

TABLE 1.—SUBCHRONIC, CHRONIC, AND OTHER TOXICITY

Guideline No.	Study Type	Results
870.3100	90-Day oral toxicity rodents	NOAEL = 48 mg/kg/day LOAEL = 192 mg/kg/day based on decreased mean body weights, increased platelets, changes in clinical parameters and histopathological findings.
870.3150	90-Day oral toxicity in nonrodents	NOAEL = would be equal to or greater than 30 mg/kg/day LOAEL = not determined; but would be greater than 30 mg/kg/day.
870.3700	Prenatal developmental in rodents-rats (1989 study) Prenatal developmental in rodents-rat (1985 study)	Maternal NOAEL = 10 mg/kg/day mg/kg/day based on decreased body weight gain, decreased food consumption, increased preimplantation loss. Developmental NOAEL = 75 mg/kg/day LOAEL = 150 mg/kg/day based on increased incidences of skeletal malfunctions and variations. Maternal NOAEL = 80 mg/kg/day LOAEL = 200 mg/kg/day based on clinical signs (alopecia, wet fur with urinary staining, piloerection). Developmental NOAEL = 80 mg/kg/day LOAEL = 200 mg/kg/day based on increased fetal malfunctions.
870.3700	Prenatal developmental in rabbits-nonrodents	Maternal NOAEL = 10 mg/kg/day LOAEL = 30 mg/kg/day based on decreased body weight gain. Developmental NOAEL = would be equal to or greater than 30 mg/kg/day LOAEL = would be greater than 30 mg/kg/day.
870.3800	Reproduction and fertility effects	Parental/Systemic NOAEL = 6.34/7.32 male/female mg/kg/day LOAEL = 61.48/72.30 male/female mg/kg/day based on reduced body weight and body weight gain in P & F1a. Reproductive NOAEL = 6.34/7.32 male/female mg/kg/day LOAEL = 61.48/72.30 male/female mg/kg/day based on decreased pup body weights.
870.4200	Carcinogenicity mice	NOAEL = 10.71/16.82 male/female mg/kg/day LOAEL = 107.50/166.57 male/female mg/kg/day based on increased absolute and relative liver weights as well as histopathological lesions in the liver, and stomach mucosa.
870.4300	Chronic/Carcinogenicity rats	NOAEL = 2.21/2.78 male/female mg/kg/day LOAEL = 22.09/29.18 male/female mg/kg/day based upon histopathological changes in the liver and stomach including cystic liver degeneration, periportal hepatocellular vacuolation, and pyloric intestinal metaplasia of the stomach.
870.5300	Gene Mutation	<i>In vitro</i> gene mutation in CHO cells. Negative for mutagenicity.
870.5300	Cytogenetics	<i>In vitro</i> bone marrow assay did not induce a clastogenic response.
870.5550	Gene Mutation	<i>In vitro</i> UDS assay did not induce a genotoxic effect.
870.5100	Gene Mutation	<i>S.typhimurium</i> /mammalian microsome assay did not induce a genotoxic effect.
870.7600	Dermal penetration	There were no dermal absorption studies and no appropriate toxicity studies available to allow an estimation of the dermal absorption by a route-to-route comparison of toxicity. However, two structurally related chemicals, acetochlor and alachlor, have experimentally derived dermal data indicating that absorption is 20 to 25 percent, respectively. Therefore, the estimated dermal absorption is 25%

B. Toxicological Endpoints

The dose at which 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 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 intra species differences. An additional 3x uncertainty factor was applied due to the data gap for a chronic toxicity study in dogs.

For dietary risk assessment (other than cancer) the Agency uses the UF to calculate an acute or chronic reference dose (acute RfD or chronic RfD) where the RfD is equal to the NOAEL divided

by the appropriate UF (RfD = NOAEL/UF). Where an additional safety factor is retained due to concerns unique to the FQPA, this additional factor is applied to the RfD by dividing the RfD by such additional factor. The acute or chronic Population Adjusted Dose (aPAD or cPAD) is a modification of the RfD to accommodate this type of FQPA Safety Factor.

For non-dietary risk assessments (other than cancer) the UF is used to determine the LOC. For example, when 100 is the appropriate UF (10X to