

January 2024

QC Water was tested for a wide range of parameters including microbial contaminants, metals and trace elements, nitrogen compounds, inorganic ions, PFAS, PCBs, chlorinated herbicides, semi-volatile organic chemicals, purgeable organic compounds, and other synthetic organic chemicals.

The following parameters were measured in QC Water:

Parameter	Result	Method	Lab	MCLG	S-MCL
Alkalinity	4.1 mg/L	SM2320B-11	CLTWater Lab		
Conductivity	11 µmhos/cm	SM2510B-11	CLTWater Lab		
pH	7.01	SM4500H-B-11	CLTWater Lab		6.5 – 8.5
Aluminum, Total	13 µg/L	EPA 200.7	CLTWater Lab		0.05 – 0.2 mg/L (50 – 200 µg/L)
Barium, Total	22 µg/L	EPA 200.7	CLTWater Lab	2 mg/L (2,000 µg/L)	
Calcium, Total	800 µg/L	EPA 200.7	CLTWater Lab		
Calcium Hardness (as CaCO <sub>3</sub> )	2.0 mg/L	EPA 200.7	CLTWater Lab		
Hardness (by calculation, as CaCO <sub>3</sub> )	2.7 mg/L	EPA 200.7	CLTWater Lab		
Magnesium, Total	180 µg/L	EPA 200.7	CLTWater Lab		
Sodium, Total	1.1 mg/L	EPA 200.7	CLTWater Lab		30 – 60 mg/L*

Notes:

- **MCLG** = Maximum Contaminant Level Goal: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety and are non-enforceable public health goals.
- **S-MCL** = Secondary Maximum Contaminant Level: Secondary Drinking Water Regulations are non-enforceable guidelines regarding contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water.
- Sodium is not listed in the EPA's Secondary Drinking Water Regulations, but 30 to 60 mg/L is recommended by the EPA to avoid adverse effects on taste
- Parameters without MCLG or SMCL listed do not have drinking water standards set by the EPA, but can be useful information for brewers

All the following parameters were found to be below detection levels:

Parameter	Result	Method	Lab
1,2-Dibromoethane	<0.010 µg/L	EPA 504.1	Pace Analytical
1,2-Dibromo-3-Chloropropane	<0.020 µg/L	EPA 504.1	Pace Analytical
PCB-1016 (Aroclor 1016)	<0.10 µg/L	EPA 505	Pace Analytical
PCB-1221 (Aroclor 1221)	<0.10 µg/L	EPA 505	Pace Analytical
PCB-1232 (Aroclor 1232)	<0.10 µg/L	EPA 505	Pace Analytical
PCB-1242 (Aroclor 1242)	<0.10 µg/L	EPA 505	Pace Analytical
PCB-1248 (Aroclor 1248)	<0.10 µg/L	EPA 505	Pace Analytical
PCB-1254 (Aroclor 1254)	<0.10 µg/L	EPA 505	Pace Analytical
PCB-1260 (Aroclor 1260)	<0.10 µg/L	EPA 505	Pace Analytical
Chlordane	<0.21 µg/L	EPA 505	Pace Analytical
Toxaphene	<1.0 µg/L	EPA 505	Pace Analytical
2,4-D	<0.10 µg/L	EPA 515.3	Pace Analytical
Dalapon	<1.0 µg/L	EPA 515.3	Pace Analytical
Pentachlorophenol	<0.040 µg/L	EPA 515.3	Pace Analytical
Picloram	<0.10 µg/L	EPA 515.3	Pace Analytical
2,4,5-TP (Silvex)	<0.20 µg/L	EPA 515.3	Pace Analytical
Alachlor	<0.21 µg/L	EPA 525.3	Pace Analytical
Atrazine	<0.10 µg/L	EPA 525.3	Pace Analytical
Benzo[a]pyrene	<0.10 µg/L	EPA 525.3	Pace Analytical
Hexachlorocyclohexane, gamma (Lindane)	<0.021 µg/L	EPA 525.3	Pace Analytical
Endrin	<0.010 µg/L	EPA 525.3	Pace Analytical
Di(2-ethylhexyl)adipate	<1.5 µg/L	EPA 525.3	Pace Analytical
Di(2-ethylhexyl)phthalate	<2.1 µg/L	EPA 525.3	Pace Analytical
Heptachlor	<0.041 µg/L	EPA 525.3	Pace Analytical
Heptachlor epoxide	<0.021 µg/L	EPA 525.3	Pace Analytical
Hexachlorobenzene	<0.10 µg/L	EPA 525.3	Pace Analytical
Hexachlorocyclopentadiene	<0.10 µg/L	EPA 525.3	Pace Analytical
Methoxychlor	<0.10 µg/L	EPA 525.3	Pace Analytical
Simazine	<0.18 µg/L	EPA 525.3	Pace Analytical
Carbofuran	<0.09 µg/L	EPA 531.2	Pace Analytical
Oxamyl	<2.0 µg/L	EPA 531.2	Pace Analytical
11Cl-PF3OUdS	<1.9 ng/L	EPA 533	Pace Analytical
4:2 FTS	<1.9 ng/L	EPA 533	Pace Analytical
6:2 FTS	<3.9 ng/L	EPA 533	Pace Analytical
8:2 FTS	<1.9 ng/L	EPA 533	Pace Analytical
9Cl-PF3ONS	<1.9 ng/L	EPA 533	Pace Analytical
ADONA	<1.9 ng/L	EPA 533	Pace Analytical
HFPO-DA	<1.9 ng/L	EPA 533	Pace Analytical
NFDHA	<1.9 ng/L	EPA 533	Pace Analytical
PFBA	<1.9 ng/L	EPA 533	Pace Analytical
Perfluorobutanesulfonic acid	<1.9 ng/L	EPA 533	Pace Analytical
Perfluorodecanoic acid	<1.9 ng/L	EPA 533	Pace Analytical
Perfluorododecanoic acid	<1.9 ng/L	EPA 533	Pace Analytical

Parameter	Result	Method	Lab
PFEESA	<1.9 ng/L	EPA 533	Pace Analytical
Perfluoroheptanoic acid	<1.9 ng/L	EPA 533	Pace Analytical
PFHpS	<1.9 ng/L	EPA 533	Pace Analytical
Perfluorohexanoic acid	<1.9 ng/L	EPA 533	Pace Analytical
Perfluorohexanesulfonic acid	<1.9 ng/L	EPA 533	Pace Analytical
PFMBA	<1.9 ng/L	EPA 533	Pace Analytical
PFMPA	<1.9 ng/L	EPA 533	Pace Analytical
Perfluorononanoic acid	<1.9 ng/L	EPA 533	Pace Analytical
Perfluorooctanoic acid (PFOA)	<1.9 ng/L	EPA 533	Pace Analytical
Perfluorooctanesulfonic acid (PFOS)	<1.9 ng/L	EPA 533	Pace Analytical
PFPeA	<1.9 ng/L	EPA 533	Pace Analytical
PFPeS	<1.9 ng/L	EPA 533	Pace Analytical
PFUnA	<1.9 ng/L	EPA 533	Pace Analytical
11Cl-PF3OUdS	<2.0 ng/L	EPA 537.1	Pace Analytical
9Cl-PF3ONS	<2.0 ng/L	EPA 537.1	Pace Analytical
ADONA	<2.0 ng/L	EPA 537.1	Pace Analytical
HFPO-DA	<2.0 ng/L	EPA 537.1	Pace Analytical
NEtFOSAA	<2.0 ng/L	EPA 537.1	Pace Analytical
NMeFOSAA	<2.0 ng/L	EPA 537.1	Pace Analytical
Perfluorobutanesulfonic acid	<2.0 ng/L	EPA 537.1	Pace Analytical
Perfluorodecanoic acid	<2.0 ng/L	EPA 537.1	Pace Analytical
Perfluorododecanoic acid	<2.0 ng/L	EPA 537.1	Pace Analytical
Perfluoroheptanoic acid	<2.0 ng/L	EPA 537.1	Pace Analytical
Perfluorohexanesulfonic acid	<2.0 ng/L	EPA 537.1	Pace Analytical
Perfluorohexanoic acid	<2.0 ng/L	EPA 537.1	Pace Analytical
Perfluorononanoic acid	<2.0 ng/L	EPA 537.1	Pace Analytical
Perfluorooctanesulfonic acid (PFOS)	<2.0 ng/L	EPA 537.1	Pace Analytical
Perfluorooctanoic acid (PFOA)	<2.0 ng/L	EPA 537.1	Pace Analytical
Perfluorotetradecanoic acid	<2.0 ng/L	EPA 537.1	Pace Analytical
Perfluorotridecanoic acid	<2.0 ng/L	EPA 537.1	Pace Analytical
Perfluoroundecanoic acid	<2.0 ng/L	EPA 537.1	Pace Analytical
Beryllium, Total	<2.0 µg/L	EPA 200.7	CLTWater Lab
Iron, Total	<50 µg/L	EPA 200.7	CLTWater Lab
Manganese, Total	<5.0 µg/L	EPA 200.7	CLTWater Lab
Antimony, Total	<3.0 µg/L	EPA 200.8	CLTWater Lab
Arsenic, Total	<5.0 µg/L	EPA 200.8	CLTWater Lab
Cadmium, Total	<1.0 µg/L	EPA 200.8	CLTWater Lab
Chromium, Total	<5.0 µg/L	EPA 200.8	CLTWater Lab
Chromium, Hexavalent	<5.0 µg/L	Screen	CLTWater Lab
Copper, Total	<2.0 µg/L	EPA 200.8	CLTWater Lab
Lead, Total	<3.0 µg/L	EPA 200.8	CLTWater Lab
Mercury, Total	<2.0 µg/L	EPA 200.8	CLTWater Lab
Selenium, Total	<2.0 µg/L	EPA 200.8	CLTWater Lab
Thallium, Total	<1.0 µg/L	EPA 200.8	CLTWater Lab
Zinc, Total	<10 µg/L	EPA 200.8	CLTWater Lab

Parameter	Result	Method	Lab
1,1,1,2-Tetrachloroethane	<0.5 µg/L	EPA 242.2	CLTWater Lab
1,1,1-Trichloroethane	<0.5 µg/L	EPA 242.2	CLTWater Lab
1,1,2,2-Tetrachloroethane	<0.5 µg/L	EPA 242.2	CLTWater Lab
1,1,2-Trichloroethane	<0.5 µg/L	EPA 242.2	CLTWater Lab
1,1-Dichloroethane	<0.5 µg/L	EPA 242.2	CLTWater Lab
1,1-Dichloroethene	<0.5 µg/L	EPA 242.2	CLTWater Lab
1,1-Dichloropropene	<0.5 µg/L	EPA 242.2	CLTWater Lab
1,2,3-Trichlorobenzene	<0.5 µg/L	EPA 242.2	CLTWater Lab
1,2,3-Trichloropropane	<0.5 µg/L	EPA 242.2	CLTWater Lab
1,2,4-Trichlorobenzene	<0.5 µg/L	EPA 242.2	CLTWater Lab
1,2,4-Trimethylbenzene	<0.5 µg/L	EPA 242.2	CLTWater Lab
1,2-Dibromo-3-chloropropane	<0.5 µg/L	EPA 242.2	CLTWater Lab
1,2-Dibromoethane	<0.5 µg/L	EPA 242.2	CLTWater Lab
1,2-Dichlorobenzene	<0.5 µg/L	EPA 242.2	CLTWater Lab
1,2-Dichloroethane	<0.5 µg/L	EPA 242.2	CLTWater Lab
1,2-Dichloropropane	<0.5 µg/L	EPA 242.2	CLTWater Lab
1,3,5-Trimethylbenzene	<0.5 µg/L	EPA 242.2	CLTWater Lab
1,3-Dichlorobenzene	<0.5 µg/L	EPA 242.2	CLTWater Lab
1,3-Dichloropropane	<0.5 µg/L	EPA 242.2	CLTWater Lab
1,4-Dichlorobenzene	<0.5 µg/L	EPA 242.2	CLTWater Lab
2,2-Dichloropropane	<0.5 µg/L	EPA 242.2	CLTWater Lab
2-Chlorotoluene	<0.5 µg/L	EPA 242.2	CLTWater Lab
4-Chlorotoluene	<0.5 µg/L	EPA 242.2	CLTWater Lab
4-Isopropyltoluene	<0.5 µg/L	EPA 242.2	CLTWater Lab
Benzene	<0.5 µg/L	EPA 242.2	CLTWater Lab
Bromobenzene	<0.5 µg/L	EPA 242.2	CLTWater Lab
Bromochloromethane	<0.5 µg/L	EPA 242.2	CLTWater Lab
Bromodichloromethane	<0.5 µg/L	EPA 242.2	CLTWater Lab
Bromoform	<0.5 µg/L	EPA 242.2	CLTWater Lab
Bromomethane	<0.5 µg/L	EPA 242.2	CLTWater Lab
Carbon tetrachloride	<0.5 µg/L	EPA 242.2	CLTWater Lab
Chlorobenzene	<0.5 µg/L	EPA 242.2	CLTWater Lab
Chloroethane	<0.5 µg/L	EPA 242.2	CLTWater Lab
Chloroform	<0.5 µg/L	EPA 242.2	CLTWater Lab
Chloromethane	<0.5 µg/L	EPA 242.2	CLTWater Lab
cis-1,2-Dichloroethene	<0.5 µg/L	EPA 242.2	CLTWater Lab
cis-1,3-Dichloropropene	<0.5 µg/L	EPA 242.2	CLTWater Lab
Dibromochloromethane	<0.5 µg/L	EPA 242.2	CLTWater Lab
Dibromomethane	<0.5 µg/L	EPA 242.2	CLTWater Lab
Dichlorodifluoromethane	<0.5 µg/L	EPA 242.2	CLTWater Lab

Parameter	Result	Method	Lab
Ethylbenzene	<0.5 µg/L	EPA 242.2	CLTWater Lab
Hexachlorobutadiene	<0.5 µg/L	EPA 242.2	CLTWater Lab
Isopropylbenzene	<0.5 µg/L	EPA 242.2	CLTWater Lab
Methylene chloride	<0.5 µg/L	EPA 242.2	CLTWater Lab
Methyl-t-butyl ether*	<0.5 µg/L	EPA 242.2	CLTWater Lab
m-Xylene	<0.5 µg/L	EPA 242.2	CLTWater Lab
Naphthalene	<0.5 µg/L	EPA 242.2	CLTWater Lab
n-Butylbenzene	<0.5 µg/L	EPA 242.2	CLTWater Lab
n-Propylbenzene	<0.5 µg/L	EPA 242.2	CLTWater Lab
o-Xylene	<0.5 µg/L	EPA 242.2	CLTWater Lab
p-Xylene	<0.5 µg/L	EPA 242.2	CLTWater Lab
sec-Butylbenzene	<0.5 µg/L	EPA 242.2	CLTWater Lab
Styrene	<0.5 µg/L	EPA 242.2	CLTWater Lab
tert-Butylbenzene	<0.5 µg/L	EPA 242.2	CLTWater Lab
Tetrachloroethene	<0.5 µg/L	EPA 242.2	CLTWater Lab
Toluene	<0.5 µg/L	EPA 242.2	CLTWater Lab
trans-1,2-Dichloroethene	<0.5 µg/L	EPA 242.2	CLTWater Lab
trans-1,3-Dichloropropene	<0.5 µg/L	EPA 242.2	CLTWater Lab
Trichloroethene	<0.5 µg/L	EPA 242.2	CLTWater Lab
Trichlorofluoromethane	<0.5 µg/L	EPA 242.2	CLTWater Lab
Vinyl chloride	<0.5 µg/L	EPA 242.2	CLTWater Lab
Cyanide	<10 µg/L	10-204-000-1-X	CLTWater Lab
Chloride	<1.0 mg/L	EPA 300.0-93	CLTWater Lab
Fluoride	<0.1 mg/L	EPA 300.0-93	CLTWater Lab
Sulfate	<2.0 mg/L	EPA 300.0-93	CLTWater Lab
Nitrate	<0.05 mg/L	EPA 353.2-93	CLTWater Lab
Nitrite	<0.05 mg/L	EPA 353.2-93	CLTWater Lab
E. coli	Absent	SM9223B	CLTWater Lab
Total Coliform	Absent	SM9223B	CLTWater Lab
Ammonia-Nitrogen	<0.10 mg/L	SM4500NH3-H-11	CLTWater Lab

Note: Some PFAS compounds were analyzed under both PFAS Methods, EPA 533 and EPA 537.1