

# wellcare<sup>®</sup> information for you about **Benzene**

---

## **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 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.

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 the 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 smell it in water at .5 to 4.5 parts per million of water.

If you suspect benzene may be present in your drinking water, contact your 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 is the treatment 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 and other drinking water contaminants

Institute for Environmental Technology, Michigan State University:  
[www.iet.msu.edu/Tox\\_for\\_Journ/Chemicals/benzene.htm](http://www.iet.msu.edu/Tox_for_Journ/Chemicals/benzene.htm)

EPA Office of Ground Water & Drinking Water, *Factsheet on: Benzene*:  
[www.epa.gov/safewater/contaminants/dw\\_contamfs/benzene.html](http://www.epa.gov/safewater/contaminants/dw_contamfs/benzene.html)

Wisconsin Department of Health & Family Services:  
[www.dhfs.state.wi.us/eh/ChemFS/fs/benzene.htm](http://www.dhfs.state.wi.us/eh/ChemFS/fs/benzene.htm)

---

## For more information on your drinking water

The following sites provide up-to-date information on efforts to protect drinking water supplies and steps you can take as a private well owner:

Water Quality Association	<a href="http://www.wqa.org">www.wqa.org</a>
NSF International	<a href="http://www.nsf.org">www.nsf.org</a>
Home*A*Syst Program	<a href="http://www.uwex.edu/homeasyst">www.uwex.edu/homeasyst</a>
The Groundwater Foundation	<a href="http://www.groundwater.org">www.groundwater.org</a>
American Water Works Association	<a href="http://www.awwa.org">www.awwa.org</a>
wellcare® hotline for well owners	888-395-1033

## 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. Well owners and others with questions about wells or well water can now call the new **wellcare® hotline** at **888-395-1033** or visit [www.watersystemscouncil.org](http://www.watersystemscouncil.org)



This publication was developed in part under Assistance Agreement No. X-82849101-4 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.