



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

Prasad Subbanna
Laboratory Certification Program Manager
Tennessee Division of Water Resources

Effective Date: 4/21/2025 Issue Date: 5/16/2025 Expiration Date: 4/21/2028

*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 – 2025

TENNESSEE

Microbac - Knoxville Division

TN02017

EPA # TN00018

10/2/2025

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

<u>Parameter</u>	<u>Sample #</u>	<u>EPA Parameter #</u>	<u>Approved Method</u>	<u>Study Type</u>	<u>Date Accepted</u>	<u>PT Provider / WS #</u>
Disinfectant Residuals						
Total Chlorine Residual	009	1940 / 1012	SM - 4500-Cl G	Proficiency Test	8/21/2025	ERA / WS-348
Free Chlorine Residual	009	1945 / 1013	SM - 4500-Cl G	Proficiency Test	2/27/2025	ERA / WS-342
Free Chlorine	009	1945 / 1013	SM - 4500-Cl G	Proficiency Test	8/21/2025	ERA / WS-348
Total Chlorine Residual	010	1940 / 1012	SM - 4500-Cl G	Proficiency Test	2/27/2025	ERA / WS-342
Inorganics						
Turbidity	001	2055 / 0100	EPA - 180.1	Proficiency Test	6/5/2025	ERA / 042425O
Total Hardness as CaCO3	001	1755 / 1915	EPA - 200.7	Proficiency Test	8/21/2025	ERA / WS-348
Sodium	001	1155 / 1052	EPA - 200.7	Proficiency Test	8/21/2025	ERA / WS-348
Sodium	001	1155 / 1052	EPA - 200.7	Proficiency Test	2/27/2025	ERA / WS-342
Silica	001	1990 / 1049	EPA - 200.7	Proficiency Test	8/21/2025	ERA / WS-348
Potassium	001	1125 / 1042	EPA - 200.7	Proficiency Test	2/27/2025	ERA / WS-342
Potassium	001	1125 / 1042	EPA - 200.7	Proficiency Test	8/21/2025	ERA / WS-348
Color	001	1605 / 1905	SM - 2120 B	Proficiency Test	9/26/2025	ERA / 091025P
Calcium	001	1035 / 1016	EPA - 200.7	Proficiency Test	8/21/2025	ERA / WS-348
Calcium	001	1035 / 1016	EPA - 200.7	Proficiency Test	2/27/2025	ERA / WS-342
Total Hardness as CaCO3	002	1755 / 1915	EPA - 200.7	Proficiency Test	2/27/2025	ERA / WS-342
Conductivity	003	1610 / 1064	SM - 2510 B	Proficiency Test	8/21/2025	ERA / WS-348
pH	004	1900 / 1925	SM - 4500-H+B	Proficiency Test	8/21/2025	ERA / WS-348
Conductivity	004	1610 / 1064	SM - 2510 B	Proficiency Test	2/27/2025	ERA / WS-342
Total Dissolved Solids	005	1955 / 1930	SM - 2540 C	Proficiency Test	8/21/2025	ERA / WS-348
pH	005	1900 / 1925	SM - 4500-H+B	Proficiency Test	2/27/2025	ERA / WS-342
Total Dissolved Solids	006	1955 / 1930	SM - 2540 C	Proficiency Test	2/27/2025	ERA / WS-342
Sulfate	006	2000 / 1055	EPA - 300.0	Proficiency Test	8/21/2025	ERA / WS-348
Chloride	006	1575 / 1017	EPA - 300.0	Proficiency Test	8/21/2025	ERA / WS-348
Nitrate + Nitrite	007	1820 / 1038	EPA - 300.0	Proficiency Test	8/21/2025	ERA / WS-348
Nitrate	007	1810 / 1040	EPA - 300.0	Proficiency Test	8/21/2025	ERA / WS-348
Fluoride	007	1730 / 1025	EPA - 300.0	Proficiency Test	8/21/2025	ERA / WS-348
Chloride	007	1575 / 1017	EPA - 300.0	Proficiency Test	2/27/2025	ERA / WS-342
Sulfate	008	2000 / 1055	EPA - 300.0	Proficiency Test	2/27/2025	ERA / WS-342
Ortho-phosphate	008	1870 / 1044	EPA - 300.0	Proficiency Test	2/27/2025	ERA / WS-342
Ortho-phosphate	008	1870 / 1044	EPA - 300.0	Proficiency Test	8/21/2025	ERA / WS-348
Nitrite	008	1840 / 1041	EPA - 300.0	Proficiency Test	2/27/2025	ERA / WS-342
Nitrate + Nitrite	008	1820 / 1038	EPA - 300.0	Proficiency Test	2/27/2025	ERA / WS-342
Nitrate	008	1810 / 1040	EPA - 300.0	Proficiency Test	2/27/2025	ERA / WS-342
Fluoride	008	1730 / 1025	EPA - 300.0	Proficiency Test	2/27/2025	ERA / WS-342
Turbidity	010	2055 / 0100	EPA - 180.1	Proficiency Test	8/21/2025	ERA / WS-348
Silica	011	1990 / 1049	EPA - 200.7	Proficiency Test	2/27/2025	ERA / WS-342
Nitrite	012	1840 / 1041	EPA - 300.0	Proficiency Test	8/21/2025	ERA / WS-348
Color	013	1605 / 1905	SM - 2120 B	Proficiency Test	2/27/2025	ERA / WS-342
Iron	014	1070 / 1028	EPA - 200.7	Proficiency Test	8/21/2025	ERA / WS-348

<u>Parameter</u>	<u>Sample #</u>	<u>EPA Parameter #</u>	<u>Approved Method</u>	<u>Study Type</u>	<u>Date Accepted</u>	<u>PT Provider / WS #</u>
Calcium Hardness (as CaCO3)	001	1550 / 1919	EPA - 200.7	Proficiency Test	2/27/2025	ERA / WS-342
Calcium Hardness (as CaCO3)	001	1550 / 1919	EPA - 200.7	Proficiency Test	8/21/2025	ERA / WS-348
Alkalinity, Total	002	1505 / 1927	SM - 2320 B	Proficiency Test	8/21/2025	ERA / WS-348
Alkalinity, Total	003	1505 / 1927	SM - 2320 B	Proficiency Test	2/27/2025	ERA / WS-342
Odor			SM – 2150 B			N/A
Metals						
Magnesium	001	1085 / 1031	EPA - 200.7	Proficiency Test	2/27/2025	ERA / WS-342
Magnesium	001	1085 / 1031	EPA - 200.7	Proficiency Test	8/21/2025	ERA / WS-348
Nickel	014	1105 / 1036	EPA - 200.7	Proficiency Test	2/27/2025	ERA / WS-342
Nickel	014	1105 / 1036	EPA - 200.7	Proficiency Test	8/21/2025	ERA / WS-348
Manganese	014	1090 / 1032	EPA - 200.7	Proficiency Test	2/27/2025	ERA / WS-342
Manganese	014	1090 / 1032	EPA - 200.7	Proficiency Test	8/21/2025	ERA / WS-348
Copper	014	1055 / 1022	EPA - 200.7	Proficiency Test	8/21/2025	ERA / WS-348
Copper	014	1055 / 1022	EPA - 200.7	Proficiency Test	2/27/2025	ERA / WS-342
Chromium	014	1040 / 1020	EPA - 200.7	Proficiency Test	2/27/2025	ERA / WS-342
Chromium	014	1040 / 1020	EPA - 200.7	Proficiency Test	8/21/2025	ERA / WS-348
Cadmium	014	1030 / 1015	EPA - 200.7	Proficiency Test	2/27/2025	ERA / WS-342
Cadmium	014	1030 / 1015	EPA - 200.7	Proficiency Test	8/21/2025	ERA / WS-348
Beryllium	014	1020 / 1075	EPA - 200.7	Proficiency Test	8/21/2025	ERA / WS-348
Beryllium	014	1020 / 1075	EPA - 200.7	Proficiency Test	2/27/2025	ERA / WS-342
Barium	014	1015 / 1010	EPA - 200.7	Proficiency Test	2/27/2025	ERA / WS-342
Barium	014	1015 / 1010	EPA - 200.7	Proficiency Test	8/21/2025	ERA / WS-348
Thallium	015	1165 / 1085	EPA - 200.8	Proficiency Test	8/21/2025	ERA / WS-348
Thallium	015	1165 / 1085	EPA - 200.8	Proficiency Test	2/27/2025	ERA / WS-342
Selenium	015	1140 / 1045	EPA - 200.8	Proficiency Test	8/21/2025	ERA / WS-348
Nickel	015	1105 / 1036	EPA - 200.8	Proficiency Test	8/21/2025	ERA / WS-348
Manganese	015	1090 / 1032	EPA - 200.8	Proficiency Test	8/21/2025	ERA / WS-348
Lead	015	1075 / 5000	EPA - 200.8	Proficiency Test	8/21/2025	ERA / WS-348
Copper	015	1055 / 1022	EPA - 200.8	Proficiency Test	8/21/2025	ERA / WS-348
Chromium	015	1040 / 1020	EPA - 200.8	Proficiency Test	8/21/2025	ERA / WS-348
Cadmium	015	1030 / 1015	EPA - 200.8	Proficiency Test	8/21/2025	ERA / WS-348
Beryllium	015	1020 / 1075	EPA - 200.8	Proficiency Test	8/21/2025	ERA / WS-348
Barium	015	1015 / 1010	EPA - 200.8	Proficiency Test	2/27/2025	ERA / WS-342
Barium	015	1015 / 1010	EPA - 200.8	Proficiency Test	8/21/2025	ERA / WS-348
Arsenic	015	1010 / 1005	EPA - 200.8	Proficiency Test	8/21/2025	ERA / WS-348
Antimony	015	1005 / 1074	EPA - 200.8	Proficiency Test	2/27/2025	ERA / WS-342
Antimony	015	1005 / 1074	EPA - 200.8	Proficiency Test	8/21/2025	ERA / WS-348
Selenium	016	1140 / 1045	EPA - 200.8	Proficiency Test	2/27/2025	ERA / WS-342
Nickel	016	1105 / 1036	EPA - 200.8	Proficiency Test	2/27/2025	ERA / WS-342
Manganese	016	1090 / 1032	EPA - 200.8	Proficiency Test	2/27/2025	ERA / WS-342
Copper	016	1055 / 1022	EPA - 200.8	Proficiency Test	2/27/2025	ERA / WS-342
Chromium	016	1040 / 1020	EPA - 200.8	Proficiency Test	2/27/2025	ERA / WS-342
Cadmium	016	1030 / 1015	EPA - 200.8	Proficiency Test	2/27/2025	ERA / WS-342
Beryllium	016	1020 / 1075	EPA - 200.8	Proficiency Test	2/27/2025	ERA / WS-342
Arsenic	016	1010 / 1005	EPA - 200.8	Proficiency Test	2/27/2025	ERA / WS-342
Lead	017	1075 / 5000	EPA - 200.8	Proficiency Test	2/27/2025	ERA / WS-342
Zinc	014	1190 / 1095	EPA - 200.7	Proficiency Test	2/27/2025	ERA / WS-342
Zinc	014	1190 / 1095	EPA - 200.7	Proficiency Test	8/21/2025	ERA / WS-348
Silver	014	1150 / 1050	EPA - 200.7	Proficiency Test	2/27/2025	ERA / WS-342
Silver	014	1150 / 1050	EPA - 200.7	Proficiency Test	8/21/2025	ERA / WS-348
Aluminum	014	1000 / 1002	EPA - 200.7	Proficiency Test	8/21/2025	ERA / WS-348

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Aluminum	014	1000 / 1002	EPA - 200.7	Proficiency Test	2/27/2025	ERA / WS-342
Zinc	015	1190 / 1095	EPA - 200.8	Proficiency Test	2/27/2025	ERA / WS-342
Zinc	015	1190 / 1095	EPA - 200.8	Proficiency Test	8/21/2025	ERA / WS-348
Silver	015	1150 / 1050	EPA - 200.8	Proficiency Test	8/21/2025	ERA / WS-348
Silver	015	1150 / 1050	EPA - 200.8	Proficiency Test	2/27/2025	ERA / WS-342
Aluminum	015	1000 / 1002	EPA - 200.8	Proficiency Test	8/21/2025	ERA / WS-348
Aluminum	015	1000 / 1002	EPA - 200.8	Proficiency Test	2/27/2025	ERA / WS-342

Microbiologicals

Total Coliform, Colilert-18		2500 / 3000	SM - 9223B-PA	Proficiency Test	2/27/2025	ERA / WS-342
Heterotrophic Bacteria, Pour plate metho		2555 / 3001	SM - 9215 B	Proficiency Test	2/27/2025	ERA / WS-342
Escherichia coli, Colilert-18		2525 / 3014	SM - 9223B-PA	Proficiency Test	2/27/2025	ERA / WS-342
Total Coliform, Colilert	002	2500 / 3000	SM - 9223B-PA	Proficiency Test	9/26/2025	ERA / 091025P
Escherichia coli, Colilert	003	2525 / 3014	SM - 9223B-PA	Proficiency Test	9/26/2025	ERA / 091025P
Heterotrophic Bacteria, Pour plate metho	013	2555 / 3001	SM - 9215 B	Proficiency Test	8/21/2025	ERA / WS-348