OHIO EPA SURFACE WATER QUALITY CRITERION FACT SHEET

Chemical Name: 2-Nitrophenol Developed by: Chris J. Skalski
CAS # 88-75-5 Data Retrieval Date: 9-05-97
Internal Code # 96 Fact Sheet Preparation Date: 3-01-06

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 *Daphnia magna*	17,000	S,U	48	17,000	17,000	1
Fathead Minnow *Pimephales promelas*	160,000	F,M	96	160,000	160,000	2

[a] S = static; F= flow through; U = unmeasured; M = measured.
[b] SMAV = Species Mean Acute Value; GMAV = Genus Mean Acute Value.

CHRONIC DATA

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

No Chronic Data

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

REFERENCES

1. Kuhn, R., M. Pattard, K. Pernak and A. Winter. 1989. Results of the Harmful effects of Selected Water Pollutants (Anilines, Phenols, Aliphatic Compounds) to *Daphnia magna*. Wat. Res. 23(4):495-499.

2. Geiger, D.L., D.J. Call and L.T. Brooke. 1988. Acute Toxicities of Organic Chemicals to Fathead Minnows (*Pimephales promelas*), Vol. 4. Center for Lake Superior Environmental Studies, Univ. Of Wisconsin, Superior, WI:355 p.

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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	160,000
(d)	*Daphnia magna*	17,000

Secondary Acute Factor (SAF) = 13.0

Secondary Acute Value (SAV) = Lowest GMAV ÷ SAF
= 17,000 ÷ 13.0
= 1,308 = 1,300 µg/l

Tier II Acute Aquatic Value (AAV) = SAV ÷ 2
= 1,308 ÷ 2
= 654 = 650 µg/l

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
None Available				

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

Chronic Aquatic Value (CAV) = SAV ÷ SACR
= 1,308 ÷ 18
= 73 µg/l

[a]See Ohio Administrative Code 3745-1-36 effective February 22, 2002.