

Appendix C
Summary of Ecotoxicity Data for Bromadiolone

Table C-1: Avian Acute Toxicity of Bromadiolone

Species	% A.I.	Toxicity Endpoint	Toxicity Classification	MRID (or as specified)	Status
Acute Single Oral Dose					
Bobwhite quail (<i>Colinus virginianus</i>)	99.75	30-day LD ₅₀ = 170 mg a.i./kg-bw Slope = n/a	Moderately Toxic	00143279	Core (“Acceptable”)
Mallard duck (<i>Anas platyrhynchos</i>)	99.00			44000201	Un-reviewed
Acute Dietary					
Mallard duck (<i>Anas platyrhynchos</i>)	94.40	25-day LC ₅₀ = 440 mg a.i./kg-diet	Highly Toxic	00249995	Core (“Acceptable”)
Mallard duck (<i>Anas platyrhynchos</i>)	99.75	35-day LC ₅₀ = 158 mg a.i./kg-diet	Highly Toxic	00143278	Core (“Acceptable”)
Bobwhite quail (<i>Colinus virginianus</i>)	99.75	LC ₅₀ = 37.6 mg a.i./kg-diet Slope = 0.83 ± 0.40	Very Highly Toxic	00143280	Core (“Acceptable”)
Bobwhite quail (<i>Colinus virginianus</i>)	0.005 (Rat-A-Rest)	17-day LC ₅₀ > 10 mg a.i./kg-diet	---	00145321	Supplemental
Mallard duck (<i>Anas platyrhynchos</i>)	0.005 (Rat-A-Rest)	17-day LC ₅₀ > 20 mg a.i./kg-diet	---	00145322	Supplemental
Bobwhite quail (<i>Colinus virginianus</i>)	94.4	14-day LC ₅₀ could not be determined due to insufficient test duration	---	00030961	Supplemental
Mallard duck (<i>Anas platyrhynchos</i>)	99.0			44000202	Un-reviewed
Japanese quail (<i>Coturnix japonica</i>)				00150982	Supplemental with limited utility (high control mortality)

Table C-2: Mammalian Acute Toxicity of Bromadiolone

Species	% A.I.	Toxicity Endpoint	Toxicity Classification	MRID (or as specified)	Status
Acute Single Oral Dose					
Wistar albino rat	1.0 (formulated in corn starch)	14-day LD ₅₀ = 0.6 mg a.i./kg-bw 14-day LD ₅₀ = 60 mg form./kg-bw	Very Highly Toxic	00241703	Supplemental ("Minimum")
Swiss mice	Not specified	3-week LD ₅₀ = 1.75 mg a.i./kg (male)	Very Highly Toxic	00226423 or 00007425	Supplemental ("Minimum")
Sprague-Dawley rat	Not specified	3-week LD ₅₀ = 1.13 mg a.i./kg (female)	Very Highly Toxic	00226423	Supplemental
Sprague-Dawley rat	2.5g/L	21-day LD ₅₀ >0.56, <0.84 mg a.i./kg-bw	Very Highly Toxic	41900001	Supplemental ("Minimum")
Domestic cat	Not specified	LD ₅₀ > 25 mg a.i./kg-bw	---	00142699 (ascension no. 254000)	Not rated
Beagle dog	not specified	LD ₅₀ > 10 mg a.i./kg-bw	---	00142699 (ascension no. 254000)	Not rated
Acute Multiple Oral Doses					
Beagle dog	100.74	13-week LD ₅₀ = 16.7 mg a.i./kg-bw/day (dogs dosed by gavage every day for 90 days)	Highly Toxic	00160954	Supplemental
Pig	Not specified	45-day LD ₅₀ > 0.02 mg a.i./kg-bw/day (pigs dosed every day for 45 days)	---	00143276	Supplemental
		LD ₅₀ > 1.0 mg a.i./kg/day (pigs dosed 15 days; not dosed 15 days; dosed again 5 days)	---		

Table C-3: Mammalian Developmental Toxicity of Bromadiolone

Species	% A.I.	Toxicity Endpoint	MRID (or as specified)	Status
Wistar albino rat	100	NOAEL = 0.070 mg a.i./kg-bw LOAEL = 0.035 mg a.i./kg-bw Based on vaginal bleeding, hypotonicity, pale eyes, and death	92196014	Acceptable

Table C-4: Bromadiolone Toxicity to Aquatic Species

Species	% A.I.	Toxicity Endpoint	Toxicity Classification	MRID (or as specified)	Status
Invertebrates					
Freshwater daphnid (<i>Daphnia magna</i>)	98.7 w/w	48-hr EC ₅₀ = 2 mg a.i./L	Moderately Toxic	42093302	Core (“Acceptable”)
Freshwater daphnid (<i>Daphnia magna</i>)	Not reported	48-hr EC ₅₀ = 0.24 mg a.i./L	Highly Toxic	232567	Supplemental
Vertebrates (none)					