

Fact Sheet Date: March 12, 1998

**NEW YORK STATE  
- HUMAN HEALTH FACT SHEET -**

**Ambient Water Quality Value for  
Protection of Sources of Potable Water**

**SUBSTANCE:** trans-1,2-Dichloroethene

**CAS REGISTRY NUMBER:** 156-60-5

**AMBIENT WATER QUALITY VALUE:** 5 ug/L

<b>BASIS:</b>	Surface Water:	Principal Organic Contaminant Classes
	Groundwater:	Former Reference to 10 NYCRR Subpart 5-1 Principal Organic Contaminant (POC) General Maximum Contaminant Level (MCL)

**SUMMARY OF INFORMATION**

New York State developed a guidance value for trans-1,2-dichloroethene in water of 50 ug/L based on a review of literature up to 1984 (NYS, 1985). This was based on section 701.15(e) of 6 NYCRR that describes a general value of 50 ug/L when the database is inadequate to derive a specific value. Recent assessments (1983-1989) of health effects have been reviewed (USEPA, 1988; Mallon et al., 1989; USEPA, 1986).

A study by Barnes et al. (1985) in mice was determined to be the most appropriate for calculation of a Drinking Water Equivalent Level by the U.S. Office of Drinking Water. Based on increases in serum chemistry values in response to exposure in drinking water, a NOAEL of 17 mg/kg/day and a reference dose of 200 ug/kg/day were determined. No data are available at the present time concerning the carcinogenic effects of trans-1,2-dichloroethene in humans or animals (Mallon et al., 1989).

A specific ambient water quality value calculated using procedures established in Section 702.5 of 6 NYCRR greatly exceeds 5 ug/L.

## DERIVATION OF VALUE

### Surface Water

Regulations [6 NYCRR 702.2(b)] require that the value be the most stringent of the values derived using the procedures found in sections 702.3 through 702.7. The principal organic contaminant class value of 5 ug/L (702.3(b)) represents the most stringent value that can be derived for trans-1,2-dichloroethene. Therefore, the ambient surface water quality value for trans-1,2-dichloroethene is 5 ug/L.

### Groundwater

The principal organic contaminant (POC) groundwater standard of 5 ug/L (6 NYCRR 703.5) applies to trans-1,2-dichloroethene. This standard became effective on January 9, 1989 by inclusion by reference to 10 NYCRR Subpart 5-1 standards. The basis and derivation of the POC standard are described in a separate fact sheet.

## REFERENCES

Barnes, D.W., Sanders, V.M., White, K.L., Shopp, G.M., and Munson, A.E., 1985. Toxicology of trans-1,2-dichloroethylene in the mouse. Humoral and Immune Status. Drug Chem. Toxicol. 8: 373-392, 393-407.

Hayes, J.R., Condie, L.W., Egle, J.L., and Borzelleca, J.F., 1987. The acute and subchronic toxicity in rats of trans-1,2-dichloroethylene in drinking water. J. Am. Coll. Toxicol. 6: 471-478.

Mallon, B., Hsieh, P., McKone, T.E., 1989. Health Risk Assessment of Trans-1,2-Dichloroethylene in California Drinking Water. 1989. Lawrence Livermore National Lab., CA. DE89-007229.

6 NYCRR, Chapter X, Parts 700-705. Water Quality Regulations. Surface Waters and Groundwater Classifications and Standards.

10 NYCRR, Chapter I, Part 5, Subpart 5-1. Public Water Supplies.

NYS, New York State, 1985. Ambient Surface Water Quality Standards Documentation. Trans-1,2-dichloroethylene. September 6, 1985 (Fact Sheet Revised). Albany, NY.

USEPA, 1988. U.S. Environmental Protection Agency, Office of Drinking Water Health Advisories. Trans-1,2-dichloroethylene. Rev. Environ. Contam. Toxicol. 106: 103-112.

USEPA, 1986. Drinking Water Criteria Document for Dichloroethylenes. Final Draft. Office of Drinking Water, Washington, D.C. PB89-192512.

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