

August 15, 2019

Ms. Kelley Keenan
Environmental Testing Solutions, Inc.
351 Depot Street
Asheville, NC 28801
USA

Dear Kelley,

Thank you for participating in the WSM0719 Water Supply Proficiency Testing Study. Enclosed is your final report, which has been carefully reviewed by the PT specialists at Phenova. This report presents some additional sections and features which will give you more information on the study data for the standards that were reported by your laboratory and more information regarding the overall performance of your laboratory in relation to other study participants.

The enclosed report is in two sections, the "Evaluation Report" and the "Statistical Report". The "Evaluation Report" contains the evaluation of your reported data as well the reported method, analysis date and analyst. The "Evaluation Report" is an updated and enhanced version of the reports you previously received at the conclusion of our PT studies. The "Statistical Report" contains your passing percentage as well as statistics from the study for the analytes reported by your laboratory.

For any analyte falling outside the established acceptance limits, our PT management staff would like to assist you in determining the most appropriate course of corrective action for your facility. Please contact us at any time if we may be of service to you.

Thank you again for participating in the WSM0719 Water Supply Proficiency Testing Study. We appreciate working with you and look forward to our next study. If you have any questions, please call us at 866-942-2978.

Report Definitions:

Assigned Value

The Assigned Value is determined from the study mean, gravimetric and volumetric true concentration of an analyte to be analyzed, calculation and/or an appropriate reference value as stipulated in the EPA National Standards for Water Proficiency Testing Studies Criteria Document (current version), the National Environmental Laboratory Accreditation Conference Institute (TNI) criteria (ref: TNI FOT tables, TNI PT Committee) and other documents distributed by accrediting agencies as applicable.

Evaluation Limits

Acceptance Limits are derived from fixed limits, coefficients, constants and calculations stipulated in the EPA National Standards for Water Proficiency Testing Studies Criteria Documents (current version), the National Environmental Laboratory Accreditation Conference Institute (TNI) criteria (ref: TNI FOT tables, TNI PT Committee) and other documents distributed by accrediting agencies as applicable.

Evaluation

Acceptable

The reported value falls within the Acceptance Limits.

Not Acceptable

The reported value falls outside the Acceptance Limits.

No Evaluation

The reported value is non-numeric and can not be evaluated.

NR

As required by the TNI standards and requested by state authorities, any analyte purchased but not reported by your facility is listed as NR (Not Reported).

Study Mean and Standard Deviation

The mean and standard deviation are calculated from the study data using robust statistical calculations when possible. Other statistical calculations may be used if robust statistical calculations are not possible. The displayed values are independent of any statistical calculations required for the calculation of the analyte evaluation limits.

This report must not be reproduced except in full, without the written approval of Phenova. Various aspects of Phenova's proficiency testing schemes can from time to time be subcontracted. If subcontracting occurs, it is placed with a competent and qualified subcontractor and Phenova is responsible for all work performed.

This report must not be used to claim product certification, approval, or endorsement by the American Association for Laboratory Accreditation (A2LA) or any agency of the federal government.



6390 Joyce Drive
100
Golden, CO 80403

Phone 303-940-0033
Fax 866-283-0269
www.phenova.com

State Regulatory Agency Request(s):

Phenova has been authorized to send a copy of your WSM0719 final results to the following state agencies:

NC

Other Regulatory Agency Request(s):

No requests were made to send a copy of your WSM0719 final results to an agency.

Third Party Request(s):

No requests were made to send a copy of your WSM0719 final results to a third party.

6390 Joyce Drive
100
Golden, CO 80403

Phone 303-940-0033
Fax 866-283-0269
www.phenova.com

Final Report - Water Supply Proficiency Testing

Study: WSM0719

Opening Date: July 23, 2019 - Closing Date: August 8, 2019

Laboratory: Environmental Testing Solutions, Inc.
351 Depot Street
Asheville, NC 28801
USA

Contact: Ms. Kelley Keenan
828-350-9364

EPA Lab ID: NC01230

Micro (Presence/Absence) (PT-MIC-WS) Lot #: 5306-04

Complete Analyte Evaluation

The complete analyte evaluation(s) are based on the results for the individual samples. The Evaluation is "Acceptable" if nine of ten samples are Acceptable, and no false negatives are reported.

NELAC Code	Analyte	Evaluation
2530	Fecal Coliform	NR
2525	E.Coli	Acceptable
2500	Total Coliform	Acceptable

Individual Sample Evaluation

NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Assigned Value	Result	Evaluation
Sample 1								
2530	Fecal Coliform					Absence		NR
2525	E.Coli	7/24/2019	KEK	20212413	SM 9223 B-2004 (Colilert®) 22nd ED	Absence	Absence	Acceptable
2500	Total Coliform	7/24/2019	KEK	20212413	SM 9223 B-2004 (Colilert®) 22nd ED	Presence	Presence	Acceptable
Sample 2								
2530	Fecal Coliform					Absence		NR
2525	E.Coli	7/24/2019	KEK	20212413	SM 9223 B-2004 (Colilert®) 22nd ED	Absence	Absence	Acceptable
2500	Total Coliform	7/24/2019	KEK	20212413	SM 9223 B-2004 (Colilert®) 22nd ED	Absence	Absence	Acceptable
Sample 3								
2530	Fecal Coliform					Presence		NR
2525	E.Coli	7/24/2019	KEK	20212413	SM 9223 B-2004 (Colilert®) 22nd ED	Presence	Presence	Acceptable
2500	Total Coliform	7/24/2019	KEK	20212413	SM 9223 B-2004 (Colilert®) 22nd ED	Presence	Presence	Acceptable

6390 Joyce Drive
100
Golden, CO 80403

Phone 303-940-0033
Fax 866-283-0269
www.phenova.com

Final Report - Water Supply Proficiency Testing

Study: WSM0719

Opening Date: July 23, 2019 - Closing Date: August 8, 2019

Laboratory: Environmental Testing Solutions, Inc.
351 Depot Street
Asheville, NC 28801
USA

Contact: Ms. Kelley Keenan
828-350-9364

EPA Lab ID: NC01230

Micro (Presence/Absence) (PT-MIC-WS) cont'd								Lot #: 5306-04
NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Assigned Value	Result	Evaluation
Sample 4								
2530	Fecal Coliform					Presence		NR
2525	E.Coli	7/24/2019	KEK	20212413	SM 9223 B-2004 (Colilert®) 22nd ED	Presence	Presence	Acceptable
2500	Total Coliform	7/24/2019	KEK	20212413	SM 9223 B-2004 (Colilert®) 22nd ED	Presence	Presence	Acceptable
Sample 5								
2530	Fecal Coliform					Presence		NR
2525	E.Coli	7/24/2019	KEK	20212413	SM 9223 B-2004 (Colilert®) 22nd ED	Presence	Presence	Acceptable
2500	Total Coliform	7/24/2019	KEK	20212413	SM 9223 B-2004 (Colilert®) 22nd ED	Presence	Presence	Acceptable
Sample 6								
2530	Fecal Coliform					Absence		NR
2525	E.Coli	7/24/2019	KEK	20212413	SM 9223 B-2004 (Colilert®) 22nd ED	Absence	Absence	Acceptable
2500	Total Coliform	7/24/2019	KEK	20212413	SM 9223 B-2004 (Colilert®) 22nd ED	Absence	Absence	Acceptable
Sample 7								
2530	Fecal Coliform					Absence		NR
2525	E.Coli	7/24/2019	KEK	20212413	SM 9223 B-2004 (Colilert®) 22nd ED	Absence	Absence	Acceptable
2500	Total Coliform	7/24/2019	KEK	20212413	SM 9223 B-2004 (Colilert®) 22nd ED	Absence	Absence	Acceptable
Sample 8								
2530	Fecal Coliform					Absence		NR
2525	E.Coli	7/24/2019	KEK	20212413	SM 9223 B-2004 (Colilert®) 22nd ED	Absence	Absence	Acceptable
2500	Total Coliform	7/24/2019	KEK	20212413	SM 9223 B-2004 (Colilert®) 22nd ED	Presence	Presence	Acceptable

6390 Joyce Drive
100
Golden, CO 80403

Phone 303-940-0033
Fax 866-283-0269
www.phenova.com

Final Report - Water Supply Proficiency Testing

Study: WSM0719

Opening Date: July 23, 2019 - Closing Date: August 8, 2019

Laboratory: Environmental Testing Solutions, Inc.
351 Depot Street
Asheville, NC 28801
USA

Contact: Ms. Kelley Keenan
828-350-9364

EPA Lab ID: NC01230

Micro (Presence/Absence) (PT-MIC-WS) cont'd								Lot #: 5306-04
NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Assigned Value	Result	Evaluation
Sample 9								
2530	Fecal Coliform					Absence		NR
2525	E.Coli	7/24/2019	KEK	20212413	SM 9223 B-2004 (Colilert®) 22nd ED	Absence	Absence	Acceptable
2500	Total Coliform	7/24/2019	KEK	20212413	SM 9223 B-2004 (Colilert®) 22nd ED	Absence	Absence	Acceptable
Sample 10								
2530	Fecal Coliform					Absence		NR
2525	E.Coli	7/24/2019	KEK	20212413	SM 9223 B-2004 (Colilert®) 22nd ED	Absence	Absence	Acceptable
2500	Total Coliform	7/24/2019	KEK	20212413	SM 9223 B-2004 (Colilert®) 22nd ED	Presence	Presence	Acceptable

6390 Joyce Drive
100
Golden, CO 80403

Phone 303-940-0033
Fax 866-283-0269
www.phenova.com

Final Report - Water Supply Proficiency Testing

Study: WSM0719

Opening Date: July 23, 2019 - Closing Date: August 8, 2019

Laboratory: Environmental Testing Solutions, Inc.
351 Depot Street
Asheville, NC 28801
USA

Contact: Ms. Kelley Keenan
828-350-9364

EPA Lab ID: NC01230

Source Water Micro (PT-SW-WS)										Lot #: 5306-14
NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Units	Assigned Value	Result	Acceptance Limits	Evaluation
2530	Fecal Coliform, MF					CFU/100 mL	106		68 - 166	NR
2525	E. Coli, MF					CFU/100 mL	106		64 - 178	NR
2500	Total Coliform, MF					CFU/100 mL	100		57 - 175	NR
2530	Fecal Coliform, MPN					MPN/100 mL	127		49.0 - 331	NR
2525	E. Coli, MPN	7/24/2019	KEK	20211614	SM 9223 B-2004 (Colilert Quanti-Tray) 22nd ED	MPN/100 mL	138	143.9	91.7 - 208	Acceptable
2500	Total Coliform, MPN					MPN/100 mL	139		89.6 - 217	NR



6390 Joyce Drive
 # 100
 Golden, CO 80403

Phone 303-940-0033
 Fax 866-283-0269
 www.phenova.com

PT Study Score Report

EPA ID: NC01230
 Laboratory: Environmental Testing Solutions, Inc.
 351 Depot Street
 Asheville, NC 28801
 USA

Study Number	Number of Reported Results	Number of Passing Results	Percent Passing
WSM0719	23	23	100%

Report Definitions:

- Number of Reported Results** The number of results reported which could be evaluated. Results receiving an evaluation of "NR" or "No Evaluation" are not included.
- Number of Passing Results** The number of results reported receiving an evaluation of "Acceptable" or "Check for Error".
- Percent Passing** The percentage of results reported receiving an evaluation of "Acceptable" or "Check for Error".

6390 Joyce Drive
100
Golden, CO 80403

Phone 303-940-0033
Fax 866-283-0269
www.phenova.com

Statistical Summary Report - Water Supply Proficiency Testing

Study: WSM0719

Opening Date: July 23, 2019 - Closing Date: August 8, 2019

Laboratory: Environmental Testing Solutions, Inc.
351 Depot Street
Asheville, NC 28801
USA

Contact: Ms. Kelley Keenan
828-350-9364

EPA Lab ID: NC01230

Micro (Presence/Absence) (PT-MIC-WS)							Lot #: 5306-04
NELAC Code	Analyte	Units	Study Mean	Study Standard Deviation	Low Acceptance Limit %	High Acceptance Limit %	
Sample 1							
2530	Fecal Coliform		N/A	N/A	N/A	N/A	
2525	E.Coli		N/A	N/A	N/A	N/A	
2500	Total Coliform		N/A	N/A	N/A	N/A	
Sample 2							
2530	Fecal Coliform		N/A	N/A	N/A	N/A	
2525	E.Coli		N/A	N/A	N/A	N/A	
2500	Total Coliform		N/A	N/A	N/A	N/A	
Sample 3							
2530	Fecal Coliform		N/A	N/A	N/A	N/A	
2525	E.Coli		N/A	N/A	N/A	N/A	
2500	Total Coliform		N/A	N/A	N/A	N/A	
Sample 4							
2530	Fecal Coliform		N/A	N/A	N/A	N/A	
2525	E.Coli		N/A	N/A	N/A	N/A	
2500	Total Coliform		N/A	N/A	N/A	N/A	
Sample 5							
2530	Fecal Coliform		N/A	N/A	N/A	N/A	
2525	E.Coli		N/A	N/A	N/A	N/A	
2500	Total Coliform		N/A	N/A	N/A	N/A	
Sample 6							
2530	Fecal Coliform		N/A	N/A	N/A	N/A	
2525	E.Coli		N/A	N/A	N/A	N/A	
2500	Total Coliform		N/A	N/A	N/A	N/A	
Sample 7							
2530	Fecal Coliform		N/A	N/A	N/A	N/A	
2525	E.Coli		N/A	N/A	N/A	N/A	
2500	Total Coliform		N/A	N/A	N/A	N/A	
Sample 8							
2530	Fecal Coliform		N/A	N/A	N/A	N/A	
2525	E.Coli		N/A	N/A	N/A	N/A	
2500	Total Coliform		N/A	N/A	N/A	N/A	
Sample 9							
2530	Fecal Coliform		N/A	N/A	N/A	N/A	
2525	E.Coli		N/A	N/A	N/A	N/A	
2500	Total Coliform		N/A	N/A	N/A	N/A	
Sample 10							
2530	Fecal Coliform		N/A	N/A	N/A	N/A	
2525	E.Coli		N/A	N/A	N/A	N/A	
2500	Total Coliform		N/A	N/A	N/A	N/A	

6390 Joyce Drive
100
Golden, CO 80403

Phone 303-940-0033
Fax 866-283-0269
www.phenova.com

Statistical Summary Report - Water Supply Proficiency Testing

Opening Date: July 23, 2019 - Closing Date: August 8, 2019

Laboratory: Environmental Testing Solutions, Inc.
351 Depot Street
Asheville, NC 28801
USA

Contact: Ms. Kelley Keenan
828-350-9364

EPA Lab ID: NC01230

Source Water Micro (PT-SW-WS)						Lot #: 5306-14
NELAC Code	Analyte	Units	Study Mean	Study Standard Deviation	Low Acceptance Limit %	High Acceptance Limit %
2530	Fecal Coliform, MF	CFU/100 mL	108	25.5	64.2	157
2525	E. Coli, MF	CFU/100 mL	110	27.0	60.4	168
2500	Total Coliform, MF	CFU/100 mL	104	28.7	57.0	175
2530	Fecal Coliform, MPN	MPN/100 mL	141	68.0	38.6	261
2525	E. Coli, MPN	MPN/100 mL	138	28.6	66.4	151
2500	Total Coliform, MPN	MPN/100 mL	139	30.1	64.5	156