

MICHIGAN DEPARTMENT OF NATURAL RESOURCES

INTEROFFICE COMMUNICATION

October 21, 1994

TO: File for Suberic Acid (505-48-6)
FROM: Marco Bianchi *Marco Bianchi*
SUBJECT: Initial Threshold Screening Level

The initial threshold screening level (ITSL) for suberic acid is $17 \mu\text{g}/\text{m}^3$ based on an annual averaging time.

The following references or databases were searched to identify data to determine the ITSL: IRIS, HEAST, NTP Management Status Report, RTECS, EPB-CCD, EPB library, CAS-online, NLM-online, IARC, NIOSH Pocket Guide, and ACGIH Guide.

A complete reference check was conducted for suberic acid, but only limited information was available. Upjohn provided an in-house oral LD_{50} study for suberic acid. A single group of four male albino rats were orally dosed at 5000 mg/kg of suberic acid suspended in a 0.25% methylcellulose aqueous solution. Initial clinical signs included salivation, dried red material around the mouth, lack of fecal discharge, and slight body weight loss. By day two post dosing, and thereafter for the rest of the 14-day study period, all four rats appeared normal and had body weights which exceeded their fasting body weights. Necropsy of all four rats at terminal euthanasia did not reveal any gross lesions. Although there were no deaths from compound administration at 5000 mg/kg, this value will be used as a surrogate to calculate an ITSL.

The ITSL was derived as follows:

The LD_{50} for this study was determined to be 5000 mg/kg.

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$\text{LD}_{50} = 5000 \text{ mg/kg}$

$$\text{ITSL} = \frac{1}{500} \times \frac{1}{40} \times \frac{1}{100} \times \frac{5000}{0.167 \times 0.900} = 0.0166 \text{ mg/kg}$$

$0.0166 \text{ mg/kg} \times 1000 = 17 \mu\text{g}/\text{m}^3$ based on annual averaging.

The ITSL for suberic acid = $17 \mu\text{g}/\text{m}^3$ based on annual averaging.

MB:ma