



Suburban Property Inspections

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BARIUM FACT SHEET

Brief Overview:

Category:	Metals
Acceptable Level:	2.0 mg/L MCL, Primary Drinking Water Standards
Source:	Natural occurring, Industry
Effect:	Short and Long-term Health Effects
Follow up:	Test for Barium and other metals
Treatment:	Ion Exchange, Reverse Osmosis, Lime Softening, Electrodialysis

Details:

Source: Barium is a lustrous, machinable metal which exists in nature only in ores containing mixtures of elements. It is used in making a wide variety of electronic components, in metal alloys, bleaches, dyes, fireworks, ceramics and glass. In particular, it is used in well drilling operations where it is directly released into the ground.

At one time, the largest end use of barium metal is as a "getter" to remove the last traces of gases from vacuum and television picture tubes. As vacuum tube production is reduced, this will change. It is also used to improve performance of lead alloy grids of acid batteries; as a component of grey and ductile irons; in the manufacture of steel, copper and other metals; as a loader for paper, soap, rubber and linoleum.

Barium peroxide is used as a bleach, in dyes, fireworks and tracer-bullets, in igniter and welding materials, and in manufacture of hydrogen peroxide and oxygen. The permanganate is used as a dry cell depolarizer and disinfectants.

Barium nitrate is used in fireworks, ceramic glazes, electronics, tracer bullets, detonators, and neon sign lights. Barium cyanide is used in electroplating and metallurgy. Barium chlorate is used in fireworks, explosives, matches, and as a mordant in dyeing.

Barium carbonate is used as follows: 45 percent as ingredient in glass, 25 percent in brick and clay products, 7 percent as a raw material for barium ferrites, 4 percent in photographic paper coatings, 19 percent other.

Effect: Short term: EPA has found barium to potentially cause gastrointestinal disturbances and muscular weakness resulting from acute exposures at levels above the MCL.

Long term: Barium has the potential to cause hypertension resulting from long-term exposures at levels above the MCL. There is no evidence that barium has the potential to cause cancer from lifetime exposures in drinking water.

Follow up: Treat and re-test for metals.

Treatment: Ion Exchange, Reverse Osmosis, Lime Softening, Electrodialysis

Following installation of this system, the consumer should have the treated water tested for barium to verify barium reduction is being achieved and the system is functioning properly.

For more information visit the USEPA website.

For further technical assistance, call Suburban Property Inspections at 1-866-866-6700, or call the U. S. Environmental Protection Agency Safe Drinking Water Hotline at 1-800-426-4791.



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