

Private Well Lab Results Report

If any contaminate from your well sample are above EPA MCL (Maximum Contaminate Level), Missouri State Public Health Lab will contact Christian County Health Department immediately with the contaminate level. If we do receive that notification we will contact the owner of the well to advise them on their next steps.

Understanding Your Results: Your lab result will provide you with a “Result” and “Reporting Limit”. Please disregard the “Reporting Limit”; it only pertains to Missouri State Public Health Lab equipment limits. Compare the results on the Laboratory Results Report to the EPA MCL’s listed below.

Primary Pollutants- Drinking Water

Maximum Contaminant Level (MCL) - The highest level of a contaminant that is allowed in drinking water. Primary standards and treatment techniques protect public health by limiting the levels of contaminants in drinking water.

Metal	MCL mg/L	Sources of Contaminant in Drinking Water
Antimony	0.006	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic	0.00	Erosion of natural deposits; runoff from orchards, runoff from glass and electronics production wastes
Beryllium	0.004	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
Barium	2.00	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Cadmium	0.1	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
Chromium	0.0	Discharge from steel and pulp mills; erosion of natural deposits
Copper	1.3	Corrosion of household plumbing systems; erosion of natural deposits
Fluoride	4.0	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
Lead	0.05	Corrosion of household plumbing systems; erosion of natural deposits
Mercury	0.002	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and croplands
Nitrate	10	Runoff from fertilizer use; leaking from septic tanks, sewage; erosion of natural deposits
Selenium	0.05	Discharge from petroleum refineries; erosion of natural deposits; discharge from mines
Thallium	0.002	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories

Source: EPA.gov

Secondary Pollutants

These contaminants are not health threatening. Private water systems only need to test for them on a voluntary basis. Then why is it necessary to set secondary standards?

EPA believes that if these contaminants are present in your water at levels above these standards, the contaminants may cause the water to appear cloudy or colored, or to taste or smell bad. This may cause a great number of people to stop using water from their private water system even though the water is actually safe to drink.

Secondary standards are set to give water systems some guidance on removing these chemicals to levels that are below what most people will find to be noticeable.

There are a wide variety of problems related to secondary contaminants.

These problems can be grouped into three categories:

- Aesthetic effects — undesirable tastes or odors;
- Cosmetic effects — effects which do not damage the body but are still undesirable
- Technical effects — damage to water equipment or reduced effectiveness of treatment for other contaminants

Secondary Pollutant	MCL mg/L	Noticeable Effects above the Secondary MCL
Chloride	250	salty taste
Sulfate	250	salty taste
Aluminum	0.05-0.2	colored water
Iron	0.3	rusty color; sediment; metallic taste; reddish or orange staining
Manganese	0.05	black to brown color; black staining; bitter metallic taste
Copper	1.3	metallic taste; blue-green staining
Zinc	5.0	metallic taste
pH	6.5-8.5	low pH: bitter metallic taste; corrosion high pH: slippery feel; soda taste; deposits
Total Dissolved Solids	500	hardness; deposits; colored water; staining; salty taste

Source: EPA.gov

Other Pollutants

The U.S. Environmental Protection Agency (EPA) has not set maximum contaminant levels (MCL) for following in the National Primary Drinking Water Regulations:

Cobalt
Iron
Lithium
Manganese
Molybdenum
Nickel (Ni):

Strontium
Thorium
Tin (Sn)
Titanium
Uranium
Vanadium (V)