

TABLE 3.—AGGREGATE RISK ASSESSMENT FOR ACUTE EXPOSURE TO EMAMECTIN

Population Subgroup	aPAD (mg/kg)	% aPAD (Food)	Surface Water EEC (ppb)	Ground Water EEC (ppb)	Acute DWLOC (ppb)
U.S. Population	0.00025	29	0.298	0.006	6.2
All infants (< 1 year old)	0.00025	51	0.298	0.006	1.2
Children (1–2 years old)	0.00025	50	0.298	0.006	1.3
Children (3–5 years old)	0.00025	58	0.298	0.006	1.0
Children (6–12 years old)	0.00025	36	0.298	0.006	1.6
Youth (13–19 years old)	0.00025	27	0.298	0.006	6.4
Adults (20–49 years old)	0.00025	20	0.298	0.006	7.0
Females (13–49 years old)	0.00025	23	0.298	0.006	5.8
Adults (50+ years old)	0.00025	22	0.298	0.006	6.9

2. *Chronic risk.* Using the exposure assumptions described in this unit for chronic exposure, EPA has concluded that exposure to emamectin from food will utilize 19% of the cPAD for the U.S. population, 17% of the cPAD for females 13 years and older, 9% of the

cPAD for all infants (<1 year old) and 34% of the cPAD for children 1–2 years old. There are no residential uses for emamectin that result in chronic residential exposure to emamectin. In addition, there is potential for chronic dietary exposure to emamectin in

drinking water. After calculating DWLOCs and comparing them to the EECs for surface and ground water, EPA does not expect the aggregate exposure to exceed 100% of the cPAD, as shown in the following Table 4:

TABLE 4.—AGGREGATE RISK ASSESSMENT FOR CHRONIC (NON-CANCER) EXPOSURE TO EMAMECTIN

Population Subgroup	cPAD (mg/kg)	% cPAD (Food)	Surface Water EEC (ppb)	Ground Water EEC (ppb)	Chronic DWLOC (ppb)
U.S. Population	0.000075	19	0.080	0.006	2.1
All infants (< 1 year old)	0.000075	9	0.080	0.006	0.68
Children (1–2 years old)	0.000075	34	0.080	0.006	0.49
Children (3–5 years old)	0.000075	31	0.080	0.006	0.52
Children (6–12 years old)	0.000075	23	0.080	0.006	0.58
Youth (13–19 years old)	0.000075	17	0.080	0.006	2.2
Adults (20–49 years old)	0.000075	17	0.080	0.006	2.2
Females (13–49 years old)	0.000075	17	0.080	0.006	1.9
Adults (50+ years old)	0.000075	16	0.080	0.006	2.2

3. *Short-term risk.* Short-term aggregate exposure takes into account residential exposure plus chronic exposure to food and water (considered to be a background exposure level). Emamectin is not registered for use on any sites that would result in residential exposure. Therefore, the aggregate risk is the sum of the risk from food and water, which do not exceed the Agency's level of concern.

4. *Intermediate-term risk.* Intermediate-term aggregate exposure takes into account residential exposure plus chronic exposure to food and water (considered to be a background exposure level).

Emamectin is not registered for use on any sites that would result in residential exposure. Therefore, the aggregate risk is the sum of the risk from food and water, which do not exceed the Agency's level of concern.

5. *Aggregate cancer risk for U.S. population.* Emamectin is classified as a "not likely" human carcinogen based on the lack of evidence of carcinogenicity in male and female rats or male and female mice at doses that were judged to be adequate to assess the carcinogenic potential of the chemical. Therefore, EPA does not expect it to pose a cancer risk. As a result, a quantitative cancer

dietary exposure analysis was not performed.

6. *Determination of safety.* Based on these risk assessments, EPA concludes that there is a reasonable certainty that no harm will result to the general population, and to infants and children from aggregate exposure to emamectin residues.

#### IV. Other Considerations

##### A. Analytical Enforcement Methodology

An analytical method (HPLC-fluorescence) for the enforcement of tolerances for residues of emamectin and its metabolites in/on plant commodities has been validated by EPA