

TABLE 2.—3-METHYLPHOSPHINICO-PROPIONIC ACID: SUBCHRONIC TOXICITY—Continued

Guideline No.	Study Type	Results
870.3700	Prenatal developmental in rodents in rats	Maternal: NOAEL = 300 mg/kg/day Maternal: LOAEL = 900 mg/kg/day based on one death and clinical findings (persistent piloerection and/or increased urinary output) Developmental: NOAEL = 300 mg/kg/day Developmental: LOAEL = 900 mg/kg/day based on increases in the incidences of total litter loss and in the fetal and litter incidences of wavy and/or thickened ribs.
870.3700	Prenatal developmental in rabbits	Maternal: NOAEL = 50 mg/kg/day Maternal: LOAEL = 100 mg/kg/day based on increased abortions, mortality, and reductions in food and water consumption, body weight gain, and fecal output Developmental: NOAEL = 200 mg/kg/day Developmental: LOAEL = Not observed

TABLE 3.—METABOLITE, 2-ACETOMIDO-4-METHYLPHOSPHINICO-BUTANOIC: SUBCHRONIC AND OTHER TOXICITY

Guideline No.	Study Type	Results
870.3100	90-Day oral toxicity rodents in rats	NOAEL = 147 mg/kg/day in males, 162 mg/kg/day in females LOAEL = 738 mg/kg/day in males, 800 mg/kg/day in females based on glutamine synthetase inhibition in the brain
870.3100	90-Day oral toxicity rodents in mice	NOAEL = Not established for males, 110 mg/kg/day in females LOAEL = 83 mg/kg/day in males, 436 mg/kg/day in females based on glutamine synthetase inhibition in the brain
870.3150	Subchronic Nonrodent Oral Toxicity in dogs	NOAEL = 19 mg/kg/day in males, 21 mg/kg/day in females LOAEL = 72 mg/kg/day in males, 79 mg/kg/day in females based on glutamine synthetase inhibition in the brain
870.3700	Prenatal developmental in rodents-rat	Maternal: NOAEL = 1,000 mg/kg/day Maternal: LOAEL = Not observed Developmental: NOAEL = 1,000 mg/kg/day Developmental: LOAEL = Not observed
870.3700	Prenatal developmental in rabbits	Maternal: NOAEL = 64 mg/kg/day Maternal: LOAEL = 160 mg/kg/day based on reduced feed consumption Developmental: NOAEL = 64 mg/kg/day Developmental: LOAEL = 160 based on uni- or bilateral extra at the 13th thoracic vertebra
870.6200	Acute Neurotoxicity in rats	NOAEL = 1,000 mg/kg in males and females LOAEL = 2,000 mg/kg in males and females based on clinical signs of toxicity including sedation, ruffled fur, and diarrhea
870.6200	Acute Neurotoxicity in rats	NOAEL = 100 mg/kg in males and females LOAEL = 1,000 mg/kg in males and females based on decreased body weight gain
870.6200	Repeat Dose Neurotoxicity in rats	NOAEL = 158.9 mg/kg/day in males, 179.4 mg/kg/day in females LOAEL = Not established in males and females

B. Toxicological Endpoints

The dose at which no adverse effects are observed (the NOAEL) from the toxicology study identified as appropriate for use in risk assessment is used to estimate the toxicological level of concern (LOC). However, the lowest dose at which adverse effects of concern are identified (the LOAEL) is sometimes used for risk assessment if no NOAEL was achieved in the toxicology study selected. An uncertainty factor (UF) is applied to reflect uncertainties inherent

in the extrapolation from laboratory animal data to humans and in the variations in sensitivity among members of the human population as well as other unknowns. An UF of 100 is routinely used, 10X to account for interspecies differences and 10X for intraspecies differences. A 10x data base uncertainty factor, due to the lack of a developmental neurotoxicity study, was applied to all dietary and residential dermal, inhalation, and incidental oral exposure assessments. For residential inhalation exposure assessments an

additional 10x data base uncertainty factor was applied due to the lack of an adequate inhalation study and high concern for exposure via the inhalation route (10,000). Agency policy limits the total uncertainty factor applied for any particular chemical to no more than 3,000 (see EPA report "A Review of the Reference Dose and Reference Concentration Processes:" EPA/630/P-02/022F, December 2002; a Notice of Availability of the Final Report was published in the **Federal Register** of