

Chemical Name: Isophorone Developed by: Bob HeitzmanCAS # 78-59-1 IRIS Data Retrieval Date: 5-18-98Internal Code # 87 Fact Sheet Preparation Date: 5-18-98

CRITERIA SUMMARY

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

EXPOSURE AND TOXICITY DATA

Human health trophic level 3 bioaccumulation factor ($\text{BAFHH}_{\text{TL3}}$) = Not availableHuman health trophic level 4 bioaccumulation factor ($\text{BAFHH}_{\text{TL4}}$) = Not available

Acceptable daily exposure (ADE) = 0.15 mg/kg/day (IRIS RfD, last revised 01/01/91)

Carcinogen assessment: Class C; possible human carcinogen (IRIS, last revised 11/01/92)

Cancer slope factor (q_1^*) = 9.5E-4 per mg/kg/day (IRIS, last revised 11/01/92)

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 (FC_{TL3}) = 0.0036 kg/day (OAC 3745-1-38)Mean consumption of trophic level four fish (FC_{TL4}) = 0.0114 kg/day (OAC 3745-1-38)Risk associated dose (RAD) = Risk level \div q_1^* = 1E-5 \div 9.5E-4 per mg/kg/day

= 1.053E-2 mg/kg/day

REFERENCES

Integrated Risk Information System. USEPA Office of Research and Development, National Center for Environmental Assessment.

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.

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CALCULATION OF
HUMAN NONCARCINOGENIC CRITERION (HNC) ^a

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

Insufficient data (no BAF).

CALCULATION OF
HUMAN CARCINOGENIC CRITERION (HCC) ^a

$$\text{HCC} = \frac{\text{RAD} \times \text{BW}}{\text{WC} + [(\text{FC}_{\text{TL3}} \times \text{BAFH}_{\text{TL3}}) + (\text{FC}_{\text{TL4}} \times \text{BAFH}_{\text{TL4}})]}$$

Insufficient data (no BAF).

^aSee Ohio Administrative Code 3745-1-38 effective October 31, 1997.