empowerDX

Customer Information

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SAMPLE INFORMATION

Sample ID: XXXXXXXXX

Sample Location: Backyard hose

Collection Date: Lorem ipsum dolor sit

Collection Time: Lorem ipsum dolor sit

TESTING INFORMATION

Test Performed: empowerDX Pro Plus Water Test Kit

Received Date: Lorem ipsum dolor sit

Reported Date: Lorem ipsum dolor sit

SAMPLE

YOUR RESULTS

These results are for personal information only. Our testing is performed under consumer conditions and may differ from official government or municipal testing. For compliance or legal purposes, certified testing may be required.

AI-generated insights

The water analysis indicates that most contaminants tested are either absent or well below regulatory limits, ensuring safe drinking water overall. Nitrate levels are close to the regulatory limit defined by the EPA (10 mg/L), with a result of 9.2 mg/L, which may warrant periodic monitoring to avoid exceeding safe thresholds (**EPA Maximum Contaminant Level (MCL): 10 mg/L**). The water's pH is slightly high at 8.8, which is within typical drinking water ranges but may contribute to a chalky taste or potential scaling in pipes and appliances. Additionally, a moderate level of total dissolved solids (300 mg/L) suggests good overall water cleanliness though it may influence taste. Bromodichloromethane (8.1 µg/L), chloroform (12 µg/L), and dibromochloromethane (5 µg/L)—byproducts of disinfection—were detected but are far below EPA safety limits for chlorination byproducts (*example total trihalomethanes guideline: 80 µg/L*). Consider using activated carbon filtration to improve taste and reduce disinfection byproducts, even though levels meet safety standards.

ANALYTE	VALUE	INTERPRETATION	NOTES

For hardness, calcium and magnesium levels bring the total hardness value to 160 mg/L, which may classify water as moderately hard (common in groundwater supplies). Hard water can lead to mineral buildup in appliances and plumbing; consider installing a water softener system if scaling becomes a concern. No microbial contaminants like total coliform or E. coli were detected, indicating excellent water safety in terms of microorganisms. Regular testing is recommended to ensure ongoing water quality and compliance with safety standards.

References: EPA National Primary Drinking Water Regulations (www.epa.gov/safewater), CDC Drinking Water Standards (www.cdc.gov).

This AI-generated summary provides general context for laboratory water-quality results using publicly available regulatory and scientific sources. It is not medical advice or personalized guidance.

Questions? Our AI Assistant has your results and can tell you more.

SAMPLE

ANALYTE	VALUE	INTERPRETATION	NOTES
General Properties			
Sodium Adsorption Ratio (SAR)	0.93 NONE	No federal limits	Typically used in irrigation water quality for soil permeability.
Calcium hardness as calcium carbonate	110 mg/L	No federal limits	Portion of hardness from calcium; contributes to scaling
Total Hardness as CaCO3	160 mg/L	No federal limits	Values <60 mg/L is 'soft' water, 60-120 mg/L is 'moderately hard', and >120 is 'hard' water.
Magnesium hardness as calcium carbonate	50 mg/L	No federal limits	Portion of hardness from magnesium; contributes to scaling.
Acidity as CaCO3 to pH 8.3	Not Detected		Typical range is 20–200 mg/L. Low alkalinity may make water corrosive.

ANALYTE	VALUE	INTERPRETATION	NOTES
Turbidity	Not Detected		Shows how clear your water is; under 1 is considered good, and above 5 is high.
Total Metals	110 mg/L	No federal limits	Aggregate measure—interpret by the individual metals.
Grains per Gallon (GPG)	9.2 NONE	No federal limits	Hardness unit; higher values mean harder water and more scaling.
Total Anions	120 mg/L	No federal limits	Sum of negatively charged ions; reflects overall mineral content.
Alkalinity	47 mg/L	No federal limits	Shows how well water can resist becoming acidic; low values can make water more corrosive.
Bicarbonate Alkalinity as CaCO3	47 mg/L	No federal limits	The main form of alkalinity in most water; typical range is 20–200 mg/L.
Carbonate Alkalinity as CaCO3	Not Detected		Part of what keeps water stable; helps prevent sudden pH changes.
Hydroxide Alkalinity	Not Detected		Usually near zero in normal water; higher levels can make water feel slippery or caustic.
Phenolphthalein Alkalinity	Not Detected		Used to estimate how much carbonate is in the water; mostly for testing balance, not health.
Specific Conductance	460 umhos/cm	No federal limits	Shows how many dissolved minerals are in the water; higher values mean more minerals.
pH	8.8 S.U.	No federal limits	A pH of 7 is neutral; most drinking water is between 6.5 and 8.5.
Langelier Index	0.69 LangSU	No federal limits	0 is balanced. LSI below 0 means it is corrosive, may leach metals from pipes.

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ANALYTE	VALUE	INTERPRETATION	NOTES
Total Dissolved Solids	300 mg/L	No federal limits	
Volatile Organic Compounds (VOCs)			
1,1,1-Trichloroethane	Not Detected		
1,1,2,2-Tetrachloroethane	Not Detected		Industrial solvent; uncommon in treated water.
1,1,2-Trichloroethane	Not Detected		
1,1-Dichloroethane	Not Detected		Solvent; usually from industrial sources.
1,1-Dichloroethene	Not Detected		
1,1-Dichloropropene	Not Detected		Industrial chemical; high levels may affect health.
1,2,3-Trichlorobenzene	Not Detected		Industrial chemical; persistent but uncommon in tap water.
1,2,3-Trichloropropane	Not Detected		Some states regulate at very low levels.
1,2,4-Trichlorobenzene	Not Detected		
1,2-Dibromo-3-Chloropropane	Not Detected		
1,2-Dibromoethane	Not Detected		
1,2-Dichlorobenzene	Not Detected		
1,2-Dichloroethane	Not Detected		

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ANALYTE	VALUE	INTERPRETATION	NOTES
1,2-Dichloropropane	Not Detected		
1,3,5-Trimethylbenzene	Not Detected		Gasoline component; odor at higher levels.
1,3-Dichlorobenzene	Not Detected		Not routinely regulated; related to other dichlorobenzenes.
1,3-Dichloropropane	Not Detected		Industrial solvent; rarely detected.
1,3-Dichloropropene, Total	Not Detected		Fumigant-related; rarely detected.
1,4-Dichlorobenzene	Not Detected		
2,2-Dichloropropane	Not Detected		Solvent; rarely detected.
2-Butanone	Not Detected		Solvent (MEK); noticeable odor at elevated levels.
2-Chlorotoluene	Not Detected		Industrial solvent; uncommon in drinking water.
2-Hexanone	Not Detected		Solvent (MBK); odor at high levels.
4-Chlorotoluene	Not Detected		Industrial solvent; uncommon in drinking water.
4-Methyl-2-pentanone	Not Detected		Solvent (MIBK); odor at high levels.
Acetone	Not Detected		Evaporates quickly. Usually not a health concern at trace levels.
Benzene	Not Detected		
Bromobenzene	Not Detected		Solvent; rare in finished water.

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ANALYTE	VALUE	INTERPRETATION	NOTES
Bromodichloromethane	8.1 ug/L	No federal limits	Part of total trihalomethanes (TTHMs) standard of 0.080 mg/L.
Bromoform	1.2 ug/L	No federal limits	Part of total trihalomethanes (TTHMs) standard of 0.080 mg/L.
Bromomethane	Not Detected		Fumigant; rarely detected in drinking water.
Carbon disulfide	Not Detected		Solvent; strong odor at high levels.
Carbon tetrachloride	Not Detected		
Chlorobenzene	Not Detected		
Chloroethane	Not Detected		Volatile solvent; typically evaporates quickly.
Chloroform	12 ug/L	No federal limits	Part of total trihalomethanes (TTHMs) standard of 0.080 mg/L.
Chloromethane	Not Detected		Volatile solvent; rare in finished water.
cis-1,2-Dichloroethene	0.55 ug/L		Your result of 0.55 ug/L is below federal limit (MCL) of 70 ug/L and below federal goal level (MCLG) of 70 ug/L.
cis-1,3-Dichloropropene	Not Detected		Fumigant-related; rarely detected in tap water.
Dibromochloromethane	5.0 ug/L	No federal limits	Part of total trihalomethanes (TTHMs) standard of 0.080 mg/L.
Dibromomethane	Not Detected		Solvent/fumigant; rare in drinking water.
Dichlorodifluoromethane	Not Detected		Not typically present in drinking water.

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ANALYTE	VALUE	INTERPRETATION	NOTES
Ethylbenzene	Not Detected		
Freon 113	Not Detected		Rare in drinking water.
Hexachlorobutadiene	Not Detected		Industrial byproduct
Isopropylbenzene	Not Detected		Gasoline component; odor at high levels.
m&p-Xylene	Not Detected		
Methyl tertiary butyl ether	Not Detected		Gasoline additive (MTBE); strong taste/odor at low levels.
Methylene Chloride	Not Detected		
n-Butylbenzene	Not Detected		Gasoline-related; rarely detected.
N-Propylbenzene	Not Detected		Gasoline-related; rarely detected.
Naphthalene	Not Detected		Mothball/petroleum odor compound; usually trace.
o-Xylene	Not Detected		
p-Isopropyltoluene	Not Detected		Fragrance/solvent; usually trace.
sec-Butylbenzene	Not Detected		Gasoline-related; rarely detected.
Styrene	Not Detected		
tert-Butylbenzene	Not Detected		Gasoline-related; rarely detected.

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ANALYTE	VALUE	INTERPRETATION	NOTES
Tetrachloroethene	Not Detected		
Toluene	Not Detected		
trans-1,2-Dichloroethene	Not Detected		
trans-1,3-Dichloropropene	Not Detected		Fumigant-related; rarely detected.
Trichloroethene	0.18 ug/L		Trace amount detected but below Reporting Limit of 0.50 ug/L.
Trichlorofluoromethane	Not Detected		Not typically present in drinking water.
Trihalomethanes, Total	26 ug/L	No federal limits	
Vinyl chloride	Not Detected		
Xylene (total)	Not Detected		
Metals			
Aluminum	Not Detected		
Antimony	Not Detected		
Arsenic	Not Detected		
Barium	0.013 mg/L		Your result of 0.013 mg/L is below federal limit (MCL) of 2 mg/L and below federal goal level (MCLG) of 2 mg/L.
Beryllium	Not Detected		

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ANALYTE	VALUE	INTERPRETATION	NOTES
Boron	0.027 mg/L		WHO guideline recommends under ~2.4 mg/L.
Cadmium	Not Detected		
Calcium	43 mg/L	No federal limits	Calcium contributes to water hardness, and is not a health concern. Typical levels are 20–100 mg/L.
Chromium	0.0032 mg/L		Trace amount detected but below Reporting Limit of 0.015 mg/L.
Cobalt	Not Detected		High levels may suggest industrial contamination.
Copper	Not Detected		
Iron	Not Detected		
Lead	Not Detected		
Lithium	Not Detected		Some advisories recommend <0.1 mg/L.
Magnesium	12 mg/L	No federal limits	Magnesium contributes to hardness, and is not a health concern. Typical levels are 5–50 mg/L.
Manganese	Not Detected		EPA recommends <0.05 for taste/staining, and <0.3 for health concerns.
Molybdenum	Not Detected		Typically <0.1 mg/L in natural waters.
Nickel	Not Detected		Some states recommend <0.1 mg/L.

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ANALYTE	VALUE	INTERPRETATION	NOTES
Selenium	Not Detected		
Silver	Not Detected		EPA recommends less than 0.1 mg/L to avoid skin discoloration.
Thallium	Not Detected		
Thorium	Not Detected		Elevated levels may indicate industrial or geologic sources.
Tin	Not Detected		Rare in water; may leach from plumbing or industrial sources.
Titanium	0.0032 mg/L		Common mineral in rocks; not a health concern at typical levels.
Tungsten	Not Detected		Rarely found; may occur near mining areas.
Vanadium	Not Detected		Naturally present in groundwater; some states advise under 0.05 mg/L.
Zinc	0.37 mg/L	No federal limits	Levels above 5 mg/L can cause metallic taste or cloudiness.
Zirconium	Not Detected		Very rare; may indicate industrial contamination.
Mercury	Not Detected		
Nutrients / Salts			
Phosphorus	0.15 mg/L	No federal limits	High levels suggest fertilizer runoff.
Potassium	2.7 mg/L	No federal limits	Usually <10 mg/L in water. Water softeners will increase potassium.

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ANALYTE	VALUE	INTERPRETATION	NOTES
Silicon	3.8 mg/L	No federal limits	Typical levels are 0.5–15 mg/L. Not a health concern, but may cause scaling in appliances.
SiO2	8.1 mg/L	No federal limits	Common in natural water (1–30 mg/L). Not a health concern, but may cause scaling.
Sodium	27 mg/L	No federal limits	EPA recommends <20 mg/L for very low-sodium diets.
Strontium	0.12 mg/L	No federal limits	Naturally present in groundwater.
Sulfur	17 mg/L	No federal limits	Levels above 0.05 mg/L can cause a rotten-egg odor but are not a health concern.
Nitrite as N	Not Detected		
Nitrate as N	9.2 mg/L		Your result of 9.2 mg/L is below federal limit (MCL) of 10 mg/L and below federal goal level (MCLG) of 10 mg/L.
Nitrate Nitrite as N	9.2 mg/L		Your result of 9.2 mg/L is below federal limit (MCL) of 10 mg/L and below federal goal level (MCLG) of 10 mg/L.
Bromide	Not Detected		Can form disinfection byproducts during chlorination.
Fluoride	0.65 mg/L		Your result of 0.65 mg/L is below federal limit (MCL) of 4 mg/L and below federal goal level (MCLG) of 4 mg/L.
Chloride	73 mg/L	No federal limits	EPA recommends under 250 mg/L for taste and corrosion.
Sulfate	38 mg/L	No federal limits	Levels above 250 mg/L can cause bitter taste and laxative effect.

Bacteria / Biological Indicators

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ANALYTE	VALUE	INTERPRETATION	NOTES
Coliform	Not Detected		Total coliform indicates possible contamination and triggers follow-up testing.
Escherichia coli	Not Detected		Any E. coli detection means the water is unsafe to drink until resolved.

SAMPLE