

Chemical Name: 1,3,5-Trimethylbenzene Developed by: Mylynda Shaskus, Bob HeitzmanCAS # 108-67-8 IRIS Data Retrieval Date: No file in IRIS 7-6-05Internal Code # Fact Sheet Preparation Date: 7-6-05

CRITERIA SUMMARY

Lake Erie Basin			
Tier I HNC ($\mu\text{g/l}$)		Tier I HCC ($\mu\text{g/l}$)	
Drinking	Nondrinking	Drinking	Nondrinking
710	1500	ID	ID

EXPOSURE AND TOXICITY DATA

Human health trophic level 3 bioaccumulation factor ($\text{BAFH}_{\text{TL}3}$) = 89 L/kg (Michigan DEQ, 2001)Human health trophic level 4 bioaccumulation factor ($\text{BAFH}_{\text{TL}4}$) = 140 L/kg (Michigan DEQ, 2001)Acceptable daily exposure (ADE) = $5\text{E}-2$ mg/kg-d (NCEA 1999)

Carcinogen assessment: Not available

Cancer slope factor (q_1^*) = Not available

Body weight of average human (BW) = 70 kg (OAC 3745-1-38)

Relative source contribution factor (RSC) = 0.8 (OAC 3745-1-38)

Per capita water consumption (WC) = 2.0 l/day for drinking water criteria (OAC 3745-1-38)

= 0.01 l/day for nondrinking water criteria (OAC 3745-1-38)

Mean consumption of trophic level three fish ($\text{FC}_{\text{TL}3}$) = 0.0036 kg/day (OAC 3745-1-38)Mean consumption of trophic level four fish ($\text{FC}_{\text{TL}4}$) = 0.0114 kg/day (OAC 3745-1-38)

REFERENCES

Integrated Risk Information System. USEPA Office of Research and Development, National Center for Environmental Assessment. <http://www.epa.gov/iris/index.html>

Ohio Administrative Code rule 3745-1-38: Methodologies for Development of Human Health Criteria and Values for the Lake Erie Drainage Basin. Effective 10/31/97.

National Center for Environmental Assessment. 1999. Risk Assessment Issue Paper for: Derivation of a Provisional RfD for 1,2,4-Trimethylbenzene (CASRN 95-63-6) and 1,3,5-Trimethylbenzene (CASRN 108-67-8). 98-023/6-30-99. USEPA Office of Research and Development.

Michigan Department of Environmental Quality. 2001. Bioaccumulation Factor Worksheet for 1,3,5-Trimethylbenzene. Water Bureau, Surface Water Assessment Section.

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CALCULATION OF
HUMAN NONCARCINOGENIC CRITERION (HNC) ^a

$$\text{HNC} = \frac{\text{ADE} \times \text{BW} \times \text{RSC}}{\text{WC} + [(\text{FC}_{\text{TL3}} \times \text{BAFHH}_{\text{TL3}}) + (\text{FC}_{\text{TL4}} \times \text{BAFHH}_{\text{TL4}})]}$$

Drinking Water HNC =