitoko, G. J. A. and Deneer, J. W. (1993). Lethal Body Burdens of Four Organophorus Pesticides in the Guppy (Poecilia reticulata). *Sci.Total Environ.(Suppl.)* 559-565.

EcoReference No.: 4349
Chemical of Concern: CPY,DZ,AZ,PRN; Habitat: A; Effect Codes: ACC; Rejection Code: NO CONTROL(ALL CHEMS).

Pantani, C., Ghetti, P. F., Cavacini, A., and Muccioni, P. (1990). Acute Toxicity of Equitoxic Binary Mixtures of Some Metals, Surfactants and Pesticides to the Freshwater Amphipod Gammarus italicus Goedm. *Environ.Technol.* 11: 1143-1146.

EcoReference No.: 3775
Chemical of Concern: AZ,MP,Cd,CuCl; Habitat: A; Effect Codes: MOR; Rejection Code: NO CONTROL(ALL CHEMS).

Pantani, C., Pannunzio, G., De Cristofaro, M., Novelli, A. A., and Salvatori, M. (1997). Comparative Acute Toxicity of Some Pesticides, Metals, and Surfactants to Gammarus italicus Goedm. and Echinogammarus tibaldii Pink. and Stock (Crustacea: Amphipoda). *Bull.Environ.Contam.Toxicol.* 59: 963-967.

EcoReference No.: 18621
Chemical of Concern: ACR,ATZ,AZ,CBF,CBL,DMT,FMP,HCCH,MLT,MOM,MP,Cd,ADC,DDT,MXC,OML,TBC,CuCl,Cr,PPX,Zn,Hg; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(ATZ,MLT,CBF,ADC,MOM,DMT,CuCl),OK(ALL CHEMS).

Peterson, R. H. (1976). Temperature Selection of Juvenile Atlantic Salmon (Salmo salar) as Influenced by Various Toxic Substances. *J.Fish.Res.Board Can.* 33: 1722-1730.

EcoReference No.: 5160
Chemical of Concern: AZ,CBL,CPY,HCCH,MLN,Naled,CuS,PCP,Zn,HPT,NaPCP,FNT; Habitat: A; Effect Codes: MOR,BEH; Rejection Code: NO ENDPOINT(CuS,NaPCP).

Pickering, Q. H., Henderson, C., and Lemke, A. E. (1962). The Toxicity of Organic Phosphorus Insecticides to Different Species of Warmwater Fishes. *Trans.Am.Fish.Soc.* 91: 175-184.

EcoReference No.: 2893
Chemical of Concern: MP,MLN,AZ,PRN,DZ,DEM; Habitat: A; Effect Codes: MOR; Rejection Code: NO CONTROL(ALL CHEMS).

Portmann, J. E. and Wilson, K. W. (1971). The Toxicity of 140 Substances to the Brown Shrimp and Other Marine Animals. *Shellfish Information Leaflet No.22 (2nd Ed.), Ministry of Agric.Fish.Food, Fish.Lab.Burnham-on-Crouch, Essex, and Fish Exp.Station Conway, North Wales* 12 p.

EcoReference No.: 906
Chemical of Concern: SZ,24DXY,ATZ,AZ,DBN,DMT,MLN,CuS,CrAC,SFL,HgCl2,NYP,Cd,Pb,Maneb,DDT,FML,PRN,EPRN,DLD,DPDP,PAQT,PL,ACY,ES,HCCH,MCRE,Tl; Habitat: A; Effect Codes: MOR; Rejection Code: LITE EVAL CODED(ATZ,SZ,DMT,CuS,CrAC),OK(ALL CHEMS).

Pree, D. J., Whitty, K. J., Van Driel, L., and Walker, G. M. (1998). Resistance to Insecticides in Oriental Fruit Moth Populations (Grapholita molesta) from the Niagara Peninsula of Ontario. *Can.Entomol.* 130: 245-256.

EcoReference No.: 63915
Chemical of Concern:
MOM,PFF,CBF,AZ,PSM,EPRN,MLN,Naled,FNT,CPY,ACP,MTM,MDT,CBL,CYP; Habitat: T; Effect Codes: POP,MOR,GRO; Rejection Code: NO CONTROL(MOM,CBF,CYP).

Reyes, J. G. G., Dalla-Venezia, L., and Alvarez, M. G. L. (2002). Effect of Some Organophosphorus Pesticides on Oxygen Consumption of Shrimp, Litopenaeus vannamei. *Ecotoxicol.Environ.Saf.* 52: 134-136.

EcoReference No.: 65857
Chemical of Concern: DZ,AZ; Habitat: A; Effect Codes: PHY; Rejection Code: NO ENDPOINT(ALL CHEMS).

Schafer, E. W. (1972). The Acute Oral Toxicity of 369 Pesticidal, Pharmaceutical and Other Chemicals to Wild Birds. *Toxicol.Appl.Pharmacol.* 21: 315-330.

EcoReference No.: 38655
Chemical of Concern:
Ziram,AN,BZO,BZC,Captan,THM,ZINEB,CYT,SFL,MAL,MRX,ACL,MLN,ABT,CBZ,MCB,CBL,CMPH,HCCH,EN,AND,ES,NP,TCF,CPY,DDVP,PPHD,DCTP,DS,PRT,DMT,AZ,PSM,ETN,DEM,DZ,FNTH,MP,NCTN; Habitat: T; Effect Codes: MOR; Rejection Code: NO CONTROL(ALL CHEMS),NO COC(4AP).

Skinner, C. S. and Kilgore, W. W. (1982). Acute Dermal Toxicities of Various Organophosphate Insecticides in Mice. *J.Toxicol.Environ.Health* 9: 491-497.

EcoReference No.: 38799
Chemical of Concern: DZ,PRN,MP,AZ,MVP; Habitat: T; Effect Codes: MOR; Rejection Code: NO CONTROL(ALL CHEMS).

Smith, F. F., Ota, A. K., and Boswell, A. L. (1970). Insecticides for Control of the Greenhouse Whitefly. *J.Econ.Entomol.* 63: 522-527.

EcoReference No.: 72077
Chemical of Concern: ES,DMT,CBF,PRT,DS,AZ,PRN,DZ,DDVP,ADC; Habitat: T; Effect Codes: MOR,POP; Rejection Code: NO ENDPOINT(ALL CHEMS).

Solomon, M. G. and Hooker, K. J. M. (1989). Chemical Repellents for Reducing Pesticide Hazard to Honeybees in Apple Orchards. *J.Apic.Res.* 28: 223-227.

EcoReference No.: 76452
Chemical of Concern: DOD,CBD,TDF,MYC,MOM,AZ,CYP,Captan; Habitat: T; Effect Codes: BEH; Rejection Code: NO ENDPOINT(ALL CHEMS).

St.L.Searle, C. M. (1965). The Susceptibility of Pauridia peregrina Timb. (Hymenoptera: Encyrtidae) to Some Pesticide Formulations. *J.Entomol.Soc.S.Africa* 27: 239-49.

EcoReference No.: 77569
Chemical of Concern: CaPS,FNTH,AZ,DMT,PRN,DEM,ES,CBL,DDT,DLD; Habitat: T; Effect Codes: MOR; Rejection Code: NO CONTROL(ALL CHEMS),MIXTURE(PRN,DMT,ES,AZ,FNTH).

Thompson, A. R. and Gore, F. L. (1972). Toxicity of Twenty-Nine Insecticides to Folsomia candida: Laboratory Studies. *J.Econ.Entomol.* 65: 1255-1260.

EcoReference No.: 40474

Chemical of Concern:
DLD,DDT,CBF,ADC,MOM,CBL,HCCH,AND,AZ,EN,PRN,MP,DS,DZ,CPY,CHD,PRT,FNT,DZ,FNF,HPT,DIELDRIN; Habitat: T; Effect Codes: MOR; Rejection Code: NO ENDPOINT(ALL CHEMS).

Tillman, P. G. and Scott, W. (1997). Susceptibility of Cotesia marginiventris (Cresson) (Hymenoptera: Braconidae) to Field Rates of Selected Cotton Insecticides. *J.Entomol.Sci.* 32: 303-310.

EcoReference No.: 64166
Chemical of Concern: MOM,ACP,AZ,BFT,CYH,CYP,ES,EFV,FPN,MP,OML,PFF,TDC ; Habitat: T; Effect Codes: MOR; Rejection Code: OK(MOM),OK TARGET(CYP,EFV,FPN,BFT,ACP,AZ).

Tooby, T. E., Hursey, P. A., and Alabaster, J. S. (1975). The Acute Toxicity of 102 Pesticides and Miscellaneous Substances to Fish. *Chem.Ind.(Lond.)* 21: 523-526.

EcoReference No.: 848
Chemical of Concern:
BRSM,AZ,Captan,DBN,DOD,DU,HCCH,MBZ,DMM,EFS,PHMD,WFN,RTN; Habitat: A; Effect Codes: MOR; Rejection Code: NO CONTROL(ALL CHEMS).

Tronsmo, A. (1989). Effect of Fungicides and Insecticides on Growth of Botrytis cinerea, Trichoderma viride and T. harzianum. *Norw.J.Agric.Sci.* 3: 151-156.

EcoReference No.: 75156
Chemical of Concern:
DMT,BMY,MZB,IPD,VCZ,TDF,MLN,BTN,Captan,Cu,DOP,TFR,AZ,DCF,DMT,FNTH,FNT,DZ,PRN,MCPP1; Habitat: T; Effect Codes: POP; Rejection Code: NO CONTROL(ALL CHEMS).

Van der Heever, J. A. and Grobbelaar, J. U. (1998). In Vivo Chlorophyll a Fluorescence of Selenastrum capricornutum as a Screening Bioassay in Toxicity Studies. *Arch.Environ.Contam.Toxicol.* 35: 281-286.

EcoReference No.: 19800
Chemical of Concern: ATZ,AZ,CuCl,PL,Hg,Cd; Habitat: A; Effect Codes: BCM; Rejection Code: LITE EVAL CODED(ATZ,CuCl),OK(ALL CHEMS).

Van der Heever, J. A. and Grobbelaar, J. U. (1997). The Use of Oxygen Evolution to Assess the Short-Term Effects of Toxicants on Algal Photosynthetic Rates. *Water S.A.* 23: 233-237.

EcoReference No.: 19854
Chemical of Concern: ATZ,AZ,Cu,PL,Cd,Hg; Habitat: A; Effect Codes: PHY; Rejection Code: LITE EVAL CODED(ATZ,Cu),OK(ALL CHEMS).

Van der Heever, J. A. and Grobbelaar, J. U. (1996). The Use of Selenastrum capricornutum Growth Potential as a Measure of Toxicity of a Few Selected Compounds. *Water S.A.* 22: 183-191.

EcoReference No.: 18440
Chemical of Concern: ATZ,AZ,Cu,Cd,PL,Hg; Habitat: A; Effect Codes: POP; Rejection Code: LITE EVAL CODED(ATZ,Cu),OK(ALL CHEMS).

Vos, J. G., Krajnc, E. I., Beekhof, P. K., and Van Logten, M. J. (1983). Methods for Testing Immune Effects of Toxic Chemicals: Evaluation of the Immunotoxicity of Various Pesticides in the Rat. *In: J.Miyamoto and P.C.Kearney (Eds.), Pesticide Chemistry: Human Welfare and the Environment, Volume 3, Pergamon Press, Oxford, England* 497-504.

EcoReference No.: 70803
Chemical of Concern: PNB,ATZ,DDT,EN,Pb,AZ,BMY,Captan,DU,ES,Zineb,HCB,TPTH; Habitat: T; Effect Codes: GRO,BCM,PHY,CEL; Rejection Code: LITE EVAL CODED(ATZ),OK(ALL CHEMS).

Weiss, C. M. (1959). Response of Fish to Sub-lethal Exposures of Organic Phosphorus Insecticides. *Sewage Ind.Wastes* 31: 580-593.

EcoReference No.: 60203
Chemical of Concern: PRN,DZ,MLN,DEM,AZ; Habitat: A; Effect Codes: BCM; Rejection Code: OK(PRN,MLN,DEM,AZ),NO ENDPOINT(DZ).

Weiss, C. M. (1959). Stream Pollution: Response of Fish to Sub-lethal Exposures of Organic Phosphorus Insecticides. *Sewage Ind.Wastes* 31: 580-593.

EcoReference No.: 8113
Chemical of Concern: AZ,DZ,MLN,PRN,DEM; Habitat: A; Effect Codes: PHY,GRO; Rejection Code: NO ENDPOINT(ALL CHEMS).

Weiss, C. M. and Gakstatter, J. H. (1964). Detection of Pesticides in Water by Biochemical Assay. *J.Water Pollut.Control Fed.* 36 : 240-253.

EcoReference No.: 8115
Chemical of Concern: AZ,DS,DZ,MLN,DEM,PRN; Habitat: A; Effect Codes: PHY; Rejection Code: NO CONTROL,ENDPOINT(ALL CHEMS).

1. 2000). Farm Chemicals Handbook. *Meister Publishing Company, Willoughby, Ohio* 4 p.
   Rejection Code: REVIEW.

2. Akhtar, M. H., Khan, S. U., and Kacew, S. (1992). Bioavailability of Bound Pesticide Residues and Potential Toxicologic Consequences. *Proc.Soc.Exp.Biol.Med.* 199: 13-21.
   Rejection Code: REVIEW.

3. Alabaster, J. S. (1969). Survival of Fish in 164 Herbicides, Insecticides, Fungicides, Wetting Agents and Miscellaneous Substances. *Int.Pest Control* 11: 29-35 (Author Communication Used).

   ; Habitat: A; Effect Codes: MOR

4. Altman, J. and Campbell, C. L. (1977). Effect of Herbicides on Plant Diseases. *Annu.Rev.Phytopathol.* 15: 361-385.
   Rejection Code: REVIEW.

5. Anderson, J. R. (1978). Pesticide Effects Non-target Soil Microorganisms. *In: I.R.Hill and S.J.L.Wright (Eds.), Pesticide Microbiology: Microbiological Aspects of Pesticide Behaviour in the Environment, Chapter 7, Acad.Press, London* 313, 501-533.
   Rejection Code: REVIEW.

6. Applegate, V. C., Howell, J. H., Hall, A. E. Jr., and Smith, M. A. (1957). Toxicity of 4,346 Chemicals to Larval Lampreys and Fishes. *Spec.Sci.Rep.Fish.No.207, Fish Wildl.Serv., U.S.D.I., Washington, D.C.* 157 p.

   ; Habitat: A; Effect Codes: BEH,MOR

7. Aslam, M. and Huffaker, R. C. (1973). Effect of DCMU, Simazine and Atrazine on Nitrate Reductase Activity in Hordeum vulgare In Vitro and In Vivo. *Physiol.Plant.* 28: 400-404.
   Rejection Code: IN VITRO.

8. Athanasopoulos, Panagiotis E. and Pappas, Christos (2000). Effects of fruit acidity and storage conditions on the rate of degradation of azinphos methyl on apples and lemons. *Food Chemistry* 69: 69-72.
   Rejection Code: FATE.

9. Bathe, R., Sachsse, K., Ullmann, L., Hormann, W. D., Zak, F., and Hess, R. (1975). The Evaluation of Fish Toxicity in the Laboratory. *Proc.Eur.Soc.Toxicol.* 16: 113-124.

   ; Habitat: A; Effect Codes: MOR,ACC,CEL

10. Beavis, C., Simpson, P., Syme, J., and Ryan, C. (1991). Chemicals for the Protection of Field Crops, Forage Crops, and Pastures. *Queensland Dep.of Primary Ind.Info.Ser.No.QI91006, Infopest: Chemicals for the Protection of Field Crops, Forage Crops, and Pastures, 2nd Edition, Brisbane, Queensland, Australia* 312 p.
    Rejection Code: NO TOX DATA.

11. Beavis, C., Simpson, P., Syme, J., and Ryan, C. (1991). Chemicals for the Protection of Fruit and Nut Crops. *Queensland Dep.of Primary Ind.Info.Ser.No.QI91004, Infopest: Chemicals for*

the Protection of Field Crops, Forage Crops, and Pastures, 2nd Edition, Brisbane, Queensland, Australia 312 p.
Rejection Code: NO TOX DATA.

12. Beavis, C., Simpson, P., Syme, J., and Ryan, C. (1991). Chemicals for the Protection of Ornamentals and Turf. *Queensland Dep.of Primary Ind.Info.Ser.No.QI91003, Infopest: Chemicals for the Protection of Field Crops, Forage Crops, and Pastures, 2nd Edition, Brisbane, Queensland, Australia* 312 p.
Rejection Code: NO TOX DATA.

13. Beavis, C., Simpson, P., Syme, J., and Ryan, C. (1991). Chemicals for the Protection of Vegetable Crops. *Queensland Dep.of Primary Ind.Info.Ser.No.QI91005, Infopest: Chemicals for the Protection of Field Crops, Forage Crops, and Pastures, 2nd Edition, Brisbane, Queensland, Australia* 312 p.
Rejection Code: NO TOX DATA.

14. Berube, V. E., Boily, M. H., DeBlois, C., Dassylva, N., and Spear, P. A. (2005). Plasma Retinoid Profile in Bullfrogs, Rana catesbeiana, in Relation to Agricultural Intensity of Sub-watersheds in the Yamaska River Drainage Basin, Quebec, Canada. *Aquat.Toxicol.* 71: 109-120.
Rejection Code: NO DURATION/SURVEY.

15. Bester, K. (2000). Effects of Pesticides on Seagrass Beds. *Helgol.Mar.Res.* 54: 95-98.
Rejection Code: NO DURATION/SURVEY.

16. Bishop, C. A., Mahony, N. A., Struger, J., Ng, P., and Pettit, K. E. (1999). Anuran Development, Density and Diversity in Relation to Agricultural Activity in the Holland River Watershed, Ontario, Canada (1990-1992). *Environ.Monit.Assess.* 57: 21-43.
Rejection Code: EFFLUENT/SURVEY.

17. Blanck, H. (2002). A Critical Review of Procedures and Approaches Used for Assessing Pollution-Induced Community Tolerance (PICT) in Biotic Communities. *Hum.Ecol.Risk Assess.* 8: 1003-1034.

18. Boxall, A. B. A., Brown, C. D., and Barrett, K. L. (2002). Higher-Tier Laboratory Methods for Assessing the Aquatic Toxicity of Pesticides. *Pest Manag.Sci.* 58: 637-648.
Rejection Code: REFS CHECKED/REVIEW.

19. Braunbeck, T. (1994). Detection of Environmentally Relevant Concentrations of Toxic Organic Compounds Using Histological and Cytological Parameters: Substance-Specificity in the Reaction of Rainbow Trout Liver? *In: R.Muller and R.Lloyd (Eds.), Sublethal and Chronic Effects of Pollutants on Freshwater Fish, Chapter 2, Fishing News Books, London* 15-29.

; Habitat: A; Effect Codes: CEL

20. Brian, R. C. (1964). The Classification of Herbicides and Types of Toxicity. *In: L.J.Audus (Ed.), The Physiology and Biochemistry of Herbicides, Chapter 1, Acad.Press, London* 1-37.
Rejection Code: REVIEW.

21. Bridges, C., Little, E., Gardiner, D., Petty, J., and Huckins, J. (2004). Assessing the Toxicity and Teratogenicity of Pond Water in North-Central Minnesota to Amphibians. *Environ.Sci.Pollut.Res.* 11: 233-239.
Rejection Code: EFFLUENT.

22. Brucker-Davis, F. (1998). Effects of Environmental Synthetic Chemicals on Thyroid Function. *Thyroid* 8: 827-856.
Rejection Code: REFS CHECKED/REVIEW.

23. Butler, G. L., Deason, T. R., and O'Kelley, J. C. (1975). The Effect of Atrazine, 2,4-D, Methoxychlor, Carbaryl and Diazinon on the Growth of Planktonic Algae. *Br.Phycol.J.* 10: 371-376.

; Habitat: A; Effect Codes: POP

24. Butler, G. L., Deason, T. R., and O'Kelley, J. C. (1975). Loss of Five Pesticides from Cultures of Twenty-One Planktonic Algae. *Bull.Environ.Contam.Toxicol.* 13: 149-152.

; Habitat: A; Effect Codes: ACC

25. Butler, P. A. (1965). Commercial Fishery Investigations. *In: Effects of Pesticides on Fish and Wildl.Circ.226, U.S.D.I., Washington, D.C.* 65-77.

26. Carey, A. E., Wiersma, G. B., Tai, H., and Mitchell, W. G. (1973). Organochlorine Pesticide Residues in Soils and Crops of the Corn Belt Region, United States - 1970. *Pestic.Monit.J.* 6: 369-376.
Rejection Code: SURVEY.

27. Chung, K., Starrett, S., Chung, Y., and Ro, K. S. (1998). Pesticides and Herbicides. *Water Environ.Res.* 70: 693-697.
Rejection Code: REFS CHECKED/REVIEW.

28. Colborn, T. and Short, P. (1999). Pesticide use in the U.S. and Policy Implications: A Focus on Herbicides. *Toxicol.Ind.Health* 15: 241-276.
Rejection Code: REVIEW.

29. Colborn, T. and Short, P. (1999). Pesticide use in the U.S. and Policy Implications: A Focus on Herbicides. *Toxicol.Ind.Health* 15: 241-276.

; Habitat: T

30. Comber, S. D. W. (1999). Abiotic Persistence of Atrazine and Simazine in Water. *Pestic.Sci.* 55: 696-702.
Rejection Code: NO SPECIES/SURVEY.

31. Cooper, R. L., Goldman, J. M., and Stoker, T. E. (1999). Neuroendocrine and Reproductive Effects of Contemporary-Use Pesticides. *Toxicol.Ind.Health* 15: 26-36.
Rejection Code: REFS CHECKED/REVIEW.

32. Corbett, J. R., Wright, K., and Baillie, A. C. (1984). Herbicides Interfering with Photosynthesis. *In: The Biochemical Mode of Action of Pesticides, Second Edition, Acad.Press, London* 50-98.
Rejection Code: REVIEW .

33. Crebelli, R. and Carere, A. (1987). Chemical and Physical Agents Assayed in Tests for Mitotic Intergenic and Intragenic Recombination in Aspergillus nidulans Diploid Strains. *Mutagenesis* 2: 469-476.
Rejection Code: REVIEW.

34. Crebelli, R. and Carere, A. (1987). Chemical and Physical Agents Assayed in Tests for Mitotic

Intergenic and Intragenic Recombination in Aspergillus nidulans Diploid Strains. *Mutagenesis* 2: 469-476.
Rejection Code: REVIEW.

35. Crebelli, R. and Carere, A. (1987). Chemical and Physical Agents Assayed in Tests for Mitotic Intergenic and Intragenic Recombination in Aspergillus nidulans Diploid Strains. *Mutagenesis* 2: 469-476.
Rejection Code: REVIEW.

36. Davies, P. E., Cook, L. S. J., and Goenarso, D. (1994). Sublethal Responses to Pesticides of Several Species of Australian Freshwater Fish and Crustaceans and Rainbow Trout. *Environ.Toxicol.Chem.* 13: 1341-1354 (OECDG Data File).

37. Dearfield, K. L., Stack, H. F., Quest, J. A., Whiting, R. J., and Waters, M. D. (1993). A Survey of Epa/Opp and Open Literature Data on Selected Pesticide Chemicals Tested for Mutagenicity: I. Introduction and First Ten Chemicals. *Mutat.Res.* 297: 197-233.
Rejection Code: REVIEW/Survey.

38. Decleire, M., De Cat, W., and Bastin, R. (1976). Rapid Detection of Various Kinds of Herbicides in Water by the In Vivo Determination of Nitrate Reductase Activity in Lemna minor L. (Detection Rapide de Divers Herbicides dans l'eau par la Mesure In Vivo de l'Activite de la Nitrate Reductase de Lemna minor L.). *Z.Pflanzenphysiol.Bodenkd.* 77: 315-322 (FRE) (ENG ABS).
Rejection Code: NON-ENGLISH.

39. Decleire, M., De Cat, W., and Bastin, R. (1976). Rapid Detection of Various Kinds of Herbicides in Water by the In Vivo Determination of Nitrate Reductase Activity in Lemna minor L. (Detection Rapide de Divers Herbicides dans l'eau par la Mesure In Vivo de l'Activite de la Nitrate Reductase de Lemna minor L.). *Z.Pflanzenphysiol.Bodenkd.* 77: 315-322 (FRE) (ENG ABS).

; Habitat: A

40. Delistraty, D. (1999). Relationship Between Cancer Slope Factor and Acute Toxicity in Rats and Fish. *Hum.Ecol.Risk Assess.* 5: 415-426.
Rejection Code: REFS CHECKED/REVIEW.

41. DeLorenzo, M. E., Scott, G. I., and Ross, P. E. (2001). Toxicity of Pesticides to Aquatic Microorganisms: A Review. *Environ.Toxicol.Chem.* 20: 84-98.
Rejection Code: REVIEW.

42. Dowdy, D. L. and McKone, T. E. (1997). Predicting Plant Uptake of Organic Chemicals from Soil or Air Using Octanol/Water and Octanol/Air Partition Ratios and a Molecular Connectivity Index. *Environ.Toxicol.Chem.* 16: 2448-2456.
Rejection Code: REFS CHECKED/REVIEW.

43. Drogoszewski, B. (1973). Application of Simazin and Atrazin in Pine Cultures on Previously Arable Land. IV. Sensitivity of Pine Seedling to Simazine and Atrazin Applied in Cultures on Reduced Areas (Stosowanie Simazinu i Atrazinu w Uprawach Sosnowych na Gruntach Porolynch. IV. Wrazliwosc Sadzonek Sosny Zwyczajnej na Dzialanie Simazinu i Atrazinu Stosowanych w Uprawach na Powierzchni Zredukowanej). *Prace Komisji Nauk Rolniczych I Komisji Nauk Lesny* 36: 19-26 (POL) (ENG ABS).
Rejection Code: NON-ENGLISH.

44. Durham, W. F. (1987). Toxicology of Insecticides, Rodenticides, Herbicides, and Fungicides. *In: T.J.Haley and W.O.Berndt (Eds.), Handbook of Toxicology, Chapter 9, Hemisphere Publ.Corp., New York, NY* 364-383.
Rejection Code: REFS CHECKED/REVIEW.

45. Eldridge, J. C., Wetzel, L. T., Stevens, J. T., and Simpkins, J. W. (1999). The Mammary Tumor Response in Triazine-Treated Female Rats: A Threshold-Mediated Interaction with Strain and Species-Specific Reproductive Senescence. *Steroids* 64: 672-678.
Rejection Code: REFS CHECKED/REVIEW.

46. Emans, H. J. B., Plassche, E. J. V. D., Canton, J. H., Okkerman, P. C., and Sparenburg, P. M. (1993). Validation of Some Extrapolation Methods Used for Effect Assessment. *Environ.Toxicol.Chem.* 12: 2139-2154.
Rejection Code: REFS CHECKED/REVIEW.

47. Fairchild, J. F., Sappington, L. C., and Ruessler, D. S. (1999). An Ecological Risk Assessment of the Potential for Herbicide Impacts on Primary Productivity of the Lower Missouri River. *In: Water-Resour.Investig.Rep.(U.S.Geol.Surv.), 99-4018B, U.S.Geol.Surv.toxic Subst.Hydrol.Prog.* 2: 323-330.
Rejection Code: REFS CHECKED/REVIEW.

48. Fedtke, C. (1982). Photosynthesis. *In: Biochemistry and Physiology of Herbicide Action, Springer-Verlag, Berlin, Germany* 19-85.
Rejection Code: REVIEW.

49. Ferrari, Ana , Venturino, Andres, and Pechen de D'Angelo, Ana M. (Effects of carbaryl and azinphos methyl on juvenile rainbow trout (oncorhynchus mykiss) detoxifying enzymes. *Pesticide Biochemistry and Physiology* In Press, Accepted Manuscript.
Rejection Code: NO SOURCE.

50. Feucht, J. R. (1988). Herbicide Injuries to Trees-Symptoms and Solutions. *J.Arboric.* 14: 215-219.
Rejection Code: NO TOX DATA.

51. Figeys, H. P., Lannoye, R., Panneels, P., Pattijn, S., Vanden Bril, B., and Van Eycken, F. (1989). Fluorescence Study of the Molecular Basis of Photosystem II Herbicide Resistance. *Meded.Fac.Landbouwwet.Rijksuniv.Gent* 54: 303-306.
Rejection Code: NO CONC.

52. Flocco, C. G., Carranza, M. P., Carvajal, L. G., Loewy, R. M., Pechen de D'Angelo, A. M., and Giulietti, A. M. (2004). Removal of azinphos methyl by alfalfa plants (Medicago sativa L.) in a soil-free system. *Science of The Total Environment* 327: 31-39.
Rejection Code: FATE.

53. Ford, G. T. and Mt.Pleasant, J. (1994). Competitive Abilities of Six Corn (Zea mays L.) Hybrids with Four Weed Control Practices. *Weed Technol.* 8 : 124-128.
Rejection Code: MIXTURE.

54. Gagnaire, B., Thomas-Guyon, H., Burgeot, Th., and Renault, T. (2006). Pollutant Effects on Pacific Oyster, Crassostrea gigas (Thunberg), Hemocytes: Screening of 23 Molecules Using Flow Cytometry . *Cell Biol.Toxicol.* 22: 1-14.
Rejection Code: IN VITRO.

55. Gascon, J., Oubina, A., Ballesteros, B., Barcelo, D., Camps, F., Marco, M. P., Gonzalez-Martinez, M. A., Morais, S., Puchades, R., and Maquieira, A. (1997). Development of a Highly Sensitive Enzyme-Linked Immunosorbent Assay for Atrazine. Performance Evaluation by

Flow Injection Immunoassay. *Anal.Chim.Acta* 347: 149-162.
Rejection Code: IN VITRO.

56. Gaunt, P. S. (1996). Extraction and Analysis of Triazines in Fish Tissues Following a Toxic Exposure; Environmental Factors Affecting Atrazine Toxicity in Fish. *Ph.D.Thesis, Louisiana State Univ., Baton Rouge, LA* 211 p.

; Habitat: A; Effect Codes: ACC,MOR

57. George, T. K., Waite, D., Liber, K., and Sproull, J. (2003). Toxicity of a Complex Mixture of Atmospherically Transported Pesticides to Ceriodaphnia dubia. *Environ.Monit.Assess.* 85: 309-326.
Rejection Code: MIXTURE.

58. Gerritse, R. G., Beltran, J., and Hernandez, F. (1996). Adsorption of Atrazine, Simazine, and Glyphosate in Soils of the Gnangara Mound, Western Australia. *Aust.J.Soil Res.* 34: 599-607 .
Rejection Code: NO SPECIES.

59. Gianessi, L. P. (1998). Benefits of Triazine Herbicides. *In: L.G.Ballantine, J.E.McFarland, and D.S.Hackett (Eds.), ACS Symp.Ser.No.683, Triazine Herbicides Risk Assessment, Chapter 1, March 1996, New Orleans, LA, Am.Chem.Soc., Washington, D.C.* 1-8.
Rejection Code: REFS CHECKED/REVIEW.

60. Giddings, J. M. and Hall, L. (1998). The Aquatic Ecotoxicology of Triazine Herbicides. *In: L.G.Ballantine, J.E.McFarland, and D.S.Hackett (Eds.), ACS Symp.Ser.No.683, Triazine Herbicides: Risk Assessment, March 1996, New Orleans, LA, Am.Chem.Soc., Washington, D.C.* 347-356.
Rejection Code: REFS CHECKED/REVIEW.

61. Glotfelty, D. E., Taylor, A. W., Isensee, A. R., Jersey, J., and Glenn, S. (1984). Atrazine and Simazine Movement to Wye River Estuary. *J.Environ.Qual.* 13: 115-120.
Rejection Code: NO SPECIES.

62. Gomez-Arroyo, S., Castillo-Ruiz, P., Cortes-Eslava, J., and Villalobos-Pietrini, R. (1988). Vicia-Faba Sister Chromatid Exchanges of the Organophosphorus Insecticides Methyl Parathion Dimethoate Oxydemeton Methyl Azinphos Methyl and Phoxim. *Cytologia (tokyo)* 53: 627-634.
Rejection Code: IN UTERO.

63. Goss, L. B. and Sabourin, T. D. (1985). Utilization of Alternative Species for Toxicity Testing: An Overview. *J.Appl.Toxicol.* 5: 193-219.
Rejection Code: REFS CHECKED/REVIEW.

64. Gous, S. F. (1996). Vegetation Management in Pinus radiata: A Literature Review. *S.Afr.For.J.* 41-50.
Rejection Code: REFS CHECKED/REVIEW .

65. Gray, L. E. Jr., Monosson, E., and Kelce, W. R. (96). **<04 Article Title>.** *In: R.T.Di Giulio and E.Monosson (Eds.), Chapman and Hall Ecotoxicology Ser.3, Interaconnections Between Human and Ecosystem Health, Chapman and Hall Ltd., London, England* 3: <25 Page(s)>; Habitat: <40 Habitat Code>; Effect Codes: <08 Effects Code>.

66. Gressel, J., Shimabukuro, R. H., and Duysen, M. E. (1983). N-Dealkylation of Atrazine and Simazine in Senecio vulgaris Biotypes: A Major Degradation Pathway.

Pestic.Biochem.Physiol. 19: 361-370.

; Habitat: T; Effect Codes: ACC

67. Harris, M. L., Bishop, C. A., Struger, J., Van den Heuvel, M. R., Van der Kraak, G. J., Dixon, D. G., Ripley, B., and Bogart, J. P. (1998). The Functional Integrity of Northern Leopard Frog (Rana pipiens) and Green Frog (Rana clamitans) Populations in Orchard Wetlands: I. Genetics, Physiology, and Biochemistry of Breeding Adults and Young-of-the-Year. *Environ.Toxicol.Chem.* 17: 1338-1350.
Rejection Code: NO DURATION/SURVEY.

68. Hauswirth, J. W. and Wetzel, L. T. (1998). Toxicity Characteristics of the 2-Chlorotriazines Atrazine and Simazine. *In: L.G.Ballantine, J.E.McFarland, and D.S.Hackett (Eds.), ACS Symp.Ser.No.683, Triazine Herbicides: Risk Assessment, Chapter 29, March 1996, New Orleans, LA, Am.Chem.Soc., Washington, D.C.* 370-383.
Rejection Code: REFS CHECKED/REVIEW.

69. Hedgecott, S. (1996). Proposed Environmental Quality Standards for Atrazine and Simazine in Water (DWE 9378). *Water Res.Center, Rep.No.DOE2316-P/1* 75 p.
Rejection Code: REFS CHECKED/REVIEW.

70. Hendriks, A. J., Pieters, H., and De Boer, J. (1998). Accumulation of Metals, Polycyclic (Halogenated) Aromatic Hydrocarbons, and Biocides in Zebra Mussel and Eel from the Rhine and Meuse Rivers. *Environ.Toxicol.Chem.* 17: 1885-1898.
Rejection Code: NO DURATION/SURVEY.

71. Hendriks, A. J. and Stouten, M. D. A. (1993). Monitoring the Response of Microcontaminants by Dynamic Daphnia magna and Leuciscus idus Assays in the Rhine Delta: Biological Early Warning as a Useful Supplement. *Ecotoxicol.Environ.Saf.* 26: 265-279.

; Habitat: A; Effect Codes: BEH,MOR

72. Hiltibran, R. C. (1982). Effects of Insecticides on the Metal-Activated Hydrolysis of Adenosine Triphosphate by Bluegill Liver Mitochondria. *Arch.Environ.Contam.Toxicol.* 11: 709-717.
Rejection Code: IN VITRO.

73. Hilton, W. W. and Nomura, N. (1964). Phytotoxicity of Herbicides as Measured by Root Absorption. *Weed Res.* 4: 216-222.

; Habitat: T; Effect Codes: MOR

74. Hoagland, K. D., Carder, J. P., and Spawn, R. L. (1996). Effects of Organic Toxic Substances. *In: R.J.Stevenson, M.L.Bothwell, and R.L.Lowe (Eds.), Algal Ecology: Freshwater Benthic Ecosystems, Chapter 15, Academic Press, San Diego, CA* 469-496.
Rejection Code: REFS CHECKED/REVIEW.

75. Horton, H. M. and Calabrese, E. J. (1986). Use of a Bioactivation System to Screen for Hemolytic Response to Environmental Agents: Evaluation of Six Pesticides. *J.Environ.Sci.Health Part A* 21: 215-234.
Rejection Code: IN VITRO.

76. Hunter, R. S. and Culver, F. D. (1988). QSAR Sysytem User Manual. A Structure-Activity Based Chemical Modeling and Information System. *Inst.for Biological and Chemical Process Analysis, Montana State Univ., Bozeman, MT* I1-R5 .
Rejection Code: MODELING/QSAR.

77. Huppatz, J. L. (1996). Quantifying the Inhibitor-Target Site Interactions of Photosystem II Herbicides. *Weed Sci.* 44: 743-748.
Rejection Code: IN VITRO/MODELING/QSAR.

78. Hutchinson, T. H., Solbe, J., and Kloepper-Sams, P. J. (1998). Analysis of the ECETOC Aquatic Toxicity (EAT) Database III - Comparative Toxicity of Chemical Substances to Different Life Stages of Aquatic Organisms. *Chemosphere* 36: 129-142.
Rejection Code: REVIEW.

79. Innes, J. R. M., Ulland, B. M., Valerio, M. G., Petrucelli, L., Fishbein, L., Hart, E. R., Pallotta, A. J., Bates, R. R., Falk, H. L., Gart, J. J., Klein, M., Mitchell, I., and Peters, J. (1969). Bioassay of Pesticides and Industrial Chemicals for Tumorigenicity in Mice: A Preliminary Note. *J.Natl.Cancer Inst.* 42: 1101-1114.

; Habitat: T; Effect Codes: CEL

80. Jones, K. H., Sanderson, D. M., and Noakes, D. N. (1968). Acute Toxicity Data for Pesticides (1968). *World Rev.Pest Control* 7: 135-143.

; Habitat: T; Effect Codes: MOR

81. Jones, R. J. and Kerswell, A. P. (2003). Phytotoxicity of Photosystem II (PSII) Herbicides to Coral. *Mar.Ecol.Prog.Ser.* 261: 149-159.

; Habitat: A; Effect Codes: ACC,BCM

82. Kirby, M. F., Blackburn, M. A., Thain, J. E., and Waldock, M. J. (1998). Assessment of Water Quality in Estuarine and Coastal Waters of England and Wales Using a Contaminant Concentration Technique. *Mar.Pollut.Bull.* 36: 631-642.
Rejection Code: REFS CHECKED/REVIEW.

83. Kligerman, A. D., Chapin, R. E., Erexson, G. L., Germolec, D. R., Kwanyuen, P., and Yang, R. S. H. (1993). Analyses of Cytogenetic Damage in Rodents Following Exposure to Simulated Groundwater Contaminated with Pesticides and a Fertilizer. *Mutat.Res.* 300: 125-134.
Rejection Code: MIXTURE.

84. Kline, E. R., Mattson, V. R., Pickering, Q. H., Spehar, D. L., and Stephan, C. E. (1987). Effects of Pollution on Freshwater Organisms. *J.Water Pollut.Control Fed.* 59: 539-572.
Rejection Code: REFS CHECKED/REVIEW.

85. Kline, E. R., Mattson, V. R., Pickering, Q. H., Spehar, D. L., and Stephan, C. E. (1987). Effects of Pollution on Freshwater Organisms. *J.Water Pollut.Control Fed.* 59: 539-572.
Rejection Code: REFS CHECKED/REVIEW.

86. Kliuchnikov, L. Y., Petrova, A. N., and Polesko, Y. A. (1964). The Effect of Simazin and Atrasin upon on Microflora of Sandy Soil. *Mikrobiologiya* 33: 992-996 (RUS) (ENG ABS).
Rejection Code: NON-ENGLISH.

87. Kliuchnikov, L. Y., Petrova, A. N., and Polesko, Y. A. (1964). The Effect of Simazin and Atrasin upon the Microflora of Sand Soil. *Mikrobiologiya* 33: 992-996 (RUS)(ENG ABS).
Rejection Code: NON-ENGLISH.

88. Krasnikov, V. and Chikulaev, V. (1962). The Use of Simazine and Atrazine in Plantings of Corn. *Kukuruza* 5: 54-55 (RUS).
Rejection Code: NON-ENGLISH.

89. Krasteva, M. (1968). Effect of the Triazine Herbicides Simazine and Atrazine upon Young Plum Trees. *Grad Loz Nk* 5: 47-52 (RUS) (ENG ABS).
Rejection Code: NON-ENGLISH.

90. Kroes, R., Galli, C., Munro, I., Schilter, B., Tran, L. A., Walker, R., and Wurtzen, G. (2000). Threshold of Toxicological Concern for Chemical Substances Present in the Diet: a Practical Tool for Assessing the Need for Toxicity Testing. *Food Chem.Toxicol.* 38: 255-312.
Rejection Code: REVIEW.

91. Lal, R. and Saxena, D. M. (1980). Cytological and Biochemical Effects of Pesticides on Microorganisms. *Residue Rev.* 73: 49-86.
Rejection Code: REF CHECKED/REVIEW.

92. Lamoureux, G. L. and Rusness, D. G. (1995). Status and Future of Synergists in Resistance Management. *In: N.N.Ragsdale, P.C.Kearney, and J.R.Plimmer (Eds.), Proc.8th Int.Congr.of Pestic.Chem., Am.Chem.Soc., Washington, D.C.* 350-366.
Rejection Code: REVIEW.

93. Lamoureux, G. L., Simoneaux, B., and Larson, J. (1998). The Metabolism of Atrazine and Related 2-Chloro-4,6-bis(Alkylamino)-s-Triazines in Plants. *In: L.G.Ballantine, J.E.McFarland, and D.S.Hackett (Eds.), ACS Symp.Ser.No.683, Triazine Herbicides: Risk Assessment, Chapter 6, March 1996, New Orleans, LA, Am.Chem.Soc., Washington, D.C.* 60-81.
Rejection Code: REFS CHECKED/REVIEW .

94. Larocque, M., Banton, O., and Lafrance, P. (1998). Simulating the Fate of Atrazine and Deethylatrazine in a Quebec Soil Planted with Corn - Application of the AgriFlux Model (Simulation par le Modele AgriFlux du Devenir de l'Atrazine et du Deethylatrazine dans un sol du Quebec sous Mais Sucre). *Rev.Sci.Eau* 11: 191-208.
Rejection Code: NON-ENGLISH.

95. LeBaron, H. M. (1998). The Role of Triazines in Managing Weeds Resistant to Other Herbicides. *In: L.G.Ballantine, J.E.McFarland, and D.S.Hackett (Eds.), ACS Symp.Ser.No.683, Triazine Herbicides: Risk Assessment, Chapter 2, March 1996, New Orleans, LA, Am.Chem.Soc., Washington, D.C.* 9-23.
Rejection Code: REFS CHECKED/REVIEW.

96. Lehotay, S. J., Harman-Fetcho, J. A., and McConnell, L. L. (1998). Agricultural Pesticide Residues in Oysters and Water from Two Chesapeake Bay Tributaries. *Mar.Pollut.Bull.* 37: 32-44.
Rejection Code: NO DURATION/SURVEY.

97. Libra, J. A., Ro, K. S., Chung, K. H., and Chung, Y. C. (1996). Pesticides and Herbicides. *Water Environ.Res.* 68: 564-568.
Rejection Code: REFS CHECKED/REVIEW.

98. Lichtenstein, E. P. (1975). Chemical Residue Interactions and Effects in Soil-Plant-Animal Systems. *Proc.and Rep.of Two Resear.Co-Ordination Meetings Organized by the Joint FAO/IAEA Div.of Atomic Energy in Food and Agriculture, Nov.5-9, 1973 and June 4-7, 1974, Vienna, Austria* 3-7.

; Habitat: T; Effect Codes: ACC,GRO,MOR

99. Lichtenstein, E. P., Liang, T. T., and Anderegg, B. N. (1973). Synergism of Insecticides by Herbicides. *Science* 181: 847-849.

; Habitat: AT; Effect Codes: MOR

100. Lichtenstein, E. P., Liang, T. T., and Anderegg, B. N. (1975). Synergism of Insecticides by Herbicides Under Various Environmental Conditions. *Environ.Conserv.* 2: 148.
Rejection Code: REVIEW.

101. Locke, M. A. and Bryson, C. T. (1997). Herbicide-Soil Interactions in Reduced Tillage and Plant Residue Management Systems. *Weed Sci.* 45: 307-320.
Rejection Code: BACTERIA.

102. Loeb, H. A. and Kelly, W. H. (1963). Acute Oral Toxicity of 1,496 Chemicals Force-fed to Carp. *U.S.Fish.Wildl.Serv., Sp.Sci.Rep.-Fish.No.471, Washington, D.C.* 124 p.

; Habitat: A; Effect Codes: MOR,BEH

103. Loewy, M., Kirs, V., Carvajal, G., Venturino, A., and Pechen, D. E. D'angelo Am (1999). Groundwater contamination by azinphos methyl in the Northern Patagonic Region (Argentina). *Science of the Total Environment* 225 : 211-218.
Rejection Code: FATE/EFFLUENT.

104. Loewy, Miriam, Kirs, Veronica, Carvajal, Gabriela, Venturino, Andres, and Pechen de D'Angelo, Ana M. (1999). Groundwater contamination by azinphos methyl in the Northern Patagonic Region (Argentina). *The Science of The Total Environment* 225: 211-218.
Rejection Code: EFFLUENT.

105. Loewy, Miriam, Kirs, Veronica, Carvajal, Gabriela, Venturino, Andres, and Pechen de D'Angelo, Ana M. (1999). Groundwater contamination by azinphos methyl in the Northern Patagonic Region (Argentina). *The Science of The Total Environment* 225: 211-218.
Rejection Code: SURVEY.

106. Lowcock, L. A., Sharbel, T. F., Bonin, J., Ouellet, M., Rodrigue, J., and DesGranges, J. L. (1997). Flow Cytometric Assay for In Vivo Genotoxic Effects of Pesticides in Green Frogs (Rana clamitans). *Aquat.Toxicol.* 38: 241-255.
Rejection Code: MIXTURE.

107. Lyon, D. J., Miller, S. D., and Wicks, G. A. (1996). The Future of Herbicides in Weed Control Systems of the Great Plains. *J.Prod.Agric.* 9: 209-215.
Rejection Code: REFS CHECKED/REVIEW.

108. Ma, J., Wang, S., Wang, P., Ma, L., Chen, X., and Xu, R. (2006). Toxicity Assessment of 40 Herbicides to the Green Alga Raphidocelis subcapitata. *Ecotoxicol.Environ.Saf.* 63: 456-462.

; Habitat: A; Effect Codes: POP

109. Madhun, Y. A. and Freed, V. H. (1990). Impact of Pesticides on the Environment. *In: Cheng, H.H.(Ed.), Soil Science Society of America (SSSA), Book Ser.No.2, Chapter 12, Pesticides in the Soil Environment: Processes, Impacts and Modeling, Madison, WI* 429-466.
Rejection Code: REFS CHECKED/REVIEW.

110. Magee, P. S. (1991). Complex Factors in Hydrocarbon/Water, Soil/Water and Fish/Water Partitioning. *In: J.L.M.Hermens and A.Opperhuizen (Eds.), Proc.4th Int.Workshop, QSAR in Environ.Toxicol.- IV, Sept.16-20, 1990, Veldhoven, Netherlands, Elsevier Sci.Publ., Amsterdam* 155-178.

; Habitat: A

111. Mailman, R. B. and Hodgson, E. (1972). The Cytochrome P-450 Substrate Optical Difference Spectra of Pesticides with Mouse Hepatic Microsomes. *Bull.Environ.Contam.Toxicol.* 8: 186-192.

; Habitat: T

112. Makodzeba, I. A., Fisyunov, A. V., and Matyukha, L. A. (1967). The Sensitivity of Corn, Sorghum, and Millet to Atrazine and Simazine. *Dok Vses Ak* 4: 12-16 (RUS).
Rejection Code: NON-ENGLISH.

113. Mann, J. D., Jordan, L. S., and Day, B. E. (1965). A Survey of Herbicides for Their Effect upon Protein Synthesis . *Plant Physiol.* 40: 840-843.
Rejection Code: IN VITRO.

114. Mann, J. D. , Jordan, L. S., and Day, B. E. (1965). A Survey of Herbicides for Their Effect upon Protein Synthesis. *Plant Physiol.* 40: 840-843.

115. Mashtakov, V. M. and Prokhorchik, R. A. (1962). A Study of Triazine Derivatives as Plant Growth Regulators. II. The Effect of Simazine and Atrazine on the Chlorophyll Content of the Leaves of Crop Plants. *D A N Bssr* 6: 517-520 (RUS).
Rejection Code: NON-ENGLISH .

116. Mayer, F. L. Jr. (1987). Acute Toxicity Handbook of Chemicals to Estuarine Organisms. *EPA 600/8-87-017, U.S.EPA, Gulf Breeze, FL* 274p.
Rejection Code: REFS CHECKED/REVIEW.

117. Mayer, F. L. Jr. (1974). Pesticides as Pollutants. *In: B.G.Liptak (Ed.), Environmental Engineer's Handbook, Chilton Book Co., Radnor, PA* 405-418 (Publ in Part As 6797).

; Habitat: A; Effect Codes: MOR

118. Mayer, F. L. Jr. and Ellersieck, M. R. (1986). Manual of Acute Toxicity: Interpretation and Data Base for 410 Chemicals and 66 Species of Freshwater Animals. *Resour.Publ.No.160, U.S.Dep.Interior, Fish Wildl.Serv., Washington, DC* 505 p. (USGS Data File).

119. McFarlane, C. and Wickliff, C. (1985). Excised Barley Root Uptake of Several 14C Labeled Organic Compounds. *Environ.Monit.Assess.* 5: 385-391.
Rejection Code: IN VITRO.

120. Milkowska, A. and Gorzelak, A. (1966). The Effect of Atrazine and Simazine Treatment on the Soil Microflora for Control of Weeds in Forest Nurseries(Wplyw Atrazinu i Simazinuna na Mikroflora Gleby przy Zwalczaniu Chwastow w Szkdkach Lesnych)). *Sylwan* 110: 13-22 (POL) (ENG ABS).
Rejection Code: NON-ENGLISH.

121. Minotti, P. L., Hughes, B. J., Sweet, R. D., and Warholic, D. T. (1980). Sweet Corn and Weed Reponse to Differently Timed Post Emergence Applications of Atrazine, 2,4-D, Dicamba, and Metachlor. *Veg.Crops Dep., Cornell Univ., Ithaca, NY.*
Rejection Code: NO SOURCE.

122. Mohammed, K. B. and Ma, T. H. (1998). Tradescantia Micronucleus and Stamen Hair Mutation

Assays on Genotoxicity of the Gaseous and Liquid Forms of Pesticides. *In: 29th Annu.Meet.of the Environ.Mutagen.Soc., Mar.21-26, 1998, Anaheim, CA, Environ.Mol.Mutagen.* 31: 38 (ABS No.P47).
Rejection Code: ABSTRACT.

123. Moore, A. and Lower, N. (2001). The Impact of Two Pesticides on Olfactory-Mediated Endocrine Function in Mature Male Atlantic Salmon (Salmo salar L.) Parr. *Comp.Biochem.Physiol.B* 129: 269-276.

; Habitat: A; Effect Codes: BCM,REP

124. Moore, A. and Waring, C. P. (1998). Mechanistic Effects of a Triazine Pesticide on Reproductive Endocrine Function in Mature Male Atlantic Salmon (Salmo salar L.) Parr. *Pestic.Biochem.Physiol.* 62: 41-50.

; Habitat: A; Effect Codes: BCM,PHY,REP

125. Moreland, D. E. (1967). Mechanisms of Action of Herbicides. *Ann.Rev.Plant Physiol.* 18: 365-386.
Rejection Code: REFS CHECKED/REVIEW.

126. Moreland, D. E. (1993). Research on Biochemistry of Herbicides: An Historical Overview. *Z.Natforsch.Sect.C Biosci.* 48: 121-131.
Rejection Code: REFS CHECKED/REVIEW.

127. Morgun, V. V., Logvinenko, V. F., Merezhinskii, Y. G., Lapina, T. V., and Grigorenko, N. V. (1982). Cytogenetic and Genetic Activity of the Herbicides, Atrazine, Simazine, Prometrin and Linuron. *Tsitol.Genet.* 16: 38-41 (RUS) (ENG ABS).
Rejection Code: NON-ENGLISH.

128. Mosleh, Y. Y., Ismail, S. M. M., Ahmed, M. T., and Ahmed, Y. M. (2003). Comparative Toxicity and Biochemical Responses of Certain Pesticides to the Mature Earthworm Aporrectodea caliginosa Under Laboratory Conditions. *Environ.Toxicol.* 18: 338-346.

; Habitat: T; Effect Codes: MOR,GRO,BCM

129. Munn, M. D. and Gilliom, R. J. (2001). Pesticide Toxicity Index for Freshwater Aquatic Organisms. *Water-Resour.Investig.Rep.No.01-4077, U.S.Geol.Surv., Sacramento, CA* 1-55.
Rejection Code: REFS CHECKED/REVIEW.

130. Munn, M. D. and Gilliom, R. J. (2001). Pesticide Toxicity Index for Freshwater Aquatic Organisms. *Water-Resour.Investig.Rep.No.01-4077, U.S.Geol.Surv., Sacramento, CA* 1-55.
Rejection Code: REFS CHECKED/REVIEW.

131. Munn, M. D. and Gilliom, R. J. (2001). Pesticide Toxicity Index for Freshwater Aquatic Organisms. *Water-Resour.Investig.Rep.No.01-4077, U.S.Geol.Surv., Sacramento, CA* 1-55.
Rejection Code: REFS CHECKED/REVIEW.

132. Narayanan, K. S. and Chaudhuri, R. K. (1992). Emulsifiable Concentrate Formulations for Multiple Active Ingredients Using N-Alkylpyrrolidones. *In: L.E.Bode and D.G.Chasin (Eds.), Pesticide Formulations and Application Systems, ASTM STP 1112, Philadelphia, PA* 11: 73-96.
Rejection Code: NO SPECIES/NO TOX DATA.

133. Nietschke, B. S. and Medd, R. W. (1996). Chemical Weed Management of Wild Oats. *Plant Prot.Q.* 11: 190-192 .

Rejection Code: REFS CHECKED/REVIEW.

134. Nishiuchi, Y. (1972). Toxicity of Pesticides to Some Water Organisms. *Bull.Agric.Chem.Insp.Stn.(Noyaku Kensasho Hokoku)* 12: 122-128 (JPN) (ENG TRANSL).

; Habitat: A; Effect Codes: MOR

135. Nishiuchi, Y. (1972). Toxicity of Pesticides to Some Water Organisms. *Bull.Agric.Chem.Insp.Stn.(Noyaku Kensasho Hokoku)* 12: 122-128 (JPN) (ENG TRANSL).

136. Nishiuchi, Y. and Asano, K. (1979). Toxicity of Agricultural Chemicals to Some Freshwater Organisms - 59. *The Aquiculture (Suisan Zoshoku)* 27: 48-55 (JPN) (ENG TRANSL).

137. Nishiuchi, Y. and Hashimoto, Y. (1967). Toxicity of Pesticide Ingredients to Some Fresh Water Organisms. *Sci.Pest Control (Botyu-Kagaku)* 32: 5-11 (JPN) (ENG ABS) (Author Communication Used).

; Habitat: A; Effect Codes: MOR

138. O'Kelley, J. C. and Deason, T. R. (1976). Degradation of Pesticides by Algae. *EPA-600/3-76-022, U.S.EPA, Athens, GA* 41 p.(U.S.NTIS PB-251933) (Publ As 7429 and 7442). Rejection Code: FATE.

139. Owen, R., Knap, A., Ostrander, N., and Carbery, K. (2003). Comparative Acute Toxicity of Herbicides to Photosynthesis of Coral Zooxanthellae. *Bull.Environ.Contam.Toxicol.* 70: 541-548.

; Habitat: A; Effect Codes: POP

140. Pace, E., Pompili, L., Margonelli, A., Giardi, P., and Giardi, M. T. (2001). Pulse-Chase Experiments with [35S]Methionine Show D1 Reaction II Protein Turnover in Variously Herbicide Tolerant Species. *Pestic.Biochem.Physiol.* 69: 92-99.

; Habitat: T; Effect Codes: GRO,BCM

141. Paris, D. F., Lewis, D. L., Barnett, J. T. Jr., and Baughman, G. L. (1975). Microbial Degradation and Accumulation of Pesticides in Aquatic Systems. *EPA-660/3-75-007, U.S.EPA, Corvallis, OR* 46 p.

; Habitat: A; Effect Codes: GRO

142. Park, E. K. and Lees, E. M. (2005). Application of an Artificial Sea Salt Solution to Determine Acute Toxicity of Herbicides to Proisotoma minuta (Collembola). *J.Environ.Sci.Health Part B* 40: 595-604.

; Habitat: A; Effect Codes: MOR

143. Penner, D. (1994). Herbicide Action and Metabolism. *In: A.J.Turgeon (Ed.), Turf Weeds and Their Control, Chapter 3, Am.Soc.of Agron.Inc., Crop Sci.Soc.of Am.Inc., Madison, WI* 37-70. Rejection Code: REVIEW.

144. Pereira, W. E., Domagalski, J. L., Hostettler, F. D., Brown, L. R., and Rapp, J. B. (1996). Occurrence and Accumulation of Pesticides and Organic Contaminants in River Sediment,

Water and Clam Tissues from the San Joaquin River and Tributaries, California. *Environ.Toxicol.Chem.* 15: 172-180.
Rejection Code: NO DURATION/SURVEY.

145. Periera, W. E. and Hostettler, F. D. (1993). Nonpoint Source Contamination of the Mississippi River and its Tributaries by Herbicides. *Environ.Sci.Technol.* 27: 1542-1552.
Rejection Code: SURVEY.

146. Periera, W. E. and Hostettler, F. D. (1993). Nonpoint Source Contamination of the Mississippi River and its Tributaries by Herbicides. *Environ.Sci.Technol.* 27: 1542-1552.
Rejection Code: SURVEY.

147. Petit, F., Le Goff, P., Cravedi, J. P., Valotaire, Y., and Pakdel, F. (1997). Two Complementary Bioassays for Screening the Estrogenic Potency of Xenobiotics: REcombinant Yeast for Trout Estrogen Receptor and Trout Hepatocyte Cultures. *J.Mol.Endocrinol.* 19: 321-335 .
Rejection Code: IN VITRO/NO CONC.

148. Pfahler, F. (1938). Versuche Uber Die Wirkungzusatzlicher Auxin-(Heteroauxin) Gaben Auf Das Wachstum Intakter Pflanzen. *Jar Wis Bot* 86: 675-719.
Rejection Code: NON-ENGLISH/NOT PURSUING.

149. Pinter, A., Torok, G., Surjan, A., Csik, M., Borzsonyi, M., and Kelecsenyi, Z. (1989). Genotoxicity of Selected Herbicides. *Ann.Ist.Super.Sanita* 25: 577-582.
Rejection Code: NO DURATION.

150. Pleasant, J. M., Burt, R. F., and Frisch, J. C. (1994). Integrating Mechanical and Chemical Weed Management of Corn (Zea mays). *Weed Technol.* 8: 217-223.
Rejection Code: MIXTURE.

151. Plewa, M. J. (1978). Activation of Chemicals into Mutagens by Green Plants: A Preliminary Discussion. *Environ.Health Perspect.* 27: 45-50.
Rejection Code: REFS CHECKED/REVIEW.

152. Ploszynski, M. and Rola, J. (1974). The Influence of Simazine and Atrazine on the Yields and Chemical Changes in Tops of Summer (Spring) Rye and Sunflower. *Pamiet.Pulawski* 60: 105-110 (CZE) (ENG ABS).
Rejection Code: NON-ENGLISH.

153. Podola, B. and Melkonian, M. (2005). Selective Real-Time Herbicide Monitoring by an Array Chip Biosensor Employing Diverse Microalgae. *J.Appl.Phycol.* 17: 261-271.

; Habitat: A; Effect Codes: POP

154. Pollehne, F., Jost, G., Kerstan, E., Meyer-Harms, B., Reckermann, M., Nausch, M., and Wodarg, D. (1999). Triazine Herbicides and Primary Pelagic Interactions in an Estuarine Summer Situation. *J.Exp.Mar.Biol.Ecol.* 238: 243-257.
Rejection Code: MIXTURE.

155. Quellet, M., Bonin, J., Rodrigue, J., DesGranges, J. L., and Lair, S. (1997). Hindlimb Deformities (Ectromelia, Ectrodactyly) in Free-Living Anurans from Agricultural Habitats. *J.Wildl.Dis.* 33: 95-104.
Rejection Code: NO CONC/NO DURATION/SURVEY.

156. Rao, D. R., Raychaudhuri, S. P., and Verma, V. S. (1994). Study on the Effect of Herbicides on the Infectivity of Cucumber Mosaic Virus. *Int.J.Trop.Plant Dis.* 12: 177-185.

Rejection Code: IN VITRO.

157. Reddy, G. P. V. and Murthy, M. M. K. (1989). Integrated Pest Management in Rice. *Pesticides* 23: 32F-32I .
Rejection Code: NO TOX DATA.

158. Reinold, D., Hofner, W., and Kohler, W. (1994). Influence of Cu, Cd and Atrazine on the Metabolism of the Unicellular Green Alga Scenedesmus subspicatus (Auswirkungen von Cu, Cd und Atrazin auf den Stoffwechsel der Einzelligen Grunalge Scenedesmus subspicatus). *Z.Pflanzenernaeh.Bodenkd.* 157: 145-150 (GER) (ENG ABS).
Rejection Code: NON-ENGLISH.

159. Ritter, W. F., Johnson, H. P., Lovely, W. G., and Molnau, M. (1974). Atrazine, Propachlor, and Diazinon Residues on Small Agricultural Watersheds: Runoff Losses, Persistence, and Movement. *Environ.Sci.Technol.* 8: 38-42.
Rejection Code: NO SPECIES.

160. Ro, K. S., Chung, K. H., Chung, Y. C., and Tsai, F. J. (1997). Pesticides and Herbicides. *Water Environ.Res.* 69: 664-667.
Rejection Code: REFS CHECKED/REVIEW.

161. Robinson, D. W. (1981). Chemical Weed Control in Ornamental Horticulture. *In: Symp.on Horticulture for the People held at the 20th Int.Horticultural Congr., Aug.17, 1978, Sydney, Australia, Acta Hortic.* 105: 35-40.
Rejection Code: REFS CHECKED/REVIEW.

162. Rossi, L. A. (1996). Overview of Special Review of Triazines. *In: 211th Am.Chem.Soc.Natl.Meet., Mar.24-28, 1996, New Orleans, LA, Abstr.of Pap.Am.Chem.Soc.* 211: AGRO (ABS No.24).
Rejection Code: ABSTRACT.

163. Salt, D. E., Smith, R. D., and Raskin, I. (1998). Phytoremediation. *In: R.L.Jones, C.R.Somerville, and V.Walbot (Eds.), Annu.Rev.of Plant Physiol.and Plant Mol.Biol., Annu.Rev.Inc., Palo Alto, CA* 49: 643-668.
Rejection Code: REVIEW.

164. Samsoe-Petersen, L. (1995). Effects of 67 Herbicides and Plant Growth Regulators on the Rove Beetle Aleochara bilineata (Col.: Staphylinidae) in the Laboratory. *Entomophaga* 40: 95-104.

; Habitat: T; Effect Codes: MOR,REP,GRO

165. Schroder, I., Meyer, M., and Mucke, D. (1970). Effects of the Herbicides 2,4-D, Amitrole, Atrazine, Chlorpropham and Chlorflurenol on Nucleic-Acid Biosynthesis in the Ascomycete Neurospora crassa (Die Wirkung der Herbizide 2,4-D, Amitrol, Atrazin, Chlorpropham und Chlorflurenol auf die Nucleinsaure-Biosynthese des Ascomyceten Neurospora crassa). *Weed Res.* 10: 172-177.
Rejection Code: NON-ENGLISH.

166. Sharma, C. and Panneerselvam, N. (1987). Mutagenicity of Pesticides in Barley Progeny Test System. *In: 18th Annu.Meet.of the Environ.Mutagen Soc., Apr.8-12, 1987, San Francisco, CA, Environ.Mutagen.* 9: 99 (ABS No.258).
Rejection Code: ABSTRACT.

167. Shrazi, M. A., Ratsch, H. C., and Peniston, B. E. (1992). The Distribution of Relative Error of Toxicity of Herbicides and Metals to Arabidopsis. *Environ.Toxicol.Chem.* 11: 237-243.

Rejection Code: MODELING.

168. Shrazi, M. A., Ratsch, H. C., and Peniston, B. E. (1992). The Distribution of Relative Error of Toxicity of Herbicides and Metals to Arabidopsis. *Environ.Toxicol.Chem.* 11: 237-243.

; Habitat: T

169. Smith, A. E., Grover, R., Emmond, G. S., and Korven, H. C. (1975). Persistence and Movement of Atrazine, Bromacil, Monuron, and Simazine in Intermittently-Filled Irrigation Ditches. *Can.J.Plant Sci.* 55: 809-816.
Rejection Code: NO SPECIES.

170. Smith, A. E., Grover, R., Emmond, G. S., and Korven, H. C. (1975). Persistence and Movement of Atrazine, Bromacil, Monuron, and Simazine in Intermittently-Filled Irrigation Ditches. *Can.J.Plant Sci.* 55: 809-816.

; Habitat: A

171. Smith, A. E. and Wilkinson, R. E. (1973). Influence of Simazine and Atrazine on Free Fatty Acid Content in Isolated Chloroplasts. *Weed Sci.* 21: 57-60.
Rejection Code: IN VITRO.

172. Smith, R. J. Jr. (1991). Integration of Biological Control Agents with Chemical Pesticides. *In: D.O.Tebeest (Ed.), Microbial Control of Weeds, Routledge, Chapter 11, Chapman and Hall, NY* 189-208.
Rejection Code: REFS CHECKED/REVIEW.

173. Smith, R. J. Jr. (1991). Integration of Biological Control Agents with Chemical Pesticides. *In: D.O.Tebeest (Ed.), Microbial Control of Weeds, Routledge, Chapter 11, Chapman and Hall, NY* 189-208.
Rejection Code: REFS CHECKED/REVIEW.

174. Sonnet, P. E., Lye, T. L., and Sackett, R. R. (1978). Effects of Selected Herbicides on the Toxicity of Several Insecticides to Honey Bees. *Environ.Entomol.* 7: 254-256.

; Habitat: T; Effect Codes: MOR

175. Spandl, E., Rabaey, T. L., Kells, J. J., and Harvey, R. G. (1997). Application Timing for Weed Control in Corn (Zea mays) with Dicamba Tank Mixtures. *Weed Technol.* 11: 602-607.
Rejection Code: MIXTURE.

176. Stehouwer, R. C., Dick, W. A., and Traina, S. J. (1994). Sorption and Retention of Herbicides in Vertically Oriented Earthworm and Artificial Burrows. *J.Environ.Qual.* 23: 286-292.
Rejection Code: NO EFFECT.

177. Stephan, C. E., Mount, D. I., Hansen, D. J., Gentile, J. H., Chapman, G. A., and Brungs, W. A. (1985). Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses, National Technical Information Services, Springfield, VA. *U.S.EPA* (PB85-227049).
Rejection Code: METHODS.

178. Stratton, G. W. (1987). The Effects of Pesticides and Heavy Metals Towards Phototrophic Microorganisms. *In: E.Hodgson (Ed.), Reviews in Environmental Toxicology 3, Elsevier Science Publishers* 71-147.
Rejection Code: REFS CHECKED/REVIEW.

179. Swann, C. W. and Buchholtz, K. P. (1966). Control and Carbohydrate Reserves of Quackgrass as Influenced by Uracil Herbicides. *Weed Sci.* 14: 103-105.

; Habitat: T

180. Tachikawa, M., Sawamura, R., and Okada, S. (1989). The Effects of Environmental Chemical Pollutants on Fish Gills . *Eisei Kagaku* 35: 397-407 (JPN) (ENG ABS).
Rejection Code: REVIEW.

181. Tachikawa, M., Sawamura, R., and Okada, S. (1989). The Effects of Environmental Chemical Pollutants on Fish Gills . *Eisei Kagaku* 35: 397-407 (JPN) (ENG ABS).
Rejection Code: REVIEW.

182. Teasdale, J. R. (1993). Reduced-Herbicide Weed Management Systems for No-Tillage Corn (Zea mays) in a Hairy Vetch (Vicia villosa) Cover Crop. *Weed Technol.* 7: 879-883.
Rejection Code: MIXTURE.

183. Tosato, M. L., Cesareo, D., Marchini, S., Passerini, L., and Pino, A. (1989). QSARs and Pesticides Design. *In: J.L.Fauchere (Ed.), Progress in Clinical and Biological Research, Volume 291, QSAR: Quantitative Structure-Activity Relationships in Drug Design, Alan R.Liss Inc., New York, NY* 417-420.
Rejection Code: MODELING/QSAR.

184. U.S.Environmental Protection Agency (1985). Appendix B - Response to Public Comments on "Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses". *Fed.Regist.* 50: 30793-30796.
Rejection Code: NO TOX DATA.

185. U.S.Environmental Protection Agency (1987). Permit Writer's Guide to Water Quality-Based Permitting for Toxic Pollutants. *EPA-440/4-87-005, National Technical Information Service, Springfield, VA.*
Rejection Code: NO TOX DATA.

186. U.S.Environmental Protection Agency (1986). Stream Design Flow for Steady-State Modeling. *In: Book VI-Design Conditions, In: Chapter 1, Technical Guidance Manual for Performing Waste Load Allocation, Office of Water, Washington, DC.*
Rejection Code: METHODS/MODELING/NO TOX DATA.

187. U.S.Environmental Protection Agency (1991). Technical Support Document for Water Quality-Based Toxics Control. *EPA-505/2-90-001, U.S.EPA, Washington, D.C.* 292 p. (U.S.NTIS PB91-127415).
Rejection Code: REFS CHECKED/REVIEW.

188. U.S.Environmental Protection Agency (1994). Water Quality Standards Handbook 2nd Edition. *EPA-823-B94-005b.*
Rejection Code: NO TOX DATA.

189. U.S.Environmental Protection Agency (1983). Water Quality Standards Regulation. *Fed.Regist.* 48: 51400-51413.
Rejection Code: REVIEW.

190. Veleminsky, J. and Gichner, T. (1988). Mutagenic Activity of Promutagens in Plants: Indirect Evidence of Their Activation. *Mutat.Res.* 197: 221-242.
Rejection Code: REVIEW.

191. Vizantinopoulos, S., Liapis, K., and Daris, B. (1994). Soil Residues of Triazine Herbicides Following Repeated Application in a Dry Greek Vineyard. *Ann.Inst.Phytopathol.Benaki* 17: 1-10.
Rejection Code: FATE.

192. Vogel, E. W., Graf, U., Frei, H.-J., and Nivard, M. M. J. (99). **<04 Article Title>.** *IARC Sci.Publ.* 146: <25 Page(s)>; Habitat: <40 Habitat Code>; Effect Codes: <08 Effects Code>.

193. Volovyk, O. H. and Einor, L. O. (1964). Effect of Simazine and Atrazine on the Enzymatic Transformation of Cytochrome C in Plants. *Ukr.Bot.Zh.* 21: 10-17 (UKR) (ENG ABS).
Rejection Code: NON-ENGLISH.

194. Wauchope, R. D. (1978). The Pesticide Content of Surface Water Draining from Agricultural Fields - A Review. *J.Environ.Qual.* 7: 459-472.
Rejection Code: NO SPECIES/REVIEW.

195. Weber, J. B. (1977). The Pesticide Scorecard. Toxicological Effects, Biological Distributions, and the Fate of These Chemicals can be Quantified in a Simplified. *Environ.Sci.Technol.* 11: 756-761.
Rejection Code: REFS CHECKED/REVIEW.

196. Weber, J. B. (1977). The Pesticide Scorecard. Toxicological Effects, Biological Distributions, and the Fate of These Chemicals can be Quantified in a Simplified, Straightforward Manner. *Environ.Sci.Technol.* 11: 756-761.

; Habitat: AT

197. Wegrzyn, T. (1971). Effect of Some Herbicides on Azotobacter chroococcum. *Acta Microbiol.Pol.Ser.B* 3: 131-134.
Rejection Code: BACTERIA.

198. Whyte, J. J., Jung, R. E., Schmitt, C. J., and Tillitt, D. E. (2000). Ethoxyresorufin-O-Deethylase (EROD) Activity in Fish as a Biomarker of Chemical Exposure. *Crit.Rev.Toxicol.* 30: 347-570 .
Rejection Code: REVIEW.

199. Wilhelm, C., Conrad, R., Meitzler, L., and Muhlenweg, A. (1996). Combination of Solid Phase Extraction and a Microalgal Test System Based on Pulse-Amplitude Modulated Fluorescence to Detect Photosystem II Herbicides up to 0.05 ueq1-1. *J.Appl.Phycol.* 8: 171-173.
Rejection Code: NO DURATION/SURVEY.

200. Winterlin, W., Seiber, J. N., Craigmill, A., Baier, T., Woodrow, J., and Walker, G. (1989). Degradation of Pesticide Waste Taken from a Highly Contaminated Soil Evaporation Pit in California. *Arch.Environ.Contam.Toxicol.* 18: 734-747.
Rejection Code: NO SPECIES.

201. Wortberg, M., Goodrow, M. H., Gee, S. J., and Hammock, B. D. (1996). Immunoassay for Simazine and Atrazine with Low Cross-Reactivity for Propazine. *J.Agric.Food Chem.* 44: 2210-2219.
Rejection Code: IN VITRO.

202. Wu, J., Robinson, R. A., and Simoneaux, B. (1998). Metabolism of Selected (s)-Triazines in Animals. *In: L.G.Ballantine, J.E.Mcfarland, and D.S.Hackett (Eds.), ACS Symp.Ser.683, Triazine Herbicides: Risk Assessment, Chapter 9, Mar.1996, New Orleans, LA,*

Am.Chem.Soc., Washington, D.C. 95-103.
Rejection Code: REFS CHECKED/REVIEW.

203. Xu, F. L., Dawson, R. W., Tao, S., Li, B. G., and Cao, J. (2002). System-Level Responses of Lake Ecosystems to Chemical Stresses Using Energy and Structural Exergy as Ecological Indicators. *Chemosphere* 46: 173-185.
Rejection Code: MODELING/REVIEW.

204. Yaacoby, T., Schonfeld, M., and Rubin, B. (1985). Triazine-Resistant Grass Weeds and Their Response to Herbicides. *Phytoparasitica* 13: 232 (ABS).
Rejection Code: ABSTRACT.

205. Yu, S. J. (2004). Induction of Detoxification Enzymes by Triazine Herbicides in the Fall Armyworm, Spodoptera frugiperda (J.E. Smith). *Pestic.Biochem.Physiol.* 80: 113-122.

; Habitat: T; Effect Codes: BCM,MOR

206. Zeljenkova, D. and Vargova, M. (1996). Possible Estrogenic Effects of Some Herbicides. *In: 24th Conf.of the Eur.Teratol.Soc., Sept.2-5, 1996, Rome, Italy, Teratology* 53: 39A (ABS No.P57).
Rejection Code: ABSTRACT.

207. Zimmering, S., Mason, J. M., and Osgood, C. (1986). Current Status of Aneuploidy Testing in Drosophila. *Mutat.Res.* 167: 71-88.
Rejection Code: REFS CHECKED/REVIEW.

ECOTOX Study Summaries: Amphibians

Chemical Name: Azinphos Methyl

CAS No: 86-50-0

ECOTOX Record Number and Citation: Harris, M. L., Bishop, C. A., Struger, J., Ripley, B., and Bogart, J. P. (1998). The Functional Integrity of Northern Leopard Frog (*Rana pipiens*) and Green Frog (*Rana clamitans*) Populations in Orchard Wetlands. II. Effects of Pesticides and Eutrophic Conditions on Early Life Stage Development. *Environ.Toxicol.Chem.* 17: 1351-1363. EcoReference No.: 19300

Purpose of Review (DP Barcode or Litigation): Litigation (California Red-Legged Frog)

Date of Review: June 2007

Brief Summary of Study Findings:
The embryo-larval stages of northern leopard frogs (*Rana pipiens*) and green frogs (*Rana clamitans*) were evaluated at seven wetland sites to determine if environmental conditions associated with orchard management in Ontario, Canada, affected frog early development. Synchronous with breeding events (May-July), frogs were exposed to study site pond water for 2 to 3 weeks in the field and in the laboratory. Developmental differences in cages set in study site ponds were analyzed for significance, and then compared to frog development in pond water in the laboratory where water temperature, an important limiting tadpole growth variable, could be controlled. In situ and laboratory pond water assays were conducted as continuous 13-day static-renewal and 16-day discontinuous exposure scenarios. Six pesticides, including Guthion 50WP, were evaluated for direct toxicity to green frogs using continuous and discontinuous toxicity tests.

The laboratory tests were performed with green frogs (eggs and larvae) only. Fertilized eggs for all assays were produced in the laboratory to ensure control of the genetic source. Treatment solutions were made with pond water from a reference field site. Gosner stage 8-25 (embryos – tadpoles) were continuously exposed for 13 days, with 2/3 renewal every second day. The second laboratory toxicity test was a discontinuous exposure, with 4-day static renewal. Gosner stage 8-25 (embryos – tadpoles) green frogs were exposed for 4 days, and then treatments were replaced with clean pond water. Embryos hatched and began feeding in clean (unexposed) conditions. After 7.5 days in clean water (with renewal every second day), treatments were reintroduced for another 4-day exposure.

Results from the field tests demonstrated reduced tadpole growth occurred at several study sites, with no significant difference among reference and orchard (exposure) sites. Surface water temperature appeared to be the driving factor in tadpole growth rates.

In the laboratory toxicity tests, the 96-hour LC_{50} for green frogs was determined to be greater than 5.0 mg a.i./L azinphos methyl. The 13-day (continuous exposure) and 16-day (discontinuous exposure) LC_{50s} were 2.61 ± 0.55 mg a.i./L and greater than 5.0 mg a.i./L azinphos methyl, respectively. Growth was significantly inhibited in both the continuous and discontinuous exposure tests at 2.5 mg a.i./L azinphos methyl.

The combined results of field and laboratory tests indicate that embryo-larval development of these two frog species could be accomplished at all study sites, regardless of the association of apple orchards.

Description of Use in Document: Qualitative

Rationale for Use: This study provides useful information to characterize the potential aquatic risks related to azinphos methyl. Since it is not the most sensitive acute amphibian toxicity endpoint, it will not be used to calculate RQs in this assessment.

Limitations of Study:

1. Control mortality was not reported.
2. It was reported that growth was significantly inhibited at 2.5 mg a.i./L azinphos methyl, but the percent inhibition is unknown.

3. Treatment concentrations were not measured analytically; thus, actual exposures are somewhat uncertain.

Reviewer: Colleen Flaherty, Biologist (ERB3)

Chemical Name: Azinphos Methyl

CAS No: 86-50-0

ECOTOX Record Number and Citation: Harris, M. L., Chora, L., Bishop, C. A., and Bogart, J. P. (2000). Species-and Age-Related Differences in Susceptibility to Pesticide Exposure for Two Amphibians, *Rana pipiens*, and *Bufo americanus*. *Bull.Environ.Contam.Toxicol.* 64: 263-270. EcoReference No.: 49995

Purpose of Review (DP Barcode or Litigation): Litigation (California Red-Legged Frog)

Date of Review: June 2007

Brief Summary of Study Findings:
This study compared the toxicity of several pesticides, including Guthion 50WP, to northern leopard frogs (*Rana pipiens*) and American toads (*Bufo americanus*) at two potentially sensitive developmental stages, gastrulation and metamorphic climax. Guthion 50WP test concentrations were 0.0005, 0.005, 0.05, 0.5, 2.5, and 5.0 mg a.i./L.

One egg mass each of American toads and northern leopard frogs were collected from local ponds. During the first exposure, at late cleavage (stage 8), ten developing embryos were placed in each of three replicate test chambers (*i.e.*, 250-mL beakers). Pesticide treatment solutions were two-thirds renewed at 48-hr. At 96-hr, American toads had developed to stage 17 to 19 ('tail bud' through to 'heart beat') stages, while leopard frogs had developed to stage 15 to 17 ('rotation' through to 'tail bud') stages. Thus, toads were in the process of hatching while the frogs had not yet begun to hatch by the termination of the first 96-hour experiment. After 96 hours, embryos were removed from treatments and placed in clean, aged tap water. Once a forelimb emerged (stage 42), individuals were exposed for the second time, for a period of 48 hours. Test endpoints included mortality, presence of deformities, time-to-metamorphosis, and size and sex of metamorphs.

Neither frog species showed dose-related mortality upon exposure to azinphos methyl up to and including 2.5 to 5 mg a.i./L at either developmental stage. Azinphos methyl exposure did not elicit deformities at hatching, inhibit growth, or alter the sex ratio (1:1) in either species.

Description of Use in Document: Qualitative

Rationale for Use: This study provides useful information to characterize the potential aquatic risks related to azinphos methyl. Since it is not the most sensitive acute amphibian toxicity endpoint, it will not be used to calculate RQs in this assessment.

Limitations of Study:

1. Test organisms were collected from the field; one egg mass each of American toads and northern leopard frogs were collected from local ponds. Thus, previous exposure is unknown.
2. It is not clear how much time passed between the first and second exposures of azinphos methyl.
3. Control mortality for the azinphos methyl studies was not reported.
4. Biomass loading in the test chambers may have been too high (*i.e.*, ten embryos in 250-mL beakers).
5. Treatment concentrations were not measured analytically; thus, actual exposures are uncertain.

Reviewer: Colleen Flaherty, Biologist (ERB3)

Chemical Name: Azinphos Methyl
CAS No: 86-50-0

ECOTOX Record Number and Citation: Nebeker, A. V., Schuytema, G. S., Griffis, W. L., and Cataldo, A. (1998). Impact of Guthion on Survival and Growth of the Frog *Pseudacris regilla* and the Salamanders *Ambystoma gracile* and *Ambystoma maculatum*. *Arch.Environ.Contam.Toxicol.* 35: 48-51. EcoReference No.: 19308

Purpose of Review (DP Barcode or Litigation): Litigation (California Red-Legged Frog)

Date of Review: June 2007

Brief Summary of Study Findings:
The purpose of the study was to determine the effects of technical grade Guthion and Guthion 2S (formulation, 22% Guthion) under flow-through test conditions on survival and growth of tadpoles of the Pacific treefrog *Pseudacris regilla*, and larvae of the Northwestern salamander *Ambystoma gracile* and the spotted salamander *Ambystoma maculatum*. Four 10-day tests were completed with the three species.

In test 1 with 3-week-old Pacific treefrog tadpoles exposed to Guthion technical, the 96-hour LC_{50} was determined to be greater than 3.60 mg a.i./L (the highest mean measured concentration). Total length, hind limb length, and weight were significantly affected at 3.60 mg/L (NOAEC = 0.98 mg a.i./L).

In test 2, Guthion 2S was significantly more toxic than technical grade Guthion to 5-week-old Pacific treefrog tadpoles, as expressed in terms of measured active ingredient, apparently due to other materials in the formulation added to enhance Guthion toxicity. The 96-hour LC_{50} was 1.47 mg a.i./L. Total length, hind limb length, and weight were significantly affected at 0.17 mg a.i./L; the NOAEC was 0.07 mg a.i./L.

In test 3, with 6-week-old larvae of the Northwestern salamander exposed to Guthion 2S, the 96-hour LC_{50} was 1.67 mg a.i./L. Significant differences in total length, snout-to-vent length, and weight occurred at 0.22 mg a.i./L Guthion 2S; the NOAEC was 0.10 mg a.i./L.

In test 4, a 96-hour LC_{50} of 1.90 mg a.i./L Guthion 2S was calculated for the spotted salamander larvae. Snout-to-vent length was significantly affected at 1.01 mg/L Guthion 2S; the NOAEC was 0.37 mg a.i./L. The LOAEC and NOAEC for total length were 0.37 and 0.11 mg a.i./L, respectively. Total weight was the most sensitive parameter with a LOAEC and NOAEC of 0.11 and 0.03 mg a.i./L Guthion 2S, respectively.

Test Species	**Age and Life Stage**	**Chemical**	**96-h LC_{50} (mg a.i./L)**	**10-day LOAEC (mg a.i./L)**	**10-day NOAEC (mg a.i./L)**
Pseudacris regilla	3-week-old tadpole	Guthion tech	> 3.60	3.60[a]	0.98[a]
Pseudacris regilla	5-week-old tadpole	Guthion 2S	1.47	0.17[a]	0.07[a]
Ambystoma gracile	6-week-old larvae	Guthion 2S	1.67	0.22[b]	0.10[b]
Ambystoma maculatum	8-week-old larvae	Guthion 2S	1.90	1.01[c] 0.37[d] 0.11[e]	0.37[c] 0.11[d] 0.03[e]

[a] Based on total length, hind limb length, and total weight
[b] Based on total length, snout-to-vent length, and total weight
[c] Based on snout-to vent length
[d] Based on total length
[e] Based on total weight

Description of Use in Document: Qualitative

Rationale for Use: This study provides useful information to characterize the potential aquatic risks related to azinphos methyl. Since it is not the most sensitive acute amphibian toxicity endpoint, it will not be used to calculate RQs in this assessment.

Limitations of Study:

1. The test substance, Guthion 2S, is not a formulation that is relevant to this assessment.

2. Test organisms were collected as eggs from the field. Thus, previous exposure is unknown.

Reviewer: Colleen Flaherty, Biologist (ERB3)

Chemical Name: Azinphos Methyl
CAS No: 86-50-0

ECOTOX Record Number and Citation: Ozmen, M., Sener, S., Mete, A., and Kucukbay, H. (1999). In Vitro and In Vivo Acetylcholinesterase-Inhibiting Effect of New Classes of Organophosphorus Compounds. *Environ.Toxicol.Chem.* 18: 241-246. EcoReference No.: 15315

Purpose of Review (DP Barcode or Litigation): Litigation (California Red-Legged Frog)

Date of Review: June 2007

Brief Summary of Study Findings:
Anticholinesterase properties of new synthesized organophosphorus (OP) compounds were tested in vitro and in vivo using electric eel AChE and lowland frogs (*Rana ridibunda*), respectively. Gusathion-M® (23% a.i.) was used as a reference anti-AChE agent.

In the in vivo part of the study, twenty-day-old tadpoles were exposed to Gusathion-M concentrations ranging from 1.4 to 14.75 mg a.i./L. The 24-hour LC50 for Gusathion-M was determined to be 7.18 mg a.i./L.

Description of Use in Document:

Qualitative

Rationale for Use:

This study provides useful information to characterize the potential aquatic risks related to azinphos methyl. Since it is not the most sensitive acute amphibian toxicity endpoint, it will not be used to calculate RQs in this assessment.

Limitations of Study:

1. The test substance, Gusathion-M®, is not a formulation that is relevant to this assessment.

2. Test organisms were collected from the field. Thus, previous exposure is unknown.

3. The loading rate for tadpoles in the test chambers was too high (*i.e.*, ten tadpoles in 100 mL solution). Laboratory manuals on the use of *Xenopus laevis* recommend that stocking rates not exceed 1 tadpole/L (Sive, H. L., R. M. Granger and R. M. Harland. 1998. *Early Development of* Xenopus laevis, *a Laboratory Manual)*.

4. Exposure period was only 24 hours (instead of 96 hours).

Reviewer: Colleen Flaherty, Biologist (ERB3)

Chemical Name: Azinphos Methyl
CAS No: 86-50-0

ECOTOX Record Number and Citation: Sanders, H. O. (1970). 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). EcoReference No.: 2891

Purpose of Review (DP Barcode or Litigation): Litigation (California Red-Legged Frog)

Date of Review: June 2007

Brief Summary of Study Findings:
Static bioassays were conducted to determine the relative acute toxicities of 16 pesticides to 1-week-old western chorus frog (*Pseudacris triseriata*) tadpoles and 18 pesticides to four- and five-week-old Fowler's toad (*Bufo woodhousii fowleri*) tadpoles. The toxicity was calculated as the Median Tolerance Limit (TL_{50}), which is defined as the pesticide concentration at which half of the test animals survive during the specified time (*i.e.*, essentially the same as LC_{50}).

For *Bufo woodhousii fowleri*, the 96-hour TL_{50} for Guthion was estimated to be 0.13 (0.05 – 0.33) mg a.i./L. The 48-hour TL_{50} was estimated to be 0.31 (0.17 – 0.56) mg a.i./L, and the 24-hour TL_{50} was estimated to be 0.68 (0.45 – 1.6) mg a.i./L. All control animals survived the 96-hour exposure test and exhibited no symptoms of stress. Guthion was not one of the test chemicals in the bioassays with *Pseudacris triseriata*.

Description of Use in Document: Qualitative

Rationale for Use: This study provides useful information to characterize the potential aquatic risks related to azinphos methyl. This study is consistent with the *Bufo woodhousii fowleri* 96-hour LC_{50} of 0.109 mg a.i./L determined in MRID 40098001. Since it is not the most sensitive acute amphibian toxicity endpoint, it will not be used to calculate RQs in this assessment.

Limitations of Study:

1. Test organisms (egg masses) were collected from the field. Thus, previous exposure is unknown.

2. It is unclear exactly how old the test organisms (*Bufo woodhousii fowleri*) were at test initiation.

3. Exposures were not measured analytically.

Reviewer: Colleen Flaherty, Biologist (ERB3)

Chemical Name: Azinphos Methyl
CAS No: 86-50-0

ECOTOX Record Number and Citation: Schuytema, G. S., Nebeker, A. V., and Griffis, W. L. (1994). Toxicity of Guthion and Guthion 2S to *Xenopus laevis* Embryos. *Arch.Environ.Contam.Toxicol.* 27: 250-255. EcoReference No.: 13686

Purpose of Review (DP Barcode or Litigation): Litigation (California Red-Legged Frog)

Date of Review: June 2007

Brief Summary of Study Findings:

The purpose of this study was to evaluate mortality, teratogenesis, and growth of African clawed frogs (*Xenopus laevis)* exposed to Guthion technical; to compare the effects of Guthion technical to the formulation Guthion 2S; and to evaluate the possible effects of test vessel size on pesticide effects.

Xenopus laevis eggs were obtained from a breeding colony and tested at stage 10 to 11. Five static daily-renewal tests were conducted using the standard protocol for the Frog Embryo Teratogenesis Assay – *Xenopus* as a guideline; adaptations included the addition of 100-ml test volumes, the use of jellied eggs, and the use of well water instead of FETAX solution. Jellied eggs were exposed to five or six increasing concentrations of the test chemical in 10- and 100-ml volumes in static daily-renewal tests.

Percent hatch in the Guthion tests was never less than 91%, relative to the carrier control hatch. Control mortality was ≤ 5%in the carrier-free controls and ≤10% in the carrier controls.

There were no significant mortality effects in Guthion Test 1 (treatments up to 0.89 mg a.i./L) or Test 2 (treatments up to 7.62 mg a.i./L); however, in Test 2, over 90% of test organisms exhibited deformities at 7.62 mg a.i./L. There was also a significant decrease in embryo length at concentrations of 3 mg a.i./L and higher.

Frogs exposed in 10-ml volumes of Guthion exhibited increased mortality, increased deformation, and decreased size as compared to those exposed in 100-ml volumes. The 96-hour LC_{50}s for embryos in the 10-ml Guthion tests ranged from 6.1 to 6.3 mg/L as compared to 10.6 to 11.9 mg/L for those in the 100-ml tests. The percentage of deformities at 3 mg/L Guthion among test survivors in 10-ml tests ranged from 73-89%; in the 100 ml tests, less than 2% were deformed at 3 mg/L Guthion.

The formulation, Guthion 2S, was considerably more toxic than Guthion technical with a 96-hour LC_{50} of 1.6 mg/L for embryos in the 100-mL test. Ninety-six hour NOAECs and LOAECs for length, deformity, and mortality for *Xenopus laevis* are tabulated below.

Test Substance	Volume (ml)	Length		Deformity		Mortality	
		NOAEC (mg a.i./L)	LOAEC (mg a.i./L)	NOAEC (mg a.i./L)	LOAEC (mg a.i./L)	NOAEC (mg a.i./L)	LOAEC (mg a.i./L)
Guthion[a]	10	0.66	2.20	0.51	1.31	3.14	7.16
Guthion[b]	100	1.13	3.11	3.11	7.31	7.16	14.06
Guthion 2S	100	0.48	1.30	--	--	1.30	3.80

[a] Mean of 2 tests
[b] Mean of 3 tests

Description of Use in Document: Qualitative

Rationale for Use: This study provides useful information to characterize the potential aquatic risks related to azinphos methyl. However, the test chamber volume significantly affected test results; as a result, the reported LC50s are highly uncertain and cannot be used to calculate a risk quotient in the risk assessment.

Limitations of Study:

1. Deformities were reported, but not described. It is unclear how and to what extent the test organisms were deformed.

2. Test chamber volume significantly affected test results. Reduced toxicity, decreased presence of deformities, and increased growth all appeared to be related to the 10-fold increase in test exposure volume in the larger test containers (100 ml).

Reviewer: Colleen Flaherty, Biologist (ERB3)

Chemical Name: Azinphos Methyl
CAS No: 86-50-0

ECOTOX Record Number and Citation: Schuytema, G. S., Nebeker, A. V., and Griffis, W. L. (1995). Comparative Toxicity of Guthion and Guthion 2S to *Xenopus laevis* and *Pseudacris regilla* Tadpoles. *Bull.Environ.Contam.Toxicol.* 54: 382-388. EcoReference No.: 14957

Purpose of Review (DP Barcode or Litigation): Litigation (California Red-Legged Frog)

Date of Review: June 2007

Brief Summary of Study Findings:
This study evaluated mortality effects of Guthion and Guthion 2S (formulation) on 2-week-old African clawed frogs (*Xenopus laevis*) and 3-week-old Pacific treefrogs (*Pseudacris regilla*).

Xenopus laevis were raised from eggs obtained from a breeding colony and were 2 weeks old at test initiation. *Pseudacris regilla* were 3 weeks old at test initiation and were raised from locally collected eggs. Both tadpole species were exposed over 4 or 8 days to the test chemicals in 1000-ml beakers containing 400, 500, or 1000 mL of solution. All tests were static with daily renewal of exposure solutions. Measured concentrations were analyzed, and recovery of Guthion was 102% ± 0.8. Mean percent loss from the test vessels over each 24-hour period was less than 10%.

Xenopus laevis was slightly more sensitive than *Pseudacris regilla*, with a 96-hr LC_{50} of 2.94 mg a.i./L compared to 4.14 mg a.i./L (see table below).

Test Chemical	Test Species	Duration (days)	Test Volume (ml)	LC50 (95% CI), mg a.i./L
Guthion	*X. laevis*	4	400	2.94 (2.30 – 3.77)
Guthion	*P. regilla*	4	500	4.14[a]
Guthion	*P. regilla*	8	500	2.77 (1.82 – 4.22)
Guthion 2S	*X. laevis*	4	500	0.59 (0.43 – 0.80)
Guthion 2S	*X. laevis*	4	500	0.42 (0.38 – 0.46)
Guthion 2S	*P. regilla*	4	1000	0.84 (0.72 – 0.97)
Guthion 2S	*P. regilla*	8	1000	0.76 (0.64 – 0.91)
Guthion 2S	*P. regilla*	4	1000	0.46 (0.39 – 0.55)

[a] CI not calculable

Description of Use in Document: Qualitative

Rationale for Use: This study provides useful information to characterize the potential aquatic risks related to azinphos methyl. Since it is not the most sensitive acute amphibian toxicity endpoint, it will not be used to calculate RQs in this assessment.

Limitations of Study:

1. The exposure history of the wild-caught *Pseudacris larvae* is unknown. It is difficult to find reliable sources for indignious species and based on control mortality, it did not appear to be an issue; however, it does represent an uncertainty.
2. The loading rate for tadpoles per liter is high; laboratory manuals on the use of *X. laevis* recommend that stocking rates not exceed 1 tadpole/L (Sive, H. L., R. M. Granger and R. M. Harland. 1998. *Early Development of Xenopus laevis, a Laboratory Manual*. Cold Springs Harbor Laboratory Press). It is presumed that the daily renewals were complete (100%) renewals. The average dissolved oxygen (DO) concentration is reported as 7.5 mg/L, which suggests that DO was not an issue; however, without aeration

and with such high loading rates, it is surprising that DO was not an issue. However, mortality was less than 5% in the controls.
3. It is unclear why the test volumes are fluctuating in each of the studies.
4. The study purports to measure NOEC and LOEC (hypothesis-based endpoints); however, it is unclear how this was done for Guthion 2S test with *Xenopus laevis* since it had only a single replicate.
5. Measured concentrations were made from stock solution and test solutions combined; this biases the analytical measurements.
6. The level of detection (10 ug/L) is close to the lower treatment concentration range for *Pseudacris*. Presumably, the level of quantification would be considerably higher so it is unclear how the researchers accurately measured the lower treatment concentrations.
7. Feeding of the *Pseudacris* larvae from treatment days 4 - 8 may have markedly impacted the exposure conditions.

Reviewers: Colleen Flaherty, Biologist (ERB3); Dr. Thomas Steeger, Senior Scientist (ERB4)

ECOTOX Study Summaries: Aquatic Plants

Chemical Name: Azinphos Methyl
CAS No: 86-50-0

ECOTOX Record Number and Citation: Van der Heever, J. A. and Grobbelaar, J. U. (1998). In Vivo Chlorophyll a Fluorescence of *Selenastrum capricornutum* as a Screening Bioassay in Toxicity Studies. *Arch.Environ.Contam.Toxicol.* 35: 281-286. EcoReference No.: 19800

Purpose of Review (DP Barcode or Litigation): Litigation (California Red-Legged Frog)

Date of Review: June 2007

Brief Summary of Study Findings:
The objective of this study was to evalutate *in vivo* chlorophyll *a* fluorescence of *Selenastrum capricornutum* as an effective and rapid screeing bioassay to detect waterborne toxic substances, including azinphos methyl. Test concentrations were 0 (control), 0.00001, 0.0001, 0.001, 0.01, 0.1, and 1 mg/L. Fluorescence measurements were taking at four difference exposure times; immediately after addition of toxicant, 0.5 h after exposure, 1 h after exposure, and 4 h after exposure. Azinphos methyl did not significantly inhibit fluorescence for any time of exposure.

Description of Use in Document: Qualitative

Rationale for Use: This study provides useful information to characterize the potential risks to aquatic plants related to azinphos methyl. However, no definitive endpoints (*e.g.*, EC50) were obtained for use in risk calculations. The exposure duration was considerably shorter than required for a tier 1 aquatic non-vascular plant toxicity test (4 hours in this study versus 5 days for guideline §122-2).

Limitations of Study:

1. Treatment concentrations were not measured analytically; thus, actual exposures are uncertain.

Reviewers: Colleen Flaherty, Biologist (ERB3)

Chemical Name: Azinphos Methyl
CAS No: 86-50-0

ECOTOX Record Number and Citation: Van der Heever, J. A. and Grobbelaar, J. U. (1997). The Use of Oxygen Evolution to Assess the Short-Term Effects of Toxicants on Algal Photosynthetic Rates. *Water S.A.* 23: 233-237. EcoReference No.: 19854

Purpose of Review (DP Barcode or Litigation): Litigation (California Red-Legged Frog)

Date of Review: June 2007

Brief Summary of Study Findings:
This study assessed the oxygen-production of *Selenastrum capricornutum* and *Chlorella vulgaris* following exposure to various toxicants, including azinphos methyl. Test concentrations were 0 (control), 0.00001, 0.0001, 0.001, 0.01, 0.1, and 1 mg/L. Results indicated that azinphos methyl had no effect on the oxygen evolution of either algal species up to 1 mg/L (the highest level tested) following a 30-min exposure.

Description of Use in Document: Qualitative

Rationale for Use: This study provides useful information to characterize the potential risks to aquatic plants related to azinphos methyl. However, no definitive endpoints (*e.g.*, EC50) were obtained for use in risk calculations. The exposure duration was considerably shorter than required for a tier 1 aquatic non-vascular plant toxicity test (30 minutes in this study versus 5 days for guideline §122-2).

Limitations of Study:

1. Treatment concentrations were not measured analytically; thus, actual exposures are uncertain.

Reviewers: Colleen Flaherty, Biologist (ERB3)

ECOTOX Study Summaries: Mammals

Chemical Name: Azinphos Methyl
CAS No: 86-50-0

ECOTOX Record Number and Citation: Meyers, S. M. and Wolff, J. O. (1994). Comparative Toxicity of Azinphos-Methyl to House Mice, Laboratory Mice, Deer Mice, and Gray-Tailed Voles. *Arch.Environ.Contam.Toxicol.* 26: 478-482. EcoReference No.: 40206

Purpose of Review (DP Barcode or Litigation): Litigation (California Red-Legged Frog)

Date of Review: June 2007

Brief Summary of Study Findings:
The acute oral and dietary toxicity of Guthion® (99.1% azinphos methyl) to house mice and laboratory mice (*Mus musculus*), gray-tailed voles (*Microtus canicaudus*) and deer mice (*Peromyscus maniculatus*) was assessed. For the acute oral tests, five to ten male animals of each species were given one of four or five doses of azinphos methyl dissolved in acetone and corn oil via stomach gavage. For the dietary toxicity test, ten animals of mixed sexes were used in each of six treatments. The test consisted of a 3-day pretrial followed by a 10-day feeding trial on azinphos methyl treated food. Concentrations in the food were verified by extraction and high resolution gas chromatography. LC50s were calculated after 5 days and 10 days of treatment. Brain tissue was analyzed for cholinesterase activity.

The single dose oral LD50 for azinphos methyl was determined to be 10, 11, 32, and 48 mg/kg bw for wild house mice, laboratory mice, gray-tailed voles, and deer mice, respectively. Ten-day dietary LC50s were 277 ppm for laboratory mice, 297 ppm for gray-tailed voles, and 1180 ppm for deer mice. All treated animals lost more weight, consumed less food, and had depressed brain cholinesterase (ChE) activity compared to controls. Five-day LC50s were 406, 543, and 2425 ppm for gray-tailed vole, laboratory mouse, and deer mouse, respectively. Animals that died during the dietary LC50 tests had mean ChE activity of 50-55% while survivors had 56-70% of controls.

Description of Use in Document: Quantitative

Rationale for Use: The most sensitive acute dietary 5-day LC50 (406 ppm for gray-tailed vole) is used quantitatively in this risk assessment since there are no other subacute dietary toxicity data available for mammals. The LD50s determined in this study are used qualitatively in this risk assessment since there is a more sensitive endpoint among the available data.

Limitations of Study:

1. Deer mice and house mice were wild caught; thus, previous exposure is unknown.

2. Only males were used in the acute oral toxicity tests.

Reviewers: Colleen Flaherty, Biologist (ERB3)