

WP Performance Summary
July 2007 WP
APG Customer Code: 999999

Watson
Main Facility
500 Laboratory Road
Testville, OH 45714

*** CLTI D48500***

Water Pollution (WP) Proficiency Testing Program Report

Introduction:

The Analytical Products Group, Inc. Proficiency Testing Program has been designed to evaluate your laboratory's performance against other participating laboratories on the same set of standards. This report has been specifically prepared for your organization to assist you in ensuring that your procedures are in-control. Therefore, in most cases sample levels are not designed to challenge the detection limits of the method.

The Analytical Products Group Proficiency Testing Program is certified to meet all of the following requirements:

- This Proficiency Testing Program is accredited by A2LA for the design, preparation, and operation of PT schemes that meet the requirements of ISO Guide 43-1:1997, ILAC G13:2000, EPA National Standards for Water Proficiency Testing Studies Criteria Document, and relevant sections of ISO Guide 34:200, ISO/IEC 17025:2005 and 2003 NELAC Chapter 2 and Chapter 5 (Certification Code 2430.01).
- Analytical Products Group, Inc. Quality System is registered with DNV Certification to meet the ISO 9001 standard to design, manufacture, and distribute chemical reference materials and operate Proficiency Testing Programs (Certificate # 98-HOU-AQ-9513)
- For applicable analytes, this Proficiency Testing Program is certified to meet all requirements as specified in the US EPA National Standards for Water Proficiency Testing Program Criteria Document (NERL-Ci-0045).

All analytes in this report are covered by APG's A2LA accreditation. This report must not be used to claim product certification, approval, or endorsement by A2LA, or any agency of the federal government.

Report Layout

This report contains the following sub-reports:

Introduction - This section is the general introduction to the Analytical Products Group, Inc. Proficiency Testing Program as well as all of the certifications that the organization maintains.

Terms & Definitions - Defines all of the terms used throughout the report. This is an excellent section to refer to first if you have any questions.

Laboratory Benchmark Report - This report presents an overall summary of the study as well as your performance relative to all other study participants.

Comment Report - Contains comments submitted to Analytical Products Group by the program participants or comments by Analytical Products Group to program participants concerning unusual characteristics of the data set or problems with standards which could influence the interpretation of the data. Please review this section thoroughly before examining your data.


Exception Report - This report is a summary of all of the analytes that resulted in an Evaluation of "Not Acceptable" for your laboratory. The Exception Report is designed to very quickly identify for your laboratory the areas that may require your immediate attention.

Performance Evaluation Summary Report - Provides a summary of all of your data for each analyte. This summary is formatted similar to the US EPA DMR-QA Reports.

Detail Report- This report lists all the details of your data. Also included in this section are useful graphs indicating the APG Assigned Value, the Mean, the Acceptance Limits and your Reported Value. Another graph included in this section shows your Z score for the analyte of interest.

The goal of this report is to provide your laboratory with the information you need to monitor and improve your quality. If you have any questions or feedback, please give us a call (800-272-4442). Thank you for choosing Analytical Products Group as your proficiency testing provider.

Sincerely,



Michael D. Haller
Operations Manager

Terms & Definitions

Average Acceptable Data - This value is the average percent of data that is within the EPA Acceptance Limits for this study. The Average Acceptable Data is reported for all laboratories as a whole as well as your laboratory as an individual. These values can be found in the Laboratory Benchmark Report.

Average Percentile for All Parameters - This is your laboratory's rank on each parameter and the related rank for that parameter. The average percentile is the average of this data across all parameters reported. It is a different measure of performance than percent acceptable data since it is affected by your relative performance on each parameter. The report provides an average for this measure for all laboratories reporting as well as your laboratory's performance.

Analyte - Name of the analyte of interest as found in the US EPA National Standards for Water Proficiency Testing Program Criteria Document (NERL-Ci-0045) or NELAC Field of Testing List.

NELAC Analyte Code - This value is the code given to the analyte by NELAC. These codes can be found in the US EPA National Standards for Water Proficiency Testing Program Criteria Document (NERL-Ci-0045) or the NELAC Fields of Testing List.

APG Assigned Value - This value is the calculated True Value of the standard based upon the actual composition of the standard in most cases.

Z-Score - This figure corresponds to how far your Reported Value was from the EPA Mean, reported in terms of EPA Standard Deviation units. As a point of reference, the US EPA Acceptance Limits are plus or minus three (3) EPA Standard Deviations from the EPA Mean.

APG Certified Value - This value is the result of the quality control testing performed on the sample by Analytical Products Group before the sample is shipped to the customer. Through this testing, the samples are traced against a NIST Standard Reference Material where available or an external standard if a NIST Standard Reference Material is not available. The reported uncertainty of this value is expressed as two times the standard deviation (s) divided by the square root of the number of samples (n) tested (i.e. $2s/\sqrt{n}$). This quality control testing meets the requirements as specified by the NIST National Voluntary Laboratory Accreditation Program (NVLAP) Handbook 150-19 (Chemical Calibration: Providers of Proficiency Testing).

Acceptance Range - For applicable analytes, this range is calculated based upon the US EPA National Standards for Water Proficiency Testing Program Criteria Document (NERL-Ci-0045). For the Water Pollution Program (WP), EPA Acceptance Limits are defined as \pm three (3) EPA Standard Deviations from the EPA Mean.

Mean - If the analyte is included in the US EPA National Standards for Water Proficiency Testing Program Criteria Document (NERL-Ci-0045) then this value is the estimated mean value calculated per the Criteria Document. If the analyte is not included in the Criteria Document, then this value is the Study Mean.

Study Standard Deviation - This value is calculated using all reported values after the removal of outliers, which are removed using standard statistical methods. The Study Standard Deviation is only reported if a statistically acceptable number of laboratories report numeric results for the analyte.

Your Ranking - This is your ranking based on your Z Score for the analyte of interest among all possible rankings. It is important to note that several laboratories can achieve the same rank.

Terms & Definitions (continued)

Evaluation - This value is determined by the Acceptance Limits and the Reported Value. Evaluation may have one of following values:

Value	Description
Acceptable	The Reported Value was within the Acceptable Limits or a less than (<) value was reported AND zero (0) was included in the Acceptance Limit Range AND the numeric part of the Reported Value was less than the upper limit of the Acceptance Limit.
Not Acceptable	The Reported Value is outside of the Acceptance Limits or a less than (<) value was reported AND zero (0) is not included in the Acceptance Limits range or the numeric part of the Reported Value was greater than the upper limit of the Acceptance Limit or a greater than value (>) was reported.
Check for Error	The Reported Value is between two (2) and three (3) Standard Deviations from the Mean.
Not Evaluated	The Reported Value was a text value which could not be evaluated.
Blank	No data was reported for this analyte [the analyte was not spiked].

Inter-Laboratory Statistics - This data is a summary of all of the data from all study participants for the analyte of interest. Inter-Laboratory Statistics are only reported if a minimum number of laboratories analyzed and reported data for the analyte of interest.

Product Level - Often referred to as 'Program'. This value indicates which program the analyte of interest is a part. For Water Pollution Studies (WP), the only values that Program will have are 'WP' or 'APG+'. If the analyte and range are consistent with the US EPA National Standards for Water Proficiency Testing Program Criteria Document (NERL-Ci-0045) then the Program value will have a value of 'WP' and if this is not the case then the Program value will be 'APG+', indicating that the analyte and/or range was specified by Analytical Products Group.

Product Type - To the right of each analyte in the performance summary is a code that designates the scope of the APG's accreditation for that analyte. An analyte designated as "NE" is applicable to NELAC and EPA requirements and ranges. An analyte designated as "N" is applicable to NELAC requirements and ranges. An analyte designated as "E" is applicable to EPA requirements and ranges. An analyte designated as "X" or without a designation is not covered by APG's accreditations.

Rank on Percent Acceptable Data - This is your laboratories rank out of all possible ranks in the current study based on percent acceptable data. It is important to note that several laboratories can achieve the same rank.

Rank on Average Percentile Data - This value is your laboratories rank out of all possible ranks based on Your Ranking converted to a percentile. It is important to note that several laboratories can achieve the same rank.

Laboratory Pass Percentage - This is the percentage of study participants that reported values within the Acceptance Limits for the analyte of interest.

Solids Standards - Solids standards are individually prepared, therefore, each standard has a unique APG Assigned Value.

Terms & Definitions (continued)

Reported Value - This value is the result that was reported by your organization for the particular analyte. Every effort has been made to ensure correct data entry. Should you find a data entry error, please notify Analytical Products Group, Inc. and we will correct the error and re-issue the report. If the Reported Value is reported as a less than (<) figure, then the only way that the Evaluation will result in an "Acceptable" value is if the numeric part of the Reported Value (i.e. 8 if the Report Value were <8) is less than the upper limit of the Acceptance Range AND zero (0) is included in the Acceptance Range. Any other non-numeric value (i.e. BDL, ND, >10, etc.) cannot be evaluated and will return an Evaluation result of "No Evaluation". This method of evaluation is consistent with the US EPA National Standards for Water Proficiency Testing Program Criteria Document (NERL-Ci-0045).

Number of Acceptable Data Points - This value is the number of data points reported by your laboratory that were within the Acceptance Limits.

Weighted Rank on Percent Acceptable Data - Because the Analytical Products Group Proficiency Testing Program includes laboratories of many sizes and capabilities, we have provided a weighted ranking system that will result in meaningful rankings for all study participants. The Weighted Rank on Percent Acceptable Data is the weighted rank of your laboratory based on Percent Acceptable Data and the number of analytes reported.

Weight Rank on Percentile Data - Because the Analytical Products Group Proficiency Testing Program includes laboratories of many sizes and capabilities, we have provided a weighted ranking system that will result in meaningful rankings for all study participants. The Weighted Rank on Percentile Data is the weighted rank of your laboratory based on Rank on Average Percentile Data and the number of analytes reported.

Study Mean - This value is calculated using all reported values after the removal of outliers, which are removed using standard statistical methods. The Study Mean is only reported if a statistically acceptable number of laboratories report numeric results for the analyte.

Laboratory Benchmark Report

Customer Code: 999999

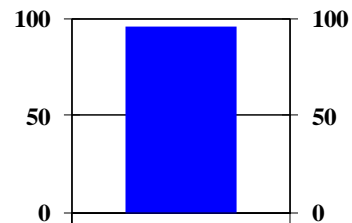
July 2007 WP

Summary of Ranking Data

Summary of National Ranking Data

Total Number of Laboratories Reporting:	412
Average Percent Acceptable Data:	95.24%
Average Percentile for all Parameters:	55.00%

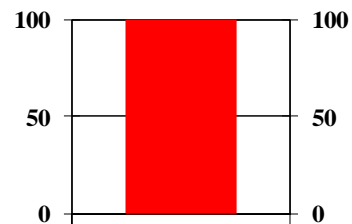
National Avg % Acceptable
95.2 %



Summary of Laboratory Ranking:

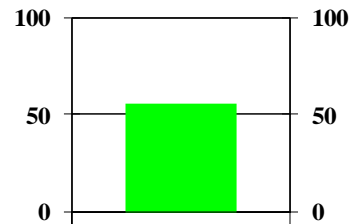
Total Data Points Reported:	6
Number of Acceptable Data Points:	6
Percent Acceptable Data:	100.00%
Average Percentile for all Parameters:	68.22%

Laboratory Avg % Acceptable
100.00%



Rank on Percent Acceptable Data:	1 of 94
Rank on Average Percentile Data:	105 of 381
Weighted Rank on Percent Acceptable Data:	95 of 101
Weighted Rank on Average Percentile Data:	170 of 386

Weighted Rank Avg Percentile
56.0 %



Comment Report

There are no comments to report.

Exception Report

Product:

Exception Reporting

Lot Number:

Analyte	Units	NELAC Code	Reported Value	Assigned Value	Acceptance Range	Z-Score	Method Code Desc.	Method Technology Desc.	Code Technology Desc.	Evaluation
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Performance Summary

Performance Summary

APG Customer 999999 Laboratory Address
 EPA Lab Code OH99999 Watson
 Primary AA CA12345 500 Laboratory Road
 A2LA Certification: 2430.01 Testville, OH 45714

Nelac Point Of Contact
 Watson

WP July 2007 WP #7007

Study Print Date 01/29/2008

Study Shipment Date 07/02/2007

Study Closing Date 08/15/2007

Product: Demand		Lot Number: 119957							
Analyte	Units	NELAC Code	Reported Value	Assigned Value	Accept Range Warn Range	ZScore	Method Code Method Desc.	Technology Code Technology Desc.	Evaluation
Biochemical Oxygen Demand	N mg/L	1530	94.83	101	51.1-151 67.7-134	0.371	20027401 SM18thED5210B		Acceptable
Carbonaceous BOD	N mg/L	1555		86.8	38.9-135 54.9-119				Not Reported
Chemical Oxygen Demand	N mg/L	1565		163	125-186 135-176				Not Reported
Total Organic Carbon	N mg/L	2040		64.5	53.9-74.2 57.3-70.8				Not Reported

Product: Nutrients		Lot Number: 120121-120122							
Analyte	Units	NELAC Code	Reported Value	Assigned Value	Accept Range Warn Range	ZScore	Method Code Method Desc.	Technology Code Technology Desc.	Evaluation
Ammonia Nitrogen as N	N mg/L	1515	4.79	4.76	3.45-6.10 3.89-5.66	0.0298	20023807 SM18ED4500NH3E		Acceptable
Nitrate Nitrogen as N	N mg/L	1810		3.63	2.82-4.40 3.09-4.13				Not Reported
Orthophosphate as P	N mg/L	1870		2.41	1.95-2.89 2.11-2.73				Not Reported
Total Kjeldahl Nitrogen	N mg/L	1795		17.2	11.4-22.2 13.2-20.4				Not Reported
Total Phosphorus as P	N mg/L	1910		3.61	2.94-4.33 3.17-4.10				Not Reported

Performance Summary

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 EPA Lab Code OH99999 Watson
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Nelac Point Of Contact
 Watson

WP July 2007 WP #7007

Study Print Date 01/29/2008
Study Shipment Date 07/02/2007
Study Closing Date 08/15/2007

Product: Solids**Lot Number: 116564**

Analyte	Units	NELAC Code	Reported Value	Assigned Value	Accept Range Warn Range	ZScore	Method Code Method Desc.	Technology Code Technology Desc.	Evaluation
Total Dissolved Solids at 180°C	mg/L	1705		254	184-313 206-291				Not Reported
Total Solids	N mg/L	1950		315	274-352 287-339				Not Reported
Total Suspended Solids	N mg/L	1960	55.1	61.4	48.8-69.4 52.3-65.9	1.17	20004802 SM18thED2540D		Acceptable

Product: pH**Lot Number: 120125**

Analyte	Units	NELAC Code	Reported Value	Assigned Value	Accept Range Warn Range	ZScore	Method Code Method Desc.	Technology Code Technology Desc.	Evaluation
pH	N Units	1900	5.58	5.61	5.41-5.81 5.48-5.74	0.450	20016404 SM1819ED4500H+B		Acceptable

Product: Total Residual Chlorine**Lot Number: 120130**

Analyte	Units	NELAC Code	Reported Value	Assigned Value	Accept Range Warn Range	ZScore	Method Code Method Desc.	Technology Code Technology Desc.	Evaluation
Total Residual Chlorine	N mg/L	1940	1.02	1.04	0.749-1.29 0.840-1.20	0.0162	20020604 SM18thED4500CIG		Acceptable

Performance Summary

APG Customer 999999 Laboratory Address
 EPA Lab Code OH99999 Watson
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 A2LA Certification: 2430.01 Testville, OH 45714

Nelac Point Of Contact
 Watson

WP July 2007 WP #7007

Study Print Date 01/29/2008

Study Shipment Date 07/02/2007

Study Closing Date 08/15/2007

Product: Microbiological

Lot Number: 120132

Analyte	Units	NELAC Code	Reported Value	Assigned Value	Accept Range Warn Range	ZScore	Method Code Method Desc.	Technology Code Technology Desc.	Evaluation
Escherichia coli - MF	CFU/100mL	2525		957	56.0-4990 119-2360				Not Reported
Escherichia coli - MPN	MPN/100mL	2525		1000	73.0-8160 159-3710				Not Reported
Fecal Coliforms as E. Coli.- MF	N CFU/100mL	2530	693	957	49.0-3040	0.862	20037405		Acceptable
					97.0-1520		SM18th9222D		
Fecal Coliforms as E. Coli.- MPN	N MPN/100mL	2530		1000	26.0-12500 73.0-4470				Not Reported
Total Coliforms - MF	N CFU/100mL	2500		957	56.0-4990 119-2360				Not Reported
Total Coliforms - MPN	N MPN/100mL	2500		1000	87.0-7400 182-3520				Not Reported

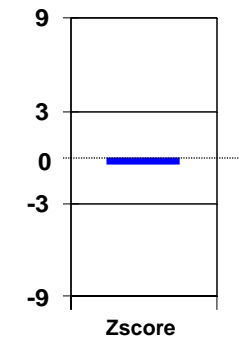
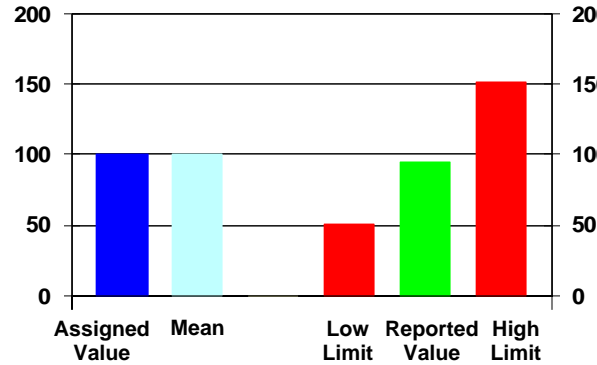
Detail Report

APG Customer 999999 Laboratory Address
 EPA Lab Code OH99999 Watson
 Primary AA CA12345 500 Laboratory Road
 A2LA Certification: 2430.01 Testville, OH 45714

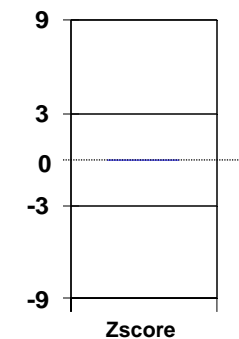
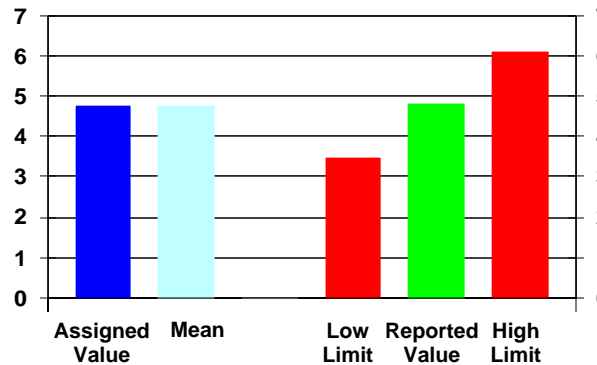
Nelac Point Of Contact
 Watson

WP July 2007 WP #7007
Study Print Date 01/29/2008
Study Shipment Date 07/02/2007
Study Closing Date 08/15/2007

Demand	Biochemical Oxygen Demand	Test Method	20027401	SM18thED5210B
Reported Value	94.83			
Assigned Value	101			Lot Number: 119957
APG Certified Value	99.1 ± 0.294			
Mean	101			
Standard Deviation	16.6			
Acceptance Range	51.1 - 151			
Z-Score	-0.371			
Evaluation	Acceptable			
Inter-Laboratory Statistics				
Study Mean	100			
Study Standard Deviation	17.1			
Number of Labs Reporting	147			
Your Ranking	24/89			
Laboratory Pass Percentage	95.90%			



Nutrients	Ammonia Nitrogen as N	Test Method	20023807	SM18ED4500NH3E
Reported Value	4.79			
Assigned Value	4.76			Lot Number: 120121-120122
APG Certified Value	4.80 ± 0.0158			
Mean	4.78			
Standard Deviation	0.443			
Acceptance Range	3.45 - 6.10			
Z-Score	0.0298			
Evaluation	Acceptable			
Inter-Laboratory Statistics				
Study Mean	4.76			
Study Standard Deviation	0.392			
Number of Labs Reporting	153			
Your Ranking	3/97			
Laboratory Pass Percentage	96.10%			



Detail Report

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 A2LA Certification: 2430.01 Testville, OH 45714

Nelac Point Of Contact
 Watson

WP July 2007 WP #7007

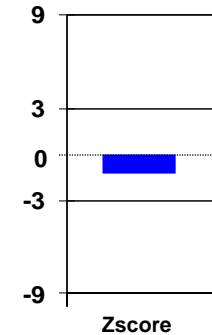
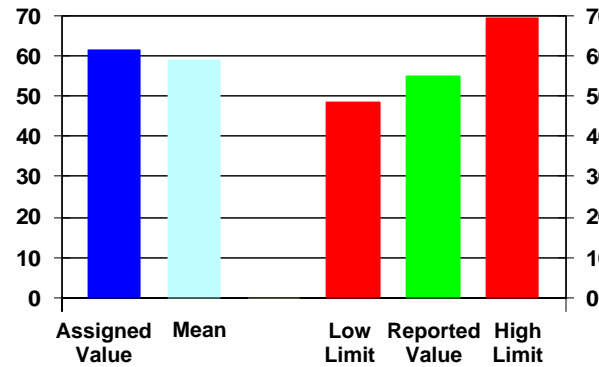
Study Print Date 01/29/2008

Study Shipment Date 07/02/2007

Study Closing Date 08/15/2007

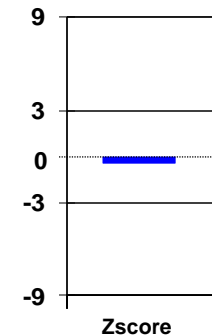
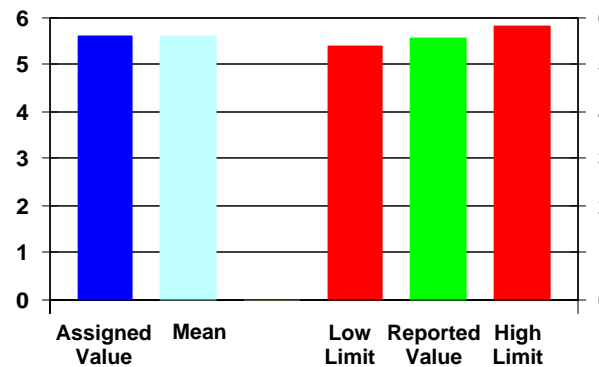
Solids	Total Suspended Solids	Test Method	20004802	SM18thED2540D
Reported Value	55.1			
Assigned Value	61.4			
APG Certified Value	61.4 ± 0.2			
Mean	59.1			
Standard Deviation	3.42			
Acceptance Range	48.8 - 69.4			
Z-Score	-1.17			
Evaluation	Acceptable			
Inter-Laboratory Statistics				
Study Mean	93.7			
Study Standard Deviation	4.65			
Number of Labs Reporting	215			
Your Ranking	149/203			
Laboratory Pass Percentage	96.30%			

Lot Number: 116564



pH	pH	Test Method	20016404	SM1819ED4500H+B
Reported Value	5.58			
Assigned Value	5.61			
APG Certified Value	5.61 ± 0.00198			
Mean	5.61			
Standard Deviation	0.0667			
Acceptance Range	5.41 - 5.81			
Z-Score	-0.450			
Evaluation	Acceptable			
Inter-Laboratory Statistics				
Study Mean	5.62			
Study Standard Deviation	0.0415			
Number of Labs Reporting	310			
Your Ranking	9/39			
Laboratory Pass Percentage	97.70%			

Lot Number: 120125



Detail Report

APG Customer 999999 Laboratory Address
 EPA Lab Code OH99999 Watson
 Primary AA CA12345 500 Laboratory Road
 A2LA Certification: 2430.01 Testville, OH 45714

Nelac Point Of Contact
 Watson

WP July 2007 WP #7007

Study Print Date 01/29/2008

Study Shipment Date 07/02/2007

Study Closing Date 08/15/2007

Total Residual Chlorine		Total Residual Chlorine	Test Method	20020604	SM18thED4500CIG
Reported Value	1.02				
Assigned Value	1.04				
APG Certified Value	1.04 ± 0.00701				
Mean	1.02				
Standard Deviation	0.0909				
Acceptance Range	0.749 - 1.29				
Z-Score	0.0162				
Evaluation	Acceptable				
Inter-Laboratory Statistics					
Study Mean	1.01				
Study Standard Deviation	0.0795				
Number of Labs Reporting	178				
Your Ranking	1/62				
Laboratory Pass Percentage	94.90%				

Lot Number: 120130

