

REVIEWED

By James G. Elkins, Ph.D. at 10:25 am, Sep 12, 2025



BASIC WATER PANEL

Inspector:	Advantage Inspection Raleigh	Date Collected:	09/09/2025
Project Name:	270 Wiggins Rd, Louisburg	Date Received:	09/10/2025
Project Number:	Bordeaux	Date Reported:	09/12/2025
Assured Bio ID:	DP091025-24	Analyst(s):	D. Christopher

Sample Results

Assured Bio Identifier	DP091025-24-1		
Sample ID			
Sample Description	Grab Water Sample; Location: Sink		
Sample Condition	Intact		
Sample Type	Water		
Analyte	Result	Unit	
Bacteria			
Coliform	Present	P/A	
<i>E. coli</i>	Negative	P/A	
Property			
pH	6.22		
Inorganic			
Nitrate	Negative	ppm	
Nitrite	Negative	ppm	
Metal			
Lead	Negative	ppm	

ABBREVIATIONS

μS/cm	Microsiemens per centimeter	MCL	Maximum Contaminant Level	nps	no published standard
AL	Action Level	ml	milliliter	ppm	part per million (mg/l)
BDL	Below Detectable Limits	MPN	Most Probable Number	PtCo	Platinum -Cobalt
cfu	colony forming unit	NTU	Nephelometric Turbidity Units	SMCL	Secondary Maximum Contaminant
color unit	1 color unit = 1 PtCo unit	n/a	not applicable		

REFERENCE TABLE: Range of Detection for each analyte and [Maximum Containment Levels](#) set forth by the EPA.

***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.

Table 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.

Analyte Range of Detection MCL* Description	Analyte Range of Detection MCL* Description
Arsenic 0 – 0.5 ppm 0.01 ppm A toxic element, sources include natural deposits, industrial & agricultural pollution. Long-term exposure can cause cancer, skin lesions, & developmental effects.	Magnesium 0.50 – 50 ppm nps Beneficial in small amounts & generally not harmful; part of total hardness; found naturally.
Alkalinity 25-400 ppm 30-400 ppm (recommended) Referring to the ability to maintain a stable pH level; level varies based on the P/A of dissolved compounds such as bicarbonates, carbonates, & hydroxides.	Manganese 0.006 – 0.700 ppm 0.05 ppm High levels can cause neurological issues & staining of plumbing; naturally occurring; leaches from pipes & industrial discharges.
Aluminum 0.02 – 0.5 ppm 0.05 – 0.2 ppm Naturally occurring metal, elevated levels can cause discoloration & affect water taste but are generally not harmful at low concentrations.	Most Probable Number (MPN) <1 MPN/ml->2420 MPN/ml 0 cfu/ml Quantification of Coliform & E. coli. Determine the level of coliform & E. coli contamination. Reported as Most Probable Number, 95% lower, & 95% upper confidence limits.
Boron 0.05 – 0.25 ppm nps Naturally occurring & used in some industries. Elevated levels may pose health risks, particularly affecting the reproductive system.	Nitrate 1.00 – 60.00 ppm 10 ppm Associated with livestock/human waste & agricultural runoff. Increased nitrates &/ are particularly harmful for children under three.
Chloride 1 – 1000 ppm <250 ppm Associated with industrial pollution & natural mineral deposits. High levels lead to a salty taste & can contribute to high blood pressure.	Nitrite 0.015 – 2.00 ppm 1 ppm Associated with livestock/human waste & agricultural runoff. Increased nitrates &/or nitrites are particularly harmful for children under three. Blue baby syndrome is associated with drinking water high in nitrites.
Coliform / E. coli Presence Absence ≥1 cfu/100 ml 0 cfu/100 ml Coliform / E. coli MPN <1 MPN/ml->2420 MPN/ml 0 cfu/100 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, & more. <i>E. coli</i> bacteria can result in recurring gastro-intestinal illness, with symptoms such as stomach cramping & diarrhea.	pH 1.0 – 14.0 6.5-8.5 Associated with & 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.
Color 5 – 500 color units (PtCo) 15 color units Associated with & 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.	Phosphate, total 0.05 – 1.5 ppm 0.05 ppm Often found in fertilizers & detergents, presence can indicate agricultural runoff & wastewater (septic) discharge.
Conductivity 0 – 1999 μS/cm nps High levels indicate the presence of dissolved salts & pollutants; found in natural deposits, industrial pollution, agricultural runoff.	Potassium 0.10 – 700 ppm nps Very high levels can affect individuals with kidney problems; found in natural deposits, agricultural runoff, fertilizer.
Copper, total 0.10 – 8.00 ppm 1.3 ppm Can be found due to corrosion of household plumbing systems, natural deposits, industrial discharge; exposure can cause gastrointestinal distress, liver or kidney damage.	Silver 0.02 – 0.70 ppm 0.1 ppm SMCL Commonly used in jewelry & electronics. SMCL based on aesthetics considerations such as skin discoloration.
Hardness, total 20 – 350 ppm nps A measure of the concentration of calcium & magnesium; not a health risk but can cause scale buildup in plumbing & reduce effectiveness of soap.	Sulfate 40 – 150 ppm 250 ppm A naturally occurring element in minerals, soil & rocks, agriculture runoff, industrial discharges; high levels can cause a laxative effect & unpleasant taste.
Heterotrophic Plate Count <0.2 – >115 MPN/ml nps Estimation of the number of live, culturable heterotrophic bacteria in a water sample. Mostly harmless, monitoring can provide insights into the general water quality.	Sulfide 0.10 – 2.0 ppm nps Recognized by its characteristic “rotten egg” odor, which can be detected down to 0.5 ppm, and is corrosive to water infrastructure. It forms naturally from decaying organic matter and certain bacteria in groundwater.
Hydrocarbons 1– no upper limit nps Organic compounds consisting of hydrogen/carbon atoms; primarily found in petroleum products. Enter water through industrial discharges or oil spills. Specific hydrocarbons are regulated due to potential health effects, but not as a group.	Total Dissolved Solids 4.0 – 20,000 ppm 500 ppm SMCL Consists of tiny solid particles that are dissolved in water & can pass through a filter, including inorganic salts & organic matter. Can lead to undesirable taste, odor, or appearance in drinking water.
Iron, total 0.20 – 6.00 ppm 0.3 ppm High concentrations cause staining & unpleasant taste; sources include natural deposits & corrosion of iron pipes.	Total Suspended Solids 2.5 – 200 ppm nps Measurement of particles suspended in the water including silt, plankton, waste, minerals; can cause water turbidity & effects water aesthetics.
Lead 0.003 – 0.300 ppm 0 ppm Household plumbing & service lines made from lead or lead solder can leach lead into drinking water. Lead is toxic, a carcinogen, in fetuses & children can cause developmental & cognitive problems & accumulate in the body over time.	Turbidity 0–200 NTU nps Measure of the cloudiness of water, used to indicate water quality & filtration effectiveness. Higher levels are often associated with higher levels of disease-causing microorganisms.
	Zinc 0.01 – 3.00 5 ppm Often present in water due to corrosion of galvanized pipes or industrial sources. Elevated levels can cause a metallic taste & lead to gastrointestinal discomfort, generally not harmful in small amounts.

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 report 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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General Chain of Custody

AS Certified for Internal Use Only

DP091025-24

Project Name:

270 Wiggins Rd, Louisville

Project Number:

Borden X

PO Number:

Collection Date:

9/9/25

Rush (Specify TAT and Samples):**

Inspector/Customer:

Dave Park

Company Name (If Applicable):
Advantage Inspection Raleigh

Company Address:

4020 Wake Forest Rd. Suite 300 Raleigh NC 27609

Phone:

919-850-2526

Email:

dave@advantageinc.com

MoldScan (Direct Exam)

Big 2 (Pen/Asp & Stachybotrys)

ERMI

SIM - Survey of Indoor Molds

SIAM - Species Id of Airborne Molds

Legionella (ISO or CDC ELITE)

ViaScan Fungal Genus ID

ViaScan Fungal Species ID*

ViaScan Bacterial Colony Count

ViaScan Bacterial Species ID*

Basic Home Loan Panel

Coliform/E. coli Test (+/-)

Lead Water Test

Other:***

Other:***

Outside Conditions

Clear

Rain

Wind

Thunderstorm

Snow

Other

Sample Codes (SC)

MT - M-Trap

SP - Spore Trap

SW - Swab

W - Water

B - Bulk

TL - Tape Lift

D - Dust

O - Other

Sample ID

Description

SC

Volume/Area
(If Applicable)

Comments

grab water sample

W

2 bottles

FHA

location: Sink

Culture and PCR done at Assured Bio Labs, sequencing subcontracted. **Consult pricing catalogue or call lab for rush availability and pricing. ***Please specify other analysis. Some analyses may be subcontracted, contact Assured Bio for more information.

Page ___ of ___ Relinquished By: _____

Date:

9/9/25

Time:

4:00

Shipped Date

9/9/25

Tracking #

Select one

Drop Off ☐ USPS ☐
Fed Ex ☐ UPS ☐

For Internal Use Only - Received By: _____

Date: 9/9/25

Time: 10:08

Order #

Order #