



The State of Tennessee

DEPARTMENT OF ENVIRONMENT AND CONSERVATION

DIVISION OF WATER RESOURCES

Certifies That

Microbac Laboratory – Knoxville Division

*Having Met the Requirements of the Regulations for the
Certification of Laboratories Analyzing Drinking Water
is hereby Approved as a*

State Certified Laboratory in Chemistry and Microbiology

*To perform the Analyses as Indicated on the enclosed
Certified Parameter List For the Public Water Systems of Tennessee*

Laboratory ID Number 02017

A handwritten signature in black ink that reads 'Prasad Subbanna'.

Prasad Subbanna
Laboratory Certification Program Manager
Tennessee Division of Water Resources

Issue Date: 03/10/2019

Expiration Date: 12/9/2022

*This certification is subject to performance on E.P.A.
Proficiency Testing Samples, laboratory inspections,
payment of annual fees, is nontransferable, and
supersedes previously issued certificates*

Certified Parameters - 2021

TENNESSEE

Microbac - Knoxville Division

TN02017

EPA # TN00018

3/6/2022

Attn: T.J. McCallum
505 East Broadway Avenue
Maryville, TN 37804

Parameter	EPA Parameter #	Approved Method	Study Type	Date Complete	PT Provider / WS #
Disinfectant Residuals					
Free Chlorine Residual	1013	SM - 4500-CI D	Proficiency Test	5/20/2021	ERA / WS-297
Free Chlorine Residual	1013	SM - 4500-CI G	Proficiency Test	11/22/2021	ERA / WS-303
Total Chlorine Residual	1012	SM - 4500-CI G	Proficiency Test	11/22/2021	ERA / WS-303
Total Chlorine Residual	1012	SM - 4500-CI D	Proficiency Test	5/20/2021	ERA / WS-297
Disinfection By-Products					
UV 254 Absorbance	2922	SM - 5910 B	Proficiency Test	11/22/2021	ERA / WS-303
UV 254 Absorbance	2922	SM - 5910 B	Proficiency Test	5/20/2021	ERA / WS-297
Inorganics					
Alkalinity, BiCarbonate	1928	SM - 2320 B	Proficiency Test	2/3/2021	ERA / 123120C2
Calcium	1016	EPA - 200.7	Proficiency Test	11/22/2021	ERA / WS-303
Calcium	1016	EPA - 200.7	Proficiency Test	5/20/2021	ERA / WS-297
Chloride	1017	EPA - 300.0	Proficiency Test	5/20/2021	ERA / WS-297
Chloride	1017	EPA - 300.0	Proficiency Test	11/22/2021	ERA / WS-303
Conductivity	1064	SM - 2510 B	Proficiency Test	11/22/2021	ERA / WS-303
Conductivity	1064	SM - 2510 B	Proficiency Test	5/20/2021	ERA / WS-297
Cyanide	1024	EPA - 335.4	Proficiency Test	11/22/2021	ERA / WS-303
Fluoride	1025	EPA - 300.0	Proficiency Test	5/20/2021	ERA / WS-297
Iron	1028	EPA - 200.7	Proficiency Test	11/22/2021	ERA / WS-303
Iron	1028	EPA - 200.7	Proficiency Test	5/20/2021	ERA / WS-297
Nitrate	1040	EPA - 300.0	Proficiency Test	11/22/2021	ERA / WS-303
Nitrate	1040	EPA - 300.0	Proficiency Test	5/20/2021	ERA / WS-297
Nitrate	1040	EPA - 300.0	Proficiency Test	2/3/2021	ERA / 123120C2
Nitrate + Nitrite	1038	EPA - 300.0	Proficiency Test	5/20/2021	ERA / WS-297
Nitrate + Nitrite	1038	EPA - 300.0	Proficiency Test	11/22/2021	ERA / WS-303
Nitrate + Nitrite	1038	EPA - 300.0	Proficiency Test	2/3/2021	ERA / 123120C2
Nitrite	1041	EPA - 300.0	Proficiency Test	5/20/2021	ERA / WS-297
Nitrite	1041	EPA - 300.0	Proficiency Test	11/22/2021	ERA / WS-303
Ortho-phosphate	1044	EPA - 300.0	Proficiency Test	5/20/2021	ERA / WS-297
Ortho-phosphate	1044	EPA - 300.0	Proficiency Test	11/22/2021	ERA / WS-303
pH	1925	SM - 4500-H+B	Proficiency Test	5/20/2021	ERA / WS-297
pH	1925	SM - 4500-H+B	Proficiency Test	11/22/2021	ERA / WS-303

<u>Parameter</u>	<u>EPA Parameter #</u>	<u>Approved Method</u>	<u>Study Type</u>	<u>Date Complete</u>	<u>PT Provider / WS #</u>
Potassium	1042	EPA - 200.7	Proficiency Test	11/22/2021	ERA / WS-303
Potassium	1042	EPA - 200.7	Proficiency Test	5/20/2021	ERA / WS-297
Silica	1049	EPA - 200.7	Proficiency Test	5/20/2021	ERA / WS-297
Silica	1049	EPA - 200.7	Proficiency Test	11/22/2021	ERA / WS-303
Sodium	1052	EPA - 200.7	Proficiency Test	11/22/2021	ERA / WS-303
Sodium	1052	EPA - 200.7	Proficiency Test	5/20/2021	ERA / WS-297
Sulfate	1055	EPA - 300.0	Proficiency Test	11/22/2021	ERA / WS-303
Sulfate	1055	EPA - 300.0	Proficiency Test	5/20/2021	ERA / WS-297
Sulfate	1055	EPA - 300.0	Proficiency Test	2/3/2021	ERA / 123120C2
Total Dissolved Solids	1930	SM - 2540 C	Proficiency Test	11/22/2021	ERA / WS-303
Total Dissolved Solids	1930	SM - 2540 C	Proficiency Test	5/20/2021	ERA / WS-297
Turbidity	0100	EPA - 180.1	Proficiency Test	2/3/2021	ERA / 123120C2
Turbidity	0100	EPA - 180.1	Proficiency Test	5/20/2021	ERA / WS-297
Turbidity	0100	EPA - 180.1	Proficiency Test	11/22/2021	ERA / WS-303
Alkalinity, Total	1927	SM - 2320 B	Proficiency Test	5/20/2021	ERA / WS-297
Alkalinity, Total	1927	SM - 2320 B	Proficiency Test	11/22/2021	ERA / WS-303

Metals

Antimony	1074	EPA - 200.8	Proficiency Test	11/22/2021	ERA / WS-303
Antimony	1074	EPA - 200.8	Proficiency Test	8/19/2021	ERA / 070721F
Arsenic	1005	EPA - 200.8	Proficiency Test	11/22/2021	ERA / WS-303
Arsenic	1005	EPA - 200.8	Proficiency Test	8/19/2021	ERA / 070721F
Barium	1010	EPA - 200.8	Proficiency Test	11/22/2021	ERA / WS-303
Barium	1010	EPA - 200.8	Proficiency Test	8/19/2021	ERA / 070721F
Barium	1010	EPA - 200.7	Proficiency Test	5/20/2021	ERA / WS-297
Barium	1010	EPA - 200.7	Proficiency Test	11/22/2021	ERA / WS-303
Beryllium	1075	EPA - 200.8	Proficiency Test	11/22/2021	ERA / WS-303
Beryllium	1075	EPA - 200.7	Proficiency Test	5/20/2021	ERA / WS-297
Beryllium	1075	EPA - 200.7	Proficiency Test	11/22/2021	ERA / WS-303
Beryllium	1075	EPA - 200.8	Proficiency Test	10/18/2021	ERA / 100421V2
Cadmium	1015	EPA - 200.7	Proficiency Test	11/22/2021	ERA / WS-303
Cadmium	1015	EPA - 200.8	Proficiency Test	11/22/2021	ERA / WS-303
Cadmium	1015	EPA - 200.7	Proficiency Test	5/20/2021	ERA / WS-297
Cadmium	1015	EPA - 200.8	Proficiency Test	8/19/2021	ERA / 070721F
Chromium	1020	EPA - 200.7	Proficiency Test	11/22/2021	ERA / WS-303
Chromium	1020	EPA - 200.8	Proficiency Test	11/22/2021	ERA / WS-303
Chromium	1020	EPA - 200.8	Proficiency Test	8/19/2021	ERA / 070721F
Chromium	1020	EPA - 200.7	Proficiency Test	5/20/2021	ERA / WS-297
Copper	1022	EPA - 200.8	Proficiency Test	10/18/2021	ERA / 100421V2
Copper	1022	EPA - 200.7	Proficiency Test	5/20/2021	ERA / WS-297
Copper	1022	EPA - 200.7	Proficiency Test	11/22/2021	ERA / WS-303
Lead	5000	EPA - 200.8	Proficiency Test	8/19/2021	ERA / 070721F

<u>Parameter</u>	<u>EPA Parameter #</u>	<u>Approved Method</u>	<u>Study Type</u>	<u>Date Complete</u>	<u>PT Provider / WS #</u>
Lead	5000	EPA - 200.8	Proficiency Test	11/22/2021	ERA / WS-303
Magnesium	1031	EPA - 200.7	Proficiency Test	11/22/2021	ERA / WS-303
Magnesium	1031	EPA - 200.7	Proficiency Test	5/20/2021	ERA / WS-297
Manganese	1032	EPA - 200.8	Proficiency Test	8/19/2021	ERA / 070721F
Manganese	1032	EPA - 200.8	Proficiency Test	11/22/2021	ERA / WS-303
Manganese	1032	EPA - 200.8	Proficiency Test	5/20/2021	ERA / WS-297
Manganese	1032	EPA - 200.7	Proficiency Test	11/22/2021	ERA / WS-303
Mercury	1035	EPA - 245.1	Proficiency Test	5/20/2021	ERA / WS-297
Mercury	1035	EPA - 245.1	Proficiency Test	11/22/2021	ERA / WS-303
Nickel	1036	EPA - 200.7	Proficiency Test	5/20/2021	ERA / WS-297
Nickel	1036	EPA - 200.7	Proficiency Test	11/22/2021	ERA / WS-303
Nickel	1036	EPA - 200.8	Proficiency Test	10/18/2021	ERA / 100421V2
Nickel	1036	EPA - 200.8	Proficiency Test	11/22/2021	ERA / WS-303
Selenium	1045	EPA - 200.8	Proficiency Test	8/19/2021	ERA / 070721F
Selenium	1045	EPA - 200.8	Proficiency Test	11/22/2021	ERA / WS-303
Thallium	1085	EPA - 200.8	Proficiency Test	8/19/2021	ERA / 070721F
Thallium	1085	EPA - 200.8	Proficiency Test	11/22/2021	ERA / WS-303
Aluminum	1002	EPA - 200.8	Proficiency Test	11/22/2021	ERA / WS-303
Aluminum	1002	EPA - 200.7	Proficiency Test	5/20/2021	ERA / WS-297
Aluminum	1002	EPA - 200.8	Proficiency Test	8/19/2021	ERA / 070721F
Silver	1050	EPA - 200.7	Proficiency Test	11/22/2021	ERA / WS-303
Silver	1050	EPA - 200.8	Proficiency Test	8/19/2021	ERA / 070721F
Silver	1050	EPA - 200.8	Proficiency Test	11/22/2021	ERA / WS-303
Silver	1050	EPA - 200.7	Proficiency Test	5/20/2021	ERA / WS-297
Zinc	1095	EPA - 200.8	Proficiency Test	11/22/2021	ERA / WS-303
Zinc	1095	EPA - 200.7	Proficiency Test	11/22/2021	ERA / WS-303
Zinc	1095	EPA - 200.7	Proficiency Test	5/20/2021	ERA / WS-297
Zinc	1095	EPA - 200.8	Proficiency Test	8/19/2021	ERA / 070721F

Microbiologicals

Escherichia coli, Colilert-18	3014	SM - 9223	Proficiency Test	5/20/2021	ERA / WS-297
Heterotrophic Bacteria, R2A	3001	-	Proficiency Test	5/20/2021	ERA / WS-297
Total Coliform, Colilert-18	3000	SM - 9223	Proficiency Test	5/20/2021	ERA / WS-297