



**Monterey County Health Department
Consolidated Environmental Laboratory**

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CHROMIUM – 6 (HEXAVALENT CHROMIUM)

PURPOSE: Hexavalent chromium is a carcinogen in animals. Chromium is a metallic chemical that originates as a contaminant in the environment from the discharges of dye and paint pigments, wood preservatives, chrome-plating liquid wastes, and leaching from hazardous waste sites. Chromium is a metal found in natural deposits of ores containing other elements, mostly as chrome-iron ore. It is also widely present in soil and plants. Under most conditions, natural chromium in the environment occurs as Cr³⁺. Under oxidizing conditions, alkaline pH range, presence of MnO₂ and minerals containing chromium, part of it may occur as hexavalent chromium dissolved in groundwater. Recent sampling of drinking water sources throughout California suggests that hexavalent chromium may occur naturally in groundwater at many locations. Naturally occurring hexavalent chromium may be associated with serpentinite-containing rock or chromium containing geologic formations.

SAMPLE COLLECTION: The following procedures will help you collect a reliable sample:

1. **Select a tap as close to the well as possible.** When you have found a suitable faucet, open it and allow water to flow for a few minutes before collecting a sample.
2. Carefully fill the one-½ pint plastic container provided.
3. Label the sample with sample identification, date and time of collection.
4. Complete the laboratory form including mailing address, name of sample collector, well number, description of sample point, date and time of collection, and test ordered (i.e. "Hexavalent Chromium").
5. Samples must be cooled to 4°C during transport and storage and must be submitted on the same day of collection.

CARE OF SAMPLE: *Samples for hexavalent chromium have a short hold time. To assure that this time limit is met, it is preferable to collect the sample(s) **Monday through Thursday** and delivered to the Monterey County Consolidated Environmental Laboratory **by 2:00 pm**. This will allow us sufficient time to package the sample and ship to our reference laboratory **on the same day of collection**.*

FEE FOR TESTING: Testing for hexavalent chromium is performed by a certified reference laboratory that we have selected based on high quality and competitive pricing. While subject to change, the current fee is \$96 per sample. If you do not have an account with our laboratory, you must pay in advance for this testing. Clients who have an account will be billed at the end of the month that that results were reported.

INTERPRETATION OF RESULTS: In 2014, California Department of Public Health (CDPH) established the Maximum Contaminant Level (MCL) for hexavalent chromium at 10 micrograms per liter ($\mu\text{g/L}$ or ppb).