UNIVERSITY OF GEORGIA
EXTENSION

Soil, Plant, and Water Laboratory
2400 College Station Road
Athens, Georgia 30602-9105
Website: http://aesl.ces.uga.edu

Water Treatment System Analysis Report

Sample ID

(CEC/CEA Signature)

Lab Information	*County Information*
Lab #2083 Received: Sep 27, 2023 Completed: Sep 29, 2023 Tests: W2 W42Pb	**DeKalb County** 4380 Memorial Drive Room 200 Decatur, GA 30032 phone: 404-298-4080 e-mail: uge1089@uga.edu
Reason for testing: Drinking	

Results

pH: 8.0 (Desired pH range 6.5 to 8.5)

Calculated Hardness: 15 ppm (0.9 gr/gal) - Soft Water -

(Water hardness is due to the presence of certain dissolved minerals, primarily calcium and magnesium.)

Saturation Index: -1.4 - Mild Corrosion: Treatment Should be Considered [a]

Parameter	Concentration in Sample	EPA Maximum Level*	Parameter	Concentration in Sample	EPA Maximum Level*
Alkalinity	27 ppm		Magnesium (Mg)	1.4 ppm	No Set Maximum
Aluminum (Al)	negligible	0.2 ppm (S)	Manganese (Mn)	negligible	0.05 ppm (S)
Boron (B)	0.02 ppm	No Set Maximum	Molybdenum (Mo)	negligible	No Set Maximum
Calcium (Ca)	3.8 ppm	No Set Maximum	Nickel (Ni)	negligible	No Set Maximum
Carbon Dioxide (CO_2)	0.59 ppm		Nitrate-Nitrogen (NO_3^--N)	0.70 ppm	10.0 ppm (P)
Chloride (Cl)	7.79 ppm	250 ppm (S)			
Chromium (Cr)	negligible	100 ppb (P)	Phosphate (PO_4)	negligible	
Conductivity (Specific Conductance @ 25°C)	107 µS/cm [b] (µS/cm = µmhos/cm)		Phosphorus (P)	negligible	No Set Maximum
			Potassium (K)	2.2 ppm	No Set Maximum
Copper (Cu)	negligible	1.0 ppm (S) 1.3 ppm (P)	Silica (SiO_2)	6.46 ppm	No Set Maximum
			Sodium (Na)	13.8 ppm	No Set Maximum
Fluoride (F)	0.67 ppm	2.0 ppm (S) 4.0 ppm (P)	Sulfate (SO_4)	9.20 ppm	250 ppm (S)
Iron (Fe)	negligible	0.30 ppm (S)	Total Dissolved Solids (TDS) - Estimated	59 ppm	500 ppm (S)
Lead (Pb)	negligible	15 ppb (P)	Zinc (Zn)	negligible	5.0 ppm (S)

* The letter (P) beside an EPA Maximum Level indicates that EPA has established a primary drinking water standard for this parameter. These are parameters which have been shown to cause adverse health effects. The letter (S) indicates that EPA has established a secondary drinking water standard for this parameter. These parameters are not generally considered threats to health, but can cause nuisance problems such as staining, tastes or odors.

ppm:Stands for parts per million. One part per million is equivalent to 1 pound of an element dissolved in 1,000,000 pounds of water. One part per million is the same as one milligram per liter (mg/L).

ppb:Stands for parts per billion. One part per billion is the same as one microgram per liter (µg/L).

NOTE: This test does not imply that this water is safe from bacteria or other chemicals that may be present. If you have concerns in these areas, contact your County Extension Agent.

Report continued on next page

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Water Treatment System
Analysis Report

(CEC/CEA Signature)

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Lab Information	County Information
Lab #2083	**DeKalb County**
Received: Sep 27, 2023	4380 Memorial Drive Room 200
Completed: Sep 29, 2023	Decatur, GA 30032
Tests: W2 W42Pb	phone: 404-298-4080
	e-mail: uge1089@uga.edu

Type: **4. Municipal Water** Decatur

Results continued

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Calculated Hardness: 15 ppm (0.9 gr/gal) - Soft Water -

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Comments are listed on the next page

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[a] **Saturation Index**

The saturation index is used to predict the corrosion or scaling property of this water. Corrosion of the pump, pipe, and fixtures can cause high metal levels in the water, especially copper and lead. Treatment for corrosion would consist of pH neutralization with a calcium or magnesium base (ie., calcite) filter bed. Corrosion problems can be reduced by using non-metal plumbing (ie., PVC). Treatment for scaling consists of water softening to reduce hardness. Scaling problems can be reduced by lowering the hot water temperature.

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[b] **Conductivity**

Conductivity is the measure of the ability of the water to conduct electricity. The units for conductivity are usually expressed either as micro-Siemens (µS) or micro-mhos (µmhos) per centimeter (µS/cm = µmhos/cm). Conductivity increases as the amount of dissolved ionic solids increases and is sometimes called "soluble salts". Dissolved inorganic compounds are relatively good conductors; conversely, dissolved organic compounds are poor conductors. The conductivity of distilled water usually ranges from 0.5 to 3 µS/cm and most drinking water in the United States ranges from 50 to 1500 µS/cm.

All parameters tested are within the permissible limits established for drinking water.