



Beryllium

The United States Environmental Protection Agency (EPA) regulates beryllium in drinking water to protect public health. Beryllium may cause health problems if present in public or private water supplies in amounts greater than the drinking water standard set by EPA. The drinking water Maximum Contaminant Level for beryllium is 0.004 mg/L.

What is beryllium?

Beryllium is an inorganic metallic element in the periodic table. Because it is an element, it does not degrade nor can it be destroyed. Compounds of beryllium are either white or colorless and do not have a particular smell.

What are beryllium's health effects?

Some people who drink water containing beryllium well in excess of the maximum contaminant level (MCL) for many years could develop intestinal lesions.

What are EPA's drinking water regulations for beryllium?

In 1974, Congress passed the Safe Drinking Water Act. This law requires EPA to determine the level of contaminants in drinking water at which no adverse health effects are likely to occur. These non-enforceable health goals, based solely on possible health risks and exposure over a lifetime with an adequate margin of safety, are called maximum contaminant level goals (MCLG). Contaminants are any physical, chemical, biological or radiological substances or matter in water.

The MCLG for beryllium is 0.004 mg/L or 4 ppb. EPA has set this level of protection based on the best available science to prevent potential health problems. EPA has set an enforceable regulation for beryllium, called a maximum contaminant level (MCL), at 0.004 mg/L or 4 ppb. MCLs are set as close to the health goals as possible, considering cost, benefits and the ability of public water systems to detect and remove contaminants using suitable treatment technologies. In this case, the MCL equals the MCLG, because analytical methods or treatment technology do not pose any limitation.

How does beryllium get into my drinking water?

Beryllium naturally enters surface water and ground water through the weathering of rocks and soils or from industrial wastewater discharges. The major sources of environmental releases from human activities are coal and fuel oil combustion.

How will beryllium be removed from my drinking water?

The following treatment method(s) have proven to be effective for removing beryllium to below 0.004 mg/L or 4 ppb: activated alumina, coagulation/filtration, ion exchange, lime softening, reverse osmosis.

Source: Abridged from <http://water.epa.gov/drink/contaminants/basicinformation/beryllium.cfm>

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