

wellcare[®] information for you about **Perchlorate**

What is Perchlorate?

Perchlorate is a toxic chemical typically found in weapons, explosives and rocket fuel. Salts in perchlorate provide oxygen so rocket fuel can burn. It also is used to make matches, fireworks, roadside flares and airbag inflators. The substance dissolves easily in water.

Perchlorate contamination in water and soil is attributed mainly to waste from military bases, aerospace installations and defense contractors that build rockets. A small amount of perchlorate contamination in the United States has been traced to a salt-based fertilizer made in Chile.

To date, 26 states have documented contamination in water supplies, with California containing the greatest number of sites. A total of 40 states have identified significant use of the chemical.

What Are the Health Effects of Perchlorate?

Perchlorate disrupts the thyroid gland. It is linked to child development problems and thyroid cancer. It poses the greatest threat in the drinking water of nursing and expectant mothers, children under 12 and persons with improperly functioning thyroids.

The U.S. Environmental Protection Agency (EPA) is studying the regulation of perchlorate, but has not issued a Maximum Containment Level (MCL) for the substance in public water supplies. During the study period, the EPA indicated that perchlorate could be harmful at levels of one part per billion (ppb) and that the agency could order a clean up of water supplies if perchlorate levels reached four ppb.

How Do I Test for Perchlorate?

First, try to determine the risk. Check with your state and local health department, particularly if you live in California, Massachusetts and many other states with rocket-related installations or manufacturers. Health departments maintain records of communities where perchlorate has been discovered in drinking water, usually public supplies. They also can direct you to the laboratories certified to test for the substance.

What is the Treatment for Perchlorate in Drinking Water?

It actually takes two steps to remove perchlorate in drinking water. First, anion exchange or biological treatment of the water is needed. Then, a granulated activated carbon (GAC) filter system is required to clean up the wastes from the first step. Contact your water well professional or local or state health department for guidance.

For more information about Perchlorate and other drinking water contaminants

EPA, Office of Water: www.epa.gov/safewater/ccl/perchlorate/perchlorate.html

U.S. Food & Drug Administration: www.cfsan.fda.gov/~dms/clo4qa.html

For more information on your drinking water

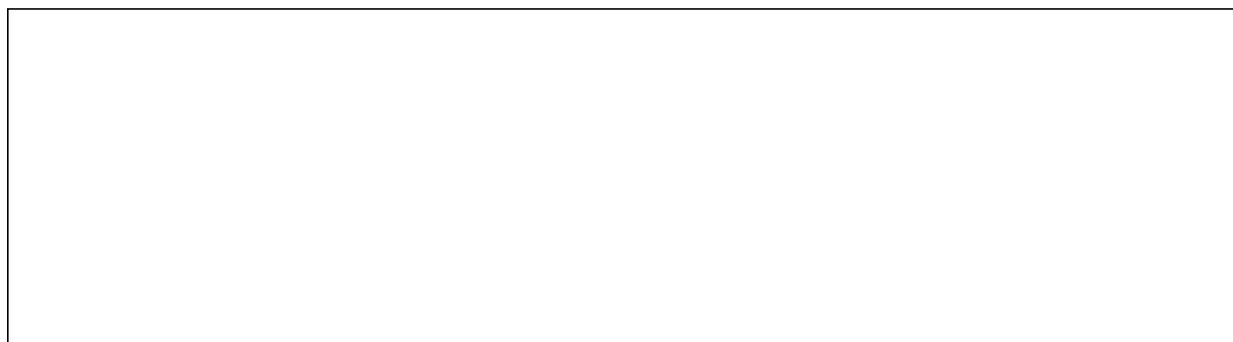
The following sites provide up-to-date information on efforts to protect drinking water supplies and steps you can take as a private well owner:

Water Quality Association www.wqa.org

NSF International www.nsf.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. Well owners and others with questions about wells or well water can now call the **wellcare® hotline at 888-395-1033** or visit 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.