OHIO EPA SURFACE WATER QUALITY CRITERION FACT SHEET

Chemical Name: 4-Methyl-2-pentanone Developed by: Chris J. Skalski
CAS # 108-10-1 Data Retrieval Date: 4-17-01
Internal Code # --- Fact Sheet Preparation Date: 5-16-06
Reviewed by: Bob Heitzman

ACUTE DATA

SPECIES	EC_{50}/LC_{50} (µg/l)	TEST TYPE[a]	DURATION (HOURS)	SMAV[b] (µg/l)	GMAV[b] (µg/l)	REFERENCE NUMBER
Cladoceran	3,682,000[c]	S,U	24			1
Daphnia magna	4,280,000[c]	S,U	24			2
Goldfish *Carassius auratus*	460,000[c]	S,U	24			3
Fathead Minnow	505,000	F,M	96	517,767	517,767	4
Pimephales promelas	509,000	F,M	96			5
	540,000	F,M	96			4

[a] S = static; U = unmeasured; F = Flow-through; M = Measured.
[b] SMAV = Species Mean Acute Value; GMAV = Genus Mean Acute Value.
[c] Data not used to calculate a SMAV because the exposure duration was inadequate.

CHRONIC DATA

SPECIES	CHRONIC VALUE (µg/l)	METHOD	SMCV[a] (µg/l)	GMCV[a] (µg/l)	REFERENCE NUMBER

No Chronic Data Available

[a] SMCV = Species Mean Chronic Value; GMCV = Genus Mean Chronic Value.

REFERENCES

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2. Bringmann, G. and R. Kuhn. 1977. The Effects of Water Pollutants on *Daphnia magna*. Z. Wasser-Abwasser-Forsch 10(5):161-166; T.R.-79-1204, English Translation, Literature Research Company:13p.

3. Applegate, V.C., J.H. Howell, A.E. Hall and M.A. Smith. 1957. Toxicity of 4,346 Chemicals to Larval Lampreys and Fishes. Spec. Sci. Rep. Fish. No. 207, Fish Wildlife Service, U.S. Dept. of Interior, Washington, D.C.:157 p.

4. Brooke, L.T., D.J. Call, D.L. Geiger and C.E. Northcott. 1984. Acute Toxicities of Organic Chemicals to Fathead Minnows (*Pimephales promelas*) Vol. 1. Center for Lake Superior Environmental Studies, Univ. of Wisconsin, Superior, WI: 414 p.

5. Veith, G.D., D.J. Call and L.T. Brooke. 1983. Estimating the Acute Toxicity of Narcotic Industrial Chemicals to Fathead Minnows. In: W.E. Bishop, R.D. Cardwell and B.B. Heidolph (Eds.), Aquatic Toxicol. and Hazard Assess: 6th Symposium, ASTM STP 802. Philadelphia, PA: 90-97.

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CALCULATION OF ACUTE AQUATIC VALUE (AAV)[a]

Data Requirement OAC 3745-1-36(A)(1)	SPECIES	GMAV (µg/l)
(c)	Fathead Minnow	517,767

Secondary Acute Factor (SAF) =

Secondary Acute Value (SAV) = Lowest GMAV ÷ SAF
=
= Insufficient data available

Tier II Acute Aquatic Value (AAV) = SAV ÷ 2
=
= Insufficient data available

CALCULATION OF CHRONIC AQUATIC VALUE (CAV)[a]

Experimentally determined Acute-Chronic Ratios (ACRs):

SPECIES	ACUTE VALUE (µg/l)	CHRONIC VALUE (µg/l)	ACUTE-CHRONIC RATIO	SPECIES MEAN ACR

No Experimentally-Derived ACRs Available

Secondary Acute-Chronic Ratio (SACR) = $\sqrt[3]{(18)(18)(18)} = 18$

Chronic Aquatic Value (CAV) = SAV ÷ SACR
=
= Insufficient data available

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[a]See Ohio Administrative Code 3745-1-36 effective February 22, 2006.