

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE COMMUNICATION

January 10, 2002

TO: Methyl benzoate File (CAS #93-58-3)
FROM: Gary Butterfield, Toxics Unit, Air Quality Division
SUBJECT: Screening Level for Methyl benzoate

The initial threshold screening level (ITSL) for methyl benzoate is being set at 4 µg/m³ with annual averaging.

Methyl benzoate is a colorless, oily liquid with a vapor pressure of 1 mmHg.

The following references or databases were searched to identify data to determine the screening level: U.S. Environmental Protection Agency (EPA) Integrated Risk Information System (IRIS), National Institute for Occupational Safety and Health (NIOSH) Registry for Toxic Effects of Chemical Substances (RTECS), American Conference of Governmental and Industrial Hygienists (ACGIH) Threshold Limit Values (TLVs), Michigan Department of Environmental Quality (DEQ) library, International Agency for Research on Cancer (IARC) Monographs, Chemical Abstract Service (CAS) Online (1967- July 2000), National Library of Medicine (NLM) - Toxline, and National Toxicology Program (NTP) Status Report.

On-line literature searches were conducted on March 14, 2001 of the CAS and on March 8, 2001 of NLM. Very little toxicity information is available for this chemical. There has been a few Russian and Japanese articles published. However, these foreign language articles are generally not useful for establishing a screening level.

Jenner et al (1964) reported an oral LD-50 for rats and mice. The LD-50 for the rats of 1350 mg/kg is considered the most appropriate value upon which the ITSL can be based. The ITSL can be calculated using the equation from R232(h) with the default inhalation rate for rats of 0.9 m³/kg as follows:

$$\text{ITSL} = \frac{1350 \text{ mg/kg}}{500 \times 40 \times 100 \times 0.167} \times \frac{1}{0.9} = 4 \text{ } \mu\text{g/m}^3 \text{ annual average}$$

References:

Jenner et al. 1964. Food flavourings and compounds of related structure I. Acute oral toxicity. *Fd Cosmet Toxicol* 2: 327-343.

GB:DB

cc: Cathy Simon, AQD
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