

Hexavalent Chromium (Chromium-6) in Drinking Water

1. What is chromium-6?

Chromium is a metallic element that has no odor or taste. It is found in rocks, plants, soil, and animals. Two of the most common forms of chromium are trivalent (chromium-3) and hexavalent (chromium-6). Chromium-3 is important for human health and is found in many vegetables, fruits, meats, grains, and yeast. Chromium-6 is found naturally in the environment and is also produced by some industrial processes.

2. How is chromium-6 used?

Chromium-6 is used widely in electroplating, stainless steel production, leather tanning, textile manufacturing, and wood preservation.

3. How does chromium-6 enter drinking water?

Some companies, including steel and pulp mills, metal plating operations, and boiler water corrosion control applications, have released chromium-6 into water sources. At some locations, chromium-6 has gotten into the environment through leakage, poor storage, or bad disposal practices.

4. Is there a drinking water standard for chromium?

Yes, EPA has set a drinking water standard for chromium that includes chromium-6. Waterworks are required to test for total chromium to make sure that all types of chromium in the water are measured. If tap water from a waterworks exceeds the federal standard, the waterworks must tell consumers and take action to reduce the level.

5. How are people exposed to chromium-6 and what are the known health effects?

People are exposed to chromium-6 by breathing it in, eating it in food, drinking it in water, or contact with skin. Exposure to chromium-6 has caused nasal and sinus cancers, lung cancer, kidney and liver damage, nasal and skin irritation and sores, and eye irritation and damage.

6. Is chromium-6 in drinking water a health concern?

Yes, chromium-6 is a health concern. The federal standard for total chromium is based on possible harmful skin effects, such as skin reactions (allergic dermatitis).

7. Chromium in Virginia public water systems

Generally, total chromium, which includes chromium-6, is not a health problem in Virginia. Since 2010, total chromium levels in Virginia waterworks have been below the federal drinking water standard. The Virginia Department of Health enforces the federal regulations to make sure that waterworks follow these regulations.

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