

Report #: 314221028

Date : 3/14/2022

P.O.Number: 3-15-22 Visa

Matrix: Water

Client: Morales

Sample  
Location:

Phone (770) 893-2271

This sample taken by Michael "Scott" Webb at 2:00:00 PM  
on 3/10/2022. . Point of collection: Spring

## Health Scan Report

<u>Analytes</u>	<u>Results</u>	<u>Description</u>	<u>EPA Limits</u>
<b><u>Bacteria</u></b>			
Total Coliform	Present	There should be no Coliform bacteria in the sample.	0
E. Coli	Present	There should be no Fecal/E. Coli bacteria in the sample.	0
<b><u>MicroAnalysis</u></b>			
MicroAnalysis	See Attached		
<b><u>Mineral Chemistry</u></b>			
Sodium	1.40 mg/L	A Component of Salt	No Limit
Potassium	0.47 mg/L	A Component of Salt	No Limit
Copper	Not Detected	Indicates Plumbing Corrosion	1.30 mg/L
Iron	Not Detected	Brown Stains, Bitter Taste	0.30 mg/L
Manganese	Not Detected	May Cause Black/ Laundry Staining	0.05 mg/L
Magnesium	9.53 mg/L	A Component of Hardness	No Limit
Calcium	38.74 mg/L	A Component of Hardness	No Limit
Arsenic (Total)	Not Detected	A Naturally Occurring Toxic Element	0.010 mg/L
Lead	Not Detected	A Toxic Metal, From Plumbing Components	0.015 mg/L
pH	7.67 SU	Acid/Basic Determination	6.5 - 8.5 SU
Turbidity	0.11 N.T.U.	Presence of Particles/Measure of Cloudiness	No Limit
Color	0 C.U.	Clarity (0), Discoloration (15)	15.0 C.U.
Odor	Absent	Odor May Be Due To Bacteria Contamination	3.0 T.O.N.
Conductivity	252.0 umhos	Electrical Resistance (umhos/cm)	No Limit
T.D.S.	151.2 mg/L	Total Dissolved Minerals Present	500.0 mg/L
Sediment	Absent	Undissolved Solids	Present
Chlorine	Not Detected	A Disinfectant Byproduct	4.0 mg/L
Chloride	2.68 mg/L	A Component of Salt	250.0 mg/L
Hardness	136.0 mg/L	75 or Higher is Considered Hard	No Limit
Nitrate as Nitrogen	0.63 mg/L	Indicator of Biological Waste	10.0 mg/L
Nitrite as Nitrogen	Not Detected	Indicator of Waste	1.0 mg/L
Ammonia as Nitrogen	Not Detected	Indicator of Waste	No Limit
Sulfate	2.44 mg/L	A Mineral, Can Cause Odor	250.0 mg/L
<b><u>Radiochemistry</u></b>			
Radon in Water	4500 pCi/L	Massachusetts D.E.P. Guideline - 10,000 pCi/L	-
<b><u>Volatile Organics</u></b>			
Benzene	Not Detected	Industrial Solvent	5.0 ug/L
Bromobenzene	Not Detected	Industrial Solvent	-
Bromochloromethane	Not Detected	Industrial Solvent	-
Bromodichloromethane	Not Detected	A Disinfectant Byproduct	-

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Bromoform	Not Detected	Industrial Solvent	-
Bromomethane	Not Detected	Industrial Solvent	-
n-Butylbenzene	Not Detected	Industrial Solvent	-
sec-Butylbenzene	Not Detected	Industrial Solvent	No Limit
tert-Butylbenzene	Not Detected	Industrial Solvent	-
Carbon-Tetrachloride	Not Detected	Industrial Solvent	5.0 ug/L
Dibromochloromethane	Not Detected	A Disinfectant Byproduct	-
Chloroethane	Not Detected	Industrial Solvent	-
Chloroform	Not Detected	A Disinfectant Byproduct	-
Chloromethane	Not Detected	Industrial Solvent	-
1,2-Chlorotoluene	Not Detected	Industrial Solvent	-
1,4-Chlorotoluene	Not Detected	Industrial Solvent	-
1,2-Dibromo-3-chloropropane	Not Detected	Pesticide Byproduct	0.2 ug/L
Dibromomethane	Not Detected	Industrial Solvent	-
1,2-Dibromoethane	Not Detected	Pesticide Byproduct	-
1,3-Dichlorobenzene	Not Detected	Pesticide Byproduct	-
1,2-Dichlorobenzene	Not Detected	Pesticide Byproduct	600.0 ug/L
1,4-Dichlorobenzene	Not Detected	Pesticide Byproduct	5.0 ug/L
Dichlorodifluoromethane	Not Detected	Industrial Solvent	-
1,1-Dichloroethane	Not Detected	Plastic Manufacturing Byproduct	-
1,2-Dichloroethane	Not Detected	Plastic Manufacturing Byproduct	5.0 ug/L
1,1-Dichloroethylene	Not Detected	Plastic Manufacturing Byproduct	7.0 ug/L
cis-1,2-Dichloroethene	Not Detected	Industrial Solvent	70.0 ug/L
trans-1,2-Dichloroethene	Not Detected	Industrial Solvent	100.0 ug/L
1,2-Dichloropropane	Not Detected	Industrial Solvent	5.0 ug/L
1,3-Dichloropropane	Not Detected	Pesticide Byproduct	-
2,2-Dichloropropane	Not Detected	Industrial Solvent	-
1,1-Dichloropropene	Not Detected	Pesticide Byproduct	-
1,3-Dichloropropene	Not Detected	Pesticide Byproduct	-
trans-1,3-Dichloropropene	Not Detected	Pesticide Byproduct	No Limit
Ethylbenzene	Not Detected	Industrial Solvent	700.0 ug/L
Trichlorofluoromethane	Not Detected	Industrial Solvent	No Limit
Hexachlorobutadiene	Not Detected	Industrial Solvent	-
Isopropylbenzene	Not Detected	Industrial Solvent	-
p-Isopropyltoluene	Not Detected	Industrial Solvent	-
Methyl-t-Butyl Ether (MTBE)	Not Detected	Gasoline Byproduct	70.0 ug/L
Methylene Chloride	Not Detected	Industrial Solvent	5.0 ug/L
Monochlorobenzene	Not Detected	Industrial Solvent	100.0 ug/L
Napthalene	Not Detected	Industrial Solvent	-
n-Propylbenzene	Not Detected	Industrial Solvent	-

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Styrene	Not Detected	Plastic Manufacturing Byproduct	100.0 ug/L
1,1,1,2-Tetrachloroethane	Not Detected	Industrial Solvent	-
1,1,2,2-Tetrachloroethane	Not Detected	Industrial Solvent	-
Tetrachloroethylene	Not Detected	Industrial Solvent	5.0 ug/L
Toluene	Not Detected	Industrial Solvent	1000.0 ug/L
1,2,3-Trichlorobenzene	Not Detected	Industrial Solvent	-
1,2,4-Trichlorobenzene	Not Detected	Industrial Solvent	70.0 ug/L
1,1,1-Trichloroethane	Not Detected	Industrial Solvent	200.0 ug/L
1,1,2-Trichloroethane	Not Detected	Industrial Solvent	5.0 ug/L
Trichloroethylene	Not Detected	Industrial Solvent	5.0 ug/L
1,2,3-Trichloropropane	Not Detected	Industrial Solvent	-
1,2,4-Trimethylbenzene	Not Detected	Industrial Solvent	-
1,3,5-Trimethylbenzene	Not Detected	Plastic Manufacturing Byproduct	-
Vinyl Chloride	Not Detected	Plastic Manufacturing Byproduct	2.0 ug/L
o-Xylene	Not Detected	Industrial Solvent	T. Xylenes 10K ug/
m+p Xylenes	Not Detected	Industrial Solvent	T. Xylenes 10K ug/

# Microanalysis of Report #314221028

## 1. Bacteria

**Bacteria Found Similar to**  
*Brevundimonas vesicularis*

**Total Colony Count = >160000 cfu/100 mL**

## 2. Fungi (Including Mold and Yeast)

**Unidentified Yeast Found**

**Mold Found Similar to**  
*Penicillium*

**Total Colony Count = >16000 cfu/100 mL**

## 3. Particles

**Small Quantity of Sand & Mineral Sediment**

**No Organisms Found**

**Particle Count = 76 Particles/mL**

<sup>1</sup> CFU/ml = colony forming units per milliliter

<sup>2</sup> TNTC = Too numerous to count

<sup>3</sup> Additional information regarding the organism(s) detected in this analysis can be attained using resources such as the Internet, local libraries, or by consulting your physician.

## ***Brevundimonas vesicularis***

*Brevundimonas vesicularis* are aerobic, gram-negative bacilli that are isolated from both the external environment and human clinical specimens. While infections caused by this species are uncommon, there have been a few cases of opportunistic infections that have occurred in immunocompromised individuals, such as bacteremia and endocarditis.

### **References**

Yang, M., Chen, Y., Chen, T., Lin, W., Lin, C., & Lu, P. (2006). Case report: Infective endocarditis caused by *Brevundimonas vesicularis*. *BMC Infectious Diseases*, 6:179.

Shang, S., Chiu, S., Chan, M., Wang, N., Yang, Y., Lin, J., & Chang, F. (2012). Invasive *Brevundimonas vesicularis* bacteremia: Two case reports and review of the literature. *Journal of Microbiology, Immunology and Infection*, 45:6, 468-472.

## **Penicillium**

*Penicillium* fungi are molds that are most commonly found in soil, on organic matter, seeds, fruits and bulbs, and in the air and dust of indoor settings. These fungi are among the main causes of food spoilage, but some species are used for the production of penicillin and for cheesemaking. Some species produce mycotoxins (toxic chemical products of certain fungi), and can be pathogenic (disease-causing), particularly to immunocompromised individuals. Infections caused by species of this fungi include keratitis (inflammation of the cornea), external ear infections, respiratory infections, urinary tract infections, and endocarditis (inflammation of the endocardium).

### **References**

Larone, D. H. (1995). *Medically important fungi: A guide to identification* (3<sup>rd</sup> ed.). Washington, DC: American Society for Microbiology Press. (Original work published 1976)

*Penicillium*. (n.d.). Retrieved November 23, 2015 from the Wikipedia wiki: <https://en.wikipedia.org/wiki/Penicillium>