

Hexavalent Chromium

(Chromium 6, Cr6 or Cr(VI))

What is Hexavalent Chromium (Cr6)?

Chromium is an odorless and tasteless metallic element. Chromium is found naturally in rocks, plants, soil and volcanic dust, and animals. The most common forms of chromium that occur in natural waters in the environment are: trivalent chromium (Cr3) and hexavalent chromium (Cr6). These two forms combined are referred to as total chromium. Cr3 is an essential human dietary element. It is found in many vegetables, fruits, meats, grains and yeast. Cr6 occurs naturally in the environment from the erosion of natural chromium deposits. It can also be produced by industrial processes. It is used in the production of stainless steel, textile dyes, wood preservation, leather tanning and a variety of other applications.

How does Hexavalent Chromium get in my water?

Cr6 can leach into water naturally or through industrial runoff. Water supplies can be impacted by industrial waste by leakage, poor storage or inadequate disposal practices.

Is Hexavalent Chromium in drinking water a concern?

Cr6 at high concentrations can be of concern. While Cr6 on its own is not regulated, total chromium has a federal drinking water standard at 100 parts per billion (ppb). Total chromium includes Cr6 and Cr3 because these forms of chromium can convert back and forth in water and in the human body, depending on the environmental conditions. To ensure the greatest potential risk is addressed the EPA's regulation assumes that a measurement of total chromium is 100 percent Cr6, the more toxic form.

Is there Hexavalent Chromium in my water?

The average level of Cr6 detected in the BWL water supply is in trace amounts, on average 500 times less than the EPA's allowable limit of 100 ppb for total chromium. As part of the UCMR3 in 2015, Cr6 was tested individually. The average Cr6 detected in BWL water was 0.2 ppb. 1 ppb is equivalent to 1 drop of water in an Olympic size swimming pool.

What are the steps the BWL has or is taking?

The BWL continues to monitor monthly for total chromium (standard is 100 ppb) in our water conditioning plant samples and the results continue to be reported as non-detect or less than 1 ppb. Further evaluation of our well field showed Cr6 to be consistent throughout our service area at the average detected level of 0.05 ppb.

For further information about hexavalent chromium in drinking water, please visit:

DrinkTap: <http://www.drinktap.org/water-info/whats-in-my-water/hexavalent-chromium.aspx>

EPA: <https://www.epa.gov/dwstandardsregulations/chromium-drinking-water>