

Oregon Department of Human Services

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TECHNICAL BULLETIN

HEALTH EFFECTS INFORMATION

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ENVIRONMENTAL TOXICOLOGY SECTION
Office of Environmental Public Health
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(1,2-DCP)
1,2 DICHLOROPROPANE

For More Information Contact:

Environmental Toxicology Section
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(971) 673-0405

What is (1,2-DCP) 1,2-Dichloropropane?

1,2-DCP is a volatile, synthetic, organic compound used as a solvent for oils and fats, a solvent for dry cleaning and degreasing operations. It has also been used as a soil fumigant that has subsequently been cancelled and is no longer available.

Occurrence and Sources of 1,2-DCP in Water Supplies

1,2-DCP is not naturally occurring in water supplies. It can enter drinking water supplies through soil application as a pesticide fumigant and through improper waste disposal. 1,2-DCP has been identified as a contaminant of both ground and surface waters. It is expected to be persistent and migrate in soil and to biodegrade in water over several weeks.

What are the Health Effects of Drinking 1,2-DCP Contaminated Water?

The United States Environmental Protection Agency (US EPA) is proposing to establish a maximum contaminant level (MCL) of 0.005 mg/L for 1,2-DCP in public drinking water supplies in the near future. Consuming elevated levels of 1,2-DCP has been shown to result in liver damage in animal studies; little information is available on the short and long term effects on humans.

What is the Cancer Risk?

1,2-DCP has not been shown to cause cancer in humans. It can, however, cause cancer in laboratory animals when given over a lifetime in very high doses (125 mg/kg), therefore this compound is considered a probable human carcinogen by the US EPA.

What can be done about 1,2-DCP Contamination?

Although a maximum contaminant level will be set for 1,2-DCP which has a wide margin of safety, the Department of Human Services recommends that exposure to 1,2-DCP be kept to a minimum. Persons whose drinking water exceeds the proposed standards or who do not wish to consume even small amounts of 1,2-DCP have several options, including using an alternative source of water, such as bottled water or properly constructing a new well. Other options include installing an in-home treatment device. The best available treatment technologies for removing 1,2-DCP from groundwater are granular activated carbon adsorption (GAC), packed tower aeration (air stripping), and ion exchange. Boiling the water for drinking and cooking

use is also an effective method.

Those wanting to obtain home treatment systems are encouraged to contact the Department of Human Services for information on equipment selection.

For more information on 1,2-DCP, contact the Department of Human Services Drinking Water Program at (971) 673-0405.