

Sample Report

Assured Bio Labs, LLC Water Analysis Report

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REVIEWED

By Joshua Birkebak, Ph.D. at 3:29 pm, Jun 22, 2023

Tennessee Division of Water Resources Lab ID: 03147

Inspector:	Advantage Inspection Raleigh	Date Collected:	6/15/2023
Project Name:		Date Received:	6/16/2023
Project Number:		Date Reported:	6/22/2023
Assured Bio ID:	DP061623-17	Analyst(s):	J. Gibson, D. Christopher

Assured Bio Identifier:	DP061623-17-1	Sample Condition:	Intact
Sample ID:	1	Sample Type:	Water
Sample Description:	Well Head		

Results on Next Page

Test Results:

Alkalinity	43.0 ppm
Arsenic	Negative
Chlorine, Free*	Negative
Chlorine, Total*	Negative
Chloride	5.00 ppm
Conductivity	156 µS
Copper	Negative
Coliforms*	Negative
<i>E. coli</i> *	Negative
Fluoride*	0.132 ppm

Total Water Hardness	42.9 ppm
Lead*	Negative
Magnesium	2.93 ppm
Nitrate (as Nitrogen)*	0.783 ppm
Nitrite (as Nitrogen)*	Negative
pH*	7.17
Potassium	2.0 ppm
Total Phosphorous *	Negative
Sulfide *	Negative
Total Suspended Solids	Negative
Total Iron *	Negative

Comments:

Optional Tests Available:

Alkalinity	N/A
Aluminum	N/A
Ammonia*	N/A
Anionic Surfactants	N/A
Arsenic	N/A
Barium	N/A
Boron	N/A
Bromine	N/A
Cadmium	N/A
Total Cadmium	N/A
Calcium (as Ca)	N/A
Calcium (as CaCO3)*	N/A
Cationic Surfactants	N/A
Chloride	N/A
Chlorine, Free*	N/A
Chlorine, Total*	N/A
Chromium, Hexavalent *	N/A
Total Chromium *	N/A
Color *	N/A
Total Copper	N/A
Free Cyanide *	N/A

Fluoride *	N/A
Ferric Iron *	N/A
Manganese *	N/A
Monochloramine	N/A
Nickel	N/A
Total Nickel	N/A
Nonionic Surfactants	N/A
Potassium	N/A
Reactive Phosphorus *	N/A
Total Phosphorus *	N/A
Silver	N/A
Sulfate *	N/A
Sulfide *	N/A
Total Suspended Solids	N/A
Turbidity	N/A
Residual Chlorine	N/A
Total Dissolved Solids *	N/A
Total Water Hardness	N/A
Zinc *	N/A

*EPA Approved Method Used

See Reference Table on Page 3 and 4

Reference Table

Contaminants	Maximum Contaminant Levels	Range of Detection
Aluminum	0.2 ppm	0.02 - 0.5 ppm
Alkalinity	No Published Standard	25 - 400 ppm
Ammonia	No Published Standard	0.015 - 2.0 ppm
Arsenic	0.01 ppm	0.002 - 0.3 ppm
Anionic Surfactants	0.5 ppm (Secondary)	0.1 - 4 ppm
Barium	2.0 ppm	2.0 - 10,000 ppm
Boron	2.4 ppm	0.05 - 2.5 ppm
Bromine	No Published Standard	0.05 - 4.50 ppm
Cadmium	0.005 ppm	0.02 - 0.3 ppm
Total Cadmium	0.005 ppm	0.02 - 0.3 ppm
Calcium (as Ca)	No Published Standard	5-100 ppm
Calcium (as CaCO ₃)	No Published Standard	0-25,000 ppm
Cationic Surfactants	0.5 ppm (Secondary)	0.2-2.0 ppm
Chloride	250 ppm	0.1 - 25.0 ppm
Chlorine, Free	4.0 ppm	0.05 - 2.0 ppm
Chlorine, Total	No Published Standard	0.05 - 2.0 ppm
Chromium, Hexavalent	0.1 ppm	0.01 - 0.7 ppm
Total Chromium	0.1 ppm	0.01 - 0.7 ppm
Color	15	0-500
Conductivity	No Published Standard	0 - 1999 µS
Copper UL	1.3 ppm (Primary) 1.0 ppm (Secondary)	0.1 - 8.0 ppm
Copper LL	1.3 ppm (Primary) 1.0 ppm (Secondary)	0.001-0.210 ppm
Total Copper	1.3 ppm (Primary) 1.0 ppm (Secondary)	0.1 - 8.0 ppm
Coliforms:	0 CFU/L	10 CFU/L - No Upper Limit
<i>E. coli</i>	0 CFU/L	10 CFU/L - No Upper Limit
Free Cyanide	0.2 ppm	0.01-0.6 ppm
Fluoride	4.0 ppm (Primary) 2.0 ppm (Secondary)	0.1 - 2.5 ppm
Ferric Iron	0.3 ppm	0.2-6.0 ppm
Total Iron	0.3 ppm	0.2-6.0 ppm
Lead	0 ppm (Action Level 0.015 ppm)	0.003 - 0.3 ppm
Magnesium	No Published Standard	0.5 -50 ppm
Manganese	0.05 ppm	0.006 - 0.700 ppm
Monochloramine	4.0 ppm	0.1 - 10.0 ppm
Nickel	0.1 ppm	0.1 - 6.0 ppm
Total Nickel	0.1 ppm	0.1 - 6.0 ppm
Nitrate (as Nitrogen)	10 ppm	0.23 - 13.50 ppm
Nitrite (as Nitrogen)	1 ppm	0.015 - 1.2 ppm
Nonionic Surfactants	0.5 ppm (Secondary)	0.2-200 ppm
Potassium	No Published Standard	0.1 -7.0 ppm
Reactive Phosphorus	No Published Standard	0.5-5.0 ppm

Reference Table

Contaminants	Maximum Contaminant Levels	Range of Detection
Total Phosphorus	No Published Standard	0.5-5.0 ppm
pH	6.5 - 8.5	0 - 14
Silver	0.10 ppm	0.02 -0.70 ppm
Sulfate	250 ppm	150 - 900 ppm
Sulfide	No Published Standard	0.005 - 0.8 ppm
Total Suspended Solids	No Published Standard	5 - 750 ppm
Turbidity	No Published Standard	0 - 200 NTU
Residual Chlorine	4 ppm	0- 1.2 ppm
Total Dissolved Solids	500 ppm	0.00 - No Upper Limit
Total Water Hardness	No Published Standard	20-350 ppm
Zinc	5 ppm	0.01 - 5.0 ppm

This chart serves as a reference to the maximum of containment levels set forth by the EPA or WHO. It is not a representation of your samples, but a guide to assist in the interpretation of your results. Please consult your local and state regulations.

Please contact us with any questions about methods used or for data interpretation.

Abbreviations:	
BDL	Below Detectable Limits
CFU	Colony Forming Units
L	Liter
NTU	Nephelometric Turbidity Units
N/A	Not Applicable
ppm	Parts Per Million (mg/L)
µS	Micromhos

Coliform/ <i>E. coli</i> Analysis Information:	
Incubation Temperature:	35 °C
Media:	Colilert/ Colilet-18
Incubation Time:	24 Hours/ 18 Hours (+4 if ambiguous)

Methods of Analysis

Assured Bio Labs, LLC uses the following Standard Operating Procedures for the analysis of samples:

CD 205: Coliform Presence Absence Test According to the EPA Manual for the Certification of Laboratories Analyzing Drinking Water, CD 219: Hach Water Testing (DR 3900) Using TNT, Powder Pillow, or Other Photospectroscopic Methods.

Reporting Limits

Method Detection Limit: The American Industrial Hygiene Association defines this term in AIHA-LAP, LLC Policy Document – Module 9 as "The minimum concentration of an analyte that, in a given matrix and with a specific method, has a 99 percent probability of being identified, qualitatively or quantitatively measured, and reported to be greater than zero."

Reporting Limit: The American Industrial Hygiene Association defines this term in AIHA-LAP, LLC Policy Document – Module 9 as "The lowest concentration of analyte in a sample that can be reported with a defined, reproducible level of certainty."

Range of Detection: The reporting limit to the maximum reporting limit giving the currently used testing methodology at Assured Bio Labs LLC. Any amount reported outside of this range should be considered an estimate. Values outside of this range may be reported as greater than (">") or less than ("<").

Additional Comments

The analytical data included in this report reflect only the conditions of the material sampled and submitted to the laboratory for analysis at the time of collection. The results included in this report may not be used for past or future environmental conditions. The results apply to the sample(s) as received.

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