Table 1. Health Effect Levels of Resmethrin in Laboratory Animals

Route	Duration	Species	NOAEL	LOAEL	Organ/Effect	Comments	Reference
Acute Duration Toxicity							
dermal	once	rat		2,500 mg/kg	LD_{50}		HSDB 2003
dermal	once	rabbit		2,500 mg/kg	LD_{50}		HSDB 2003
dermal	once	mouse		>5,000 mg/kg	LD_{50}		HSDB 2003
oral	once	rat		1,244 to >2,500 mg/kg	LD_{50}		HSDB 2003
oral	once	mouse		300–940 mg/kg	LD_{50}		HSDB 2003
oral (diet)	14 days	rat	148 mg/kg/day (M), 180 mg/kg/day (F)	386 mg/kg/day	Tremor, increased hepatic/ body weight ratios	Mortality and reduced body weight and food intake at ≥1,080 mg/kg/day.	Swentzel et al. 1977
inhalation	4 hours	rat		>9,490 mg/m^3	LC_{50}		HSDB 2003
inhalation	1 hour	rabbit		>12,000 mg/m^3	LC_{50}		HSDB 2003
inhalation	4 hours	dog		>420 mg/m^3	LC_{50}		HSDB 2003
Intermediate Duration Toxicity							
oral (diet)	90 days	rat	67 mg/kg/day	679–724 mg/kg/day	Tremor, reduced body weight	Mortality at 2,400 mg/kg/day	Swentzel et al. 1977
oral (diet)	24 wks	rat	1,500 ppm (77.5 mg/kg/day (M), 86.6 mg/kg/day (F))	5,000 ppm	Tremor, decreased body weight, increased liver and kidney weights	Serum alkaline phosphatase activity also increased.	Miyamoto 1976
oral (diet)	6 months	dog	10 mg/kg/day	30 mg/kg/day	Increased liver weights		Gephart et al. 1980; Penwick Corp. 1980b
inhalation	90 days 6 hours/day, 5 days/week	rat	100 mg/m^3	300 mg/m^3	Minor effects on some clinical parameters and signs of irritation	At 1,000 mg/m^3, clinical signs of irritation, minor neurobehavioral changes, reduced rate of weight gain; some changes in clinical pathology parameters.	Coombs et al. 1985
Chronic Duration Toxicity							
oral (diet)	2 year	rat		500 ppm (39.5 mg/kg/day M) (47 mg/kg/day F)	Minimal hypertrophy of hepatocytes; decreased spleen weights in females		Penwick Corp. 1980a
oral (diet)	85 wks	mouse	1,000 mg/kg		No oncogenicity	No oncogenicity observed	Cox et al 1979

Table 1. Health Effect Levels of Resmethrin in Laboratory Animals (continued)

Route	Duration	Species	NOAEL	LOAEL	Organ/Effect	Comments	Reference
oral (diet)	112 wks	rat	5,000 mg/kg		no oncogenicity	No oncogenicity observed; NOAEL of 500 mg/kg for hypertrophy of hepatocytes, which was not considered a definite toxic response	Knickerbocker et al. 1980
Developmental/Reproductive Toxicity							
oral (gavage)	gestation days 6–15	rat	80 mg/kg/day		No teratogenicity	No teratogenic effects seen	Machi et al. 1979
oral (diet)	gestation days 6–15	rat	40 mg/kg/day	80 mg/kg/day	Delay in skeletal development		Penwick Corp. 1979b
oral (intubation)	gestation days 6–18	rabbit	100 mg/kg/day		No teratogenicity	No teratogenic effects seen	Becci et al. 1979
oral (diet)	gestation days 6–16	rat	1,500 mg/kg		No teratogenicity	No gross abnormalities of fetal skeletons and soft tissues observed. Dams showed tremors and decreased food and water consumption at 1,500 mg/kg, and 2 dams died.	Swentzel et al. 1977
oral	gestation period	mouse	100 mg/kg		No teratogenicity	No significant adverse effects	Miyamoto 1976
oral (diet)	3 generations	rat		500 ppm (25 mg/kg/day)	Slight increase in pups cast dead and lower mean pup weight at weaning		Penwick Corp. 1979a