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Golden, CO 80403

Phone 303-940-0033  
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www.phenova.com

February 15, 2018

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

Dear Kelley,

Thank you for participating in the WSM0118 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 WSM0118 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 (NELAC) criteria (ref: NELAC FOT tables, NELAC PT Committee) and other documents distributed by accrediting

**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 (NELAC) criteria (ref: NELAC PT FOT tables, NELAC 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 NELAC 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.

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.



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State Regulatory Agency Request(s):

Phenova has been authorized to send a copy of your WSM0118 final results to the following state agencies:

NC

Other Regulatory Agency Request(s):

No requests were made to send a copy of your WSM0118 final results to an agency.

Third Party Request(s):

No requests were made to send a copy of your WSM0118 final results to a third party.

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## Final Report - Water Supply Proficiency Testing

### Study: WSM0118

**Opening Date: January 23, 2018 - Closing Date: February 8, 2018**

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 #: 5276-01

#### 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
<b>Sample 1</b>								
2530	Fecal Coliform					Absence		NR
2525	E.Coli	1/24/2018	KEK	20212413	SM 9223 B (Colilert) Rev.22nd ED 2004	Absence	Absence	Acceptable
2500	Total Coliform	1/24/2018	KEK	20212413	SM 9223 B (Colilert) Rev.22nd ED 2004	Absence	Absence	Acceptable
<b>Sample 2</b>								
2530	Fecal Coliform					Absence		NR
2525	E.Coli	1/24/2018	KEK	20212413	SM 9223 B (Colilert) Rev.22nd ED 2004	Absence	Absence	Acceptable
2500	Total Coliform	1/24/2018	KEK	20212413	SM 9223 B (Colilert) Rev.22nd ED 2004	Presence	Presence	Acceptable
<b>Sample 3</b>								
2530	Fecal Coliform					Absence		NR
2525	E.Coli	1/24/2018	KEK	20212413	SM 9223 B (Colilert) Rev.22nd ED 2004	Absence	Absence	Acceptable
2500	Total Coliform	1/24/2018	KEK	20212413	SM 9223 B (Colilert) Rev.22nd ED 2004	Absence	Absence	Acceptable

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Micro (Presence/Absence) (PT-MIC-WS) cont'd								Lot #: 5276-01
NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Assigned Value	Result	Evaluation
<b>Sample 4</b>								
2530	Fecal Coliform					Absence		NR
2525	E.Coli	1/24/2018	KEK	20212413	SM 9223 B (Colilert) Rev.22nd ED 2004	Absence	Absence	Acceptable
2500	Total Coliform	1/24/2018	KEK	20212413	SM 9223 B (Colilert) Rev.22nd ED 2004	Presence	Presence	Acceptable
<b>Sample 5</b>								
2530	Fecal Coliform					Absence		NR
2525	E.Coli	1/24/2018	KEK	20212413	SM 9223 B (Colilert) Rev.22nd ED 2004	Absence	Absence	Acceptable
2500	Total Coliform	1/24/2018	KEK	20212413	SM 9223 B (Colilert) Rev.22nd ED 2004	Presence	Presence	Acceptable
<b>Sample 6</b>								
2530	Fecal Coliform					Absence		NR
2525	E.Coli	1/24/2018	KEK	20212413	SM 9223 B (Colilert) Rev.22nd ED 2004	Absence	Absence	Acceptable
2500	Total Coliform	1/24/2018	KEK	20212413	SM 9223 B (Colilert) Rev.22nd ED 2004	Absence	Absence	Acceptable
<b>Sample 7</b>								
2530	Fecal Coliform					Presence		NR
2525	E.Coli	1/24/2018	KEK	20212413	SM 9223 B (Colilert) Rev.22nd ED 2004	Presence	Presence	Acceptable
2500	Total Coliform	1/24/2018	KEK	20212413	SM 9223 B (Colilert) Rev.22nd ED 2004	Presence	Presence	Acceptable
<b>Sample 8</b>								
2530	Fecal Coliform					Absence		NR
2525	E.Coli	1/24/2018	KEK	20212413	SM 9223 B (Colilert) Rev.22nd ED 2004	Absence	Absence	Acceptable
2500	Total Coliform	1/24/2018	KEK	20212413	SM 9223 B (Colilert) Rev.22nd ED 2004	Absence	Absence	Acceptable

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Micro (Presence/Absence) (PT-MIC-WS) cont'd								Lot #: 5276-01	
NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Assigned Value	Result	Evaluation	
<b>Sample 9</b>									
2530	Fecal Coliform					Presence		NR	
2525	E.Coli	1/24/2018	KEK	20212413	SM 9223 B (Colilert) Rev.22nd ED 2004	Presence	Presence	Acceptable	
2500	Total Coliform	1/24/2018	KEK	20212413	SM 9223 B (Colilert) Rev.22nd ED 2004	Presence	Presence	Acceptable	
<b>Sample 10</b>									
2530	Fecal Coliform					Presence		NR	
2525	E.Coli	1/24/2018	KEK	20212413	SM 9223 B (Colilert) Rev.22nd ED 2004	Presence	Presence	Acceptable	
2500	Total Coliform	1/24/2018	KEK	20212413	SM 9223 B (Colilert) Rev.22nd ED 2004	Presence	Presence	Acceptable	

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Contact: Ms. Kelley Keenan  
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EPA Lab ID: NC01230

### Source Water Micro (PT-SW-WS)

Lot #: 5276-14

NELAC Code	Analyte	Analysis Date	Analyst	Method Code	Method Description	Units	Assigned Value	Result	Acceptance Limits	Evaluation
2530	Fecal Coliform, MF					CFU/100 mL	128		94 - 174	NR
2525	E. Coli, MF					CFU/100 mL	142		109 - 185	NR
2500	Total Coliform, MF					CFU/100 mL	149		118 - 188	NR
2530	Fecal Coliform, MPN					MPN/100 mL	119		57.7 - 244	NR
2525	E. Coli, MPN	1/24/2018	KEK	20211614	SM 9223 B (Colilert Quanti-Tray) Rev.22 ED 2004	MPN/100 mL	140	133.3	89.8 - 219	Acceptable
2500	Total Coliform, MPN					MPN/100 mL	141		87.7 - 225	NR



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## 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
WSM0118	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".



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## Statistical Summary Report - Water Supply Proficiency Testing

### Study: WSM0118

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Contact: Ms. Kelley Keenan  
828-350-9364

EPA Lab ID: NC01230

Micro (Presence/Absence) (PT-MIC-WS)							Lot #: 5276-01
NELAC Code	Analyte	Units	Study Mean	Study Standard Deviation	Low Acceptance Limit %	High Acceptance Limit %	
<b>Sample 1</b>							
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	
<b>Sample 2</b>							
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	
<b>Sample 3</b>							
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	
<b>Sample 4</b>							
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	
<b>Sample 5</b>							
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	
<b>Sample 6</b>							
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	
<b>Sample 7</b>							
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	
<b>Sample 8</b>							
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	
<b>Sample 9</b>							
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	
<b>Sample 10</b>							
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	



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Source Water Micro (PT-SW-WS)						Lot #: 5276-14
NELAC Code	Analyte	Units	Study Mean	Study Standard Deviation	Low Acceptance Limit %	High Acceptance Limit %
2530	Fecal Coliform, MF	CFU/100 mL	129	19.1	73.4	136
2525	E. Coli, MF	CFU/100 mL	142	18.6	76.8	130
2500	Total Coliform, MF	CFU/100 mL	150	17.2	79.2	126
2530	Fecal Coliform, MPN	MPN/100 mL	112	52.8	48.5	205
2525	E. Coli, MPN	MPN/100 mL	141	31.9	64.1	156
2500	Total Coliform, MPN	MPN/100 mL	142	33.4	62.2	160