

US EPA ARCHIVE DOCUMENT

Completed 4-9-93

* ECOLOGICAL EFFECTS BRANCH DATA REQUIREMENTS *

Case No.: 816353

Date: 4-6-93

Biologist Name: Dennis J. McLane Telephone No.: 305-5096

Chemical: Triadimefon Chemical No: 109901

Use Patterns: Terrestrial, food crops and nonfood crops

GUIDELINES NO./STUDY TYPE (NR-not required; Y/N; I-in review)	DATA REQUIREMENT FULFILLED	MRIDs/DATES
71-1(a) Acute Avian Oral, Quail/Duck	Y	41895901 1991
71-1(b) Acute Avian Oral, Quail/Duck (TEP)	NR	
71-2(a) Acute Avian Diet/Quail	Y	00050066 1977
71-2(b) Acute Avian Diet/Duck	N	00050067 1977
71-3 Wild Mammal Toxicity	NR	
71-4(a) Avian Reproduction/Quail	Y	248177 1982
71-4(b) Avian Reproduction/Duck	Y	42342302 1992
71-5(a) Simulated Terrestrial Field	NR	
71-5(b) Actual Terrestrial Field	NR	
72-1(a) Acute Fish/Bluegill	N	00070704 1977
72-1(b) Acute Fish/Bluegill (TEP)	Y	4600870004 1984
72-1(c) Acute Fish/Rainbow Trout	N	00070704 1977
72-1(d) Acute Fish/Rainbow Trout (TEP)	Y	4600870005 1984

GUIDELINES NO./STUDY TYPE	DATA REQUIREMENT FULFILLED	MRIDs/DATES
(NR-not required; Y/N; I-in review)		
72-2(a) Acute Aquatic Invertebrate	N	460089003 1983
72-2(b) Acute Aquatic Invertebrate(TEP)	Y	460087006 1984
72-3(a) Acute Estu/Mari Fish	R	
72-3(b) Acute Estu/Mari Mollusk	R	
72-3(c) Acute Estu/Mari Shrimp	R	
72-3(d) Acute Estu/Mari Fish(TEP)	R	
72-3(e) Acute Estu/Mari Mollusk(TEP)	R	
72-3(f) Acute Estu/Mari Shrimp(TEP)	R	
72-4(a) Early Life-Stage Fish	N	41922103 1991
72-4(b) Life-Cycle Aquatic Invertebrate	N	41922102 1991
72-5 Life-Cycle Fish	R	
72-6 Aquatic Org. Accumulation	N/A	
72-7(a) Simulated Aquatic Field Study	N/A	
72-7(b) Actual Aquatic Field Study	N/A	
122-1(a) Seed Germ./Seedling Emerg.	N/A	
122-1(b) Vegetative Vigor	N/A	
122-2 Aquatic Plant Growth	N/A	
123-1(a) Seed Germ./Seedling Emerg.	N/A	
123-1(b) Vegetative Vigor	N/A	
123-2 Aquatic Plant Growth	N	41616007 1986
	N	159558 1985
124-1 Terrestrial Field	N/A	
124-2 Aquatic Plant Growth	R	

GUIDELINES NO./STUDY TYPE	DATA REQUIREMENT FULFILLED (NR-not required; Y/N; I-in review)	MRIDs/DATES
141-1	Honey Bee Acute Contact	Y 42307804 1992
141-2	Honey Bee Residue on Foliage	N/A
141-5	Field Test for Pollinators	N/A

109901
Shaughnessey

Completed 4-9-93
Revised

EEB Chemical Profile

Pesticide Name: Triadimefon (Bayleton)

100 Fish and Wildlife Toxicology

100.1 Minimum Requirements

100.1.1 Avian Acute Oral LD₅₀

Mallard duck Tech. LD₅₀ > 4000 mg/kg Core 231311 Lamb, etal, 1977

Bobwhite quail Tech. 95.0% LD₅₀ > 2000 mg/kg Core 41895901 Stafford, 1991

Metabolite Triadimenol (127201)

Canary Tech. 92% LD₅₀ > 1000 mg/kg Sup 071469 Hermann, 1975
(*Serinus canarius*)

Japanese quail Tech. 92% LD₅₀ > 10,000 mg/kg Sup 071469 Mihail, 1980
(*Coturnix coturnix*) (mortality occurred at level tested)

Bobwhite quail Tech 92% LD₅₀ > 2000 mg/kg Core 071469 Lamb, 1981

Mallard duck Tech. 92% LD₅₀ > 5000 mg/kg Core 071469 Lamb, 1981

100.1.2 Avian Dietary LC₅₀

Mallard duck Tech. 93% LC₅₀ > 10000 ppm Sup 00050067 Fink, 1977

Bobwhite quail Tech. 93% LC₅₀ > 4640 ppm Core 00050066 Fink, 1977

Metabolite Testing Triadimenol (127201)

Mallard duck Tech. 92% LC₅₀ > 5000 ppm Core 071469 Lamb, 1981

Bobwhite quail Tech. 92% LC₅₀ > 5000 ppm Core 071469 Lamb, 1981

Metabolite Testing Triazolynine (600011)

Mallard duck 97.5% LC₅₀ > 5000 ppm Core 257997 Beavers, etal, 1983

Bobwhite quail 97.5% LC₅₀ > 5000 ppm Core 257997 Beavers, etal, 1983

100.1.3 Fish Acute LC₅₀

Rainbow trout	Technical	96 h.			Invalid	00070704	LambRoney,1977
Rainbow trout	Tech.???	96 h.	LC ₅₀ 40-60		Abbrev.review	???????	Bayer,1974
Rainbow trout	Bayleton	50%WP	96 h.LC ₅₀	=22.9ppm	Sup	460087005	Carlisle,1984
Bluegill	Technical	96 h.			Invalid	00070704	LambRoney,1977
Bluegill	Bayleton	50% WP	96 h.	LC ₅₀ = 24.7ppm	Sup	460087004	Carlisle,1984
Channel Catfish	Technical	96 h.			Invalid	00070704	LambRoney,1977
Goldfish	Tech.???	96 h.	LC ₅₀ ∞ 60 ppm		Abbrev.review	???????	Bayer,1974
Mirror Carp	"	"	"	40-60ppm	"	"	"
Gold ides	"	"	"	60-80ppm	"	"	"

*Metabolite Testing Triadimenol (127201)

Bluegill	Tech.	92%	96 h.	LC ₅₀ = 15 ppm	Core	071469	Lamb,1981
Sunfish							
Rainbow trout	Tech.	92%	96 h.	LC ₅₀ = 14 ppm	Core	071469	Lamb,1981
Goldfish	94.9%	96 h.	LC ₅₀	10-50ppm	Sup	071469	Hermann,1975
Rainbow trout	94.9%	96 h.	LC ₅₀	23.5 ppm	Core	???????	Hermann,1978
Golden orfe	94.9%	LC ₅₀	= 17.4 ppm		Sup	???????	Hermann,1979
<i>(Leuciscus idus melanotus)</i>							

100.1.4 Aquatic Invertebrate LC₅₀

Daphnia Technical 48 h. LC₅₀ = 1.6 ppm Core 231311 Lamb, 1977
Daphnia Bayleton 50% WP 48 h. Invalid 460087006 Forbis, etal, 1984
Daphnia Technical 48 h LC₅₀ >10 mg/L Sup 460089003 Heimbach, 1983
Crayfish Bayleton 50% WP 96 h. LC₅₀=104ppm Sup 254693 Carlisle, etal, 1983

*Metabolite Testing triadimenol S#127201

Daphnia magna Tech. 92% 48 h. LC₅₀ = 2.5 ppm Core 071469 Lamb, 1981

100.2 Additional Terrestrial Laboratory Tests

Avian Reproduction

Mallard duck Technical NOEL >500 ppm Sup 248117 Carlisle, 1982
Mallard duck Technical NOEL >780 ppm Core 42342302 Stafford, 1992
Bobwhite quail Technical NOEL >20 ppm Core 248177 Lamb, 1982
Bobwhite quail Technical NOEL >587 ppm Sup 42342301 Stafford, 1992

Invertebrates

Honey bees Tech.LD₅₀ (AO+AC) > 25 µg/bee Core 42307804 Hoxter, etal, 1992
Manure worm Bayleton 25%WP Est LC₅₀ >50 ppm Sup 232489 Hermann, 1973
(*Eisenia foetida*)

*Metabolite Testing triadimenol S#127201

Bobwhite quail Tech. 97% (avian reproduction) Invalid 40283101 Carlisle, 1984
Mallard duck Tech. 97% NOEL >100 ppm (repro) Core 40283102 Carlisle, 1984

100.3 Additional Aquatic Laboratory Tests

Fish

Rainbow trout Tech. (no MATC but 21 day LC_{50} = 1270ppb) Sup 248117 Carlisle, 1982
 Fathead Minnow Tech. Freshwater Early Life Invalid 41922103 Cohle, 1991
 Rainbow trout Tech. 93% >41<116ppb (Early Life Stages) Sup 251243 Carlisle, 1983

Invertebrates

Daphnia magna Tech. 94.2% >52.1 <119 ppb (lifecycle) Sup 41922102 Gagliano, 1991
Daphnia magna Tech. 93% >100 <200 ppb (life cycle) Core 246736 Lamb, 1981
 21d LC_{50} = 178 ppb, RI_{50} = 220 ppb

Aquatic Plants

Tier II
Scenedesmus Tech. 91.5% 96 h EC_{50} for growth of biomass = 0.90
subspicatus ppm; 96 h. EC_{50} for growth rate = 1.71 ppm. Sup 159558 Heimbach, 1985

Tier II
Selenastrum Bayleton 50% WP 96 h. LC_{50} = 0.91 mg a.i./L Sup 41616007 Forbis, 1986
capricornutum NOEC < 0.49 (lowest level tested)

*Metabolite Testing triadimenol S#127201

Daphnia magna Tech. 92% >100 <200 ppb (life cycle) Core 071469 Lamb, 1982