

Assured Bio Labs, LLC

Environmental Microbiology Lab

Tennessee Division of Water Resources Lab ID: 03147

228 Midway Ln, Ste B

Oak Ridge, TN 37830

REVIEWED

By James G. Elkins, Ph.D. at 5:44 pm, Jul 26, 2024



BASIC WATER PANEL

Inspector:	Advantage Inspection Raleigh
Project Name:	
Project Number:	Garabaya
Assured Bio ID:	DP072524-12

Date Collected:	07/24/2024
Date Received:	07/25/2024
Date Reported:	07/26/2024
Analyst(s):	D. Christopher, J. Wilder

Reference Table: a reference to the maximum containment levels set forth by the EPA. It is not a representation of your samples, but a guide to assist in the interpretation of your results. Consult your local and state regulations for more details.

Water Analyte Range of Detection	MCL*	Description
Coliform <i>E. coli</i> ≥1 cfu/100ml	0 cfu/ml	*The presence of coliform bacteria, including <i>E. coli</i> , indicates your well water may be contaminated by livestock or human waste runoff, fertilizer, a leak in your septic system, and more. <i>E. coli</i> bacteria can result in recurring gastro-intestinal illness, with symptoms such as stomach cramping and diarrhea.
Lead 0.003 – 0.300 ppm	0 ppm 0.015 ppm	Household plumbing and service lines made from lead or lead solder can leach lead into drinking water. Lead is toxic, a carcinogen, in fetuses and children can cause developmental and cognitive problems and accumulates in the body over time.
Nitrate 0.23 – 13.5 ppm	10 ppm	Associated with livestock/human waste and agricultural runoff. Increased nitrates and/or nitrites are particularly harmful for children under three. Blue baby syndrome is associated with drinking water high in nitrites.
Nitrite 0.015 – 0.06 ppm	1 ppm	
pH 1.0 – 14.0	6.5 – 8.5	Associated with and may affect the presence of other contaminants; monitoring pH levels over time is a good way to determine if conditions impacting drinking water have changed.

Abbreviations

BDL	Below Detectable Limit
cfu	colony forming unit
MCL	Maximum Contaminant Level
ml	milliliter
n/a	not applicable
P/A	Present/Absent
ppm	parts per million (milligrams/liter)

***Maximum Contaminant Levels** are the maximum level of a contaminant in drinking water at which no known or anticipated adverse effect on the health of persons would occur set by the Environmental Protection Agency (EPA).

**For positive bacteria results we recommend referring to the [Tennessee Healthy Well Manual](#) for well shocking instructions.

An **action level is the concentration of a contaminant, set by the EPA, which, if exceeded, triggers treatment or other requirements that a water system must follow.

Sample Results

Assured Bio Identifier DP072524-12-1

Sample ID	
Sample Description	Grab Water Sample Location: Sink
Sample Condition	Intact
Sample Type	Water

Analyte	Results	Unit
Bacteria		
Coliform	Present	P/A
<i>E. coli</i>	Present	P/A
Property		
pH	6.70	
Inorganic		
Nitrate	0.738	ppm
Nitrite	Negative	ppm
Metal		
Lead	Negative	ppm

Selected References

- EPA Manual of the Certification of Laboratories Analyzing Drinking Water, 5th Edition. EPA 815-R-05-004, January 2005.
- IDEXX SimPlate® for HPC Unit Dose Instructions. 06-03208-10, 2016..
- Environmental Protection Agency. 2005. EPA Manual for the Certification of Laboratories Analyzing Drinking Water. Criteria and Procedures Quality Assurance. Fifth Edition. Cincinnati, Ohio

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.

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

CD 224 Heterotrophic Plate Count Using the SimPlate® Method

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. We can make no claims to the safety or potability of water. 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. Potential interferences may exist for certain tests. When such interferences are detected, they will be reported when potentially affecting the result and the Maximum Contaminant Level. A list of methods used can be provided upon request. If you require a certain method please contact us for further guidance.

The results are reported as the Most Probable Number per milliliter (MPN/ml) with the upper and lower 95% confidence limits provided per sample. These values are derived from the IDEXX SimPlate® Most Probable Number Table. Samples with less than one positive well are reported as below detectable limits with a 95% confidence interval of <0.03-<1.4 MPN/ml.

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