



**Monterey County Health Department
Consolidated Environmental Laboratory**

1270 Natividad Rd.
Salinas, CA 93906
(831) 755-4516

VOLATILE ORGANIC CHEMICALS (INCLUDING MTBE)

PURPOSE: Volatile organic chemicals (VOC's) readily volatilize, or travel from the water to the air. Most of them are industrial chemicals and solvents, and the list includes methyl tertiary butyl ethylene, trichloroethylene, carbon tetrachloride, vinyl chloride, 1,2-dichloroethane, benzene, para-dichlorobenzene, 1,1 dichloroethylene, and 1,1,1 trichloroethane. The health problems associated with toxic exposures to VOC's include liver and kidney effects and increased risk of cancer.

SAMPLE COLLECTION: Water samples taken for VOC testing must be collected and handled carefully in order to ensure that chemicals present in the water do not evaporate during transit to the laboratory; it is very important that air bubbles are not present in the sample container. Samples are also vulnerable to contamination by external sources of organic vapor. Use pre cleaned sample containers provided by the laboratory. Avoid contact with volatile chemicals on the day samples are collected (i.e. do not fill your fuel tank with diesel or gasoline). The following procedures will help you collect reliable samples:

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 5 minutes before collecting a sample. After 5 minutes, adjust water flow so that sample vials can be filled without splashing. If the system is not chlorinated, skip to step 3.
2. If the system is chlorinated, and the sample is collected from a tap downstream from the point of chlorination, the sample must first be dechlorinated with ascorbic acid to neutralize any chlorine that may be present. Collect the sample in the bottle provided by the laboratory containing ascorbic acid, cap and gently invert 5-6 times.
3. Wearing gloves, carefully fill the three glass 40 ml glass sample vials to the rim. The vials contain an acid preservative (HCl). Avoid contact with skin. ***Note: Two "travel blanks" may be included in the collection kit. Do not tamper with these vials; they are included as a control to assure that external sources of contamination do not affect your results.***
4. Immediately replace the cap on the vials. Invert the vials and examine for air bubbles; ***it is very important that no air bubbles are trapped in the container. If necessary remove cap and add more sample to eliminate all air.***
5. Label the sample with well identification (if applicable), description of sample point, date and time of collection, and name of sample collector.
6. 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. "VOC's").

CARE OF SAMPLE: Samples can be dropped off directly at the laboratory by 1:00 p.m., Monday thru Friday, or at one of the following health department offices:

Monterey Co. Environmental Health
1200 Aguajito Rd.
Monterey, CA
831-647-7654

Monterey Co. Environmental Health
200 Broadway St. Suite 70
King City, CA
831-386-6899

Monterey - Drop off by 9:00 a.m.

King City – Drop off by 9:00 a.m.

Samples that cannot be delivered to the laboratory within one hour after collection should be refrigerated (e.g. iced cooler). Health department offices can provide for cold storage/transport from point of receipt.

Due to the number of analyses involved, average turnaround is four weeks.

FEE FOR TESTING: Testing for VOC's 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 for VOC testing is \$110. 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 the results were reported.

INTERPRETATION OF RESULTS: the Maximum Contaminant Level (MCL) for each chemical tested will accompany your laboratory result. This is a number established by Federal and State drinking water standards; levels above the MCL have been associated with adverse health effects. One should be able to drink water for a lifetime without ill effects from VOC's if the levels are below the MCL. If you have any questions regarding laboratory results please call. We appreciate your business and look forward to providing you the highest quality laboratory services.