

# Oregon Department of Human Services

Office of Environmental Public Health  
800 NE Oregon Street #604  
Portland, OR 97232-2162

(503) 731-4030 Emergency  
(971) 673-0405  
(971) 673-0457 FAX  
(971) 673-0372 TTY-Nonvoice

## TECHNICAL BULLETIN

# HEALTH EFFECTS INFORMATION

Prepared by:  
Department of Human Services  
ENVIRONMENTAL TOXICOLOGY SECTION  
Office of Environmental Public Health  
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(CIS 1,2 – DCE)  
**CIS 1,2 - DICHLOROETHYLENE**

**For More Information Contact:**

**Environmental Toxicology Section  
(971) 673-0440**

**Drinking Water Section  
(971) 673-0405**

## **CIS-1,2 - DCE**

Cis-1,2 - DCE is a volatile organic chemical used in the manufacture of solvents. It is a manmade or synthetic chemical with no natural sources. There is little information on the current production and use of this compound. Release of Cis-1,2 - DCE to the environment can occur from manufacturing plants. Studies have shown that it may result as a natural degradation product of trichloroethylene (TCE) or of tetrachloroethylene (PCE) in the environment.

## **OCCURRENCE OF CIS-1,2 - DCE IN WATER SUPPLIES**

When Cis-1,2 - DCE is released to surface waters it is expected to volatilize rapidly to air. Once released on to land, it migrates down through the soils and into the groundwater.

## **HEALTH EFFECTS OF DRINKING WATER CONTAMINATED WITH CIS-1,2 - DCE**

Based on known effects of closely related compounds, repeated or prolonged exposure to Cis-1,2 - DCE may be injurious to liver and kidney tissues at very low levels. It is not known whether Cis-1,2 - DCE poses a cancer hazard.

The United States Environmental Protection agency (US EPA) has set a maximum allowable level of .07 milligrams per liter (mg/L) for Cis-1,2 - DCE in public water systems. The cancer risk of Cis-1,2 - DCE has not been classified by the US EPA.

## **WHAT TO DO ABOUT WATER CONTAMINATED WITH CIS-1,2 - DCE**

Although a maximum allowable level will be set for Cis-1,2 - DCE, which is very protective of public health, the Department of Human Services recommends that exposure to this compound be kept as low as possible. To accomplish this, water suppliers and other affected persons can take a variety of actions, such as closing contaminated wells, finding other supplies, or installing treatment systems at contaminated wells.

Persons whose supplies exceed the limits or who do not wish to consume even smaller amounts of Cis-1,2 - DCE can take several actions for short-term protection, including using bottled water or using in-home treatment devices to treat water for drinking and cooking purposes. Those who want to obtain home treatment systems are encouraged to contact the Department of Human Services for

information on selecting the appropriate equipment.

**For More Information** on Cis-1,2 - DCE contact the Drinking Water Section at 971-673-0405.