

wellcare[®] information for you about **Benzene & Groundwater**

What is Benzene?

Benzene is a clear, colorless liquid with a distinctive sweet odor. It also is highly flammable. While benzene can be found naturally in air, water and soil, it is a major industrial chemical made from burning coal and oil. A component of gasoline, it also is used to manufacture plastics and synthetic materials and as a solvent in printing and dry cleaning.

Benzene can be released into water, soil and air through automobile emissions, industrial discharges, improper disposal of products containing benzene and from gasoline leaks from underground storage tanks. Benzene breaks down slowly in water and soil, and easily passes through the soil into ground water sources.

What are the health effects of Benzene?

Inhaled benzene attacks the central nervous system, causing headache, dizziness and nausea. Ingested in food or drinking water, benzene is a known carcinogen, causing leukemia. The chemical also can lead to anemia and a weakening of the immune system. Benzene can also be absorbed by the skin through contact with gasoline or other solvents, or through bathing or showering in water that contains benzene levels higher than 100 parts per billion.

The U.S. Environmental Protection Agency (EPA) limits concentrations of benzene in drinking water to 5 parts per billion (ppb), with an ultimate goal of 0 ppb. It would take only one ounce of benzene to contaminate over 1.6 million gallons of drinking water.

How do I test for Benzene?

First, try to determine your risk. Do you live within a half-mile of a gas station or industrial plant where there might be a leaking underground storage tank? Does your drinking water give off a sweet, chemical smell?

Researchers say most people can smell benzene in the air at 1.5 to 4.7 parts per million of air and taste it in water at 0.5 to 4.5 parts per million of water. If you suspect benzene may be present in your drinking water, contact your state or local health department for a list of state-certified laboratories in your area. Report any test results that exceed the EPA's maximum contaminant level to your local health department. They will be able to investigate the source of the contamination and see if other wells around you are also contaminated.

What are the treatments for Benzene in drinking water?

The EPA-approved treatment for benzene is a granular activated carbon (GAC) filter system used in combination with packed tower aeration. Contact your water well professional or local or state health department for guidance.

For more information about Benzene

Delaware Health and Social Services, Division of Public Health. Benzene Information Sheet. Retrieved May 24, 2007 from www.dhss.delaware.gov/dhss/dph/hsp/benzeneinfosheet.html

U.S. Environmental Protection Agency (EPA). Consumer Factsheet on: BENZENE. Retrieved on May 24, 2007 from www.epa.gov/safewater/contaminants/dw_contamfs/benzene.html

Wisconsin Department of Health & Family Services. (March 2000). Benzene fact sheet. Retrieved on May 24, 2007 from www.dhfs.state.wi.us/eh/ChemFS/fs/benzene.htm

For more information on your drinking water

Contact your local water well professional or health department for information on ground water in your area. The following websites provide up-to-date information on efforts to protect drinking water supplies and steps you can take as a private well owner. In addition, you may contact the **wellcare®** hotline at **1-888-395-1033**.

Underwriters Laboratories Inc. Drink Well™ Well Water Testing
U.S. Environmental Protection Agency
Water Quality Association

www.uldrinkwell.com
www.epa.gov
www.wqa.org

For more information about wells and other wellcare® publications

wellcare® is a program of the **Water Systems Council (WSC)**. WSC is a national nonprofit organization dedicated to promoting the wider use of wells as modern and affordable safe drinking water systems and to protecting ground water resources nationwide. This publication is one in a series of **wellcare®** information sheets. There were more than 60 available at the time this document was published. They can be downloaded FREE from the WSC website at www.watersystemscouncil.org. Well owners and others with questions about wells or ground water can also contact the **wellcare®** hotline at **1-888-395-1033** or visit www.wellcarehotline.org



This publication was developed in part under Assistance Agreement No. EM-83331201-0 awarded by the U.S. Environmental Protection Agency. It has not been formally reviewed by EPA. The views expressed in this document are solely those of WSC. EPA does not endorse any products or commercial services mentioned in this publication.

Well water naturally better... Contact your local water well professional