



Fact Sheet

Ambient Aquatic Life Water Quality Criteria for 2,4-Dimethylphenol

AUTHORITY

Ambient water quality criteria are published pursuant to Section 304(a) of the Clean Water Act and may form the basis for enforceable standards if adopted by a State into water quality standards. The criteria reflect the latest scientific knowledge on the identifiable effects of pollutants on public health and welfare, aquatic life and recreation. They are developed using a process described in the "Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses" (Stephan *et al.*, 1985).

BACKGROUND

2,4-Dimethylphenol (2,4-DMP) is a naturally occurring, substituted phenol derived from petroleum or coal tars. 2,4-DMP (1-hydroxy-2,2-dimethylbenzene, m-xyleneol, 2,4-xyleneol or m-4-xyleneol) is used in the manufacture of phenolic antioxidants, disinfectants, solvents, pharmaceuticals, insecticides, fungicides, plasticizers, rubber chemicals polyphenylene oxide, wetting agents, and dyestuffs. 2,4-DMP is also an additive of lubricants, gasoline, and cresylic acid. 2,4-Dimethylphenol is classified by EPA's Office of Water as a priority pollutant (Section 307(a) of the Clean Water Act).

Acute and Chronic Criteria for 2,4-dimethylphenol in this draft document will supersede guidance given in the previous Ambient Water Quality Criteria for 2,4-dimethylphenol (U.S. EPA, 1980). These new criteria were derived using improved procedures and additional (more current) information.

CRITERIA VALUES

Except where locally important species are very sensitive.

- * freshwater aquatic organisms and their uses should not be affected unacceptably if the four-day average concentration (i.e., chronic exposure) of 2,4-Dimethylphenol does not exceed 530 ug/l more than once every three years on the average and if the one-hour average

concentration (i.e., acute exposure) does not exceed 1,300 ug/l more than once every three years on the average, and

- * saltwater aquatic organisms and their uses should not be affected unacceptably if the four-day average concentration (i.e., chronic exposure) of 2,4-Dimethylphenol does not exceed 110 ug/l more than once every three years on the

average and if the one-hour average concentration (i.e., acute exposure) does not exceed 270 ug/l more than once every three years on the average.

IMPLEMENTATION INTO STATE STANDARDS

Ambient water quality criteria may form the basis for enforceable standards if adopted by a State into water quality standards. States may opt to develop site specific criteria (Water Quality Standards Handbook, December, 1983, EPA#: 440/5-83-011). Replacement of national criteria with site specific criteria may include site specific criterion concentrations, mixing zone considerations (Water Quality Standards Handbook, December, 1983, EPA#: 440/5-83-011), averaging periods and site-specific frequencies of allowed exceedences (Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses, Stephan *et al.*, 1985). When the basis for site specific criteria relate to the averaging period, there should be a justification for why variability assumptions underlying national criteria are inappropriate.

AVAILABILITY OF DOCUMENT

Copies of the proposed criteria document, and other referenced documents, may be obtained from the address below.

***2,4-Dimethylphenol Proposal
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U.S. Environmental Protection Agency
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For further information please contact:

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