AL CRIT-00095 -00096 HH CRIT-00155 -00158 BAF CRIT-00788

TIER II ACUTE AND CHRONIC AQUATIC LIFE VALUES FOR
DI-N-BUTYL PHTHALATE

Standard:

The procedures described in the Tier II methodology indicate that, except possibly where a locally important species is very sensitive, aquatic organisms should not be affected unacceptably if the four (4) day average concentration of di-butyl phthalate does not exceed 7.7 µg/L more than once every three (3) years on the average and if the one (1) hour average concentration does not exceed 34 µg/L more than once every three (3) years on the average.

Calculations:

Acute Aquatic Life:

SAV = lowest GMAV/SAF

Lowest GMAV = 350 µg/L
SAF = 5.2

SAV = 350/5.2 = 67.31 µg/L

SMC = SAV/2 = 67.31/2 = **34 µg/L**

Chronic Aquatic Life:

SCV = SAV/SACR

SACR = 8.7 (geometric mean of 18, 18, and 2)

SCV = 67.31/8.7 = **7.7 µg/L**

Calculation of ACR's

Fathead Minnows

NOEC = 264 µg/L
LOEC = 625 µg/L

CV = Geometric Mean of 264 and 625 = 406

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ACR = 775.6/406 = 2

Notes:

NONE

Table 1. GMAVs and SMAVs for di-n-butyl phthalate

Genus Mean Acute Value (µg/L)	Species	Species Mean Acute Value (µg/L)	Acute-Chronic Ratio	Reference Number
1,448	Bluegill Lepomis macrochirus	1,448		1,5
4,386	Cladoceran Daphnia magna	4,386		2,6
1,119	Fathead Minnow Pimephales promelas	1,119	19	3,4,5
2,348	Rainbow Trout Onchorhynchus mykiss	2,348		5
1,157	Channel Catfish Ictalurus punctatus	1,157		5
2,100	Scud Gammarus pseudolimnaeus	2,100		5
10,000	Crayfish Orconectes nais	10,000	5	
350	Yellow Perch Yellowsis perchis	350		5
760	Midge Chironomous riparius	760		7

References:

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