DIBROMOCHLOROMETHANE ($CHBr_2Cl$)

Chemical Abstracts Service (CAS) Number: 124-48-1

General Information

Dibromochloromethane is a colorless to pale yellow liquid with a sweet odor. It is slightly soluble in water and is nonflammable. Most of the dibrormochloromethane that enters the environment is formed as a byproduct when chlorine is added to drinking water to kill bacteria. Dibromochloromethane was also used in the past as a solvent and flame retardant, or to make other chemicals, but is now used mainly as a laboratory reagent. U.S. EPA has classified dibromochloromethane as a possible human carcinogen.

Sources

- Most dibromochloromethane is formed as a by-product when chlorine is added to drinking water. The most likely way people are exposed to dibromochloromethane is by drinking chlorinated water.
- Small amounts of dibromochloromethane are created naturally by plants in the ocean.

Indiana Emissions

Dibromochloromethane emissions totals are not available from the National Emission Inventory (NEI) for the 2014 calendar year.

Measured Concentration Trends

Ambient air monitoring data most accurately represents a limited area near the monitor location. All monitors for air toxics sample every sixth day. The monitoring locations by themselves are not sufficient to accurately characterize air toxic concentrations throughout the entire state, however, results from the monitors will provide exposure concentrations with a great deal of confidence at the monitoring locations.

The ambient air monitoring results were analyzed using U.S. EPA recommended statistical methods. IDEM evaluated the data so that a 95% upper confidence limit of the mean (UCL) could be determined. A 95% UCL represents a value which one can be 95% confident that the true mean of the population is below that value.

To learn more about the current monitoring locations, please visit IDEM's Air Toxics Monitor Siting webpage at: http://www.in.gov/idem/toxic/2337.htm

Data analysis was performed for each monitor that operated for a significant portion of the analysis period. This analysis determined the detection rate, which is defined as the percentage of valid samples taken statewide that had a quantifiable concentration of the pollutant. The statewide detection rate of dibromochloromethane for the monitors analyzed from 2006-2015 was 3.3%. This detection rate is too low for IDEM to draw any conclusions about concentration

trends of dibromochloromethane. IDEM did not perform a trend analysis for any pollutant with a detection rate less than 50%.