

**REPORT ON THE U.S. GEOLOGICAL SURVEY'S EVALUATION PROGRAM FOR
STANDARD REFERENCE SAMPLES DISTRIBUTED IN OCTOBER 1992
T-121 (TRACE CONSTITUENTS), M-124 (MAJOR CONSTITUENTS),
N-36 (NUTRIENTS), N-37 (NUTRIENTS), P-19 (LOW IONIC STRENGTH)
and Hg-15 (MERCURY)**

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and Hg-15 (MERCURY)

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ABSTRACT

This report presents the results of the U.S. Geological Survey's analytical evaluation program for six standard reference samples--T-121 (trace constituents), M-124 (major constituents), N-36 (nutrients), N-37 (nutrients), P-19 (low ionic strength), and Hg-15 (mercury)--that were distributed in October 1992 to 174 laboratories registered in the U.S. Geological Survey sponsored interlaboratory testing program. Analytical data that were received from 130 of the laboratories were evaluated with respect to: overall laboratory performance and relative laboratory performance for each analyte in the six reference samples. Results of these evaluations are presented in tabular form. Also presented are tables and graphs summarizing the analytical data provided by each laboratory for each analyte in the six standard reference samples. The most probable value for each analyte was determined using nonparametric statistics.

INTRODUCTION

The U.S. Geological Survey (USGS) conducts an interlaboratory evaluation program semiannually. This program provides a variety of reference materials to accomplish quality assurance testing of laboratories and to provide an adequate supply of samples that contribute to quality control programs of participating laboratories. Natural-matrix reference materials are preferred for use in this interlaboratory evaluation program. A series of samples are prepared and distributed each spring and fall. Occasionally, sediment samples are provided.

The program began in 1962 with a single sample containing major constituents that was prepared from distilled water and reagent grade chemicals. Twenty-three USGS laboratories participated in the 1962 determinations of six analytes in the major standard reference sample (SRS). Since that time, objectives of the program have been to:

- (1) evaluate and improve the performance of USGS and other participating laboratories;
- (2) provide a library of carefully prepared, homogeneous, stable reference materials for use in the quality control programs of laboratories;
- (3) identify analytical problem areas;
- (4) identify quality assurance needs with respect to environmental analyses and develop new reference materials to meet these needs; and
- (5) ascertain the accuracy and precision of analytical methods.

One hundred seventy-four USGS and non-USGS laboratories are registered in the program, which can currently provide eight standard reference sample types:

1. Trace constituents.
2. Major constituents.
3. Nutrients.
4. Low ionic strength.
5. Mercury.
6. Water and suspended sediment mixtures for trace metals.
7. Acid mine drainage
8. Sediment (bed material) for major and trace constituents.

When sufficient data are available, a most probable value is statistically determined for each analyte in the SRS.

Though this is not a laboratory certification program, participation in this continuing quality assurance program is mandatory for all laboratories providing water-analyses data for USGS data storage or use (publications). Federal, State, municipal, and university laboratories can participate even though they do not provide data to the USGS. Analyses of these SRS provides the means to alert participating laboratories of possible deficiencies in their analytical operations, and also provides reference materials for in-house quality control programs. Participating laboratories are identified only by a confidential code number.

A library of SRS, from previous evaluations, are available on request. Participating laboratories can request previous SRS for further testing, continuing quality assurance, and quality control programs by contacting:

Chief Laboratory Section, BQA
U.S. Geological Survey
Branch of Quality Assurance
Denver Federal Center
Box 25046 MS 401
Denver, CO 80225

Purpose and Scope

This report summarizes the analytical results submitted by 130 of the 149 laboratories (table 1) that requested and were shipped SRS for the October 1992 evaluation. Not all SRS are requested, nor necessarily analyzed by all the laboratories; nor do all laboratories enrolled in the program participate in each evaluation. Analytical results for the following, which were mailed the week of October 13, 1992, are presented in this report:

T-121	Trace constituents
M-124	Major constituents
N-36	Nutrients--low level concentrations (analytes < 0.5 milligrams per Liter)
N-37	Nutrients--high level concentrations (analytes > 0.5 milligrams per Liter)
P-19	Low ionic strength (precipitation)
Hg-15	Mercury

The USGS requested that analytical results be returned by November 30, 1992, for evaluation and preparation of this report. Each participating laboratory is requested to perform those determinations routinely made on the respective SRS for USGS investigations and to indicate the analytical method used to determine the concentration of each analyte. When analytical-method information was provided, it has been included in the respective data table. The analytical data are presented in ways that allow participants to evaluate data distribution, scatter, outliers, central tendency, bias, skewness, and method relationships.

Table 1.--*Laboratory participants in the analyses of standard reference samples distributed in October 1992*

State	City	Participating Laboratory
Alabama	Tuscaloosa	Geological Survey of Alabama
Alaska	Soldotna	Alaska Department of Game and Fish
Arizona	Yuma	Burns and Roe Services Corporation
Arkansas	Arkadelphia	Ouachita Baptist University
	Little Rock	Arkansas Department of Pollution Control and Ecology
California	Castiac	Castaic Chemical Laboratory, Department of Water Resources
	Davis	University of California - Davis
	La Mesa	San Diego Water Utility
	La Verne	Metropolitan Water District of Southern California
	Lakeside	Helix Water District
	Martinez	Central Contra Costa Sanitary District
	Oakland	East Bay Municipal Utility District
	Riverside	University of California - Riverside
	Riverside	USDA Department of Forestry
	Sacramento	Anlab
	Sacramento	US Bureau of Reclamation
	Sacramento	USGS
	Santa Fe Springs	West Coast Analytical Service, Inc.
	West Sacramento	California Department of Water Resources
Colorado	Alamosa	US Bureau of Reclamation
	Arvada	USGS National Water Quality Laboratory
	Aurora	Core Laboratories, Inc.
	Denver	US Bureau of Reclamation
	Denver	Denver Water Department
	Denver	Metro Wastewater Reclamation
	Englewood	Public Service Company of Colorado
	Fort Collins	City of Fort Collins - Water Quality
	Fort Collins	CSU - Soil Testing Laboratory
	Fort Collins	USDA US Forest Service
	Golden	Huffman Laboratories
	Loveland	Northern Colorado Water Conservation
	Northglenn	Northglenn Water Treatment Plant
	Pueblo	Pueblo Board of Water Works
	Westminster	City of Westminster
Florida	Ocala	USGS
	Orlando	Orange County
	Orlando	Post, Buckley, Schuh, and Jernigan, Inc.
	Ormand Beach	Environmental Laboratory
	Palatka	St. John's River Management District
	Tallahassee	City of Tallahassee
	Tallahassee	Florida Department of Environmental Regulations

Table 1.--*Laboratory participants in the analyses of standard reference samples distributed in October 1992--Continued*

<u>State</u>	<u>City</u>	<u>Participating Laboratory</u>
Florida	Tallahassee	Savannah Laboratories
	Tampa	Hillsborough County Environmental Protection Commission
	West Palm Beach	South Florida Water Management District
Georgia	Atlanta	Georgia Department of Natural Resources
	Atlanta	USGS WRD
	Decatur	Dekalb County Water Quality Laboratory
	Tifton	USDA Agriculture Research Station
Hawaii	Honolulu	University of Hawaii - Manoa, Department of Oceanography
Idaho	Boise	US Bureau of Reclamation
Illinois	Champaign	Illinois Environmental Protection Agency
	Champaign	Hazardous Waste Research Center
	Chicago	Illinois Environmental Protection Agency
Indiana	Indianapolis	Indianapolis Department of Public Works
Iowa	Davenport	City of Davenport
	Des Moines	University Hygienic Laboratory, Des Moines Branch
Kansas	Lawrence	Kansas Geological Survey
	Topeka	Kansas Department of Health and Environment
Kentucky	Frankfort	Division of Environmental Services
	Lexington	Kentucky Geological Survey
	Louisville	Metropolitan Sewer District
Maine	Orono	Sawyer Environmental Center, University of Maine
Maryland	Baltimore	Martel Laboratory Services, Inc.
	Baltimore	Maryland Department of Health and Mental Hygiene
Massachusetts	Wellesley Hills	Massachusetts Department of Public Works
Michigan	Ann Arbor	University of Michigan - Department of Geological Science
	Ann Arbor	University of Michigan - School of Natural Resources
	Houghton	Michigan Technical University
Minnesota	Minneapolis	Braun Intertec Environmental, Inc.
	Minneapolis	University of Minnesota, Department of Geology and Geophysics
	St. Paul	Metropolitan Waste Control Commission
	St. Paul	University of Minnesota, Research Analytical Laboratory
Missouri	Columbia	University of Missouri, School of Natural Resources
	Jefferson City	Missouri Department of Health
Montana	Butte	Montana Bureau of Mines and Geology
Nevada	Boulder City	US Bureau of Reclamation
	Las Vegas	Clark County Sanitation District
	Las Vegas	University of Nevada - Las Vegas
	Reno	Desert Research Institute
	Reno	Nevada State Health Laboratory
	Sutcliffe	Pyramid Lake Fisheries
New Mexico	Albuquerque	City of Albuquerque
	Gallup	BIA - Navajo Area Office, Natural Resources Laboratory
New York	Albany	New York State Department of Health
	Brockport	State University of New York - Brockport
	Buffalo	Erie County Laboratory
	Grahamsville	New York City Department of Environmental Protection
	Hempstead	Nassau County Department of Health
	Milbrook	Institute of Ecosystem Studies
	North Babylon	EcoTest Laboratories, Inc.
	Oakdale	Sufflok County Water Authority
	Port Washington	New York Test Environmental, Inc.
	Rochester	Monroe County
Syracuse	Onondaga County Department of Drainage and Sanitation	

Table 1.--Laboratory participants in the analyses of standard reference samples distributed in October 1992--Continued

<u>State</u>	<u>City</u>	<u>Participating Laboratory</u>
New York	Valhalla	Department of Environmental Protection
	Wantaugh	Cedar Creek Projects Laboratory
North Carolina	Charlotte	Mecklenburg County - Department of Environmental Protection
	Durham	Duke University
	Durham	Department of Water Resources
	Greensboro	City of Greensboro
North Dakota	Bismarck	North Dakota State Water Commission
Ohio	Cincinnati	US EPA
	Columbus	City of Columbus
	Franklin	Franklin EOS
	Medina	Medina County Sanitary Engineer
	Tiffin	Heidelberg College
Oklahoma	Norman	Oklahoma Geological Survey
	Oklahoma City	Oklahoma State Department of Health
Oregon	Corvallis	US Department of Agriculture
	Tigard	Unified Sewerage Agency
Pennsylvania	Harrisburg	Pennsylvania Department of Environmental Resources
	Somerset	Geochemical Testing
Puerto Rico	San Juan	Department of Natural Resources
South Dakota	Brookings	Northern Great Plains Laboratory
	Brookings	SDSU - Water Quality Laboratory
	Vermillion	South Dakota Geological Survey
Tennessee	Chattanooga	Tennessee Valley Authority
Texas	Tyler	Analytical Testing Laboratories
Utah	Salt Lake City	Utah State Department of Health
Vermont	Waterbury	Vermont Agency of Natural Resources
Virginia	Culpepper	ESS Laboratories
	Manassas	Occoquan Watershed Monitoring Lab
	Richmond	Consolidated Laboratory Services
	Virginia Beach	Hampton Road Sanitation District
Washington	Richland	Battelle - Pacific Northwest
West Virginia	Morgantown	University of West Virginia
Wisconsin	Green Bay	Green Bay Metro Sewerage District
	Madison	State Laboratory of Hygiene
	Milwaukee	Milwaukee Metro Sewerage District
Wyoming	Laramie	Wyoming Department of Agriculture

Preparation of Standard Reference Samples

All of the SRS used in this evaluation were prepared by personnel of the USGS in Golden, Colo. and were analyzed for analyte concentrations and physical property values prior to mailing.

Trace constituent sample T-121 was prepared using water collected from the Fall River near Idaho Springs, Colo. The water was pumped through 2- and 0.1- μ m filters, in series, into a 1300-L polypropylene drum. The water was continuously circulated and passed through a 0.1- μ m filter and ultraviolet sterilizer for 24 hours. Following this circulation, the water was acidified to pH 1.5 with nitric acid and then supplemented with reagent-grade chemicals to achieve selected analyte concentrations. The water was circulated an additional 24 hours

prior to bottling. Each sample was bottled after being pumped through an ultraviolet sterilizer and a 0.1- μ m filter. Bottles used were new and recycled, acid leached, deionized-water rinsed, autoclave sterilized, 500-mL polypropylene bottles. Samples not mailed for this SRS evaluation are stored until requested for use.

Major constituent sample M-124 was prepared using water collected from the North Platte River near Ogallala, Nebr. The water was pumped through 5- and 0.45- μ m filters, in series, into a 1300-L polypropylene drum. The water was continuously circulated and passed through a 0.1- μ m filter and ultraviolet sterilizer for 72 hours. The water was not supplemented with reagent-grade chemicals to modify analyte concentrations. Each sample was bottled after being pumped through an ultraviolet sterilizer and a 0.1- μ m filter. Bottles used were new and recycled, acid leached, deionized-water rinsed, autoclave sterilized, 500-mL polypropylene bottles. Samples not mailed for this SRS evaluation are stored until requested for use.

Nutrient samples N-36 and N-37 were prepared using water collected from the Fall River near Idaho Springs, Colo. These samples were prepared the week prior to the mailing for this SRS evaluation. The water was pumped through 2- and 0.1- μ m filters, in series, into a 600-L polypropylene drum and continuously circulated and passed through a 0.1- μ m filter for 48 hours. The desired nutrient concentrations were obtained by adding reagent-grade chemicals. The water was circulated an additional 24 hours. A number of nonpreserved samples were bottled from this solution. The remaining water was preserved with mercuric chloride, to a concentration of 50 mg/L, and with sodium chloride, to a concentration of 450 mg/L. The preserved water was continuously circulated for 24 hours after which preserved samples were bottled. Bottles used were new, amber, acid leached, deionized-water rinsed, 250 mL polyethylene bottles. (Nonpreserved nutrient sample use will not be encouraged because USGS protocol calls for field preservation of nutrient samples with mercuric chloride.) Samples not mailed for this SRS evaluation are refrigerated at 4 °C until requested for use.

Sample P-19 was prepared in a 400-L polypropylene drum using snowmelt collected near Echo Lake, west of Idaho Springs, Colo. The collected snow was allowed to melt: after which the snowmelt was pumped into the drum through 2- and 0.1- μ m filters in series. The snowmelt was continuously mixed for 48 hours while being circulated through a 0.1- μ m filter and an ultraviolet sterilizer. Following this mixing each sample was bottled after being pumped through an ultraviolet sterilizer and a 0.1- μ m filter. Bottles used were acid leached, deionized water rinsed, autoclave sterilized, 500 mL polypropylene bottles. Samples are stored in a warehouse until requested for use.

Sample Hg-15 was prepared using water collected from the Fall River, near Idaho Springs, Colo. The sample was prepared in a 190-L polypropylene drum. The creek water was pumped into this drum through 2- and 0.1- μ m filters in series. The water was continuously circulated and passed through a 0.1- μ m filter and ultraviolet sterilizer for 72 hours. Nitric acid (5-percent, v/v) and dichromate ion (0.05-percent, w/w) were added to stabilize the sample. The desired mercury concentration was obtained by adding a mercury standard solution. Following an additional 24 hours of circulation, each sample was bottled. Bottles used were new, acid leached, deionized-water rinsed, 125 mL glass bottles with

tetrafluoroethylene fluorocarbon resin caps. Samples not mailed for this SRS evaluation are stored until requested for use.

LABORATORY ANALYSES

The participating laboratories were asked to determine analytes which are summarized in table 2. The number of analytes varied from 26 in T-121 (trace constituents) to 1 in Hg-15 (mercury).

Table 2.--Analytes determined in standard reference samples distributed in October 1992

		[mg/L, milligrams per liter, µg/L, micrograms per liter, µS/cm, microsiemens per centimeter at 25 degrees Celsius]					
Analyte or property	Units	T-121	M-124	N-36-37	P-19	Hg-15	
Acidity	Acidity as CaCO ₃	mg/L			X		
Alk	Alkalinity as CaCO ₃	mg/L		X			
Ag	Silver	µg/L	X				
Al	Aluminum	µg/L	X				
As	Arsenic	µg/L	X				
B	Boron	µg/L	X	X			
Ba	Barium	µg/L	X				
Be	Beryllium	µg/L	X				
Ca	Calcium	mg/L	X	X		X	
Cd	Cadmium	µg/L	X				
Cl	Chloride	mg/L		X		X	
Co	Cobalt	µg/L	X				
Cr	Chromium, total	µg/L	X				
Cu	Copper	µg/L	X				
DSRD	Dissolved solids	mg/L		X			
F	Fluoride	mg/L		X		X	
Fe	Iron	µg/L	X				
Hg	Mercury	µg/L				X	
K	Potassium	mg/L	X	X		X	
Li	Lithium	µg/L	X				
Mg	Magnesium	mg/L	X	X		X	
Mn	Manganese	µg/L	X				
Mo	Molybdenum	µg/L	X				
Na	Sodium	mg/L	X	X		X	
NH ₃ as N	Ammonia	mg/L			X		
NH ₃ +Org N as N	Ammonia + Organic N	mg/L			X		
Ni	Nickel	µg/L	X				
NO ₃ +NO ₂ as N	Nitrate + Nitrite	mg/L			X		
Pb	Lead	µg/L	X				
pH		unit		X		X	
PO ₄ as P	Orthophosphate	mg/L			X	X	
total P as P	Phosphorus	mg/L		X	X		
Sb	Antimony	µg/L	X				
Se	Selenium	µg/L	X				
SiO ₂	Silica	mg/L	X	X			
SO ₄	Sulfate	mg/L		X		X	
Sp Cond	Specific conductance	µS/cm		X		X	
Sr	Strontium	µg/L	X	X			
V	Vanadium	µg/L	X	X			
Zn	Zinc	µg/L	X				

Laboratories were requested to identify the method used for each analyte according to table 3 analytical method codes.

Table 3.--Analytical-method codes

Code	Method
0	Other
1	Atomic absorption: direct, air
2	Atomic absorption: direct, nitrous oxide
3	Atomic absorption: graphite furnace
4	Inductively coupled argon plasma
5	Direct current plasma
6	Inductively coupled argon plasma/Mass spectrometry/
7	Ion chromatography
8	Atomic absorption: cold vapor
10	Atomic absorption: extraction [<i>specify chelating agents</i>]
11	Atomic absorption: hydride [<i>specify reducing agent</i>]
12	Flame emission
20	Titration: colorimetric [<i>specify color reagent</i>]
22	Colorimetric: [<i>specify reducing or oxidizing agent/color reagent</i>]
40	Selective ion electrode
41	Electrometric [<i>pH and Specific Conductance</i>]
50	Gravimetric: [<i>specify filtration, evaporation, and so forth</i>]
51	Turbidimetric

Participating laboratories were also asked to use the references listed below to further define the methods.

1. American Public Health Association and others, 1989, Standard methods for the examination of water and wastewater 17th ed: Washington, D.C., American Public Health Association, 1527p.
2. American Society for Testing and Materials, Annual book of ASTM standards: Philadelphia, v. 11.01, and v. 11.02.
3. Kopp, J.F., and McKee, G.F., 1979, Methods for chemical analysis of water and wastes: Cincinnati, U.S. Environmental Protection Agency, EPA 600/4-79-020, rev. 1983, 460 p.
4. Fishman, M.J., and Friedman, L.C., eds., 1989. Methods for determination of inorganic substances in water and fluvial sediments (3d ed.): U.S. Geological Survey Techniques of Water-Resources Investigations, Book 5, Chapter A1, 545 p.
5. Miscellaneous manufacturer's instrument manuals or references.

LABORATORY PERFORMANCE RATINGS

To facilitate interlaboratory performance comparisons, laboratory performance ratings, based on the analyses reported for each SRS, are included in tables 4 through 10 in this report. Averages of the analyte ratings and the number of analyte values reported for each SRS are given for each participating laboratory. Laboratory performance for each analyte is rated on a scale 4 to 0, based on the absolute Z-value, as listed below:

<u>Rating</u>	<u>Absolute Z-value</u>
4 (Excellent)	0.00 to 0.50
3 (Good)	0.51 to 1.00
2 (Satisfactory)	1.01 to 1.50
1 (Questionable)	1.51 to 2.00
0 (Poor)	Greater than 2.00

Overall laboratory performance ratings greater than 2.4 are considered satisfactory. Overall laboratory performance ratings between 2.0 and 2.35 are considered marginal; those less than 2.0 are considered poor.

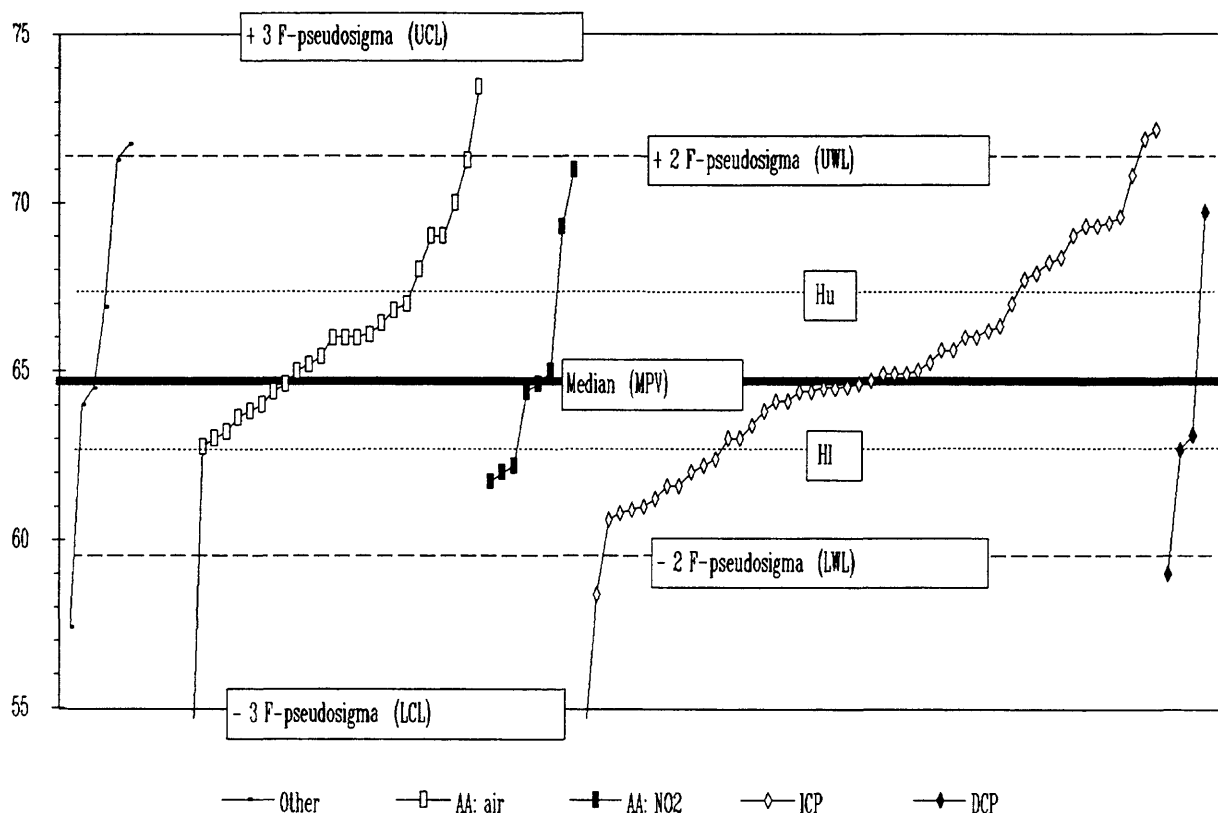
STATISTICAL PRESENTATION OF DATA

Data in this report have been evaluated using nonparametric statistics as described by Hoaglin and others (1983). This statistical approach is a resistant statistic because the median is not influenced by outliers as is the mean in traditional statistics.

Analytical data for each analyte are presented in tabular and graphical forms in tables 11 through 17. Tabulated data for each analyte include the laboratory code number, reported values, analytical method, most probable value (MPV), number of reported values - excluding less than values (N), data range, Z-value, and the F-pseudostandard deviation. (The Z-value is equivalent to the Z-score of traditional statistics, being the number of deviations the reported value is from the MPV. The F-pseudostandard deviation is equivalent to the standard deviation (σ) of traditional statistics when the data has a Gaussian distribution.) If an analyte has a sufficient number of determinations by a given method, usually 10, the σ for that analytical method is reported in the block of data listed for each analyte.

The median value is considered the MPV. Reported values of "less than" are used to establish the median, but are not considered in determining the data range. The median (midpoint) divides the ordered data into halves and is designated the MPV. The hinges include the middle 50-percent of the data and are the mid-values of the upper and lower halves of the data. (The hinges are similar to quartiles, but are not mathematically equivalent.) The range of data between the upper hinge (Hu) and the lower hinge (Hl), the hinge spread (H-spr), is used to calculate the F-pseudostandard deviation, the 95-percent confidence level MPV, the laboratory performance rating, the upper warning level (UWL) and lower warning level (LWL), the upper control level (UCL) and the lower control level (LCL). The F-pseudostandard deviation is calculated by comparison of the H-spr value to the Gaussian distribution relation; 67.45 percent of the data "hinges" between plus and minus 1σ , resulting in a H-spr of $2 \times 0.6745 = 1.349\sigma$. This relation allows the calculation of the F-pseudostandard deviation = (H-spr)/1.349. The 95-percent confidence level MPV is expressed as the median $\pm (1.96 \times \text{F-pseudostandard deviation})/\sqrt{N}$. Laboratories reporting "less than" values are not performance rated unless their reported "less than" values are greater than two Z-values from the MPV.

The graphical plot of the reported data is shown in figure 1. The upper and lower boundaries of the graphical plots generally are +3 and -3 F-pseudostandard deviations from the median. (Computer-program scaling constraints do not permit these boundaries to always be graphed at exactly these values.) The graphical plot is a modified control chart with reported values grouped by analytical method in ascending order of value. Lines designate the MPV, Hu, Hl, and the (UWL) and (LWL) at +2 and -2 F-pseudostandard deviations, respectively. "Less than" values are not plotted.



NOTE: vertical scale is the concentration value of the individual analyte in appropriate units (see table 2.) Methods shown are defined in Tables 3 and 11 through 18.

Figure 1.--Statistical parameters shown on reported-data graphs

DISCUSSION

Users need to review the tabulated and graphical plots for individual analytes because these tables and plots give indications of the method and instrumentation precision, and help provide additional evidence as to the desirability of upgrading methods or equipment or both.

REFERENCE

Hoaglin, D.C., Mosteller, F., and Tukey, J.W., eds., 1983, Understanding Robust and Exploratory Data Analysis: John Wiley and Sons, Inc., 447p.

Table 4. --Overall laboratory performance ratings for standard reference water samples distributed in October 1992

(Lab, laboratory number; OWR, overall weighted rating for all sample types; OLR, overall laboratory rating for reported values of a sample type; V/72, number of reported values of 72 possible values from all sample types; V/26, V/16, V/10, V/9 and V/1, number of reported values possible for T-121, M-124, N-36, N-37, P-19 and Hg-15, respectively)

Standard Reference Sample		T-121		M-124		N-36		N-37		P-19		Hg-15		
Lab	OWR	V/72	OLR	V/26	OLR	V/16	OLR	V/10	OLR	V/10	OLR	V/9	OLR	V/1
1	3.5	62	3.6	26	3.4	16	3.8	5	3.8	5	3.3	9	4	1
2	3.4	11	4.0	1	1.5	2					3.8	8		
3	2.6	54	2.7	20	3.0	15	1.6	5	2.2	5	2.1	8	3	1
5	3.2	25	3.7	13	2.8	12								
6	2.5	25	3.0	9	2.6	8	1.5	4	2.3	4				
8	1.9	38	2.3	18	1.6	14	0.0	3	2.3	3				
9	2.5	32	2.4	13	2.7	10	2.8	4	2.2	5				
10	3.5	23			3.2	13	4.0	5	3.8	5				
11	2.2	59	1.9	26	3.2	13	0.8	5	1.4	5	2.9	9	0	1
12	2.5	31	2.5	10	2.6	12	2.7	3	2.6	5			2	1
13	2.9	39	2.7	15	2.8	13	3.2	5	3.8	5			3	1
15	2.6	67	3.0	26	2.0	15	2.4	9	2.5	9	2.9	8		
16	2.6	38	2.8	13	2.8	14	2.4	5	1.4	5			4	1
18	2.7	49	2.0	22	3.2	16	3.0	5	3.2	5			4	1
19	2.8	29	2.1	9	2.8	12	3.3	4	3.8	4				
20	3.4	12					4.0	6	2.7	6				
21	3.1	8	4.0	1			3.0	7						
22	4.0	2					4.0	1	4.0	1				
23	2.6	47	2.5	20	2.0	13	4.0	4	3.2	5	3.2	5		
24	3.2	40	2.9	26	3.8	13							3	1
25	2.6	37	2.7	14	2.5	15	1.8	4	3.0	4				
26	2.5	15	3.0	4	2.3	11								
28	0.8	45	1.0	21			0.0	8	0.6	8	1.3	7	4	1
29	2.0	36	2.1	15	2.3	12	0.0	4	1.8	4			3	1
30	3.4	25	3.7	20	2.2	5								
32	2.4	44	2.4	23	2.6	14	1.7	3	2.3	3			3	1
33	2.9	37	3.2	11	2.8	12	1.0	3	1.0	3	4.0	8		
35	4.0	2	4.0	2										
36	2.0	34	2.0	20	2.0	13							4	1
37	2.8	44	3.4	20	3.3	12	1.3	3	1.7	3	1.0	5	3	1
38	3.3	26			3.0	9	3.0	5	3.8	5	3.7	7		
39	2.6	33	2.4	19	2.9	9					2.8	5		
40	3.6	14			3.6	14								
41	0.6	5			0.0	1			1.0	3	0.0	1		
42	2.8	41	3.1	22	2.3	12	3.0	2	3.0	2	2.7	3		
43	3.3	20	3.4	7	3.3	11	2.0	1	4.0	1				
45	3.3	49	2.8	22	3.7	14	3.7	6	3.7	6			4	1
46	3.3	48	3.2	17	3.0	12	3.8	5	3.8	5	3.5	8	4	1
48	2.3	50	2.3	20	2.9	12	2.8	5	2.2	5	1.1	8		
50	3.3	27	3.8	14	2.8	13								
51	2.7	32	2.3	15	3.2	11	2.8	5					3	1
52	2.8	58	3.0	23	2.9	14	2.4	8	2.1	8	2.5	4	4	1
53	1.5	2					0.0	1	3.0	1				
54	3.6	16	3.5	6	3.6	10								
55	3.0	52	2.9	25	2.9	16	3.4	5	3.4	5			4	1
56	2.7	13			2.4	9	3.3	4						
57	2.0	35	2.4	16	2.0	14			0.8	5				
58	1.8	33	2.0	11	1.3	9	1.8	4	0.0	4	3.8	5		
59	3.0	33	3.6	16	2.2	6	2.0	5	3.2	5			3	1
61	2.7	48	2.4	16	2.7	15	3.6	5	3.6	5	1.8	6	4	1
63	2.6	54	2.8	24	2.5	14	3.3	3	2.4	5	1.3	7	4	1
64	3.2	21	3.8	5	2.7	9					3.6	7		
68	2.3	47	2.1	24	2.2	12	3.0	5	2.6	5			2	1
69	3.1	30	2.9	16	3.4	11	3.0	1	4.0	1			3	1
70	3.0	38	3.3	19	3.2	14	1.5	2	0.5	2			3	1
73	2.3	7	2.3	7										
74	3.0	58	2.9	23	2.7	16	3.8	5	3.0	5	3.4	8	4	1
75	3.3	31	3.4	11	3.3	11	2.8	4	3.8	4			3	1
76	3.1	19	3.5	8	2.3	7	4.0	2	3.0	2				
78	2.1	51	2.7	20	2.0	13	1.7	3	1.2	6	1.8	9		
79	1.5	15	1.9	8	2.0	3	0.5	2	0.5	2				
80	2.4	5	2.4	5										
81	1.7	23			1.5	13	2.2	5	1.8	5				
83	2.8	23	2.7	9	3.2	10	3.0	2	1.0	2				
84	1.8	17	1.2	5	2.8	8	0.0	1	1.0	3				

Table 4. --Overall laboratory performance ratings for standard reference water samples distributed in October 1992
 --Continued

Standard Reference Sample	T-121			M-124			N-36		N-37		P-19		Hg-15	
	Lab	OWR	V/72	OLR	V/26	OLR	V/16	OLR	V/10	OLR	V/10	OLR	V/9	OLR
85.	3.2	37	2.8	14	3.5	13	3.8	5	3.4	5				
87.	2.6	38	2.6	15	2.8	12	1.8	5	3.0	5				3 1
88.	0.6	12					0.0	6	1.2	6				
89.	3.1	55	2.0	15	3.7	13	3.8	9	3.6	9	3.1	8	3	1
90.	2.2	27	1.9	13	0.8	5	3.5	4	3.8	4			1	1
91.	2.9	17	3.5	2	2.8	6	2.8	4	2.8	4			4	1
92.	2.4	44	2.4	14	2.3	12	2.8	5	3.4	5	1.5	8		
94.	3.2	38	3.2	18	3.4	12	3.3	4	2.8	4				
96.	3.3	33	3.5	15	2.7	7	3.4	5	3.4	5			4	1
97.	2.6	57	2.6	24	2.1	15	2.9	9	3.1	8			3	1
100.	2.7	53	2.3	26	3.1	16	2.8	5	3.0	5			3	1
101.	2.9	33	3.0	16	3.1	10					2.4	7		
102.	2.6	15			2.8	5	3.0	5	2.0	5				
103.	2.0	31	2.1	23	1.5	8								
104.	3.3	17	3.0	1	3.3	4	3.3	6	3.3	6				
105.	3.0	56	3.5	24	2.6	14	2.4	5	2.8	5	2.4	7	4	1
107.	2.6	25	2.9	15	1.8	6	2.8	4						
108.	2.1	16	2.1	8	4.0	1	1.3	3	2.0	3			2	1
109.	3.1	24	2.7	12	3.5	11							4	1
111.	2.7	26	3.7	10	2.2	10	2.0	3	1.7	3				
113.	2.7	42	2.6	18	3.4	14	2.0	4	2.0	5			4	1
114.	1.4	29	0.8	13	1.9	10	2.3	3	1.3	3				
116.	2.6	11	2.7	6	2.6	5								
118.	1.9	27	4.0	1	0.5	6	1.9	10	2.5	10				
119.	3.1	56	3.4	21	3.4	14	2.4	10	2.7	10			3	1
120.	2.6	41	2.1	20	3.1	11	3.0	5	3.4	4			4	1
121.	3.0	30	3.3	22	2.1	8								
122.	2.4	27	3.0	15	1.8	12								
123.	1.9	28	1.9	8	2.5	6	0.5	4	1.0	4	3.0	6		
126.	3.5	20	2.8	4	3.6	16								
127.	3.4	51	3.5	26	3.1	14	3.4	5	3.8	5			4	1
128.	1.0	1											1	1
129.	2.2	40	0.9	7	1.8	13	3.0	10	2.9	10				
131.	3.0	21	3.1	9	2.8	12								
133.	2.0	43	1.9	22	2.4	8	2.5	6	1.4	6			2	1
134.	3.3	69	2.9	24	3.6	16	3.5	10	3.6	10	3.3	8	3	1
136.	2.2	41	2.8	20	2.3	11					0.9	9	0	1
138.	3.4	49	3.6	24	3.2	14	3.2	5	3.2	5			4	1
139.	2.1	35	1.6	14	1.4	10	3.6	5	3.8	5			0	1
140.	2.9	33	2.9	12	3.2	11	2.0	5	3.2	5				
141.	3.1	58	3.2	25	3.1	16	3.4	5	3.8	5	2.0	6	4	1
144.	2.0	11	2.1	7	1.3	3							3	1
145.	2.3	57	1.8	16	1.8	15	3.2	10	3.1	10	1.7	6		
146.	2.2	41	2.1	24	2.0	12	3.5	2	3.0	2			2	1
149.	2.6	28	2.7	15	2.5	6	2.3	3	2.3	3			4	1
151.	3.3	21	3.5	8	3.4	11	4.0	1	0.0	1				
153.	2.4	21	3.2	10	1.7	11								
155.	2.4	25	2.0	4	2.3	8	3.6	5	2.6	5	1.0	3		
158.	2.5	25	1.6	5	3.0	6	2.5	4	2.0	4	3.2	6		
161.	1.8	27	1.8	9	1.7	11	2.0	3	2.0	4				
164.	2.3	10	2.8	4							2.0	6		
167.	3.0	45	2.5	16	3.2	13	3.5	6	3.5	6	2.7	3	1	1
179.	1.8	23	1.8	15	1.9	7							2	1
180.	3.0	39	2.9	16	2.9	13	3.6	5	3.2	5				
182.	1.0	50	0.7	19	1.3	14	0.5	8	1.1	8			3	1
183.	1.9	25	2.7	10	1.6	9	1.7	3	0.7	3				
185.	1.7	3	0.5	2			4.0	1						
191.	2.7	22	3.2	9	2.9	8	0.5	2	1.5	2	4.0	1		
193.	2.6	15	2.5	10	2.3	3	4.0	1	3.0	1				
196.1	2.5	34	2.9	18	0.9	7			1.0	2	4.0	6	0	1
196.2	2.8	6	2.8	6										
197.	2.7	15			2.6	5	1.3	3	2.7	3	4.0	4		
198.	2.4	10					2.8	5	2.0	5				
201.	1.4	25	1.0	9	1.9	9	0.0	3	2.3	4				
202.	2.6	40	2.9	18	2.9	9	2.0	5	1.8	5	1.7	3		
204.	1.6	34	1.6	18	1.6	11	1.6	5						

Table 5. --Laboratory performance ratings for standard reference water sample T-121 (trace constituents)

(MPV, most probable value; ug/L, micrograms per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/26, number of reported values of 26 possible values; RV, reported value; <, less than)

Rating	Absolute Z-value	Rating	Absolute Z-value
4 (Excellent)	0.00 - 0.50	1 (Questionable)	1.51 - 2.00
3 (Good)	0.51 - 1.00	0 (Poor)	greater than 2.00
2 (Satisfactory)	1.01 - 1.50	NR (Not Rated)	

Analyte = Ag (Silver)		Al (Aluminum)		As (Arsenic)		B (Boron)		Ba (Barium)		Be (Beryllium)				
MPV = 0.90 µg/L		85.5 µg/L		8.00 µg/L		90 µg/L		46.3 µg/L		10.6 µg/L				
F-pseudosigma = 0.36		12.9		1.11		9		4.3		1.0				
Lab	OLR	V/26	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating		
1	3.6	26	0.90	4	80.0	4	9.20	2	93	4	46.3	4	11.2	3
2	4.0	1												
3	2.7	20	< 5	NR	80.0	4	6.50	2	80	2	44.0	3	10.0	3
5	3.7	13			83.4	4	8.45	4	89	4	46.6	4		
6	3.0	9	0.70	3							44.1	3	12.0	2
8	2.3	18			102.3	2	4.00	0			39.6	1	12.3	1
9	2.4	13												
11	1.9	26	1.60	1	80.0	4	5.89	1	100	2	50.0	3	10.0	3
12	2.5	10	1.20	3	< 100	NR	< 10	NR					< 20	NR
13	2.7	15	< 2	NR	97.3	3	8.00	4			51.3	2		
15	3.0	26	0.61	3	82.8	4	7.00	3	84	3	45.0	4	11.9	2
16	2.8	13	< 7	NR	< 300	NR	7.00	3	< 200	NR	47.0	4	10.0	3
18	2.0	22	2.00	0	86.6	4	9.23	2	91	4	42.3	3	9.4	2
19	2.1	9									43.3	3		
21	4.0	1												
23	2.5	20	1.14	3	80.2	4	8.25	4			50.8	2	11.4	3
24	2.9	26	0.90	4	73.0	3	3.70	0	95	3	45.9	4	10.4	4
25	2.7	14			60.5	1			91	4	45.3	4	10.2	4
26	3.0	4	< 10	NR	< 250	NR	8.00	4	< 100	NR	< 250	NR		
28	1.0	21	< 100	NR	100.0	2	8.00	4	150	0	50.0	3	< 100	NR
29	2.1	15	0.80	4	200.0	0	9.80	1			50.0	3		
30	3.7	20	0.88	4	85.2	4	8.51	4			46.6	4	10.6	4
32	2.4	23	1.60	1			8.70	3			45.5	4	14.3	0
33	3.2	11			87.0	4					45.0	4		
35	4.0	2					8.23	4						
36	2.0	20	1.74	0	75.8	3	4.92	0			52.8	1	11.0	4
37	3.4	20	0.80	4	90.0	4	8.63	3	84	3	44.1	3	12.5	1
39	2.4	19			98.0	3	7.60	4	98	3	49.0	3	13.0	0
42	3.1	22			90.0	4	7.40	3	90	4	43.0	3		
43	3.4	7												
45	2.8	22	0.58	3	88.7	4	6.40	2	105	1	47.5	4	11.4	3
46	3.2	17	0.78	4	97.4	3	6.60	2	40	0	47.5	4	11.2	3
48	2.3	20	0.80	4	111.0	1	7.10	3	100	2	51.0	2	11.6	3
50	3.8	14	< 5	NR	85.0	4	8.00	4			< 50	NR	11.0	4
51	2.3	15					6.60	2						
52	3.0	23	< 1	NR	64.0	1	8.50	4	< 170	NR	43.5	3	11.8	2
54	3.5	6												
55	2.9	25	1.00	4	75.0	3	8.50	4	67	0	46.3	4	10.8	4
57	2.4	16	1.30	2	< 250	NR	8.00	4	200	0	50.0	3	9.0	1
58	2.0	11	1.00	4			6.10	1	88	4			3.3	0
59	3.6	16	< 10	NR	< 100	NR	7.00	3			46.0	4		
61	2.4	16	< 5	NR	70.0	2	8.50	4	92	4	42.7	3	11.0	4
63	2.8	24	1.10	3	143.0	0	8.00	4	85	3	115.0	0	10.1	3
64	3.8	5												
68	2.1	24	0.85	4	250.0	0	7.50	4			48.0	4	10.0	3
69	2.9	16	0.94	4	90.0	4	8.20	4			58.0	0	10.5	4
70	3.3	19	3.10	0	84.0	4	8.20	4	88	4	47.0	4	10.3	4
73	2.3	7			92.0	4								
74	2.9	23	0.59	3	77.0	3	8.60	3			42.0	2	10.2	4
75	3.4	11					7.65	4			49.2	3		
76	3.5	8					8.77	3			45.5	4		
78	2.7	20	1.50	1	79.2	4	8.00	4			51.1	2	11.7	2
79	1.9	8	43.00	0			6.40	2						
80	2.4	5	< 1	NR			9.00	3						
83	2.7	9												

Table 5. --Laboratory performance ratings for standard reference water sample T-121
(trace constituents)--Continued

			Analyte = Ag (Silver)		Al (Aluminum)		As (Arsenic)		B (Boron)		Ba (Barium)		Be (Beryllium)	
			MPV = 0.90 µg/L		85.5 µg/L		8.00 µg/L		90 µg/L		46.3 µg/L		10.6 µg/L	
			F-pseudsigma = 0.36		12.9		1.11		9		4.3		1.0	
Lab	OLR	V/26	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
84.	1.2	5												
85.	2.8	14	< 5	NR	90.0	4	7.50	4						
87.	2.6	15	< 2	NR			7.00	3			66.0	0		
89.	2.0	15	4.57	0	137.0	0	7.22	3			116.0	0		
90.	1.9	13	0.56	3			8.70	3			80.4	0		
91.	3.5	2												
92.	2.4	14												
94.	3.2	18	< 4	NR			7.83	4			44.6	4	10.3	4
96.	3.5	15	1.34	2			8.06	4			47.0	4		
97.	2.6	24	1.02	4	118.0	0	8.62	3			44.4	4	8.8	1
100.	2.3	26	0.89	4	73.4	3	9.50	2	140	0	46.3	4	10.4	4
101.	3.0	16			147.0	0					45.2	4		
103.	2.1	23	< 5	NR	85.0	4	7.00	3	60	0	38.0	1	10.0	3
104.	3.0	1												
105.	3.5	24	1.20	3	85.0	4	8.00	4			44.0	3	10.3	4
107.	2.9	15	0.90	4	70.2	2	8.46	4			44.5	4		
108.	2.1	8	0.50	2			7.00	3			49.0	3		
109.	2.7	12					6.96	3						
111.	3.7	10												
113.	2.6	18	0.58	3	83.8	4	7.75	4			57.8	0		
114.	0.8	13	< 10	NR	20.0	0							20.0	0
116.	2.7	6												
118.	4.0	1												
119.	3.4	21	1.00	4	102.0	2	7.50	4	88	4	48.0	4	8.2	0
120.	2.1	20	0.78	4	85.5	4	7.94	4			56.1	0	10.8	4
121.	3.3	22	0.55	3	89.0	4			90	4	46.0	4		
122.	3.0	15	< 1	NR	100.0	2			60	0	44.8	4		
123.	1.9	8					5.85	1						
126.	2.8	4	< 10	NR							< 200.0	NR		
127.	3.5	26	0.55	3	69.6	2	7.74	4	90	4	45.6	4	10.6	4
129.	0.9	7							200	0				
131.	3.1	9	< 10	NR	< 100	NR	< 50	NR	88	4	45.0	4		
133.	1.9	22	3.20	0	93.0	3	7.46	4			43.7	3	10.7	4
134.	2.9	24	1.30	2	93.7	3	7.60	4	82	3	48.6	3	8.5	0
136.	2.8	20			89.0	4	8.00	4			44.0	3		
138.	3.6	24	1.03	4	100.6	2	8.80	3			45.6	4	10.5	4
139.	1.6	14			51.0	0	8.98	3						
140.	2.9	12												
141.	3.2	25	1.00	4	82.2	4	8.50	4	95	3	45.0	4	11.7	2
144.	2.1	7	0.20	1										
145.	1.8	16			80.0	4	< 21	NR	65	0	43.7	3	9.9	3
146.	2.1	24	< 10	NR	103.0	2	8.00	4	95	3	48.9	3	10.6	4
149.	2.7	15	0.78	4	80.0	4	6.40	2			66.0	0	10.4	4
151.	3.5	8			80.0	4								
153.	3.2	10	0.81	4							47.0	4		
155.	2.0	4												
158.	1.6	5												
161.	1.8	9			123.0	0			4300	0	46.0	4		
164.	2.8	4												
167.	2.5	16	< 2	NR	< 100	NR	10.00	1	86	4	0.0	0	11.0	4
179.	1.8	15	17.80	0			6.80	2					9.3	2
180.	2.9	16	< 4	NR	57.1	0	< 18	NR	96	3	47.2	4	10.5	4
182.	0.7	19	< 1	NR	< 1000	NR	8.00	4	< 100	NR	100.0	0	10.0	3
183.	2.7	10			92.9	3	7.40	3			32.2	0		
185.	0.5	2			108.0	1								
191.	3.2	9									451.0	0		
193.	2.5	10	< 1	NR			7.00	3			42.0	2		
196.1	2.9	18	0.57	3	86.4	4	8.04	4			44.0	3	12.7	0
196.2	2.8	6	0.76	4			9.00	3						
201.	1.0	9	< 2	NR										
202.	2.9	18	0.54	2	80.0	4	7.80	4					12.0	2
204.	1.6	18	1.20	3	78.8	3	6.50	2			58.7	0		

Table 5. --Laboratory performance ratings for standard reference water sample T-121
(trace constituents)--Continued

(MPV, most probable value; ug/L, micrograms per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/26, number of reported values of 26 possible values; RV, reported value; <, less than)

Rating	Absolute Z-value	Rating	Absolute Z-value
4 (Excellent)	0.00 - 0.50	1 (Questionable)	1.51 - 2.00
3 (Good)	0.51 - 1.00	0 (Poor)	greater than 2.00
2 (Satisfactory)	1.01 - 1.50	NR (Not Rated)	

Analyte =	Ca (Calcium)	Cd (Cadmium)	Co (Cobalt)	Cr (Chromium)	Cu (Copper)	Fe (Iron)	K (Potassium)							
MPV =	5.13 mg/L	7.17 µg/L	4.6 µg/L	16.0 µg/L	4.80 µg/L	140 µg/L	0.45 mg/L							
F-pseudostigma =	0.28	1.05	0.7	1.6	0.67	12	0.06							
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating						
1	5.18	4	7.30	4	4.8	4	16.3	4	4.90	4	142	4	0.43	4
2														
3	5.20	4	7.80	3	< 10	NR	14.0	2	< 5	NR	130	3	0.36	2
5	5.26	4					16.8	3			149	3		
6			8.14	3			16.1	4	4.55	4				
8	5.36	3	6.10	2	3.9	3	9.1	0	3.60	1	143	4	0.51	3
9	4.30	0	6.80	4			17.1	3	4.00	2	135	4	0.38	2
11	5.07	4	3.74	0	6.0	1	20.0	0	3.00	0	150	3	0.44	4
12	5.00	4	7.10	4			< 20	NR	6.00	1	140	4	0.30	0
13	4.92	3	8.86	1			12.8	0	< 50	NR	134	3	0.41	3
15	5.08	4	6.87	4	4.5	4	16.8	3	2.70	0	128	2	0.47	4
16	4.90	3	8.00	3	< 10	NR	19.0	1	< 10	NR	138	4	0.40	3
18	5.60	1	6.98	4	4.0	3	13.0	1	4.40	3	117	1	0.70	0
19	4.85	3	5.50	1			14.0	2			132	3		
21											144	4		
23	4.86	3	5.72	2			15.6	4	3.70	1	122	1	0.43	4
24	5.23	4	7.50	4	5.4	2	15.5	4	4.80	4	137	4	0.25	0
25	5.58	1					17.1	3			129	3		
26			7.00	4	< 10	NR	< 20	NR	< 100	NR	< 200	NR		
28	10.40	0	10.00	0	< 100	NR	30.0	0	20.00	0	170	0	2.10	0
29			7.20	4			14.5	3	< 4	NR	125	2		
30			7.34	4	4.6	4	16.0	4	4.87	4	148	3		
32	5.30	3	7.90	3	4.6	4	16.0	4	5.60	2	205	0	0.50	3
33	5.06	4									135	4	0.48	3
35														
36	4.79	2	7.05	4	7.9	0	18.5	1	13.30	0	130	3	0.32	0
37			7.10	4	4.8	4	17.0	3	4.93	4	150	3		
39	5.97	0	7.20	4			16.0	4	6.00	1				
42	5.10	4	5.20	1			16.0	4	4.40	3	142	4	0.70	0
43	5.10	4									148	3	0.40	3
45	5.04	4	7.13	4			14.7	3	4.73	4	134	3	0.44	4
46	5.31	3	7.10	4	< 10	NR	14.4	2			147	3	0.49	3
48	5.31	3	7.70	3	< 10	NR	16.4	4	4.80	4	160	1	640	0
50			7.00	4	5.0	3	15.0	3	5.00	4	129	3		
51	5.26	4	10.00	0	4.0	3	8.0	0	4.00	2	141	4	1.54	0
52	4.90	3	6.51	3	4.1	3	17.1	3	4.94	4	133	3	0.45	4
54	5.10	4									140	4	0.45	4
55	5.18	4	8.60	2	4.0	3	16.5	4	4.10	2	140	4	0.43	4
57	5.00	4	7.50	4	< 100	NR	15.0	3	< 20	NR	120	1	0.50	3
58							17.4	3	4.40	3	86	0		
59	5.20	4	7.00	4			16.0	4	5.00	4	145	4	0.45	4
61	4.90	3	9.60	0	< 5	NR	13.2	1	< 5	NR	126	2	< 1	NR
63	5.39	3	7.70	3	46.0	0	16.4	4	5.00	4	137	4	0.52	2
64	5.04	4											0.42	4
68	4.90	3	4.80	0	3.1	0	26.0	0	6.30	0	140	4	1.00	0
69	4.80	2	7.03	4			15.8	4	6.00	1	144	4	0.50	3
70	5.26	4	5.05	0	< 10	NR	16.5	4	< 10	NR	120	1	< 0.5	NR
73			7.00	4			20.6	0	8.00	0	158	1		
74	4.80	2	6.00	2	4.0	3	14.0	2	5.00	4	130	3	0.48	4
75	4.78	2					16.0	4	4.40	3			< 1	NR
76			7.52	4			17.4	3			144	4		
78	4.65	1	5.40	1			16.3	4	3.67	1	140	4	0.46	4
79			10.60	0			16.0	4	3.00	0				
80							21.0	0	4.00	2				
83	5.27	3							4.50	4	138	4	0.48	4

Table 5. --Laboratory performance ratings for standard reference water sample T-121 (trace constituents)--Continued

Analyte =	Ca (Calcium)		Cd (Cadmium)		Co (Cobalt)		Cr (Chromium)		Cu (Copper)		Fe (Iron)		K (Potassium)	
MPV =	5.13 mg/L		7.17 µg/L		4.6 µg/L		16.0 µg/L		4.80 µg/L		140 µg/L		0.45 mg/L	
F-pseudosigma =	0.28		1.05		0.7		1.6		0.67		12		0.06	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
84.	3.90	0									150	3		
85.	5.22	4	12.00	0			< 20	NR	< 5	NR	143	4	0.51	3
87.	6.40	0	0.01	0			13.2	1	< 5	NR	157	2	0.44	4
89.	4.69	1	6.22	3	< 10	NR	15.0	3	< 10	NR	131	3	0.50	3
90.			8.40	2			32.1	0	6.10	1	138	4		
91.											144	4		
92.	4.55	0	7.00	4	5.0	3	16.0	4	5.00	4	106	0	1.55	0
94.	5.06	4	6.58	3	4.1	3	15.5	4	8.00	0	144	4	0.46	4
96.	4.98	3	7.23	4			16.5	4	4.48	4	143	4	0.49	3
97.	4.92	3	5.94	2	4.4	4	14.1	2	4.66	4	140	4	0.36	2
100.	5.41	2	7.20	4	5.4	2	15.8	4	12.20	0	138	4	0.44	4
101.	5.15	4	7.70	3			16.5	4	4.20	3	149	3	0.50	3
103.	4.90	3	6.00	2	4.0	3	12.3	0	4.00	2	130	3	0.40	3
104.														
105.	4.73	2	7.30	4	< 10	NR	17.3	3	5.00	4	133	3	0.43	4
107.	9.29	0	8.52	2			14.9	3	4.75	4	135	4		
108.			8.00	3			14.0	2	6.00	1				
109.	5.60	1	6.77	4							149	3	0.42	4
111.	5.26	4	6.20	3			16.4	4	4.30	3			0.48	4
113.	5.20	4	6.90	4			16.9	3	5.02	4	0	0	0.52	2
114.	3.00	0	< 10	NR			80.0	0	20.00	0	150	3	0.22	0
116.	5.89	0									146	3		
118.														
119.	5.15	4	7.30	4			15.5	4	5.00	4	140	4	0.43	4
120.	4.54	0	7.78	3			14.7	3	4.26	3	118	1	0.25	0
121.	5.20	4	7.00	4	7.0	0	18.0	2	5.40	3	150	3	0.44	4
122.	5.24	4	6.47	3			15.6	4	4.66	4	115	0	0.46	4
123.	4.98	3					16.7	4	4.40	3			0.28	0
126.	5.00	4					26.0	0	< 20	NR				
127.	5.14	4	7.10	4	4.2	3	15.8	4	4.96	4	140	4	0.54	2
129.	9.00	0									135	4	0.20	0
131.	4.90	3	< 10	NR	< 10	NR	< 10	NR	< 10	NR	140	4	< 2	NR
133.	4.92	3	8.26	2	12.5	0	14.6	3	7.97	0	147	3	0.37	2
134.	4.96	3	7.20	4	4.6	4	16.6	4	4.40	3	131	3	0.70	0
136.	4.60	1	10.00	0	5.0	3	11.0	0	4.00	2	150	3	0.40	3
138.	5.26	4	8.30	2	4.5	4	15.3	4	4.80	4	136	4	0.45	4
139.	5.93	0	9.22	1					4.70	4	120	1	0.54	2
140.	5.00	4	7.60	4			17.5	3	5.30	3	140	4	0.64	0
141.	5.25	4	6.70	4	5.1	3	14.4	2	5.90	1	136	4	0.42	4
144.			6.30	3			15.0	3	5.20	3				
145.	5.11	4	3.18	0	< 5	NR	7.6	0	< 3	NR	126	2	< 0.1	0
146.	5.83	0	8.60	2	4.5	4	16.1	4	12.00	0	160	1	1.56	0
149.			7.60	4			14.5	3	< 9	NR	155	2		
151.	5.10	4											0.42	4
153.	5.10	4	8.60	2			16.9	3	4.60	4			0.43	4
155.	5.75	0									131	3		
158.			6.00	2			11.4	0	4.00	2				
161.							16.0	4	5.00	4	154	2		
164.	5.39	3											0.40	3
167.	5.00	4	8.00	3	< 40	NR	15.0	3	< 20	NR	0	0	< 1	NR
179.	8.00	0	7.10	4			16.5	4	2.40	0			0.40	3
180.	5.54	2	6.50	3	4.1	3	16.0	4	5.00	4	132	3	0.55	1
182.	6.90	0	10.00	0	10.0	0	10.0	0	< 20	NR	< 200	NR	0.10	0
183.			9.21	1			15.8	4	4.77	4				
185.														
191.	5.26	4									150	3	0.48	4
193.	5.15	4	6.00	2	< 10	NR	14.0	2	< 10	NR	142	4	0.45	4
196.1			6.57	3	4.4	4	17.4	3	4.83	4				
196.2			8.10	3			15.9	4						
201.	2.75	0	7.50	4			< 2	NR	8.20	0			0.51	3
202.	5.19	4	7.80	3			15.4	4	4.50	4	134	3	0.53	2
204.	5.82	0	6.50	3			14.8	3	4.30	3	176	0	0.46	4

Table 5. --Laboratory performance ratings for standard reference water sample T-121
(trace constituents)--Continued

(MPV, most probable value; ug/L, micrograms per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/26, number of reported values of 26 possible values; RV, reported value; <, less than)

Rating	Absolute Z-value	Rating	Absolute Z-value
4 (Excellent)	0.00 - 0.50	1 (Questionable)	1.51 - 2.00
3 (Good)	0.51 - 1.00	0 (Poor)	greater than 2.00
2 (Satisfactory)	1.01 - 1.50	NR (Not Rated)	

Analyte =	Li (Lithium)	Mg (Magnesium)	Mn (Manganese)	Mo (Molybdenum)	Na (Sodium)	Ni (Nickel)	Pb (Lead)							
MPV =	25.0 μg/L	1.24 mg/L	28.5 μg/L	12.0 μg/L	7.19 mg/L	8.29 μg/L	7.75 μg/L							
F-pseudosigma =	2.2	0.07	2.2	1.8	0.30	1.26	1.03							
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating						
1	26.1	4	1.26	4	29.4	4	11.5	4	6.90	3	8.70	4	8.00	4
2														
3	27.0	3	1.20	3	27.0	3	< 10	NR	7.50	2	< 20	NR	5.20	0
5			1.25	4	28.9	4	11.1	4	7.35	3			< 30	NR
6											7.61	3	7.16	3
8			1.23	4	28.1	4			6.92	3				
9			1.20	3	27.9	4			7.40	3	7.00	2	10.00	0
11	11.0	0	1.26	4	30.0	3	10.0	2	7.06	4	4.10	0	9.80	1
12			1.30	3	30.0	3	< 20	NR	8.00	0	< 20	NR	< 10	NR
13			1.17	3	27.1	3			8.00	0	< 50	NR	8.48	3
15	23.6	3	1.26	4	24.6	1	12.3	4	7.63	2	7.80	4	7.05	3
16	< 200	NR	1.20	3	28.0	4	< 30	NR	< 10	NR	< 25	NR	< 30	NR
18			1.40	0	25.0	1			7.40	3	6.00	1	7.00	3
19			1.23	4	25.7	2			6.49	0				
21														
23			1.27	4	30.7	2			7.51	2	6.27	1	7.07	3
24	25.0	4	1.31	3	28.4	4	11.9	4	7.43	3	9.70	2	8.00	4
25	26.4	3	1.30	3	28.8	4			7.68	1				
26	< 100	NR			< 200	NR	< 50	NR			< 10	NR	6.00	1
28	< 100	NR	2.40	0	30.0	3	20.0	0	15.70	0	10.00	2	245	0
29	20.0	0			26.0	2	50.0	0			< 10	NR	7.43	4
30	22.4	2	1.15	2	28.6	4	12.5	4			8.33	4	7.89	4
32	28.8	1	1.42	0	29.6	3	11.8	4	8.40	0	9.30	3	8.10	4
33			1.24	4	31.0	2			6.94	3			35.30	0
35														
36			1.24	4	26.1	2			7.01	3	8.24	4	6.78	3
37					31.3	2			7.24	4	8.55	4	7.74	4
39	25.0	4	1.23	4	32.0	1	9.0	1	7.60	2				
42	24.0	4	1.30	3	28.0	4	10.3	3	7.00	3	6.80	2	7.75	4
43			1.20	3	29.0	4			7.00	3				
45			1.24	4	34.0	0	15.5	1	6.53	0	3.94	0	7.20	3
46			1.25	4	29.2	4	< 140	NR	7.36	3	< 25	NR	7.40	4
48			1.34	2	40.0	0	< 10	NR	7.40	3	7.60	3	7.50	4
50	< 50	NR			29.0	4	12.0	4			8.00	4	8.00	4
51			1.22	4	30.0	3			6.90	3	7.00	2	4.00	0
52			1.21	4	27.1	3	13.7	3	7.01	3	7.80	4	7.78	4
54			1.20	3	26.0	2			7.20	4				
55	23.0	3	1.20	3	26.9	3			7.16	4	8.40	4	7.10	3
57			1.10	1	35.0	0			6.90	3	< 100	NR	8.00	4
58					27.0	3					8.60	4		
59			1.20	3	28.0	4			7.40	3	10.00	2	7.00	3
61			1.10	1	30.0	3	< 10	NR	7.00	3	< 10	NR	6.10	1
63	26.0	4	1.18	3	29.0	4			7.82	0	8.70	4	6.60	2
64			1.25	4					7.22	4				
68	25.0	4	1.30	3	27.0	3	17.0	0	7.50	2	9.30	3	6.10	1
69			1.40	0					7.00	3	9.00	3	7.00	3
70	25.0	4	1.30	3	29.0	4	< 50	NR	7.25	4	< 50	NR	7.80	4
73											9.00	3		
74			1.08	0	27.0	3	10.3	3	7.31	4	8.00	4	6.80	3
75			< 2	NR			12.5	4	6.95	3	7.33	3		
76					29.0	4							8.72	3
78			1.23	4	27.9	4			6.90	3	10.40	1	7.50	4
79													7.60	4
80													8.00	4
83			1.19	3	32.3	1			7.35	3			6.20	2

Table 5. --Laboratory performance ratings for standard reference water sample T-121
(trace constituents)--Continued

Analyte = Li (Lithium)		Mg (Magnesium)		Mn (Manganese)		Mo (Molybdenum)		Na (Sodium)		Ni (Nickel)		Pb (Lead)		
MPV = 25.0 $\mu\text{g/L}$		1.24 mg/L		28.5 $\mu\text{g/L}$		12.0 $\mu\text{g/L}$		7.19 mg/L		8.29 $\mu\text{g/L}$		7.75 $\mu\text{g/L}$		
F-pseudsigma = 2.2		0.07		2.2		1.8		0.30		1.26		1.03		
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
84.			1.62	0	30.0	3			8.46	0				
85.	28.0	2	1.26	4	24.0	0	< 50	NR	7.22	4	< 10	NR	7.00	3
87.			1.22	4	28.0	4			7.20	4	< 10	NR	6.60	2
89.			1.10	1	23.8	0			6.98	3	< 25	NR	9.09	2
90.					23.0	0			7.40	3	9.50	3	8.90	2
91.					30.0	3								
92.			1.25	4	26.0	2			7.45	3	9.00	3	9.00	2
94.			1.21	4	28.0	4			7.06	4	7.95	4	6.16	1
96.			1.24	4	29.0	4			7.04	4			7.91	4
97.			1.19	3	31.2	2	14.0	2	7.05	4	8.91	4	9.25	2
100.	25.0	4	1.35	2	31.5	2	11.8	4	7.90	0	10.10	2	9.80	1
101.			1.25	4	29.4	4			7.10	4	8.90	4	10.80	0
103.	18.0	0	1.30	3	24.0	0	12.0	4	7.50	2	7.50	3	9.00	2
104.														
105.	25.0	4	1.18	3	28.0	4	12.0	4	6.91	3	8.00	4	8.90	2
107.			1.21	4	28.5	4			6.87	2			6.72	3
108.													10.00	0
109.	25.5	4	1.40	0	28.0	4			7.20	4			3.10	0
111.			1.25	4					7.19	4	7.50	3	7.70	4
113.			1.40	0	27.7	4			7.70	1	8.64	4	7.67	4
114.			0.85	0	30.0	3			5.45	0	10.00	2	< 10	NR
116.			1.26	4	32.0	1			7.10	4				
118.														
119.			1.29	3	28.0	4			7.05	4	10.50	1	8.30	3
120.			0.98	0	26.3	3	18.8	0	6.69	1	7.23	3	7.53	4
121.	25.0	4	1.20	3	27.0	3	13.0	3	7.20	4	10.00	2	8.20	4
122.			1.23	4	25.4	2			7.38	3			8.00	4
123.			1.12	1					7.35	3				
126.			1.20	3									8.00	4
127.	27.6	2	1.18	3	28.7	4	13.2	3	6.94	3	8.22	4	7.05	3
129.			65.00	0	20.0	0			6.80	2				
131.	< 50	NR	1.32	2	< 10	0	< 100	NR	7.06	4	< 26	NR	< 100	NR
133.			1.07	0	28.6	4	6.9	0	7.08	4	11.40	0	22.20	0
134.	32.8	0	1.21	4	24.0	0			7.00	3	8.90	4	7.80	4
136.			1.20	3	30.0	3	12.0	4	7.00	3	8.00	4	7.00	3
138.			1.24	4	28.2	4	11.8	4	7.16	4	7.30	3	7.60	4
139.			1.28	3	31.0	2			6.66	1	7.25	3	10.02	0
140.			1.20	3	28.1	4			7.00	3	8.60	4	10.00	0
141.			1.25	4	28.6	4	11.4	4	7.26	4	8.00	4	6.40	2
144.											6.10	1	5.00	0
145.	14.9	0	1.10	1	27.7	4	< 4	0	7.18	4	< 5	NR	< 25	NR
146.			1.36	1	31.3	2	11.4	4	7.78	1	7.99	4	< 3	0
149.					29.0	4	15.7	0			8.00	4	6.00	1
151.			1.20	3			10.9	3	7.00	3				
153.			1.20	3	24.9	1			6.90	3				
155.			1.11	1										
158.													6.70	2
161.					21.0	0								
164.			1.26	4					7.78	1				
167.			1.20	3			5.0	0	7.20	4	8.00	4	8.00	4
179.			1.80	0	11.0	0			5.10	0	6.60	2	7.70	4
180.			1.31	3	31.1	2			7.34	3	< 7	NR	< 12	NR
182.	< 1	0	1.10	1	20.0	0	50.0	0	6.00	0	10.00	2	20.00	0
183.							13.1	3			10.40	1	8.26	4
185.														
191.			1.30	3	30.0	3			7.30	4				
193.			1.38	1					8.80	0	< 10	NR	< 10	NR
196.1					31.1	2	10.5	3			7.79	4	7.89	4
196.2													8.30	3
201.			2.24	0					6.45	0	15.10	0	< 2	0
202.			1.30	3	28.0	4	5.0	0			8.40	4	9.30	1
204.			1.51	0	32.5	1			6.80	2	9.70	2	4.30	0

Table 5. --Laboratory performance ratings for standard reference water sample T-121 (trace constituents)--Continued

(MPV, most probable value; ug/L, micrograms per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/26, number of reported values of 26 possible values; RV, reported value; <, less than)

Rating	Absolute Z-value	Rating	Absolute Z-value
4 (Excellent)	0.00 - 0.50	1 (Questionable)	1.51 - 2.00
3 (Good)	0.51 - 1.00	0 (Poor)	greater than 2.00
2 (Satisfactory)	1.01 - 1.50	NR (Not Rated)	

Analyte =	Sb (Antimony)		Se (Selenium)		SiO2 (Silica)		Sr (Strontium)		V (Vanadium)		Zn (Zinc)	
MPV =	7.61	μg/L	8.12	μg/L	4.64	mg/L	44.0	μg/L	4.00	μg/L	18.0	μg/L
F-pseudosigma =	1.20		1.41		0.26		4.9		0.76		2.7	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	10.90	0	8.80	4	4.66	4	45.6	4	3.44	3	21.3	2
2					4.77	4						
3	9.60	1	6.90	3	4.70	4	40.0	3	< 10	NR	17.0	4
5			< 40	NR	4.73	4					19.8	3
6											21.3	2
8			5.00	0	4.44	3	43.3	4			18.2	4
9					4.10	0	< 30	NR			17.0	4
11	11.30	0	5.30	0	13.10	0	50.0	2	4.00	4	20.0	3
12	< 100	NR	9.00	3							< 20	NR
13			8.50	4	4.51	4					18.0	4
15	3.35	0	8.08	4	4.45	3	41.4	3	3.54	3	18.8	4
16	< 60	NR	7.00	3			39.0	2	< 10	NR	11.0	0
18			10.10	2			49.0	2	3.00	2	16.0	3
19											12.6	1
21												
23	9.78	1	3.11	0	4.71	4					15.2	2
24	4.70	0	10.40	1	4.95	2	42.9	4	7.60	0	17.1	4
25					1.89	0	48.2	3			17.9	4
26			9.00	3			< 250	NR	< 100	NR	< 250	NR
28	< 100	NR	8.00	4	4.25	2	90.0	0	20.00	0	30.0	0
29			9.40	3	4.28	2	15.0	0			17.0	4
30	7.60	4	8.37	4					4.03	4	16.6	3
32	8.40	3			5.60	0	47.6	3	4.20	4	19.0	4
33					4.61	4	41.3	3				
35			8.13	4								
36	9.51	1	7.01	3							22.3	1
37	7.53	4	9.43	3			45.5	4	4.13	4	19.8	3
39			7.80	4	4.34	2	49.0	2	6.90	0	20.0	3
42			9.70	2	4.70	4	46.0	4	3.20	2	18.4	4
43					4.70	4						
45	7.61	4	7.66	4	4.64	4					16.6	3
46			8.70	4							17.9	4
48	4.80	0	7.00	3					< 200	NR	50.0	0
50			8.00	4					< 5	NR	18.0	4
51					4.65	4					19.0	4
52	7.13	4	8.22	4	3.00	0	42.0	4	2.18	0	18.2	4
54												
55	6.10	2	10.40	1	4.99	2	19.0	0	2.50	1	17.2	4
57	< 10	NR	8.00	4	4.30	2			< 100	NR	< 20	NR
58			4.50	0	0.08	0						
59	8.00	4					45.0	4			18.0	4
61	< 50	NR	7.80	4	2.20	0			< 5	NR	17.0	4
63	7.50	4	7.30	3	4.64	4	47.9	3	< 10	NR	17.0	4
64					4.41	3						
68	6.50	3	8.70	4			40.0	3	6.10	0	14.0	2
69			8.40	4								
70			7.30	3	4.88	3	44.0	4	< 10	NR	17.0	4
73											18.5	4
74	7.50	4	8.20	4			37.0	2	3.20	2	16.6	3
75			8.12	4	4.68	4					16.6	3
76			9.05	3								
78	8.60	3	6.70	2	8.00	0					17.5	4
79			10.00	2							16.0	3
80			9.00	3								
83											9.2	0

Table 5. --Laboratory performance ratings for standard reference water sample T-121
(trace constituents)--Continued

Analyte = Sb (Antimony)	Se (Selenium)		SiO2 (Silica)		Sr (Strontium)		V (Vanadium)		Zn (Zinc)	
MPV = 7.61 μ g/L	8.12 μ g/L		4.64 mg/L		44.0 μ g/L		4.00 μ g/L		18.0 μ g/L	
F-pseudostigma = 1.20	1.41		0.26		4.9		0.76		2.7	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
84.										
85.	4.00	0	8.10	4					16.2	3
87.	8.00	4	8.20	4	4.90	3			19.0	4
89.			7.63	4	4.52	4			< 40	NR
90.			11.30	0					17.0	4
91.										
92.					4.43	3			14.0	2
94.			7.73	4			3.30	3	24.0	0
96.			9.07	3					22.0	2
97.	7.06	4	9.00	3	3.20	0	50.8	2	6.25	0
100.	12.00	0	5.00	0	4.60	4	39.3	3	3.13	2
101.					4.56	4			4.00	4
103.					4.20	1	38.0	2	3.00	2
104.					4.50	3				
105.	7.90	4	8.44	4	4.52	4	44.0	4	3.00	2
107.			12.40	0					15.8	3
108.			6.80	3						
109.			7.00	3			50.0	2		
111.									18.6	4
113.			7.70	4	5.11	1	< 200	NR	26.0	0
114.	150	0							20.0	3
116.							46.0	4		
118.					4.70	4				
119.	7.90	4	7.10	3	4.78	3			18.0	4
120.	6.98	3	15.70	0					13.6	1
121.					4.60	4	44.0	4	4.00	4
122.			7.25	3					17.8	4
123.									25.2	0
126.										
127.	7.00	4	7.51	4	4.53	4	42.9	4	4.25	4
129.										
131.	< 50	NR	< 100	NR	4.48	3	44.0	4	< 50	NR
133.	5.50	1	5.90	1					4.70	3
134.			8.20	4	4.76	4	41.0	3	4.10	4
136.	7.00	4	9.00	3					4.00	4
138.	6.60	3	8.80	4	4.79	3	42.7	4	3.60	3
139.			11.02	0						
140.									19.5	3
141.	8.20	4	9.00	3	5.20	0	40.0	3	3.70	4
144.									23.6	0
145.					8.61	0	41.6	4	< 2	0
146.	7.73	4	5.40	1	2.45	0	46.7	3	3.90	4
149.	7.00	4	6.20	2						
151.					4.70	4			19.6	3
153.										
155.					4.74	4				
158.									15.0	2
161.					2.11	0			15.0	2
164.										
167.			7.00	3	4.80	3			< 30	NR
179.	8.30	3	7.00	3						
180.	< 13	NR	< 13	NR					4.60	3
182.	100	0	8.00	4			200.0	0	< 200	NR
183.			8.30	4					10.0	0
185.					5.16	0				
191.					4.64	4	45.0	4		
193.			7.00	3					< 40	NR
196.1	9.65	1	8.38	4			15.1	0	4.29	4
196.2			12.00	0					16.3	3
201.									21.5	2
202.	6.00	2	7.60	4					16.0	3
204.			12.40	0	4.94	2			25.1	0

Table 6. --Laboratory performance ratings for standard reference water sample M-124
(major constituents)

(MPV, most probable value; ug/L, micrograms per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/16, number of reported values of 16 possible values; RV, reported value; <, less than)

Rating	Absolute Z-value	Rating	Absolute Z-value
4 (Excellent)	0.00 - 0.50	1 (Questionable)	1.51 - 2.00
3 (Good)	0.51 - 1.00	0 (Poor)	greater than 2.00
2 (Satisfactory)	1.01 - 1.50	NR (Not Rated)	

Analyte = Alkalinity			B (Boron)		Ca (Calcium)		Cl (Chloride)		DSRD			
MPV = 234 mg/L			294 µg/L		154 mg/L		82.8 mg/L		1309 mg/L			
F-pseudosigma = 5			34		9		2.4		33			
Lab	OLR	V/16	RV	Rating	RV	Rating	RV	Rating	RV	Rating		
1	3.4	16	238	3	295	4	155	4	83.3	4	1325	4
2	1.5	2										
3	3.0	15	235	4	270	3	158	4	86.0	2	1330	3
5	2.8	12	237	4	277	4	159	3	84.2	3	1460	0
6	2.6	8	232	4					78.0	1	1336	3
8	1.6	14	238	3			177	0	86.1	2	1270	2
9	2.7	10					148	3	85.8	2	1330	3
10	3.2	13	238	3	325	3	157	4	81.5	3	1357	2
11	3.2	13	230	3	300	4	149	3	85.8	2		
12	2.6	12	240	2			161	3	97.0	0	1310	4
13	2.8	13	222	0			149	3	86.2	2	1310	4
15	2.0	15	230	3	259	2	169	1	97.2	0	1300	4
16	2.8	14	232	4	347	1	143	2	84.2	3	1323	4
18	3.2	16	222	0	254	2	154	4	82.3	4	1302	4
19	2.8	12	231	3			152	4	81.5	3	1316	4
23	2.0	13	212	0			148	3	78.8	1	330	0
24	3.8	13	234	4	283	4	155	4	81.4	3		
25	2.5	15	246	0	288	4	162	3	81.8	4	1350	2
26	2.3	11	235	4			164	2	72.0	0	1330	3
29	2.3	12	233	4	2150	0	158	4	101.0	0	1308	4
30	2.2	5					166	2	61.6	0		
32	2.6	14	255	0	299	4	165	2	82.4	4	1285	3
33	2.8	12	236	4			161	3	89.0	0		
36	2.0	13	233	4			134	0	84.5	3	1330	3
37	3.3	12	231	3	262	3	129	0	82.2	4		
38	3.0	9	58	0			153	4				
39	2.9	9	233	4	297	4						
40	3.6	14	238	3	278	4	161	3	80.3	2	1317	4
41	0.0	1										
42	2.3	12	234	4			170	1	66.0	0		
43	3.3	11	237	3			150	4	85.0	3	1340	3
45	3.7	14	237	3	287	4	154	4	82.7	4	1300	4
46	3.0	12	236	4	114	0	152	4	80.9	3	1104	0
48	2.9	12	233	4	310	4	130	0	83.0	4	668	0
50	2.8	13	233	4	328	2	153	4	79.0	1	1310	4
51	3.2	11	236	4			146	3	88.6	0	1269	2
52	2.9	14	236	4	277	4	154	4	81.3	3	1290	3
54	3.6	10	232	4			155	4			1285	3
55	2.9	16	230	3	260	2	148	3	84.0	4	1280	3
56	2.4	9	240	2			143	2	83.5	4		
57	2.0	14	234	4	310	4	167	2	79.0	1	1400	0
58	1.3	9			386	0	128	0				
59	2.2	6					165	2				
61	2.7	15	244	1	277	4	141	2	84.0	4	1380	0
63	2.5	14	206	0	< 100	0	156	4	84.0	4		
64	2.7	9					160	3	83.0	4		
68	2.2	12	237	3			140	1	83.9	4		
69	3.4	11	235	4			143	2	84.0	4	1340	3
70	3.2	14	230	3	268	3	157	4	80.8	3	1321	4
74	2.7	16	236	4	313	3	155	4	21.4	0	1315	4
75	3.3	11	231	3			154	4	84.0	4	1330	3
76	2.3	7	238	3					74.9	0	1280	3
78	2.0	13	215	0			153	4	76.0	0	644	0
79	2.0	3	230	3					85.0	3		
81	1.5	13	231	3			169	1	65.7	0	1290	3

Table 6. --Laboratory performance ratings for standard reference water sample M-124
(major constituents)--Continued

Lab	Analyte = Alkalinity			B (Boron)		Ca (Calcium)		Cl (Chloride)		DSRD		
	OLR	V/16	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
83	3.2	10	237	4			162	3	82.5	4		
84	2.8	8	239	3			145	2	79.6	2		
85	3.5	13	239	3			151	4	83.0	4	1307	4
87	2.8	12	230	3			147	3	81.0	3	1287	3
89	3.7	13	235	4			150	4	82.8	4	1340	3
90	0.8	5	246	0			167	2			1260	2
91	2.8	6	229	3							1276	2
92	2.3	12	190	0			95	0	85.7	2	1293	4
94	3.4	12	236	4			155	4	83.3	4	1318	4
96	2.7	7	240	2					84.0	4	1315	4
97	2.1	15	227	2			150	4	83.2	4	1317	4
100	3.1	16	234	4	339	2	162	3	80.7	3	1304	4
101	3.1	10					155	4	86.7	1	1284	3
102	2.8	5							82.0	4		
103	1.5	8			220	0	148	3				
104	3.3	4	230	3								
105	2.6	14	237	4			158	4	80.0	2	1280	3
107	1.8	6	228	2					93.6	0		
108	4.0	1										
109	3.5	11	236	4			150	4	82.5	4	1316	4
111	2.2	10	241	2			181	0	76.7	0		
113	3.4	14	228	2			152	4	81.5	3	1290	3
114	1.9	10	234	4			80	0	83.5	4		
116	2.6	5	218	0			162	3				
118	0.5	6	231	3							1230	0
119	3.4	14	240	2	300	4	153	4	83.0	4	1308	4
120	3.1	11	231	3			169	1	82.4	4	1285	3
121	2.1	8			320	3	158	4				
122	1.8	12	113	0	290	4	76	0	78.5	1	1330	3
123	2.5	6					156	4				
127	3.6	16	236	4	288	4	156	4	81.5	3	1340	3
128	3.1	14	229	3	245	2	153	4	83.0	4		
129	1.8	13	237	3	390	0	164	2	78.7	1	1214	0
131	2.8	12			300	4	150	4	81.4	3		
133	2.4	8	614	0			151	4				
134	3.6	16	239	3	284	4	155	4	80.7	3	1315	4
136	2.3	11	252	0			144	2	83.0	4	1353	2
138	3.2	14	222	0			153	4	82.2	4	1276	2
139	1.4	10	23	0			169	1	70.0	0		
140	3.2	11					149	3	85.0	3	1321	4
141	3.1	16	236	4	337	2	159	3	83.0	4	1349	2
144	1.3	3										
145	1.8	15	226	1	327	3	152	4	83.3	4		
146	2.0	12	237	3	280	4	150	4	139.0	0	1370	1
149	2.5	6					148	3			1290	3
151	3.4	11	240	2			155	4	84.0	4	1294	4
153	1.7	11	230	3			148	3	89.3	0		
155	2.3	8	232	4			170	1			1291	3
158	3.0	6	223	0					83.1	4	1306	4
161	1.7	11	250	0	5640	0	156	4	78.0	1		
167	3.2	13	234	4	284	4			87.4	1	1320	4
179	1.9	7					117	0	77.0	0		
180	2.9	13	236	4	294	4	163	2	85.6	2		
182	1.3	14	250	0	400	0	182	0	85.0	3	1288	3
183	1.6	9	222	0					83.1	4	1296	4
191	2.9	8					149	3	81.2	3		
193	2.3	3							81.4	3		
196	0.9	7					165	2	79.5	2		
197	2.6	5	231	3					82.1	4		
201	1.9	9	258	0			112	0	81.8	4		
202	2.9	9	234	4			154	4	88.5	0	1320	4
204	1.6	11	229	3			167	2	82.4	4		

Table 6. --Laboratory performance ratings for standard reference water sample M-124
(major constituents)--Continued

(MPV, most probable value; ug/L, micrograms per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/16, number of reported values of 16 possible values; RV, reported value; <, less than)

Rating	Absolute Z-value	Rating	Absolute Z-value
4 (Excellent)	0.00 - 0.50	1 (Questionable)	1.51 - 2.00
3 (Good)	0.51 - 1.00	0 (Poor)	greater than 2.00
2 (Satisfactory)	1.01 - 1.50	NR (Not Rated)	

Analyte = F (Fluoride)	K (Potassium)		Mg (Magnesium)		Na (Sodium)		(total Phosphorus) as P			
MPV = 0.93 mg/L	13.9 mg/L		58.4 mg/L		166 mg/L		0.110 mg/L			
F-pseudostigma = 0.07	1.0		2.7		6		0.013			
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating		
1	0.81	1	14.0	4	55.6	2	161	3	0.107	4
2										
3	1.00	3	11.8	0	60.7	3	173	2	0.094	2
5			14.2	4	59.2	4	166	4		
6	0.87	3							< 0.050	0
8	0.80	1	15.6	1	60.7	3	176	1	0.190	0
9			12.7	2	60.9	3	171	3		
10	0.84	2	14.0	4	58.9	4	165	4		
11	0.87	3	14.5	3	59.1	4	165	4	0.110	4
12	1.00	3	13.9	4	60.2	3	168	4	0.150	0
13	0.97	3	13.4	4	63.2	1	170	3	0.100	3
15			16.4	0	60.6	3	194	0	0.111	4
16	0.92	4	12.9	3	55.0	2	162	3	0.095	2
18	0.88	3	14.0	4	58.0	4	169	3	0.106	4
19	0.89	3	11.8	0	61.2	2	156	1	0.110	4
23	0.94	4	12.3	1	73.4	0	168	4	0.100	3
24	0.93	4	13.4	4	57.9	4	166	4		
25	0.95	4	14.4	4	59.4	4	172	2	0.268	0
26	2.00	0	13.0	3	52.0	0	173	2		
29	2.03	0	14.9	3	56.0	3	172	2		
30					60.3	3				
32			13.8	4	63.8	1	170	3		
33	< 0.01	0	13.9	4	61.2	2	161	3		
36	0.90	4	11.1	0	53.6	1	173	2	0.109	4
37			13.0	3	57.6	4	162	3		
38			13.7	4	59.6	4	158	2	0.113	4
39					57.0	3	174	2		
40	0.91	4	13.6	4	60.9	3	167	4		
41										
42	0.85	2	12.9	3	62.2	2	167	4		
43			14.0	4	56.5	3	170	3		
45	0.94	4	13.6	4	60.5	3	169	3	0.104	4
46	0.93	4	14.3	4	56.6	3			0.103	3
48			13.8	4	59.0	4	136	0	0.110	4
50	1.00	3	13.0	3	64.0	0	168	4		
51			14.4	4	61.0	3	165	4		
52			13.3	3	57.8	4	166	4		
54	0.91	4	13.7	4	57.0	3	165	4		
55	0.95	4	14.5	3	61.2	2	165	4	0.110	4
56			14.8	3	53.4	1	148	0		
57	0.98	3	18.0	0	58.0	4	172	2	0.300	0
58			12.5	2	61.8	2	248	0	0.108	4
59			14.6	3	65.0	0	177	1		
61	0.93	4	14.2	4	54.0	1	163	3	0.103	3
63	0.95	4	12.8	2	57.3	4	151	0	0.105	4
64			12.5	2	62.5	2	175	2	0.120	3
68			12.0	1	54.0	1	160	2	0.114	4
69	0.92	4	14.0	4	56.2	3	157	2		
70	0.89	3	14.0	4	61.0	3	164	4		
74	0.91	4	14.2	4	55.0	2	177	1	0.114	4
75			13.4	4	57.8	4	170	3	0.097	3
76	0.85	2								
78	0.92	4	14.0	4	57.2	4	149	0	0.131	1
79										
81	0.81	1	14.7	3	61.7	2	172	2	0.358	0

Table 6. --Laboratory performance ratings for standard reference water sample M-124
(major constituents)--Continued

Lab	F (Fluoride)		K (Potassium)		Mg (Magnesium)		Na (Sodium)		(total Phosphorus) as P	
	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
83	0.99	3	14.7	3	60.0	3	177	1	0.100	3
84					55.9	3	167	4		
85	1.00	3	13.9	4	58.3	4	162	3	0.105	4
87			13.6	4	57.6	4	166	4	0.080	0
89	0.93	4	13.2	3	57.9	4	161	3	0.105	4
90										
91	0.95	4							0.220	0
92			12.0	1	55.0	2	152	0	0.104	4
94	0.86	3	12.9	3	59.2	4	166	4	0.074	0
96	1.00	3								
97	5.19	0	12.9	3	61.2	2	168	4	0.170	0
100	0.86	3	13.6	4	62.9	1	176	1	0.110	4
101			13.9	4	58.0	4	166	4		
102									0.019	0
103			12.0	1	60.0	3	163	3	< 0.1	NR
104									0.114	4
105	0.83	2	12.1	1	53.9	1	181	0	0.118	3
107	1.01	2							0.098	3
108									0.110	4
109	0.91	4	13.9	4	56.3	3	160	3		
111			16.2	0	61.0	3	170	3	0.098	3
113	0.89	4	13.9	4	58.4	4	166	4	0.101	3
114			60.0	0	40.0	0	82	0	0.110	4
116					59.0	4	162	3		
118									0.070	0
119	0.88	3	13.0	3	57.0	3	168	4	0.110	4
120	0.98	3	14.5	3	59.5	4	172	3	0.100	3
121	13.90	0	59.0	0	167.0	0				
122	0.93	4	11.7	0	52.5	0	172	3		
123			13.4	4	70.5	0	168	4	0.200	0
127	0.93	4	13.7	4	57.8	4	165	4	0.100	3
128	0.88	3	13.0	3	56.8	3	164	4	0.100	3
129	0.53	0	14.0	4	57.0	3	159	2	2.128	0
131	1.10	0	10.0	0	60.6	3	167	4	< 0.1	NR
133			17.0	0	57.9	4	163	4	0.130	1
134	0.81	1	14.0	4	59.0	4	168	4	0.100	3
136			15.8	1	60.0	3	170	3		
138	0.83	2	13.2	3	58.3	4	166	4	0.110	4
139			15.4	2	57.6	4	156	1	0.093	2
140	0.96	4	13.7	4	58.0	4	165	4	0.140	0
141	0.93	4	13.8	4	59.0	4	165	4	0.120	3
144									0.130	1
145	1.71	0	13.2	3	57.2	4	166	4	< 0.02	0
146			75.0	0	58.0	4	160	2		
149	0.92	4	13.9	4	33.7	0	175	1		
151			13.4	4	57.2	4	161	3		
153	1.08	0	14.0	4	59.0	4	170	3	0.325	0
155					44.3	0			0.098	3
158										
161	0.87	3			58.3	4			0.116	3
167	0.88	3	13.2	3	57.6	4	166	4	0.108	4
179			14.0	4	69.0	0	166	4		
180	0.98	3	14.1	4	60.2	3	154	0	0.114	4
182	1.16	0	5.1	0	58.0	4	150	0	0.100	3
183	1.10	0					278	0	0.110	4
191			13.9	4	57.8	4	155	1		
193										
196	0.73	0	17.7	0	65.5	0	159	2		
197										
201			15.8	1	89.4	0	163	4		
202			14.5	3	58.5	4			0.010	0
204			16.0	0	69.0	0	163	3	0.088	1

Table 6. --Laboratory performance ratings for standard reference water sample M-124
(major constituents)--Continued

(MPV, most probable value; ug/L, micrograms per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/16, number of reported values of 16 possible values; RV, reported value; <, less than)

Rating	Absolute Z-value	Rating	Absolute Z-value
4 (Excellent)	0.00 - 0.50	1 (Questionable)	1.51 - 2.00
3 (Good)	0.51 - 1.00	0 (Poor)	greater than 2.00
2 (Satisfactory)	1.01 - 1.50	NR (Not Rated)	

Analyte =	pH		SiO2 (Silica)		SO4 (Sulfate)		Sp Cond		Sr (Strontium)		V (Vanadium)	
	MPV =	F-pseudosigma =	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
	8.47	0.08	19.4	3	621	4	1738	4	1669	4	7.5	4
			1.1	0	23	0	88	0	99	0	3.0	0
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	8.39	2	18.7	3	619	4	1753	4	1684	4	6.5	4
2	8.53	3	10.3	0								
3	8.43	4	19.7	4	621	4	1670	3	1650	4	< 10	NR
5	8.34	1	19.8	4	644	2	1340	0				
6	8.50	4			593	2	1737	4				
8	8.33	1	21.3	1	665	1	1700	4	1748	3		
9			19.7	4	634	3	1801	3	1520	1		
10	8.50	4	20.7	2	609	3	1758	4				
11	8.43	4	9.7	0	612	4	1664	3				
12	8.50	4			534	0	1740	4				
13	8.54	3	19.9	4	597	2	1700	4				
15	8.28	0	18.4	3	598	3	1800	3	1490	1	10.2	3
16	8.35	2			622	4	1766	4	1492	1	< 10	NR
18	8.51	4	20.3	3	604	3	1623	2	1643	4	5.0	3
19	8.55	3			628	4	1786	3				
23	8.54	3	19.4	4	702	0	1652	3				
24	8.45	4	20.5	3	612	4	1780	4	1650	4		
25	8.45	4	24.2	0	709	0	1770	4	1760	3		
26	8.50	4			642	3	1765	4				
29	8.49	4			705	0	1770	4				
30	8.40	3			599	3						
32	8.32	1	24.4	0	640	3	1780	4	1745	3	8.5	4
33	8.42	3	19.5	4	609	3	1712	4	1715	4		
36	8.56	2	37.2	0	634	3	82	0				
37	8.48	4			625	4	1701	4	1651	4	7.6	4
38	8.60	1	19.1	4			1717	4				
39	8.50	4	18.2	2			1750	4	1870	0	9.0	3
40	8.45	4	19.7	4	624	4	1711	4	1619	3		
41	8.66	0										
42	8.54	3	20.1	3	487	0	1674	3	1807	2		
43	8.33	1	19.4	4	618	4	1770	4				
45	8.51	4	18.5	3	623	4	1750	4				
46	8.40	3			614	4	1750	4				
48	8.50	4			614	4	1805	3			< 200	NR
50	8.30	0	19.0	4	625	4	1770	4				
51	8.52	3	19.9	4	624	4	1742	4				
52	8.46	4	15.5	0	666	1	1650	3	1600	3	12.5	1
54	8.50	4			634	3	1673	3				
55	8.52	3	20.4	3	650	2	1880	1	1600	3	3.6	2
56	8.47	4			625	4	1647	2				
57	8.10	0	21.0	2	600	3	1810	3			< 100	NR
58	8.43	4	0.7	0			1465	0				
59			18.8	3					1700	4		
61	8.42	3	9.2	0	615	4	1704	4			9.5	3
63	8.40	3	18.2	2	625	4	1700	4			15.0	0
64	8.48	4	26.4	0	630	4						
68	8.20	0	18.2	2			1771	4	1450	0	8.0	4
69	8.49	4			634	3	1760	4				
70	8.46	4	18.6	3	565	0	1664	3	1680	4	< 10	NR
74	8.50	4	20.6	2	597	2	1915	0	1540	2	5.0	3
75	8.30	0	19.6	4			1750	4				
76	8.42	3			595	2	1807	3				
78	8.43	4	17.5	1	390	0	1761	4				
79							1470	0				
81	8.20	0					1750	4	2	0	0.0	0

Table 6. --Laboratory performance ratings for standard reference water sample M-124
(major constituents)--Continued

Analyte =	pH	SiO ₂ (Silica)		SO ₄ (Sulfate)		Sp Cond		Sr (Strontium)		V (Vanadium)		
MPV =	8.47	19.4 mg/L		621 mg/L		1738 µ S/cm		1669 µ g/L		7.5 µ g/L		
F-pseudostigma =	0.08	1.1		23		88		99		3.0		
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
83			19.7	4	621	4						
84	8.48	4			560	0	1754	4				
85	8.51	4	19.2	4	632	4	1500	0				
87	8.52	3	21.1	1	579	1	1780	4				
89	8.48	4	19.8	4	628	4	1690	3				
90	8.75	0					1443	0				
91	8.44	4					1739	4				
92	8.44	4	18.9	4	642	3	1752	4				
94	8.48	4			609	3	1748	4			< 10	NR
96	8.60	1			588	2	1660	3				
97	8.52	3	17.7	1	674	0	1756	4	1963	0	46.5	0
100	8.58	2	19.8	4	616	4	1754	4	1718	4	5.5	3
101	7.79	0	19.6	4			1702	4			10.0	3
102			18.8	3	627	4	1650	3				
103			18.0	2	1460	0	< 5	0				
104			18.8	3			1790	3				
105	8.43	4	18.9	4	625	4	1646	2	1720	3	< 25	NR
107	8.48	4					1396	0				
108												
109	8.25	0			619	4	1747	4				
111			19.5	4	604	3	1730	4				
113	8.44	4	18.8	3	628	4	1725	4	1840	1		
114	8.40	3			428	0	1757	4				
116									1740	3		
118	8.10	0	4.0	0			1200	0				
119	8.26	0	19.0	4	628	4	1743	4				
120	8.40	3			610	4						
121			19.2	4					1660	4	4.0	2
122	8.48	4			577	1	1580	1				
123	8.40	3										
127	8.33	1	19.0	4	628	4	1700	4	1680	4	8.1	4
128	8.60	1	18.8	3	622	4	1690	3			5.8	3
129	8.44	4			650	2	1813	3				
131	8.50	4	19.6	4	620	4	1748	4	175	0		
133	8.40	3									5.9	3
134	8.50	4	19.0	4	620	4	1780	4	1640	4	7.4	4
136	8.50	4			650	2	1030	0			7.0	4
138	8.50	4	20.4	3	613	4			1632	4	5.1	3
139	8.46	4			1559	0	1964	0				
140	8.47	4			665	1	1780	4				
141	8.30	0	20.1	3	625	4	1759	4	1900	0	6.5	4
144	8.55	3					1200	0				
145	8.30	0	37.1	0	671	0	1525	0	1607	3	12.9	1
146	8.60	1	9.4	0			1870	1	1700	4	< 10	NR
149												
151	8.45	4	19.9	4	524	0	1779	4				
153	8.13	0			483	0	1620	2				
155	8.22	0	19.1	4			1814	3				
158	8.47	4			601	3	1790	3				
161	8.58	2	8.6	0	563	0	1610	2				
167	8.30	0	18.4	3	620	4	1722	4			< 30	NR
179	8.40	3					1610	2				
180	8.50	4			594	2	1675	3			9.1	3
182	8.50	4			450	0	1600	1	1900	0	< 200	NR
183	8.60	1			585	1	1300	0				
191			21.1	1	609	3			1669	4		
193					628	4	1552	0				
196					673	0						
197	8.58	2			605	3	1589	1				
201	8.51	4			627	4	1380	0				
202	8.53	3					1749	4				
204	8.24	0	20.6	2	605	3	1561	0				

Table 7. --Laboratory performance ratings for standard reference water sample N-36 (preserved nutrients)

(MPV, most probable value; ug/L, micrograms per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/5, number of reported values of 5 possible values; RV, reported value; <, less than)

Rating		Absolute Z-value		Rating		Absolute Z-value									
4 (Excellent)		0.00 - 0.50		1 (Questionable)		1.51 - 2.00									
3 (Good)		0.51 - 1.00		0 (Poor)		greater than 2.00									
2 (Satisfactory)		1.01 - 1.50		NR (Not Rated)											
Analyte = NH ₃ as N (Ammonia)				NH ₃ + Org N as N (Ammonia+Organic N)				NO ₃ + NO ₂ as N (Nitrate & Nitrite)				total P as P (Phosphorus)		PO ₄ as P (Orthophosphate)	
MPV = 0.113 mg/L				0.246 mg/L				0.182 mg/L				0.220 mg/L		0.210 mg/L	
F-pseudosigma = 0.019				0.129				0.023				0.021		0.010	
Lab	OLR	V/5	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	
1	3.8	5	0.119	4	0.187	4	0.182	4	0.217	4	0.204	3			
11	0.8	5	0.110	4	0.630	0	0.130	0	0.300	0	0.270	0			
15	3.0	4	0.106	4	0.290	4	0.290	4	0.110	0	0.206	4			
20	4.0	3	< 2	NR	< 5	NR	0.183	4	0.220	4	0.210	4			
21	3.0	2			0.231	4	0.213	2							
23	4.0	4	0.121	4	< 0.5	NR	0.180	4	0.230	4	0.210	4			
28	0.0	4			0.600	0	0.520	0	< 0.1	0	1.200	0			
29	0.0	2					0.420	0			0.290	0			
42	4.0	1					0.172	4							
43	2.0	1					0.150	2							
45	4.0	3					0.191	4	0.220	4	0.207	4			
48	2.8	5	0.080	1	0.200	4	0.140	1	0.210	4	0.207	4			
52	2.5	4	0.126	3	0.070	2	0.173	4			0.230	1			
53	0.0	1					0.124	0							
56	3.7	3			0.150	3			0.210	4	0.210	4			
61	3.6	5	0.109	4	0.271	4	0.180	4	0.225	4	0.198	2			
63	3.5	2							0.210	4	0.220	3			
68	2.7	3	0.100	3	0.390	2			0.238	3					
74	3.8	5	0.111	4	0.134	3	0.192	4	0.227	4	0.205	4			
75	2.8	4	0.123	3			0.180	4	2.270	0	0.208	4			
78	0.0	3					0.267	0	0.340	0	0.115	0			
79	0.5	2			0.500	1			0.130	0					
81	2.2	5	0.122	4	0.168	3	0.181	4	0.505	0	0.400	0			
88	0.0	3	0.065	0			0.692	0			0.450	0			
89	3.8	4	0.127	3	0.232	4			0.210	4	0.207	4			
90	3.5	4	0.109	4	0.204	4	0.206	2			0.205	4			
92	3.5	2							0.213	4	0.219	3			
97	2.5	4	0.100	3	0.150	3	0.200	3			0.230	1			
104	1.0	1	0.082	1											
105	2.4	5	0.245	0	0.560	0	0.172	4	0.223	4	0.209	4			
118	2.2	5	0.090	2	0.410	2	0.160	3	0.260	1	0.200	3			
119	2.6	5	0.192	0	0.350	3	0.170	4	0.200	3	0.200	3			
120	3.5	2	0.115	4	0.176	3									
129	3.2	5	0.173	0	0.192	4	0.189	4	0.211	4	0.212	4			
133	3.3	3					0.150	2	0.210	4	0.210	4			
134	3.8	5	0.100	3	0.280	4	0.180	4	0.210	4	0.210	4			
139	3.5	4	0.102	3	0.145	3	0.186	4	0.213	4					
140	2.0	5	0.150	1	0.270	4	0.171	4	0.140	0	0.190	1			
141	3.4	5	0.100	3	0.260	4	0.200	3	0.220	4	0.220	3			
145	3.2	5	0.080	1	0.300	4	0.160	3	0.220	4	0.210	4			
151	4.0	1	0.120	4											
167	3.7	3	0.119	4			0.202	3			0.212	4			
182	0.5	4	0.420	0			1.200	0	0.260	1	0.230	1			
201	0.0	3	0.660	0			0.270	0	0.275	0					

Table 7. --Laboratory performance ratings for standard reference water sample N-36 (nonpreserved nutrients)--Continued

		Analyte = NH ₃ as N (Ammonia)			NH ₃ + Org N as N (Ammonia+Organic N)			NO ₃ + NO ₂ as N (Nitrate & Nitrite)			total P as P (Phosphorus)		PO ₄ as P (Orthophosphate)	
		MPV = 0.110 mg/L F-pseudosigma = 0.015			0.209 mg/L 0.091			0.180 mg/L 0.016			0.210 mg/L 0.015		0.208 mg/L 0.010	
Lab	OLR	V/5	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating		
3	1.6	5	0.083	1	0.570	0	0.212	1	0.198	3	0.200	3		
6	1.5	4	0.082	1			0.220	0	0.237	1	0.213	4		
8	0.0	3					0.220	0	0.300	0	0.300	0		
9	2.8	4	0.102	3			0.190	3	0.199	3	0.196	2		
10	4.0	5	0.110	4	0.190	4	0.180	4	0.210	4	0.210	4		
12	2.7	3	< 0.2	NR	< 0.3	NR	0.180	4	0.260	0	0.210	4		
13	3.2	5	0.105	4	0.297	3	0.150	1	0.210	4	0.208	4		
15	2.0	5	0.122	3	0.284	3	0.090	0	0.120	0	0.208	4		
16	2.4	5	0.100	3	0.187	4	0.250	0	0.235	1	0.206	4		
18	3.0	5	0.049	0	0.181	4	0.167	3	0.216	4	0.208	4		
19	3.3	4	0.120	3			0.190	3	0.210	4	0.200	3		
20	4.0	3	< 2	NR	< 5	NR	0.184	4	0.210	4	0.210	4		
21	3.0	5	0.107	4	0.184	4	0.218	0	0.214	4	0.214	3		
22	4.0	1							0.216	4				
25	1.8	4	0.100	3			0.188	4	0.175	0	0.230	0		
28	0.0	4	< 0.1	NR	0.900	0	0.620	0	< 0.1	0	1.000	0		
29	0.0	2					0.240	0			0.300	0		
32	1.7	3	0.082	1			0.171	3			0.188	1		
33	1.0	3	0.120	3			0.120	0			0.230	0		
37	1.3	3	0.195	0			0.178	4			0.565	0		
38	3.0	5	0.207	0	0.160	3	0.181	4	0.209	4	0.206	4		
42	2.0	1					0.160	2						
45	3.3	3					0.180	4	0.230	2	0.205	4		
46	3.8	5	0.111	4	0.190	4	0.181	4	0.207	4	0.199	3		
51	2.8	5	0.110	4	0.360	1	0.180	4	0.206	4	0.189	1		
52	2.3	4	0.127	2	0.140	3	0.172	4			0.230	0		
55	3.4	5	0.100	3	0.260	3	0.170	3	0.210	4	0.210	4		
56	2.0	1					0.200	2						
58	1.8	4	0.124	3			0.331	0	0.203	4	0.066	0		
59	2.0	5	0.100	3	0.400	0	0.180	4	0.300	0	0.200	3		
63	3.0	1	< 0.6	NR	< 0.09	NR	0.195	3						
68	3.5	2	0.103	4			0.170	3						
69	3.0	1					0.170	3						
70	1.5	2	0.090	2			0.150	1						
76	4.0	2	0.105	4			0.188	4						
78	1.7	3					0.250	0	0.214	4	0.192	1		
83	3.0	2					0.160	2			0.210	4		
84	0.0	1	0.270	0										
85	3.8	5	0.107	4	0.180	4	0.180	4	0.217	4	0.214	3		
87	1.8	5	0.100	3	0.310	2	0.180	4	0.156	0	0.156	0		
88	0.0	3	0.069	0			0.688	0			0.439	0		
89	3.8	5	0.113	4	0.152	3	0.188	4	0.210	4	0.212	4		
91	2.8	4	0.110	4	0.170	4	0.140	0	0.220	3				
92	2.3	3	0.120	3					0.234	1	0.214	3		
94	3.3	4	0.120	3	0.200	4	0.165	3	0.220	3				
96	3.4	5	0.113	4	0.181	4	0.174	4	0.190	2	0.215	3		
97	3.2	5	0.110	4	0.150	3	0.180	4	0.220	3	0.220	2		
100	2.8	5	0.108	4	0.330	2	0.190	3	0.210	4	0.190	1		
102	3.0	5	0.120	3	0.210	4	0.180	4	0.034	0	0.210	4		
104	3.8	5	0.113	4	0.190	4	0.173	4	0.213	4	0.214	3		
107	2.8	4	0.143	0			0.190	3	0.205	4	0.208	4		
108	1.3	3					0.150	1	0.250	0	0.200	3		
111	2.0	3	0.094	2					0.202	3	0.227	1		
113	2.0	4	0.066	0	< 0.5	NR	0.177	4	0.190	2	0.197	2		
114	2.3	3	0.104	4			0.091	0	0.200	3				
118	1.6	5	0.090	2	0.260	3	0.140	0	0.240	0	0.200	3		
119	2.2	5	0.192	0	0.320	2	0.170	3	0.200	3	0.200	3		
120	2.7	3					0.160	2	0.200	3	0.198	3		
123	0.5	4	0.350	0	0.340	2	0.430	0	0.260	0				
127	3.4	5	0.105	4	0.105	2	0.170	3	0.211	4	0.206	4		
129	2.8	5	0.228	0	0.345	2	0.182	4	0.211	4	0.209	4		
133	1.7	3	0.130	2	0.160	3	0.130	0						
134	3.2	5	0.100	3	0.270	3	0.180	4	0.200	3	0.200	3		
138	3.2	5	0.120	3	0.200	4	0.170	3	0.200	3	0.200	3		
139	4.0	1									0.208	4		
145	3.2	5	0.100	3	0.210	4	0.160	2	0.220	3	0.210	4		
146	3.5	2					0.168	3			0.208	4		
149	2.3	3	0.100	3			0.107	0	0.210	4				
155	3.6	5	0.110	4	0.175	4	0.169	3	0.209	4	0.198	3		
158	2.5	4	0.039	0			0.187	4	0.226	2	0.212	4		
161	2.0	3	0.186	0					0.228	2	0.209	4		
167	3.3	3	0.109	4			0.194	3			0.199	3		
180	3.6	5	0.119	3	0.209	4	0.174	4	0.217	4	0.218	3		
182	0.5	4	0.400	0			1.100	0	0.260	0	0.220	2		
183	1.7	3			0.020	0			0.220	3	0.220	2		
185	4.0	1	0.106	4										
191	0.5	2					0.150	1			0.160	0		
193	4.0	1					0.180	4						
197	1.3	3	0.127	2			0.162	2			0.181	0		
198	2.8	5	0.112	4	0.250	4	0.180	4	0.195	2	0.300	0		
202	2.0	5	0.100	3	0.220	4	0.170	3	0.130	0	0.130	0		
204	1.6	5	0.110	4	0.390	1	0.170	3	0.243	0	0.250	0		

Table 8. --Laboratory performance ratings for standard reference water sample N-37 (preserved nutrients)

(MPV, most probable value; ug/L, micrograms per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/5, number of reported values of 5 possible values; RV, reported value; <, less than)

Rating	Absolute Z-value	Rating	Absolute Z-value
4 (Excellent)	0.00 - 0.50	1 (Questionable)	1.51 - 2.00
3 (Good)	0.51 - 1.00	0 (Poor)	greater than 2.00
2 (Satisfactory)	1.01 - 1.50	NR (Not Rated)	

Analyte = NH ₃ as N (Ammonia)		NH ₃ + Org N as N (Ammonia+Organic N)		NO ₃ + NO ₂ as N (Nitrate & Nitrite)		total P as P (Phosphorus)		PO ₄ as P (Orthophosphate)		
MPV =	RV	MPV =	RV	MPV =	RV	MPV =	RV	MPV =	RV	
F-pseudosigma =	Rating	F-pseudosigma =	Rating	F-pseudosigma =	Rating	F-pseudosigma =	Rating	F-pseudosigma =	Rating	
0.876 mg/L	4	1.10 mg/L	4	0.857 mg/L	4	1.19 mg/L	3	1.07 mg/L	4	
0.121		0.22		0.099		0.07		0.10		
Lab	OLR	V/5	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	3.8	5	0.876	4	1.06	4	0.853	4	1.23	3
11	1.4	5	0.920	4	1.52	1	0.690	1	1.35	0
15	2.8	4	0.772	3	1.02	4			0.56	0
20	3.3	3	< 2	NR	< 5	NR	0.863	4	1.24	3
23	3.2	5	0.910	4	1.22	3	0.870	4	1.23	3
28	0.3	4			1.50	1	2.700	0	< 0.1	0
28	1.5	2					1.050	1		
42	3.0	1					0.806	3		
43	4.0	1					0.860	4		
45	4.0	3					0.872	4	1.16	4
48	2.2	5	0.610	0	1.10	4	0.780	3	1.20	4
52	2.8	4	0.880	4	0.75	1	0.807	4		
53	3.0	1					0.765	3		
61	3.6	5	0.879	4	0.94	3	0.850	4	1.23	3
63	2.4	5	1.100	1	1.40	2	1.020	1	1.20	4
68	2.0	3	0.770	3	0.95	3			0.12	0
74	3.0	5	0.938	3	1.10	4	0.914	3	1.24	3
75	3.8	4	0.847	4			0.865	4	1.19	4
78	1.3	3					1.140	0	1.57	0
79	0.5	2			0.68	1			0.96	0
81	1.8	5	1.010	2	0.99	3	0.853	4	3.11	0
88	1.7	3	0.729	2			1.309	0		
89	3.8	4	0.858	4	1.00	4			1.15	3
90	3.8	4	0.905	4	1.09	4	0.785	3		
92	3.5	2							1.15	3
97	3.3	4	0.860	4	0.94	3	0.940	3		
104	2.0	1	0.714	2						
105	2.8	5	1.050	2	1.44	1	0.790	3	1.17	4
118	3.4	5	0.780	3	1.36	2	0.820	4	1.20	4
119	3.0	5	0.820	4	1.15	4	0.970	2	1.12	2
120	3.5	2	0.802	3	1.13	4				
129	2.0	5	1.051	2	1.89	0	0.901	4	1.07	1
133	1.7	3					0.560	0	1.11	2
134	4.0	5	0.870	4	1.10	4	0.850	4	1.20	4
139	3.8	4	0.861	4	1.05	4	0.799	3	1.16	4
140	3.2	5	1.040	2	1.29	3	0.808	4	1.20	4
141	3.8	5	0.870	4	1.10	4	0.840	4	1.24	3
145	3.2	5	0.720	2	1.12	4	0.780	3	1.14	3
151	0.0	1	1.630	0						
167	3.3	3	0.895	4			0.894	4		
182	0.8	4	1.440	0			4.100	0	1.12	2
201	2.3	4	1.050	2			1.312	0	1.18	4

Table 8. --Laboratory performance ratings for standard reference water sample N-37 (nonpreserved nutrients)--Continued

Lab	Analyte = NH ₃ as N (Amonia) MPV = 0.920 m g/L F-pseudosigma = 0.058				NH ₃ + Org N as N (Amonia+Organic N) 1.06 m g/L 0.08		NO ₃ + NO ₂ as N (Nitrate & Nitrite) 0.850 m g/L 0.054		total P as P (Phosphorus) 1.17 m g/L 0.06		PO ₄ as P (Orthophosphate) 1.15 m g/L 0.04	
	OLR	V/5	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
3	2.2	5	0.873	3	1.16	2	0.837	4	1.08	1	1.07	1
6	2.3	4	0.900	4			1.100	0	1.26	1	1.16	4
8	2.3	3					1.160	0	1.19	4	1.11	3
9	2.2	5	0.841	2	1.15	2	0.892	3	1.16	4	1.05	0
10	3.8	5	0.920	4	1.06	4	0.860	4	1.19	4	1.19	3
12	2.6	5	0.900	4	0.80	0	0.820	3	1.25	2	1.15	4
13	3.8	5	0.905	4	1.11	3	0.877	4	1.17	4	1.14	4
15	2.2	5	0.930	4	1.02	3	1.140	0	0.62	0	1.15	4
16	1.4	5	0.728	0	0.86	0	1.090	0	1.17	4	1.12	3
18	3.2	5	0.804	1	1.05	4	0.813	3	1.17	4	1.17	4
19	3.8	4	0.920	4			0.860	4	1.16	4	1.12	3
20	2.0	3	< 2	NR	< 5	NR	0.859	4	1.38	0	1.08	2
22	4.0	1							1.16	4		
25	3.0	4	0.940	4			0.865	4	1.10	2	1.20	2
28	0.8	4			1.00	3	5.000	0	< 0.1	0	4.10	0
28	2.0	2					0.850	4			1.04	0
32	2.3	3	0.792	0			0.811	3			1.15	4
33	1.0	3	1.050	0			0.570	0			1.17	3
37	1.7	3	1.030	1			0.863	4			3.58	0
38	3.8	5	0.948	4	0.99	3	0.862	4	1.17	4	1.15	4
41	1.0	3	0.950	3	3.85	0	1.160	0				
42	3.0	1					0.797	3				
45	3.3	3					0.874	4	1.12	3	1.17	3
46	3.8	5	0.891	4	1.03	4	0.882	3	1.16	4	1.14	4
52	1.3	4	0.990	2	0.82	0	0.811	3			1.34	0
55	3.4	5	0.900	4	1.10	3	0.820	3	1.20	3	1.14	4
57	0.8	5	0.820	1	1.50	0	0.530	0	1.20	3	1.00	0
58	0.0	4	0.765	0			1.110	0	1.02	0	0.33	0
59	3.2	5	0.940	4	1.00	3	0.850	4	1.10	2	1.12	3
68	3.5	2	0.930	4			0.810	3				
69	4.0	1					0.870	4				
70	0.5	2	0.830	1			0.740	0				
76	3.0	2	0.914	4			0.785	2				
78	1.0	3					1.120	0	1.27	1	1.08	2
83	1.0	2					0.700	0			1.21	2
84	1.0	3	1.820	0			1.550	0			1.17	3
85	3.4	5	0.900	4	1.10	3	0.840	4	1.13	3	1.12	3
87	3.0	5	0.850	2	1.10	3	0.850	4	1.12	3	1.12	3
88	0.7	3	1.071	0			1.315	0			1.19	2
89	3.4	5	0.910	4	0.94	1	0.861	4	1.18	4	1.16	4
91	2.8	4	0.920	4	1.04	4	0.700	0	1.20	3		
92	3.3	3	0.950	3					1.17	4	1.17	3
94	2.8	4	0.950	3	1.07	4	0.795	2	1.25	2		
96	3.4	5	0.904	4	0.99	3	0.834	4	1.19	4	1.10	2
97	2.8	4	0.980	2	1.04	4	0.930	2			1.18	3
100	3.0	5	0.934	4	2.26	0	0.876	4	1.18	4	1.12	3
102	2.0	5	0.960	3	1.11	3	0.800	3	0.32	0	1.07	1
104	3.6	5	0.939	4	1.09	4	0.831	4	1.23	3	1.18	3
108	2.0	3					0.810	3	1.26	1	1.08	2
111	1.7	3	0.982	2					1.11	3	1.40	0
113	2.0	5	0.999	2	0.96	2	0.699	0	1.10	2	1.15	4
114	1.3	3	0.816	1			0.417	0	1.14	3		
118	1.6	5	0.830	1	1.20	1	0.790	2	1.20	3	1.06	1
119	2.4	5	0.870	3	1.03	4	1.000	0	1.11	2	1.12	3
120	3.3	3					0.840	4	1.12	3	1.12	3
123	1.0	4	2.920	0	1.59	0	2.130	0	1.17	4		
127	3.8	5	0.951	3	1.08	4	0.852	4	1.18	4	1.16	4
129	3.8	5	0.924	4	1.05	4	0.857	4	1.12	3	1.14	4
133	1.0	3	0.950	3	0.21	0	0.980	0				
134	3.2	5	0.900	4	1.10	3	0.850	4	1.20	3	1.20	2
138	3.2	5	0.950	3	1.06	4	0.850	4	1.11	2	1.12	3
139	4.0	1									1.16	4
145	3.0	5	0.890	3	1.06	4	0.780	2	1.14	3	1.17	3
146	3.0	2					0.797	3			1.11	3
149	2.3	3	0.900	4			0.810	3	0.87	0		
155	2.6	5	0.901	4	1.01	3	0.759	1	1.11	3	1.08	2
158	2.0	4	0.748	0			0.863	4	1.35	0	1.15	4
161	2.0	4	0.483	0			0.786	2	1.22	3	1.11	3
167	3.7	3	0.937	4			0.904	3			1.13	4
180	3.2	5	0.991	2	1.02	3	0.825	4	1.18	4	1.17	3
182	1.3	4	1.440	0			3.700	0	1.12	3	1.10	2
183	0.7	3			5.23	0			5.84	0	1.21	2
191	1.5	2					0.810	3			1.04	0
193	3.0	1					0.880	3				
196	1.0	2					0.583	0			1.10	2
197	2.7	3	0.984	2			0.807	3			1.17	3
198	2.0	5	0.800	0	1.20	1	0.860	4	1.20	3	1.20	2
202	1.8	5	0.850	2	1.24	0	0.780	2	1.20	3	1.20	2

Table 9. --Laboratory performance ratings for standard reference water sample P-19
(low ionic strength constituents)

(MPV, most probable value; ug/L, micrograms per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/9, number of reported values of 9 possible values; RV, reported value; <, less than)

Rating	Absolute Z-value	Rating	Absolute Z-value
4 (Excellent)	0.00 - 0.50	1 (Questionable)	1.51 - 2.00
3 (Good)	0.51 - 1.00	0 (Poor)	greater than 2.00
2 (Satisfactory)	1.01 - 1.50	NR (Not Rated)	

Analyte = Acidity as CaCO3			Ca (Calcium)		Cl (Chloride)		F (Fluoride)		K (Potassium)			
MPV = 3.43 mg/L			0.24 mg/L		1.14 mg/L		INSUFF DATA		0.170 mg/L			
F-pseudostigma = 3.54			0.03		0.19				0.033			
Lab	OLR	V/9	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	3.3	9	0.02	3	0.24	4	1.13	4	0.025	NR	0.015	0
2	3.8	8			0.25	4	1.13	4			0.146	3
3	2.1	8	7.00	2	0.30	0	1.30	3	< 0.1	NR	0.190	3
11	2.9	9	3.85	4	0.22	3	1.20	4	0.009	NR	0.075	0
15	2.9	8	3.96	4	0.23	4	1.35	2			0.150	3
23	3.2	5	2.50	4	< 1	NR			< 0.1	NR	0.155	4
28	1.3	7			12.60	0	1.30	3	< 0.1	NR	2.500	0
33	4.0	8			0.25	4	1.15	4	< 0.01	NR	0.170	4
37	1.0	5			< 0.244	NR	< 6	NR			0.330	0
38	3.7	7	0.15	3	0.25	4					0.160	4
39	2.8	5			0.26	3						
41	0.0	1										
42	2.7	3					1.14	4	0.060	NR		
46	3.5	8			0.22	3	0.87	2	0.013	NR	0.190	3
48	1.1	8			0.45	0	1.00	3			0.360	0
52	2.5	4	11.60	0	< 0.6	NR	1.31	3	< 0.1	NR	< 0.2	NR
58	3.8	5			0.23	4					0.180	4
61	1.8	6	1.25	3	0.22	3	0.62	0	0.015	NR	< 1	NR
63	1.3	7	6.00	3	0.22	3	0.19	0	< 0.2	NR	< 0.2	NR
64	3.6	7			0.22	3	0.97	3			0.150	3
74	3.4	8			0.24	4	1.53	0	< 0.02	NR	0.180	4
78	1.8	9	1.00	3	0.23	4	1.50	1	< 0.1	NR	0.090	0
89	3.1	8	2.74	4	0.21	3	1.52	0	< 0.1	NR	0.185	4
92	1.5	8	2.19	4	0.35	0	2.20	0			5.750	0
101	2.4	7			0.24	4	2.30	0			0.160	4
105	2.4	7	5.40	3	0.25	4	2.00	0	< 0.2	NR	< 0.4	NR
123	3.0	6			0.25	4					0.100	0
134	3.3	8			0.22	3	1.12	4	< 1	NR	0.330	0
136	0.9	9	15.80	0	0.30	0	8.00	0			0.070	0
141	2.0	6	9.50	1	0.19	1	1.10	4	< 0.1	NR	0.340	0
145	1.7	6			0.18	1	0.99	3	< 0.2	NR	< 0.1	0
155	1.0	3			0.75	0						
158	3.2	6	3.00	4	0.31	0	1.10	4				
164	2.0	6			0.23	4					0.106	1
167	2.7	3			< 1	NR	< 1	NR	< 0.05	NR	< 1	NR
191	4.0	1					1.12	4				
196	4.0	6			0.23	4	1.19	4	0.051	NR	0.170	4
197	4.0	4					1.12	4				
202	1.7	3					0.85	1				

Table 9. --Laboratory performance ratings for standard reference water sample P-19
(low ionic strength constituents) -- Continued

Analyte = Mg (Magnesium)		Na (Sodium)		pH		PO4 as P		SO4 (Sulfate)		Sp. Cond.		
MPV =	0.045 mg/L	0.060 mg/L		4.72		INSUFF DATA		0.45 mg/L		12.0 μ S/cm		
F-pseudostigma =	0.031	0.162		0.13				0.51		1.5		
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	0.038	4	0.049	4	4.64	3	0.003	NR	0.32	4	12.7	4
2	0.055	4	0.066	4	4.69	4			0.30	4	10.9	3
3	< 0.1	NR	1.800	0	4.86	2	< 0.01	NR	0.50	4	11.0	3
11	0.030	4	0.060	4	5.00	0	< 0.02	NR	0.15	3	12.7	4
15	0.048	4	0.188	3	3.79	0					13.1	3
23	< 0.2	NR	< 0.1	NR	5.38	0	< 0.01	NR	0.60	4	12.1	4
28	2.800	0			4.90	2	< 0.1	NR	0.50	4	8.4	0
33	0.040	4	0.060	4	4.76	4	< 0.01	NR	0.32	4	12.2	4
37	0.138	0	0.364	1	6.04	0	< 0.3	NR	< 6	NR	11.8	4
38	0.046	4	0.060	4	4.80	3	0.001	NR			11.4	4
39	0.048	4	0.051	4	5.17	0					11.0	3
41					7.30	0						
42					4.72	4					132.0	0
46	0.038	4	0.043	4	4.68	4	0.002	NR	0.32	4	12.6	4
48	0.250	0	0.360	1	7.80	0	0.005	NR	1.00	2	10.9	3
52	< 0.05	NR	< 0.03	NR	4.78	4	0.005	NR	< 10	NR	13.4	3
58	0.028	3			4.67	4	0.003	NR			12.0	4
61	< 1	NR	< 1	NR	4.82	3	< 0.02	NR	1.80	0	10.4	2
63	< 0.2	NR	0.630	0	4.30	0	< 0.01	NR	2.00	0	11.0	3
64	0.040	4	0.060	4	4.72	4			0.30	4		
74	0.050	4	0.140	4	4.64	3	0.002	NR	0.50	4	12.7	4
78	0.460	0	0.160	3	4.79	3	< 0.05	NR	1.00	2	8.9	0
89	0.036	4	0.050	4	4.73	4	0.101	NR	< 2	NR	10.2	2
92	0.080	2	0.400	0	4.77	4	0.005	NR	1.00	2		
101	0.040	4	0.050	4	4.49	1					81.8	0
105	0.045	4	< 0.2	NR	4.78	4	0.002	NR	0.97	2	15.0	0
123	0.040	4	0.030	4	4.80	3					12.9	3
134	0.036	4	0.090	4	4.68	4	< 0.01	NR	0.37	4	13.0	3
136	0.200	0	0.060	4	4.60	3			63.00	0	9.3	1
141					4.60	3	< 0.05	NR	< 5	NR	13.0	3
145	0.025	NR	< 0.04	NR	4.10	0	< 0.01	NR	0.40	4	10.0	2
155	0.000	NR			4.30	0	0.000	NR			13.4	3
158					4.63	3			0.40	4	12.0	4
164	0.339	0	0.446	0	4.64	3			0.30	4		
167	< 1	NR	< 1	NR	4.74	4	0.025	NR	6.63	0	11.6	4
191												
196	0.042	4	0.060	4			< 0.03	NR	0.37	4		
197					4.72	4			0.28	4	11.4	4
202					4.71	4	0.011	NR			21.2	0

Table 10. --Laboratory performance ratings for standard reference water sample Hg-15 (mercury)

(MPV, most probable value; ug/L, micrograms per liter; mg/L, Lab, laboratory number)

Rating	Absolute Z-value	Rating	Absolute Z-value
4 (Excellent)	0.00 - 0.50	1 (Questionable)	1.51 - 2.00
3 (Good)	0.51 - 1.00	0 (Poor)	greater than 2.00
2 (Satisfactory)	1.01 - 1.50	NR (Not Rated)	

Analyte = Hg (Mercury)

MPV = 0.41

F-pseudosigma + 0.20

Lab	Rating	RV
1	4	0.34
3	3	0.60
11	0	2.00
12	2	0.70
13	3	0.56
16	4	0.45
18	4	0.34
24	3	0.30
28	4	0.40
29	3	0.22
32	3	0.57
36	4	0.49
37	3	0.56
39	NR	< 0.5
45	4	0.39
46	4	0.37
48	NR	< 0.2
51	3	0.22
52	4	0.49
55	4	0.47
59	3	0.30
61	4	0.40
63	4	0.49
68	2	0.20
69	3	0.22
70	3	0.30
74	4	0.32
75	3	0.57
87	3	0.30
89	3	0.26
90	1	0.74
92	4	0.43
96	4	0.40
97	3	0.26
100	3	0.30
105	4	0.36
108	2	0.61
109	4	0.41
113	4	0.45
119	3	0.57
120	4	0.39
127	4	0.42
128	1	0.80
133	2	0.70
134	3	0.28
136	0	0.90
138	4	0.40
139	0	2.85
141	4	0.45
144	3	0.25
146	2	0.20
149	4	0.40
167	1	0.71
179	2	0.20
182	3	0.60
196	0	1.20
202	NR	< 0.3

Table 11. --Statistical summary of reported data for standard reference sample T-121 (trace constituents)

Definition of analytical methods, abbreviations, and symbols

Analytical methods

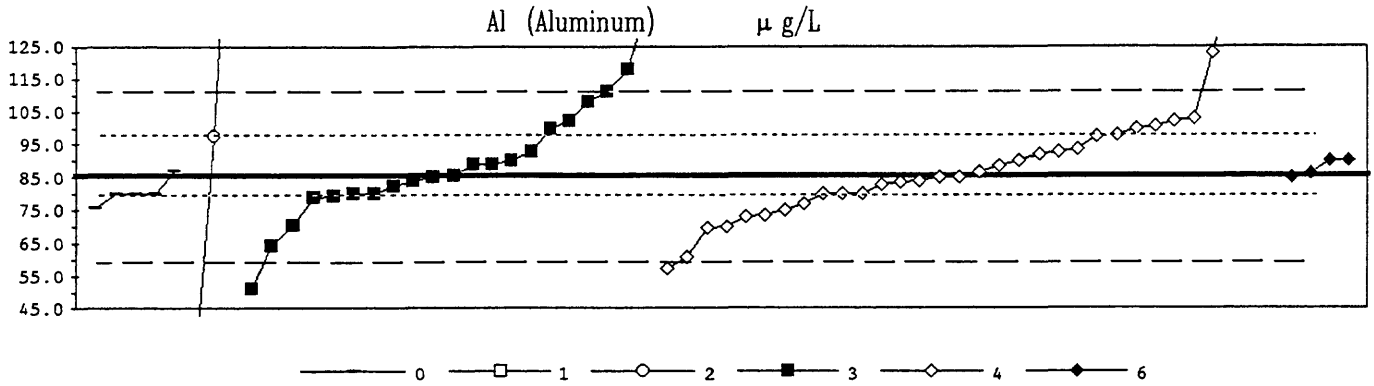
0. Other/Not reported	
1. AA: direct, air	= atomic absorption: direct, air
2. AA: direct, N ₂ O	= atomic absorption: direct, nitrous oxide
3. AA: graphite furnace	= atomic absorption: graphite furnace
4. ICP	= inductively coupled plasma
5. DCP	= direct current plasma
6. ICP/MS	= inductively coupled plasma/mass spectrometry
10. AA: extraction	= atomic absorption: extraction [chelating agent(s) specified]
11. AA: hydride	= atomic absorption: hydride [reducing agent specified]
22. Color:	= colorimetric [color reagent specified]

Abbreviations and symbols

N =	number of samples
St dev =	traditional standard deviation
MPV =	95% confidence most probable value
F-pseudostigma =	nonparametric statistic deviation
Hu =	upper hinge value
Hl =	lower hinge value
μ g/L =	micrograms per liter
m g/L =	milligrams per liter
Lab =	laboratory code number
NR =	not rated, less than value reported
< =	less than

<u>Constituent</u>	<u>page</u>	<u>Constituent</u>	<u>page</u>
Ag Silver	35	Li Lithium	48
Al Aluminium	36	Mg Magnesium	49
As Arsenic	37	Mn Manganese	50
B Boron	38	Mo Molybdenum	51
Ba Barium	39	Na Sodium	52
Be Beryllium	40	Ni Nickel	53
Ca Calcium	41	Pb Lead	54
Cd Cadmium	42	Sb Antimony	55
Co Cobalt	43	Se Selenium	56
Cr Chromium	44	SiO ₂ Silica	57
Cu Copper	45	Sr Strontium	58
Fe Iron	46	V Vanadium	59
K Potassium	47	Zn Zinc	60

Table 11. --Statistical summary of reported data for standard reference water sample T-121 (Trace constituent)--Continued



0. Other	3. AA: graphite furnace
1. AA: direct air	4. ICP
2. AA: direct N2O	6. ICP/MS
N = 5	0 3 21 32 4
Minimum = 75.8	20.0 51.0 57.1 85.2
Maximum = 87.0	200.0 137.0 250.0 90.0
Median =	85.3 85.0
St Dev =	15.9 13.9

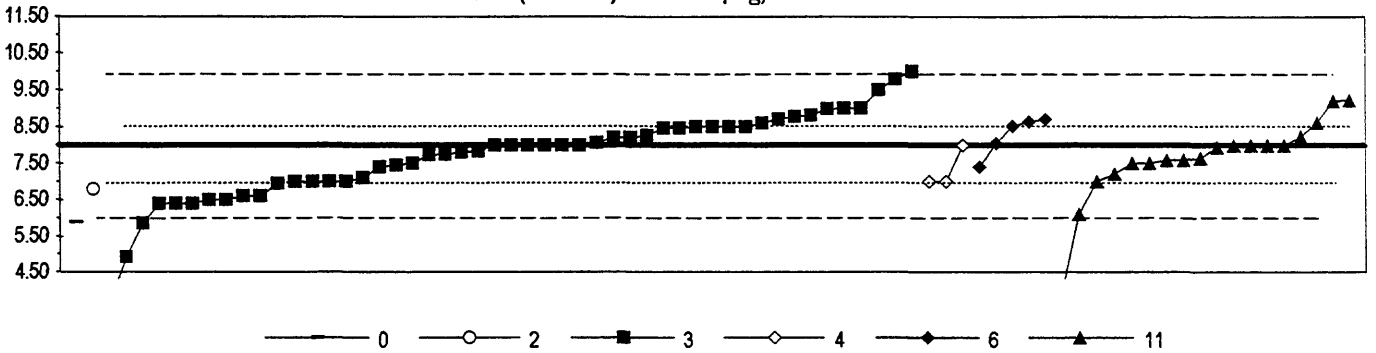
MPV = 85.5 +/- 2.2
 F-pseudosigma = 12.9
 N = 65
 Hu = 97.4
 Hl = 80.0

Lab	Rating	Z-value	0	1	2	3	4	6
1	4	-0.43	80.0					
3	4	-0.43					80.0	
5	4	-0.16					83.4	
8	2	1.30					102.3	
11	4	-0.43	80.0					
12	NR						< 100	
13	3	0.91			97.3			
15	4	-0.21					82.8	
16	NR						< 300	
18	4	0.09					86.6	
23	4	-0.41	80.2					
24	3	-0.97					73.0	
25	1	-1.94					60.5	
26	NR						< 250	
28	2	1.12					100.0	
29	0	8.88			200.0			
30	4	-0.02						85.2
33	4	0.12	87.0					
36	3	-0.75	75.8					
37	4	0.35						90.0
39	3	0.97						98.0
42	4	0.35						90.0
45	4	0.25						88.7
46	3	0.92						97.4
48	1	1.98						111.0
50	4	-0.04						85.0
52	1	-1.67						64.0
55	3	-0.81						75.0
57	NR							< 250
59	NR							< 100
61	2	-1.20						70.0
63	0	4.46						143.0
68	0	12.75						250.0
69	4	0.35						90.0
70	4	-0.12						84.0
73	4	0.50						92.0
74	3	-0.66						77.0
78	4	-0.49						79.2
85	4	0.35						90.0
89	0	3.99						137.0
97	0	2.52						118.0
100	3	-0.94						73.4
101	0	4.77						147.0
103	4	-0.04						85.0
105	4	-0.04						85.0
107	2	-1.19						70.2
113	4	-0.13						83.8
114	0	-5.08			20.0			
119	2	1.28						102.0
120	4	0.00						85.5

Lab	Rating	Z-value	0	1	2	3	4	6
121	4	0.27					89.0	
122	2	1.12					100.0	
127	2	-1.23					69.6	
131	NR						< 100	
133	3	0.58					93.0	
134	3	0.64					93.7	
136	4	0.27					89.0	
138	2	1.17					100.6	
139	0	-2.67					51.0	
141	4	-0.26					82.2	
145	4	-0.43					80.0	
146	2	1.36					103.0	
149	4	-0.43					80.0	
151	4	-0.43					80.0	
161	0	2.91					123.0	
167	NR						< 100	
180	0	-2.20					57.1	
182	NR				< 1000			
183	3	0.57					92.9	
185	1	1.74					108.0	
196	4	0.07						86.4
202	4	-0.43					80.0	
204	3	-0.52					78.8	

Table 11. --Statistical summary of reported data for standard reference water sample T-121 (trace constituent)--Continued

As (Arsenic) $\mu\text{g/L}$



0. Other	4. ICP
2. AA: direct N2O	6. ICP/MS
3. AA: graphite furnace	11. AA: hydride
N =	1 1 49 3 5 18
Minimum =	5.89 6.80 3.70 7.00 7.40 4.00
Maximum =	10.00 8.00 8.70 9.23
Median =	8.00 7.94
St Dev =	0.97 0.76

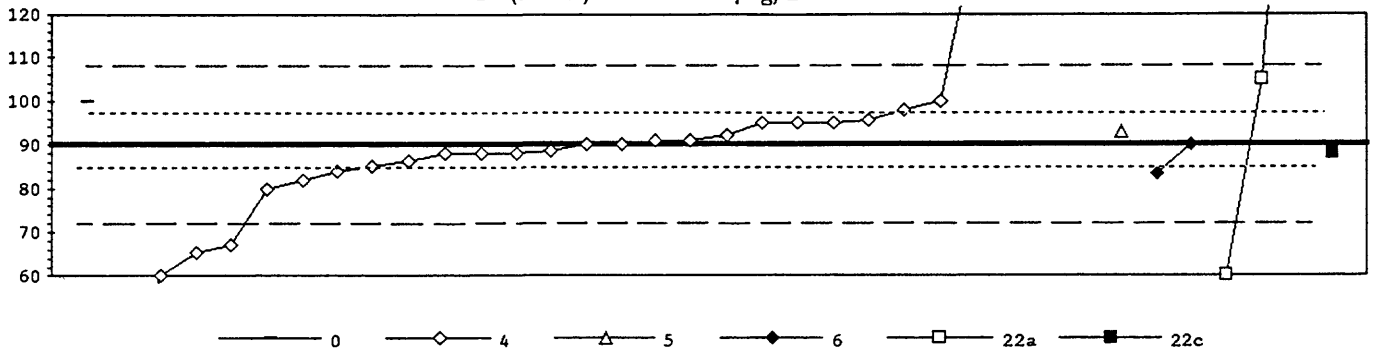
MPV = 8.00 +/- 0.17
 F-pseudostigma = 1.11
 N = 77
 Hu = 8.50
 Hl = 7.00

Lab	Rating	Z-value	0	2	3	4	6	11
1	2	1.08						9.20
3	2	-1.35			6.50			
5	4	0.40			8.45			
8	0	-3.60						4.00
11	1	-1.90	5.89					
12	NR				< 10			
13	4	0.00			8.00			
15	3	-0.90			7.00			
16	3	-0.90			7.00			
18	2	1.11						9.23
23	4	0.22			8.25			
24	0	-3.87			3.70			
26	4	0.00						8.00
28	4	0.00				8.00		
29	1	1.62			9.80			
30	4	0.46				8.51		
32	3	0.63				8.70		
35	4	0.21						8.23
36	0	-2.77			4.92			
37	3	0.57				8.63		
39	4	-0.36						7.60
42	3	-0.54				7.40		
45	2	-1.44			6.40			
46	2	-1.26			6.60			
48	3	-0.81			7.10			
50	4	0.00						8.00
51	2	-1.26			6.60			
52	4	0.45			8.50			
55	4	0.45			8.50			
57	4	0.00						8.00
58	1	-1.71						6.10
59	3	-0.90				7.00		
61	4	0.45			8.50			
63	4	0.00			8.00			
68	4	-0.45			7.50			
69	4	0.18			8.20			
70	4	0.18			8.20			
74	3	0.54			8.60			
75	4	-0.31						7.65
76	3	0.69			8.77			
78	4	0.00			8.00			
79	2	-1.44			6.40			
80	3	0.90			9.00			
85	4	-0.45						7.50
87	3	-0.90						7.00
89	3	-0.70						7.22
90	3	0.63			8.70			
94	4	-0.15			7.83			
96	4	0.05			8.06			
97	3	0.56						8.62

Lab	Rating	Z-value	0	2	3	4	6	11
100.	2	1.35			9.50			
103.	3	-0.90				7.00		
105.	4	0.00			8.00			
107.	4	0.41			8.46			
108.	3	-0.90			7.00			
109.	3	-0.94			6.96			
113.	4	-0.22			7.75			
119.	4	-0.45						7.50
120.	4	-0.05						7.94
123.	1	-1.93			5.85			
127.	4	-0.23			7.74			
131.	NR					< 50		
133.	4	-0.49			7.46			
134.	4	-0.36						7.60
136.	4	0.00			8.00			
138.	3	0.72			8.80			
139.	3	0.88			8.98			
141.	4	0.45			8.50			
145.	NR					< 21		
146.	4	0.00			8.00			
149.	2	-1.44			6.40			
167.	1	1.80			10.00			
179.	2	-1.08			6.80			
180.	NR					< 18		
182.	4	0.00						8.00
183.	3	-0.54			7.40			
193.	3	-0.90			7.00			
196.1	4	0.04						8.04
196.2	3	0.90			9.00			
202.	4	-0.18			7.80			
204.	2	-1.35			6.50			

Table 11. --Statistical summary of reported data for standard reference water sample T-121 (trace constituent)--Continued

B (Boron) $\mu\text{g/L}$

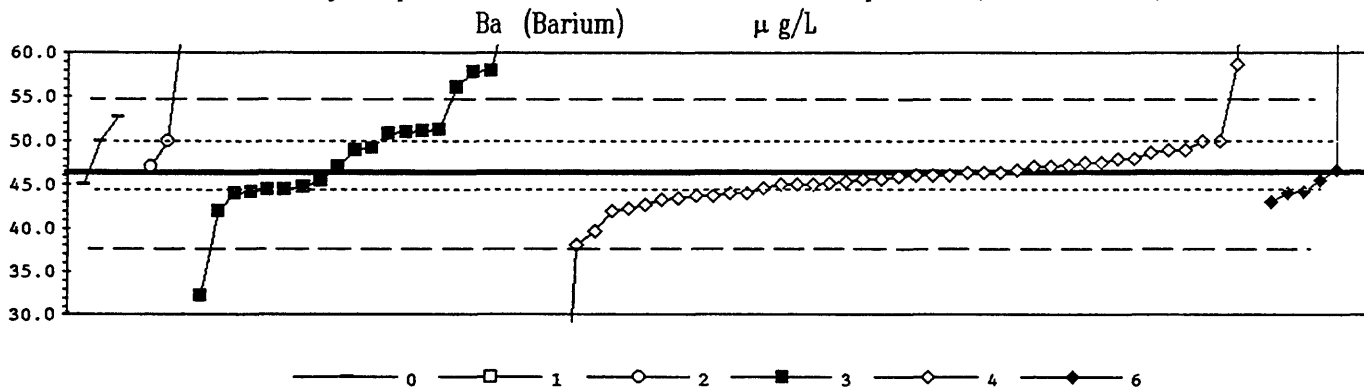


0. Other	6. ICP/MS
4. ICP	22a. Colorimetric: azomethine
5. DCP	22c. Colorimetric: curcumin
	N = 1 28 1 2 3 1
	Minimum = 100 40 93 84 60 88
	Maximum = 4300 90 200
	Median = 89
	St Dev = 9

MPV = 90 +/- 2
 F-pseudosigma = 9
 N = 36
 Hu = 97
 Hl = 85

Lab	Rating	Z-value	0	4	5	6	22a	22c
1	4	0.32			93			
3	2	-1.11		80				
5	4	-0.18		89				
11	2	1.09	100					
15	3	-0.67		84				
16	NR		< 200					
18	4	0.10		91				
24	3	0.54		95				
25	4	0.10		91				
26	NR						< 100	
28	0	6.60		150				
37	3	-0.73				84		
39	3	0.87		98				
42	4	-0.01				90		
45	1	1.64					105	
46	0	-5.52		40				
48	2	1.09		100				
52	NR		< 170					
55	0	-2.54		67				
57	0	12.10		200				
58	4	-0.23						88
61	4	0.21		92				
63	3	-0.56		85				
70	4	-0.23		88				
100	0	5.50		140				
103	0	-3.31		60				
119	4	-0.23		88				
121	4	-0.01		90				
122	0	-3.31					60	
127	4	0.01		90				
129	0	12.10					200	
131	4	-0.23		88				
134	3	-0.89		82				
141	3	0.55		95				
145	0	-2.74		65				
146	3	0.53		95				
161	0	463.60		4300				
167	4	-0.41		86				
180	3	0.59		96				
182	NR							< 100

Table 11. --Statistical summary of reported data for standard reference water sample T-121 (trace constituent)--Continued



0. Other	3. AA: graphite furnace
1. AA: direct air	4. ICP
2. AA: direct N2O	6. ICP/MS
N =	3 2 3 21 42 6
Minimum =	45.0 12.0 47.0 32.2 0.0 43.0
Maximum =	52.8 100.0 66.0 116.0 115.0 451.0
Median =	49.0 46.0
St Dev =	5.0 3.3

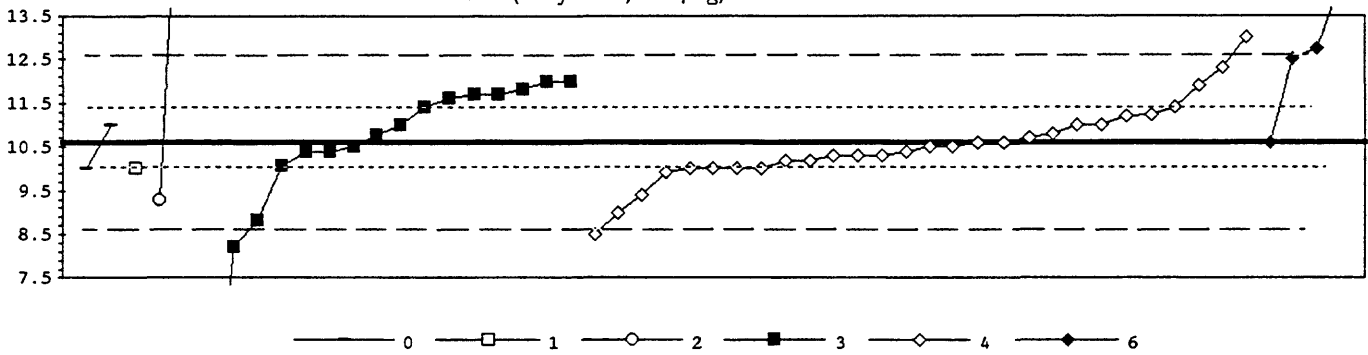
MPV = 46.3 +/- 0.7
 F-pseudostigma = 4.3
 N = 76
 Hu = 50.0
 Hl = 44.3

Lab	Rating	Z-value	0	1	2	3	4	6
1	4	0.00					46.3	
3	3	-0.54					44.0	
5	4	0.07					46.6	
6	3	-0.51				44.1		
8	1	-1.57					39.6	
11	3	0.87	50.0					
13	2	1.18				51.3		
15	4	-0.30					45.0	
16	4	0.17					47.0	
18	3	-0.94					42.3	
19	3	-0.70					43.3	
23	2	1.06				50.8		
24	4	-0.09					45.9	
25	4	-0.23					45.3	
26	NR						< 250	
28	3	0.87					50.0	
29	3	0.87			50.0			
30	4	0.07						46.6
32	4	-0.19						45.5
33	4	-0.30	45.0					
36	1	1.53	52.8					
37	3	-0.51						44.1
39	3	0.64					49.0	
42	3	-0.77						43.0
45	4	0.28					47.5	
46	4	0.28					47.5	
48	2	1.11				51.0		
50	NR					< 50		
52	3	-0.65					43.5	
55	4	0.00					46.3	
57	3	0.87					50.0	
59	4	-0.07					46.0	
61	3	-0.84					42.7	
63	0	16.12					115.0	
68	4	0.40					48.0	
69	0	2.75				58.0		
70	4	0.17					47.0	
74	2	-1.01					42.0	
75	3	0.68					49.2	
76	4	-0.19					45.5	
78	2	1.13				51.1		
87	0	4.62			66.0			
89	0	16.35				116.0		
90	0	8.00				80.4		
94	4	-0.40					44.6	
96	4	0.17			47.0			
97	4	-0.44				44.4		
100	4	0.00					46.3	
101	4	-0.26					45.2	
103	1	-1.94					38.0	

Lab	Rating	Z-value	0	1	2	3	4	6
105	3	-0.54						44.0
107	4	-0.42					44.5	
108	3	0.64					49.0	
113	0	2.70					57.8	
119	4	0.40						48.0
120	0	2.30					56.1	
121	4	-0.07						46.0
122	4	-0.35					44.8	
126	NR						< 200	
127	4	-0.16						45.6
131	4	-0.30						45.0
133	3	-0.61						43.7
134	3	0.54						48.6
136	3	-0.54					44.0	
138	4	-0.16						45.6
141	4	-0.30						45.0
145	3	-0.61						43.7
146	3	0.61						48.9
149	0	4.62					66.0	
153	4	0.17						47.0
161	4	-0.07						46.0
167	0	-10.85						0.0
180	4	0.21						47.2
182	0	12.60			100.0			
183	0	-3.31					32.2	
191	0	94.95						451.0
193	2	-1.01					42.0	
196	3	-0.53						44.0
204	0	2.91						58.7

Table 11. --Statistical summary of reported data for standard reference water sample T-121 (trace constituent)--Continued

Be (Beryllium) $\mu\text{g/L}$



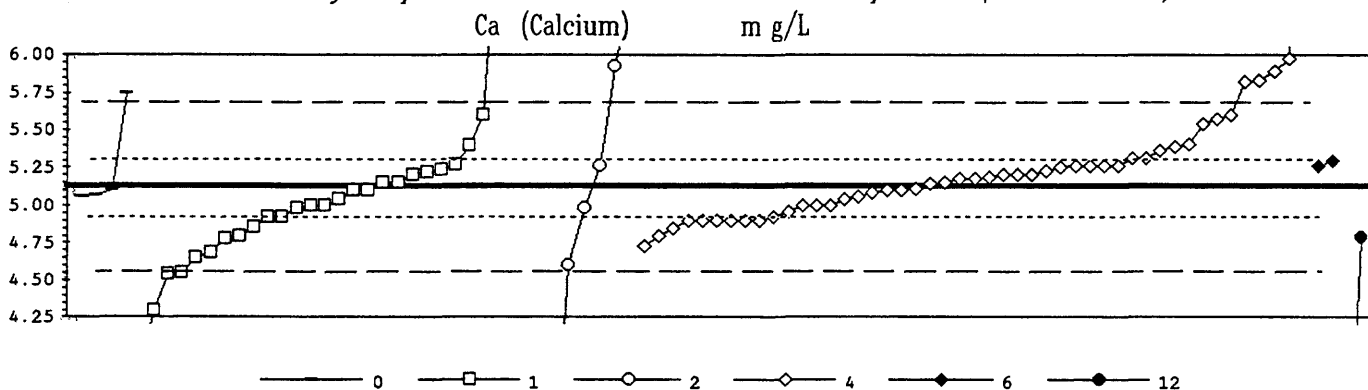
0. Other	3. AA: graphite furnace
1. AA: direct air	4. ICP
2. AA: direct N2O	6. ICP/MS
	N = 2 1 2 16 28 4
	Minimum = 10.0 10.0 9.3 3.3 8.5 10.6
	Maximum = 11.0 10.0 20.0 12.0 13.0 14.3
	Median = 11.0 10.5
	St Dev = 1.1 0.9

MPV = 10.6 +/- 0.2
 F-pseudosigma = 1.0
 N = 53
 Hu = 11.4
 Hl = 10.0

Lab	Rating	Z-value	0	1	2	3	4	6
1	3	0.60					11.2	
3	3	-0.58					10.0	
6	2	1.35			12.0			
8	1	1.64					12.3	
11	3	-0.58	10.0					
12	NR						< 20	
15	2	1.25					11.9	
16	3	-0.58					10.0	
18	2	-1.16					9.4	
23	3	0.77				11.4		
24	4	-0.19				10.4		
25	4	-0.39					10.2	
28	NR			< 100				
30	4	0.00						10.6
32	0	3.57						14.3
36	4	0.39	11.0					
37	1	1.83						12.5
39	0	2.31					13.0	
45	3	0.77					11.4	
46	3	0.58					11.2	
48	3	0.96				11.6		
50	4	0.39				11.0		
52	2	1.16				11.8		
55	4	0.19					10.8	
57	1	-1.54					9.0	
58	0	-7.03				3.3		
61	4	0.39					11.0	
63	3	-0.51				10.1		
68	3	-0.58					10.0	
69	4	-0.10				10.5		
70	4	-0.29					10.3	
74	4	-0.39					10.2	
78	2	1.06				11.7		
94	4	-0.29					10.3	
97	1	-1.72				8.8		
100	4	-0.19					10.4	
103	3	-0.58					10.0	
105	4	-0.29					10.3	
114	0	9.06		20.0				
119	0	-2.31				8.2		
120	4	0.17				10.8		
127	4	0.00					10.6	
133	4	0.10					10.7	
134	0	-2.02					8.5	
138	4	-0.10					10.5	
141	2	1.06				11.7		
145	3	-0.66					9.9	
146	4	0.00					10.6	
149	4	-0.19				10.4		
167	4	0.39					11.0	

Lab	Rating	Z-value	0	1	2	3	4	6
179	2	-1.25			9.3			
180	4	-0.10					10.5	
182	3	-0.58		10.0				
196	0	2.06						12.7
202	2	1.35				12.0		

Table 11. --Statistical summary of reported data for standard reference water sample T-121 (trace constituent)--Continued



0. Other	4. ICP
1. AA: direct air	6. ICP/MS
2. AA: direct N2O	12. AA: flame emission
	N = 4 29 6 47 2 2
	Minimum = 5.06 3.90 3.00 4.73 5.26 2.75
	Maximum = 5.75 9.29 6.40 10.40 5.30 4.79
	Median = 5.00 5.18
	St Dev = 0.30 0.29

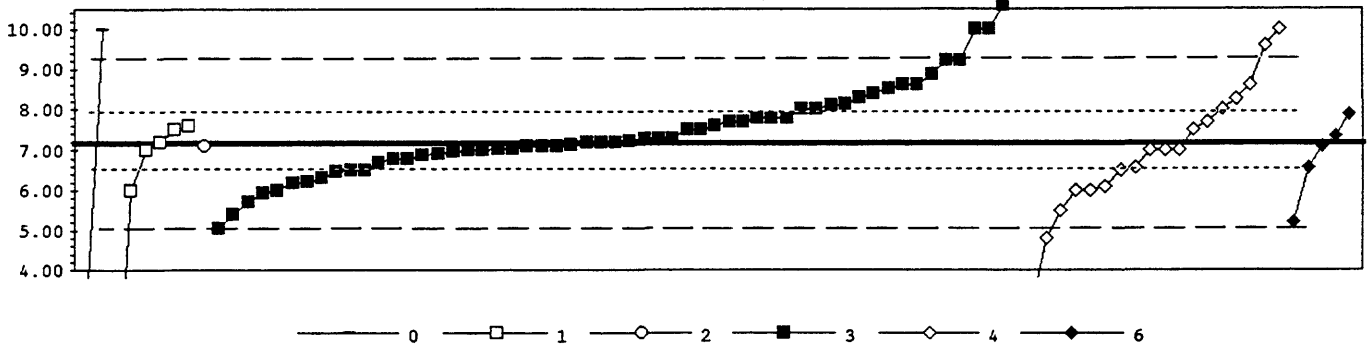
MPV = 5.13 +/- 0.04
 F-pseudostigma = 0.28
 N = 90
 Hu = 5.30
 Hl = 4.92

Lab	Rating	Z-value	0	1	2	4	6	12
1	4	0.20					5.18	
3	4	0.27					5.20	
5	4	0.48					5.26	
8	3	0.83					5.36	
9	0	-2.93	4.30					
11	4	-0.20	5.07					
12	4	-0.44					5.00	
13	3	-0.73	4.92					
15	4	-0.16					5.08	
16	3	-0.80					4.90	
18	1	1.69					5.60	
19	3	-0.98					4.85	
23	3	-0.94	4.86					
24	4	0.37					5.23	
25	1	1.62					5.58	
28	0	18.73					10.40	
32	3	0.62					5.30	
33	4	-0.24	5.06					
36	2	-1.19						4.79
39	0	3.00					5.97	
42	4	-0.09					5.10	
43	4	-0.09					5.10	
45	4	-0.30	5.04					
46	3	0.66					5.31	
48	3	0.66					5.31	
51	4	0.48					5.26	
52	3	-0.80					4.90	
54	4	-0.09	5.10					
55	4	0.20					5.18	
57	4	-0.44					5.00	
59	4	0.27					5.20	
61	3	-0.80					4.90	
63	3	0.94					5.39	
64	4	-0.30					5.04	
68	3	-0.80					4.90	
69	2	-1.15	4.80					
70	4	0.48					5.26	
74	2	-1.15					4.80	
75	2	-1.22	4.78					
78	1	-1.69	4.65					
83	3	0.51					5.27	
84	0	-4.35					3.90	
85	4	0.34					5.22	
87	0	4.53				6.40		
89	1	-1.54	4.69					
92	0	-2.04	4.55					
94	4	-0.23					5.06	
96	3	-0.51				4.98		
97	3	-0.73	4.92					
100	2	1.01					5.41	

Lab	Rating	Z-value	0	1	2	4	6	12
101	4	0.09		5.15				
103	3	-0.80				4.90		
105	2	-1.40				4.73		
107	0	14.79		9.29				
109	1	1.69		5.60				
111	4	0.48				5.26		
113	4	0.27		5.20				
114	0	-7.54				3.00		
116	0	2.72					5.89	
119	4	0.09					5.15	
120	0	-2.08		4.54				
121	4	0.27					5.20	
122	4	0.41				5.24		
123	3	-0.51		4.98				
126	4	-0.44		5.00				
127	4	0.05					5.14	
129	0	13.76		9.00				
131	3	-0.80					4.90	
133	3	-0.73					4.92	
134	3	-0.59					4.96	
136	1	-1.86				4.60		
138	4	0.48					5.26	
139	0	2.84				5.93		
140	4	-0.44		5.00				
141	4	0.44					5.25	
145	4	-0.05					5.11	
146	0	2.50					5.83	
151	4	-0.09		5.10				
153	4	-0.09	5.10					
155	0	2.22	5.75					
164	3	0.95		5.39				
167	4	-0.44					5.00	
179	0	10.21		8.00				
180	2	1.47					5.54	
182	0	6.30		6.90				
191	4	0.48					5.26	
193	4	0.09		5.15				
201	0	-8.44						2.75
202	4	0.23					5.19	
204	0	2.47					5.82	

Table 11. --Statistical summary of reported data for standard reference water sample T-121 (trace constituent)--Continued

Cd (Cadmium) $\mu\text{g/L}$



0. Other	3. AA: graphite furnace
1. AA: direct air	4. ICP
2. AA: direct N2O	6. ICP/MS
	N = 2 6 1 56 18 5
	Minimum = 3.74 0.01 7.10 5.05 3.18 5.20
	Maximum = 10.00 7.60 12.00 10.00 7.90
	Median = 7.20 7.00
	St Dev = 1.11 1.40

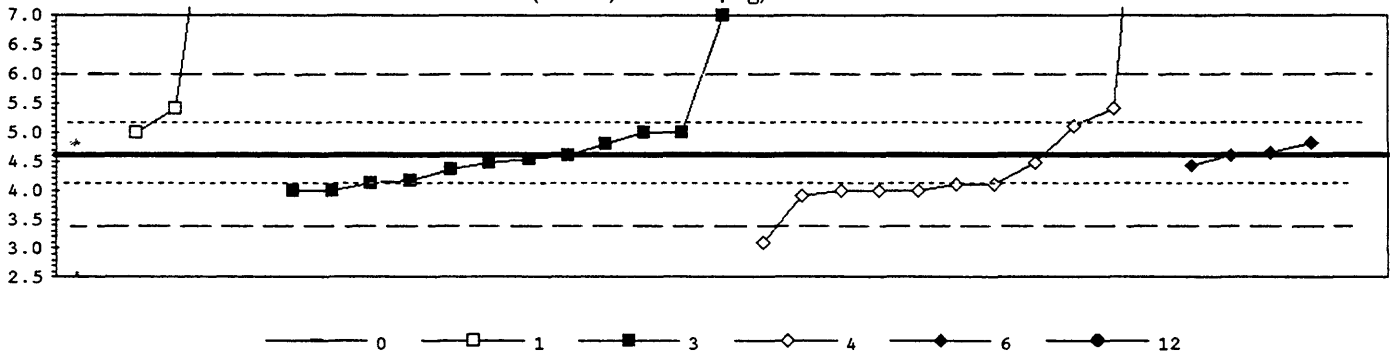
MPV = 7.17 +/- 0.15
 F-pseudosigma = 1.05
 N = 88
 Hu = 7.95
 Hl = 6.54

Lab	Rating	Z-value	0	1	2	3	4	6
1	4	0.13				7.30		
3	3	0.61				7.80		
6	3	0.93				8.14		
8	2	-1.02					6.10	
9	4	-0.35				6.80		
11	0	-3.28	3.74					
12	4	-0.06				7.10		
13	1	1.62				8.86		
15	4	-0.28				6.87		
16	3	0.80					8.00	
18	4	-0.18				6.98		
19	1	-1.59					5.50	
23	2	-1.38				5.72		
24	4	0.32					7.50	
26	4	-0.16				7.00		
28	0	2.71					10.00	
29	4	0.03				7.20		
30	4	0.17					7.34	
32	3	0.70					7.90	
36	4	-0.11				7.05		
37	4	-0.06					7.10	
39	4	0.03				7.20		
42	1	-1.88					5.20	
45	4	-0.03				7.13		
46	4	-0.06				7.10		
48	3	0.51				7.70		
50	4	-0.16				7.00		
51	0	2.71				10.00		
52	3	-0.63				6.51		
55	2	1.37				8.60		
57	4	0.32				7.50		
59	4	-0.16					7.00	
61	0	2.33					9.60	
63	3	0.51				7.70		
68	0	-2.26					4.80	
69	4	-0.13				7.03		
70	0	-2.02				5.05		
73	4	-0.16					7.00	
74	2	-1.11					6.00	
76	4	0.34				7.52		
78	1	-1.69					5.40	
79	0	3.29					10.60	
85	0	4.63					12.00	
87	0	-6.85	0.01					
89	3	-0.90					6.22	
90	2	1.18					8.40	
92	4	-0.16	7.00					
94	3	-0.56					6.58	
96	4	0.06				7.23		
97	2	-1.17				5.94		

Lab	Rating	Z-value	0	1	2	3	4	6
100.	4	0.03		7.20				
101.	3	0.51					7.70	
103.	2	-1.11					6.00	
105.	4	0.13				7.30		
107.	2	1.30				8.52		
108.	3	0.80				8.00		
109.	4	-0.38				6.77		
111.	3	-0.92				6.20		
113.	4	-0.25				6.90		
114.	NR			< 10				
119.	4	0.13				7.30		
120.	3	0.59				7.78		
121.	4	-0.16					7.00	
122.	3	-0.66				6.47		
127.	4	-0.06				7.10		
131.	NR						< 10	
133.	2	1.05					8.26	
134.	4	0.03				7.20		
136.	0	2.71				10.00		
138.	2	1.09				8.30		
139.	1	1.97				9.22		
140.	4	0.42		7.60				
141.	4	-0.44				6.70		
144.	3	-0.83				6.30		
145.	0	-3.81					3.18	
146.	2	1.37					8.60	
149.	4	0.42				7.60		
153.	2	1.37				8.60		
158.	2	-1.11				6.00		
167.	3	0.80				8.00		
179.	4	-0.06			7.10			
180.	3	-0.64					6.50	
182.	0	2.71	10.00					
183.	1	1.96				9.21		
193.	2	-1.11		6.00				
196.1	3	-0.57						6.57
196.2	3	0.89				8.10		
201.	4	0.32		7.50				
202.	3	0.61				7.80		
204.	3	-0.64				6.50		

Table 11. --Statistical summary of reported data for standard reference water sample T-121 (trace constituent)--Continued

Co (Cobalt) $\mu\text{g/L}$



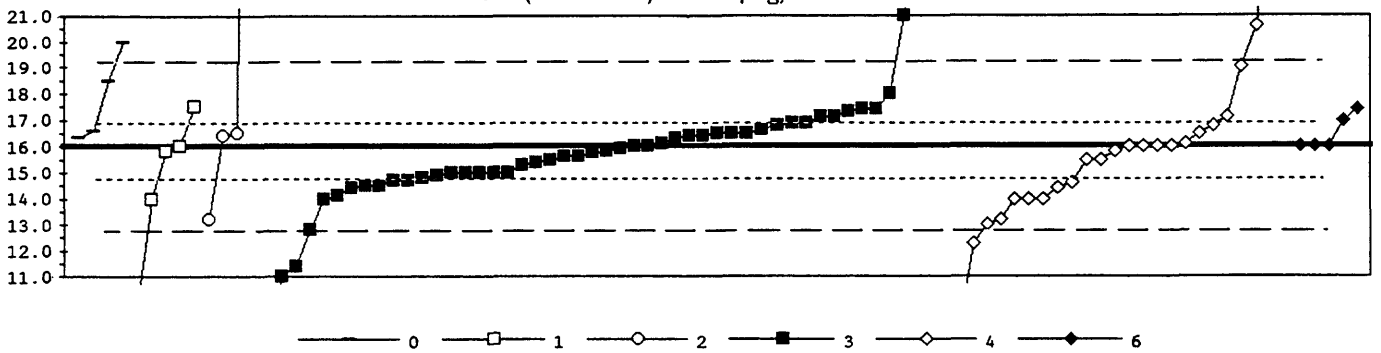
0. Other	4. ICP					
1. AA: direct air	6. ICP/MS					
3. AA: graphite furnace	12. AA: flame emission					
N = 1	4	12	11	4	1	
Minimum =	6.0	5.0	4.0	3.1	4.4	7.9
Maximum =		46.0	7.0	12.5	4.8	
Median =			4.5	4.1		
St Dev =			0.4	0.6		

MPV = 4.6 +/- 0.2
 F-pseudostigma = 0.7
 N = 33
 Hu = 5.1
 Hl = 4.1

Lab	Rating	Z-value	0	1	3	4	6	12
1	4	0.27			4.8			
3	NR					< 10		
8	3	-0.94				3.9		
11	1	1.89	6.0					
15	4	-0.09			4.5			
16	NR					< 10		
18	3	-0.81				4.0		
24	2	1.08				5.4		
26	NR				< 10			
28	NR		< 100					
30	4	0.05					4.6	
32	4	0.00					4.6	
36	0	4.48						7.9
37	4	0.28					4.8	
46	NR					< 10		
48	NR	NR				< 10		
50	3	0.54			5.0			
51	3	-0.81			4.0			
52	3	-0.65			4.1			
55	3	-0.81			4.0			
57	NR				< 100			
61	NR				< 5			
63	0	55.85	46.0					
68	0	-2.02				3.1		
70	NR					< 10		
74	3	-0.81				4.0		
89	NR				< 10			
92	3	0.54		5.0				
94	3	-0.67				4.1		
97	4	-0.32			4.4			
100	2	1.08		5.4				
103	3	-0.81				4.0		
105	NR					< 10		
121	0	3.24			7.0			
127	3	-0.58			4.2			
131	NR				< 10			
133	0	10.66				12.5		
134	4	0.00			4.6			
136	3	0.54			5.0			
138	4	-0.19			4.5			
141	3	0.67				5.1		
145	NR				< 5			
146	4	-0.19				4.5		
167	NR				< 40			
180	3	-0.67				4.1		
182	0	7.28		10.0				
193	NR		< 10					
196	4	-0.24					4.4	

Table 11. --Statistical summary of reported data for standard reference water sample T-121 (trace constituent)--Continued

Cr (Chromium) $\mu\text{g/L}$



0. Other	3. AA: graphite furnace
1. AA: direct air	4. ICP
2. AA: direct N2O	6. ICP/MS
	N = 4 5 4 48 25 5
	Minimum = 16.3 10.0 13.2 8.0 7.6 16.0
	Maximum = 20.0 17.5 80.0 32.1 30.0 17.4
	Median = 15.8 15.8
	St Dev = 1.5 1.9

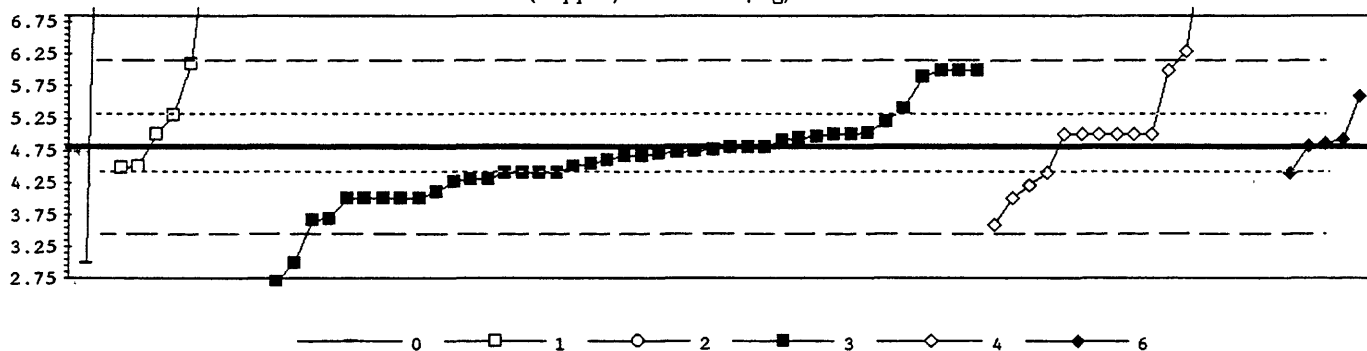
MPV = 16.0 +/- 0.2
 F-pseudosigma = 1.6
 N = 91
 Hu = 16.8
 Hl = 14.7

Lab	Rating	Z-value	0	1	2	3	4	6
1	4	0.21	16.3					
3	2	-1.28					14.0	
5	3	0.51					16.8	
6	4	0.06				16.1		
8	0	-4.42					9.1	
9	3	0.70				17.1		
11	0	2.56	20.0					
12	NR							< 20
13	0	-2.05				12.8		
15	3	0.51				16.8		
16	1	1.92					19.0	
18	1	-1.92					13.0	
19	2	-1.28					14.0	
23	4	-0.26				15.6		
24	4	-0.32					15.5	
25	3	0.70					17.1	
26	NR							< 20
28	0	8.97					30.0	
29	3	-0.96				14.5		
30	4	0.00						16.0
32	4	0.00						16.0
36	1	1.60	18.5					
37	3	0.64						17.0
39	4	0.00					16.0	
42	4	0.00						16.0
45	3	-0.83				14.7		
46	2	-1.03				14.4		
48	4	0.26				16.4		
50	3	-0.64				15.0		
51	0	-5.13				8.0		
52	3	0.70				17.1		
55	4	0.32				16.5		
57	3	-0.64				15.0		
58	3	0.90				17.4		
59	4	0.00					16.0	
61	1	-1.79					13.2	
63	4	0.26				16.4		
68	0	6.41					26.0	
69	4	-0.13				15.8		
70	4	0.32				16.5		
73	0	2.95					20.6	
74	2	-1.28					14.0	
75	4	0.00				16.0		
76	3	0.90				17.4		
78	4	0.19				16.3		
79	4	0.00				16.0		
80	0	3.20				21.0		
85	NR							< 20
87	1	-1.79			13.2			
89	3	-0.64				15.0		

Lab	Rating	Z-value	0	1	2	3	4	6
90.	0	10.32				32.1		
92.	4	0.00		16.0				
94.	4	-0.32					15.5	
96.	4	0.33					16.5	
97.	2	-1.22					14.1	
100.	4	-0.13		15.8				
101.	4	0.32					16.5	
103.	0	-2.37					12.3	
105.	3	0.83					17.3	
107.	3	-0.70					14.9	
108.	2	-1.28					14.0	
111.	4	0.26			16.4			
113.	3	0.58					16.9	
114.	0	41.01			80.0			
119.	4	-0.32					15.5	
120.	3	-0.84					14.7	
121.	2	1.28					18.0	
122.	4	-0.26					15.6	
123.	4	0.42					16.7	
126.	0	6.41					26.0	
127.	4	-0.13					15.8	
131.	0						< 10	
133.	3	-0.90					14.6	
134.	4	0.38	16.6					
136.	0	-3.20					11.0	
138.	4	-0.45					15.3	
140.	3	0.96		17.5				
141.	2	-1.03					14.4	
144.	3	-0.64					15.0	
145.	0	-5.38					7.6	
146.	4	0.06					16.1	
149.	3	-0.96					14.5	
153.	3	0.58					16.9	
158.	0	-2.95					11.4	
161.	4	0.00					16.0	
167.	3	-0.64					15.0	
179.	4	0.32			16.5			
180.	4	0.00					16.0	
182.	0	-3.85		10.0				
183.	4	-0.13					15.8	
193.	2	-1.28		14.0				
196.1	3	0.91						17.4
196.2	4	-0.06					15.9	
201.	0			< 2				
202.	4	-0.38					15.4	
204.	3	-0.77					14.8	

Table 11. --Statistical summary of reported data for standard reference water sample T-121 (trace constituent)--Continued

Cu (Copper) $\mu\text{g/L}$



0. Other	3. AA: graphite furnace
1. AA: direct air	4. ICP
2. AA: direct N2O	6. ICP/MS
N =	2 8 1 41 17 5
Minimum =	3.00 4.48 2.40 2.70 3.60 4.40
Maximum =	13.30 20.00 6.00 20.00 5.60
Median =	5.15 4.66 5.00
St Dev =	1.41 0.71 1.46

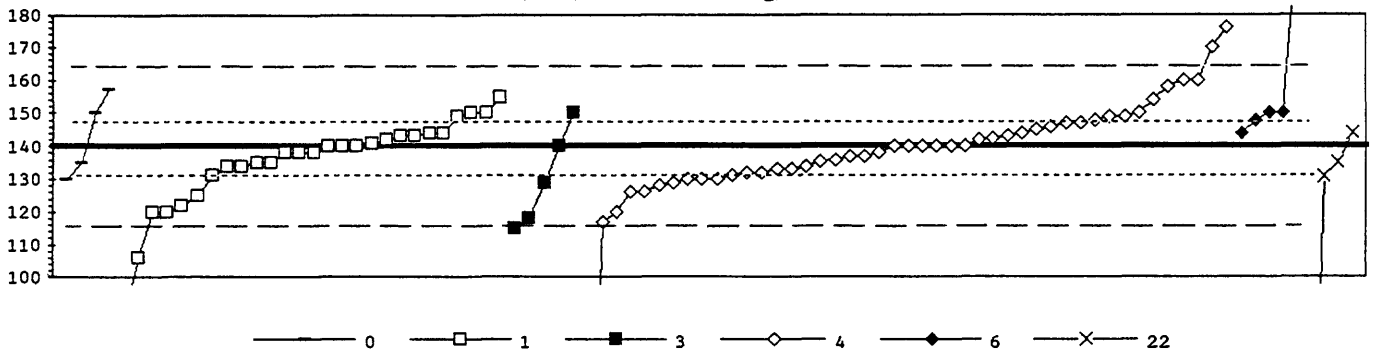
MPV = 4.80 +/- 0.10
 F-pseudostigma = 0.67
 N = 74
 Hu = 5.30
 Hl = 4.40

Lab	Rating	Z-value	0	1	2	3	4	6
1	4	0.15				4.90		
3	NR						< 5	
6	4	-0.37				4.55		
8	1	-1.80					3.60	
9	2	-1.20				4.00		
11	0	-2.70	3.00					
12	1	1.80				6.00		
13	NR						< 50	
15	0	-3.15				2.70		
16	NR							< 10
18	3	-0.60				4.40		
23	1	-1.65				3.70		
24	4	0.00				4.80		
26	NR							< 100
28	0	22.78				20.00		
29	NR			< 4				
30	4	0.10					4.87	
32	2	1.20					5.60	
36	0	12.74	13.30					
37	4	0.19					4.93	
39	1	1.80				6.00		
42	3	-0.60					4.40	
45	4	-0.10				4.73		
48	4	0.00				4.80		
50	4	0.30				5.00		
51	2	-1.20				4.00		
52	4	0.21				4.94		
55	2	-1.05				4.10		
57	NR			< 20				
58	3	-0.60				4.40		
59	4	0.30				5.00		
61	NR							< 5
63	4	0.30				5.00		
68	0	2.25					6.30	
69	1	1.80				6.00		
70	NR							< 10
73	0	4.80					8.00	
74	4	0.30					5.00	
75	3	-0.60				4.40		
78	1	-1.69				3.67		
79	0	-2.70				3.00		
80	2	-1.20				4.00		
83	4	-0.45		4.50				
85	NR			< 5				
87	NR			< 5				
89	NR				< 10			
90	1	1.95		6.10				
92	4	0.30		5.00				
94	0	4.80					8.00	
96	4	-0.48		4.48				

Lab	Rating	Z-value	0	1	2	3	4	6
97	4	-0.21				4.66		
100	0	11.09		12.20				
101	3	-0.90					4.20	
103	2	-1.20					4.00	
105	4	0.30					5.00	
107	4	-0.07				4.75		
108	1	1.80				6.00		
111	3	-0.75				4.30		
113	4	0.33				5.02		
114	0	22.78		20.00				
119	4	0.30					5.00	
120	3	-0.81				4.26		
121	3	0.90				5.40		
122	4	-0.21				4.66		
123	3	-0.60				4.40		
126	NR			< 20				
127	4	0.24				4.96		
131	NR							< 10
133	0	4.75					7.97	
134	3	-0.60				4.40		
136	2	-1.20				4.00		
138	4	0.00				4.80		
139	4	-0.15				4.70		
140	3	0.75		5.30				
141	1	1.65				5.90		
144	3	0.60				5.20		
145	NR							< 3
146	0	10.79					12.00	
149	NR			< 9				
153	4	-0.30				4.60		
158	2	-1.20				4.00		
161	4	0.30					5.00	
167	NR							< 20
179	0	-3.60			2.40			
180	4	0.30					5.00	
182	NR			< 20				
183	4	-0.04				4.77		
193	NR			< 10				
196	4	0.04					4.83	
201	0	5.10		8.20				
202	4	-0.45				4.50		
204	3	-0.75				4.30		

Table 11. --Statistical summary of reported data for standard reference water sample T-121 (trace constituent)--Continued

Fe (Iron) $\mu\text{g/L}$



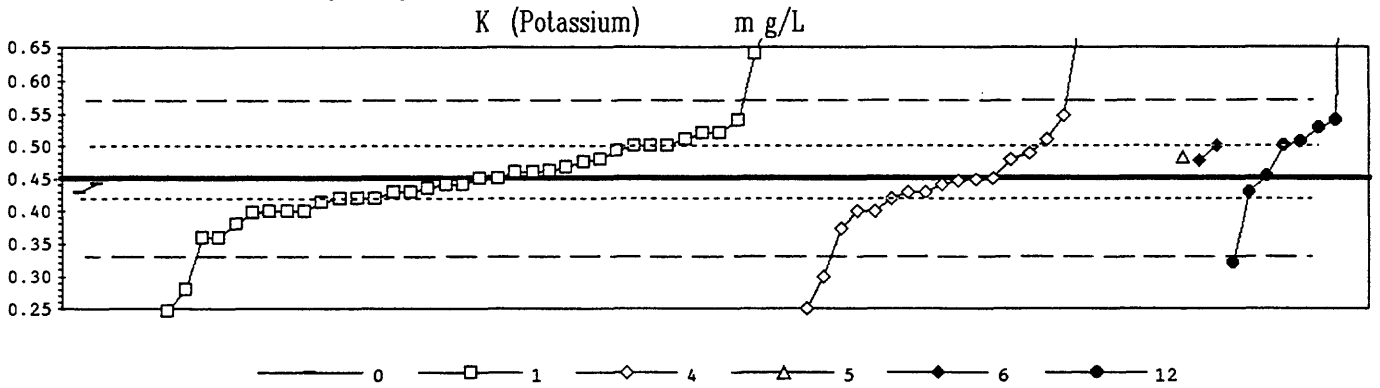
0. Other	4. ICP
1. AA: direct air	6. ICP/MS
3. AA: graphite furnace	22. Color: phenanthroline
N =	4 27 5 45 5 4
Minimum =	130 86 115 0 144 0
Maximum =	157 155 150 176 205 144
Median =	139 140
St Dev =	11 12

MPV = 140 +/- 2
 F-pseudostigma = 12
 N = 90
 Hu = 147
 Hl = 131

Lab	Rating	Z-value	0	1	3	4	6	22
1	4	0.21				142		
3	3	-0.84				130		
5	3	0.76				149		
8	4	0.25				143		
9	4	-0.42		135				
11	3	0.84	150					
12	4	0.00				140		
13	3	-0.51		134				
15	2	-1.01				128		
16	4	-0.17				138		
18	1	-1.94				117		
19	3	-0.67				132		
21	4	0.34						144
23	1	-1.52		122				
24	4	-0.25				137		
25	3	-0.93				129		
26	NR					< 200		
28	0	2.53				170		
29	2	-1.26		125				
30	3	0.67					148	
32	0	5.48					205	
33	4	-0.42	135					
36	3	-0.84	130					
37	3	0.84					150	
42	4	0.17				142		
43	3	0.67				148		
45	3	-0.51		134				
46	3	0.59				147		
48	1	1.69				160		
50	3	-0.93			129			
51	4	0.08		141				
52	3	-0.59				133		
54	4	0.00		140				
55	4	0.00				140		
57	1	-1.69		120				
58	0	-4.55		86				
59	4	0.42				145		
61	2	-1.18				126		
63	4	-0.25				137		
68	4	0.00				140		
69	4	0.34		144				
70	1	-1.69				120		
73	1	1.52				158		
74	3	-0.84				130		
76	4	0.34		144				
78	4	0.00		140				
83	4	-0.17		138				
84	3	0.84		150				
85	4	0.25		143				
87	2	1.43	157					

Lab	Rating	Z-value	0	1	3	4	6	22
89	3	-0.76		131				
90	4	-0.17		138				
91	4	0.34						144
92	0	-2.87		106				
94	4	0.34				144		
96	4	0.25		143				
97	4	0.00				140		
100	4	-0.17		138				
101	3	0.76					149	
103	3	-0.84					130	
105	3	-0.59					133	
107	4	-0.42		135				
109	3	0.76		149				
113	0	-11.79						0.13
114	3	0.84		150				
116	3	0.51					146	
119	4	0.00					140	
120	1	-1.86			118			
121	3	0.84					150	
122	0	-2.11			115			
127	4	0.00					140	
129	4	-0.42						135
131	4	0.00					140	
133	3	0.59					147	
134	3	-0.73					131	
136	3	0.84			150			
138	4	-0.38					136	
139	1	-1.69		120				
140	4	0.00		140				
141	4	-0.34					136	
145	2	-1.18					126	
146	1	1.69					160	
149	2	1.26		155				
155	3	-0.79						131
161	2	1.18					154	
167	0	-11.79					0.14	
180	3	-0.67					132	
182	NR			< 200				
191	3	0.84						150
193	4	0.17		142				
202	3	-0.51					134	
204	0	3.04					176	

Table 11. --Statistical summary of reported data for standard reference water sample T-121 (trace constituent)--Continued



0. Other	5. DCP
1. AA: direct air	6. ICP/MS
4. ICP	12. AA: flame emission
	N = 2 40 22 1 2 8
	Minimum = 0.43 0.10 0.25 0.48 0.48 0.32
	Maximum = 0.44 1.55 640 0.50 1.54
	Median = 0.44 0.44 0.50
	St Dev = 0.05 0.06 0.08

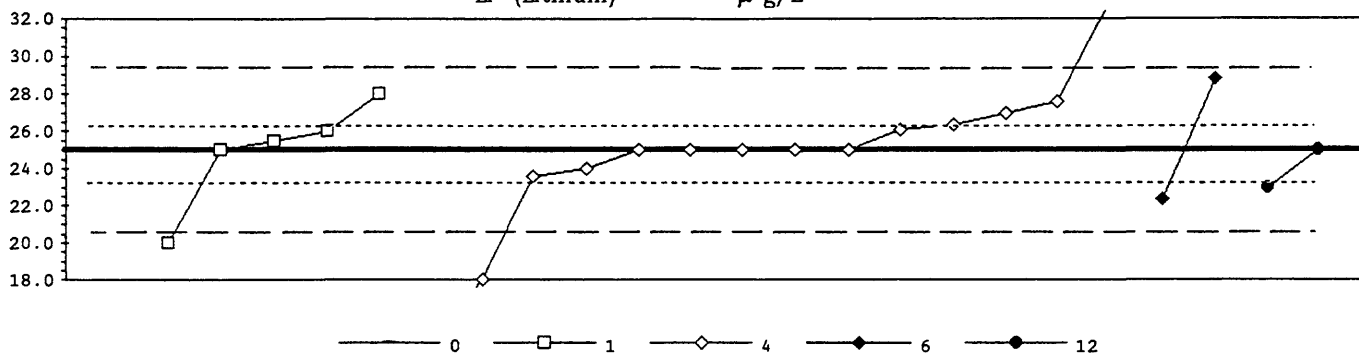
MPV = 0.45 +/- 0.01
 F-pseudostigma = 0.06
 N = 75
 Hu = 0.50
 Hl = 0.42

Lab	Rating	Z-value	0	1	4	5	6	12
1	4	-0.31		0.43				
3	2	-1.41		0.36				
8	3	0.94			0.51			
9	2	-1.10		0.38				
11	4	-0.13	0.44					
12	0	-2.35			0.30			
13	3	-0.56		0.41				
15	4	0.27		0.47				
16	3	-0.78		0.40				
18	0	3.92				0.70		
23	4	-0.31		0.43				
24	0	-3.14			0.25			
28	0	25.88			2.10			
32	3	0.78					0.50	
33	3	0.53				0.48		
36	0	-2.02						0.32
42	0	3.92			0.70			
43	3	-0.78			0.40			
45	4	-0.24		0.44				
46	3	0.63			0.49			
48	0	10032			640			
51	0	17.10						1.54
52	4	-0.03			0.45			
54	4	0.00		0.45				
55	4	-0.31						0.43
57	3	0.78		0.50				
59	4	0.00			0.45			
61	NR				< 1			
63	2	1.10		0.52				
64	4	-0.47		0.42				
68	0	8.63			1.00			
69	3	0.78						0.50
70	NR		< 0.5					
74	4	0.47			0.48			
75	NR		< 1					
78	4	0.16		0.46				
83	4	0.47		0.48				
85	3	0.94		0.51				
87	4	-0.16		0.44				
89	3	0.78		0.50				
92	0	17.25		1.55				
94	4	0.19		0.46				
96	3	0.66		0.49				
97	2	-1.41		0.36				
100	4	-0.16			0.44			
101	3	0.78		0.50				
103	3	-0.78			0.40			
105	4	-0.31			0.43			
109	4	-0.47		0.42				
111	4	0.39		0.48				

Lab	Rating	Z-value	0	1	4	5	6	12
113	2	1.10		0.52				
114	0	-3.61		0.22				
119	4	-0.31			0.43			
120	0	-3.20		0.25				
121	4	-0.16		0.44				
122	4	0.16		0.46				
123	0	-2.67		0.28				
127	2	1.41		0.54				
129	0	-3.92		0.20				
131	NR							< 2
133	2	-1.21			0.37			
134	0	3.92		0.70				
136	3	-0.78		0.40				
138	4	-0.06			0.45			
139	2	1.41						0.54
140	0	2.98		0.64				
141	4	-0.47			0.42			
145	0				< 0.1			
146	0	17.41			1.56			
151	4	-0.47		0.42				
153	4	-0.31	0.43					
164	3	-0.82		0.40				
167	NR				< 1			
179	3	-0.78		0.40				
180	1	1.52			0.55			
182	0	-5.49		0.10				
191	4	0.44					0.48	
193	4	0.00		0.45				
201	3	0.88						0.51
202	2	1.21						0.53
204	4	0.08						0.46

Table 11. --Statistical summary of reported data for standard reference water sample T-121 (trace constituent)--Continued

Li (Lithium) $\mu\text{g/L}$

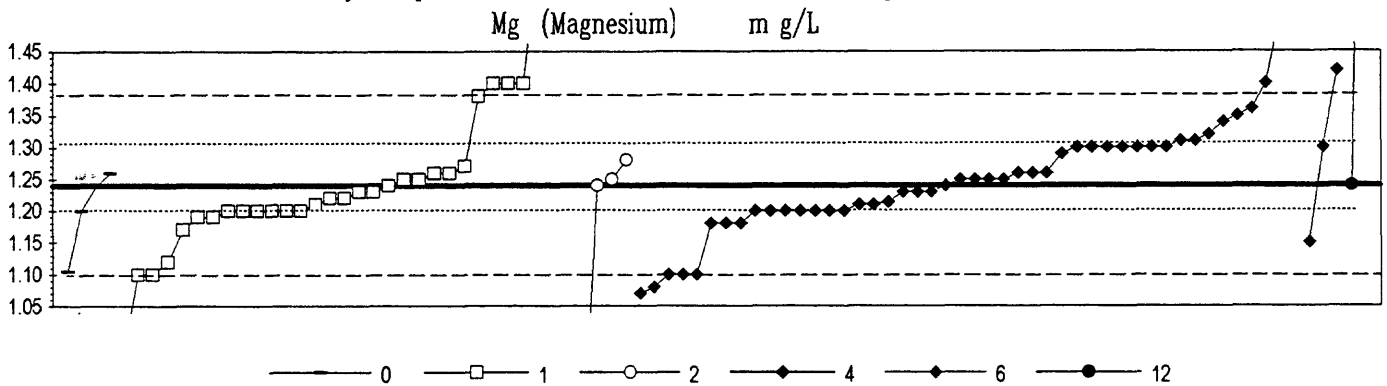


0. Other	6. ICP/MS					
1. AA: direct air	12. AA: flame emission					
4. ICP	N =	1	5	14	2	2
	Minimum =	11.0	20.0	14.9	22.4	23.0
	Maximum =		28.0	32.8	28.8	25.0
	Median =			25.0		
	St Dev =			3.2		

MPV = 25.0 +/- 0.6
 F-pseudostigma = 2.2
 N = 24
 Hu = 26.2
 Hl = 23.3

Lab	Rating	Z-value	0	1	4	6	12
1	4	0.49			26.1		
3	3	0.92			27.0		
11	0	-6.43	11.0				
15	3	-0.64			23.6		
16	NR				< 200		
24	4	0.00			25.0		
25	3	0.64			26.4		
26	NR				< 100		
28	NR			< 100			
29	0	-2.30		20.0			
30	2	-1.20				22.4	
32	1	1.75				28.8	
39	4	0.00			25.0		
42	4	-0.46			24.0		
50	NR						< 50
55	3	-0.92					23.0
63	4	0.46		26.0			
68	4	0.00			25.0		
70	4	0.00			25.0		
85	2	1.38		28.0			
100	4	0.00		25.0			
103	0	-3.22			18.0		
105	4	0.00			25.0		
109	4	0.23		25.5			
121	4	0.00					25.0
127	2	1.20			27.6		
131	NR				< 50		
134	0	3.59			32.8		
145	0	-4.63			14.9		
182	0		< 1				

Table 11. --Statistical summary of reported data for standard reference water sample T-121 (trace constituent)--Continued



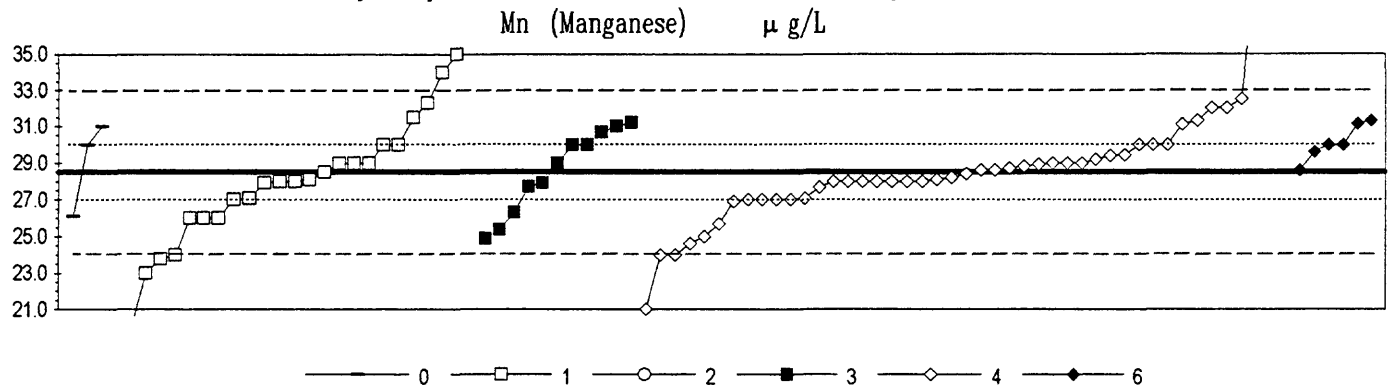
0. Other	4. ICP
1. AA: direct air	6. ICP/MS
2. AA: direct N2O	12. AA: flame emission
	N = 4 31 4 46 3 2
	Minimum = 1.11 0.98 0.85 1.07 1.15 1.24
	Maximum = 1.26 65 1.28 2.40 1.42 2.24
	Median = 1.22 1.25
	St Dev = 0.08 0.08

MPV = 1.24 +/- 0.01
 F-pseudosigma = 0.07
 N = 90
 Hu = 1.30
 Hl = 1.20

Lab	Rating	Z-value	0	1	2	4	6	12
1	4	0.27				1.26		
3	3	-0.54				1.20		
5	4	0.13				1.25		
8	4	-0.13				1.23		
9	3	-0.54	1.20					
11	4	0.27	1.26					
12	3	0.81				1.30		
13	3	-0.94	1.17					
15	4	0.27				1.26		
16	3	-0.54				1.20		
18	0	2.16				1.40		
19	4	-0.13				1.23		
23	4	0.40	1.27					
24	3	0.94				1.31		
25	3	0.81				1.30		
28	0	15.65				2.40		
30	2	-1.21					1.15	
32	0	2.43					1.42	
33	4	-0.01	1.24					
36	4	0.00						1.24
39	4	-0.13				1.23		
42	3	0.81				1.30		
43	3	-0.54				1.20		
45	4	0.00	1.24					
46	4	0.13				1.25		
48	2	1.35				1.34		
51	4	-0.27	1.22					
52	4	-0.40				1.21		
54	3	-0.54	1.20					
55	3	-0.54				1.20		
57	1	-1.89				1.10		
59	3	-0.54				1.20		
61	1	-1.89				1.10		
63	3	-0.81				1.18		
64	4	0.13				1.25		
68	3	0.81				1.30		
69	0	2.16	1.40					
70	3	0.81				1.30		
74	0	-2.16				1.08		
75	NR		< 2					
78	4	-0.13	1.23					
83	3	-0.67	1.19					
84	0	5.13	1.62					
85	4	0.27	1.26					
87	4	-0.27	1.22					
89	1	-1.89	1.10					
92	4	0.13	1.25					
94	4	-0.35				1.21		
96	4	0.00				1.24		
97	3	-0.67	1.19					

Lab	Rating	Z-value	0	1	2	4	6	12
100	2	1.48				1.35		
101	4	0.13	1.25					
103	3	0.81				1.30		
105	3	-0.81				1.18		
107	4	-0.40	1.21					
109	0	2.16	1.40					
111	4	0.13				1.25		
113	0	2.16	1.40					
114	0	-5.26			0.85			
116	4	0.27				1.26		
119	3	0.67				1.29		
120	0	-3.49	0.98					
121	3	-0.54				1.20		
122	4	-0.13	1.23					
123	1	-1.62	1.12					
126	3	-0.54	1.20					
127	3	-0.81				1.18		
129	0	860.12	65					
131	2	1.08				1.32		
133	0	-2.29				1.07		
134	4	-0.40				1.21		
136	3	-0.54	1.20					
138	4	0.00				1.24		
139	3	0.54			1.28			
140	3	-0.54	1.20					
141	4	0.13				1.25		
145	1	-1.89				1.10		
146	1	1.62				1.36		
151	3	-0.54	1.20					
153	3	-0.54	1.20					
155	1	-1.82	1.11					
164	4	0.26	1.26					
167	3	-0.54				1.20		
179	0	7.55	1.80					
180	3	0.94				1.31		
182	1	-1.89	1.10					
191	3	0.81				1.30		
193	1	1.89	1.38					
201	0	13.49						2.24
202	3	0.81				1.30		
204	0	3.64				1.51		

Table 11. --Statistical summary of reported data for standard reference water sample T-121 (trace constituent)--Continued



0. Other	3. AA: graphite furnace						
1. AA: direct air	4. ICP						
2. AA: direct N2O	6. ICP/MS						
	N =	3	24	1	11	43	6
	Minimum =	26.1	20.0	11.0	24.9	21.0	28.6
	Maximum =	31.0	35.0		31.2	40.0	31.3
	Median =	28.1		29.0		28.2	
	St Dev =	3.1		2.3		2.0	

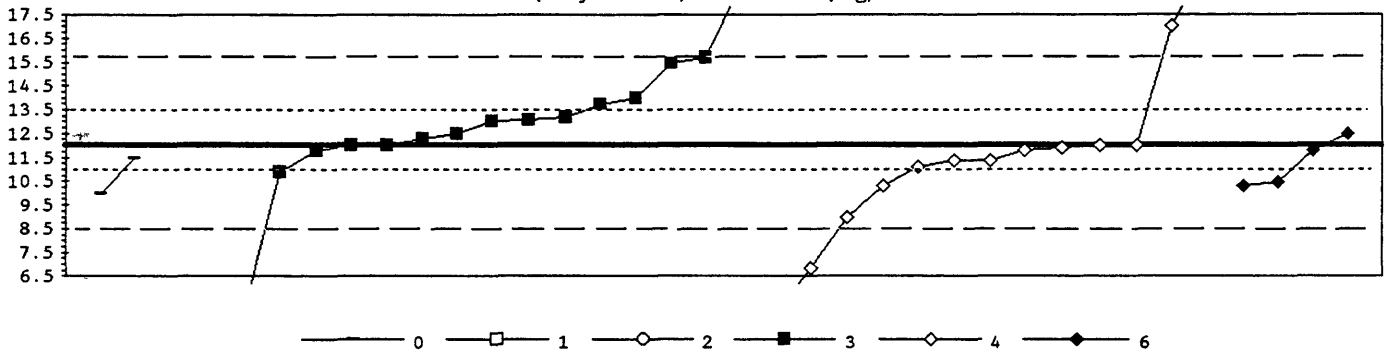
MPV = 28.5 +/- 0.3
 F-pseudostigma = 2.2
 N = 88
 Hu = 30.0
 Hl = 27.0

Lab	Rating	Z-value	0	1	2	3	4	6
1	4	0.44					29.4	
3	3	-0.65					27.0	
5	4	0.20					28.9	
8	4	-0.16					28.1	
9	4	-0.25				27.9		
11	3	0.70	30.0					
12	3	0.70					30.0	
13	3	-0.61	27.1					
15	1	-1.73					24.6	
16	4	-0.20					28.0	
18	1	-1.55					25.0	
19	2	-1.24					25.7	
23	2	1.01				30.7		
24	4	-0.02					28.4	
25	4	0.16					28.8	
26	NR						< 200	
28	3	0.70					30.0	
29	2	-1.10	26.0					
30	4	0.07					28.6	
32	3	0.52					29.6	
33	2	1.15	31.0					
36	2	-1.06	26.1					
37	2	1.28					31.3	
39	1	1.60					32.0	
42	4	-0.20					28.0	
43	4	0.25					29.0	
45	0	2.50	34.0					
46	4	0.34					29.2	
48	0	5.19					40.0	
50	4	0.25				29.0		
51	3	0.70				30.0		
52	3	-0.61					27.1	
54	2	-1.10	26.0					
55	3	-0.70					26.9	
57	0	2.95	35.0					
58	3	-0.65	27.0					
59	4	-0.20					28.0	
61	3	0.70					30.0	
63	4	0.25					29.0	
68	3	-0.65					27.0	
70	4	0.25					29.0	
74	3	-0.65					27.0	
76	4	0.25	29.0					
78	4	-0.25	27.9					
83	1	1.73	32.3					
84	3	0.70	30.0					
85	0	-2.00	24.0					
87	4	-0.20	28.0					
89	0	-2.09	23.8					
90	0	-2.45	23.0					

Lab	Rating	Z-value	0	1	2	3	4	6
91	3	0.70						30.0
92	2	-1.10	26.0					
94	4	-0.20					28.0	
96	4	0.25	29.0					
97	2	1.24				31.2		
100	2	1.37	31.5					
101	4	0.43					29.4	
103	0	-2.00					24.0	
105	4	-0.20					28.0	
107	4	0.02	28.5					
109	4	-0.20	28.0					
113	4	-0.34				27.7		
114	3	0.70	30.0					
116	1	1.60					32.0	
119	4	-0.20					28.0	
120	3	-0.97				26.3		
121	3	-0.65					27.0	
122	2	-1.37				25.4		
127	4	0.11					28.7	
129	0	-3.80	20.0					
131	0						< 10	
133	4	0.07					28.6	
134	0	-2.00					24.0	
136	3	0.70				30.0		
138	4	-0.11					28.2	
139	2	1.15				31.0		
140	4	-0.16	28.1					
141	4	0.07					28.6	
145	4	-0.35					27.7	
146	2	1.28					31.3	
149	4	0.25	29.0					
153	1	-1.60				24.9		
161	0	-3.35					21.0	
179	0	-7.85			11.0			
180	2	1.19					31.1	
182	0	-3.80	20.0					
191	3	0.70						30.0
196	2	1.21						31.1
202	4	-0.20					28.0	
204	1	1.82					32.5	

Table 11. --Statistical summary of reported data for standard reference water sample T-121 (trace constituent)--Continued

Mo (Molybdenum) $\mu\text{g/L}$

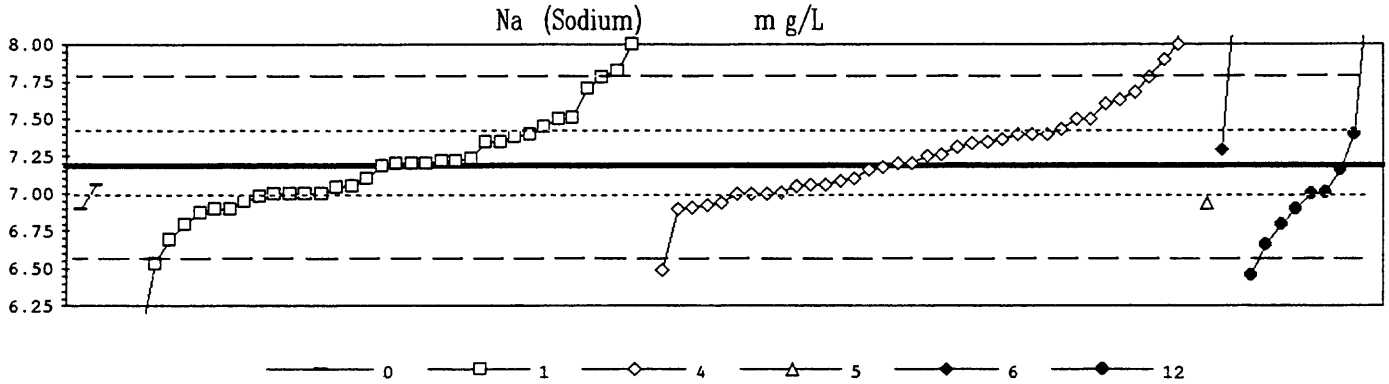


0. Other	3. AA: graphite furnace
1. AA: direct air	4. ICP
2. AA: direct N2O	6. ICP/MS
	N = 2 1 1 15 13 4
	Minimum = 10.0 50.0 50.0 5.0 5.0 10.3
	Maximum = 11.5 18.8 20.0 12.5
	Median = 13.0 11.4
	St Dev = 1.4 1.0

MPV = 12.0 +/- 0.4
 F-pseudostigma = 1.8
 N = 36
 Hu = 13.5
 Hl = 11.0

Lab	Rating	Z-value	0	1	2	3	4	6
1	4	-0.28	11.5					
3	NR						< 10	
5	4	-0.50					11.1	
11	2	-1.10	10.0					
12	NR						< 20	
15	4	0.17				12.3		
16	NR						< 30	
24	4	-0.06					11.9	
26	NR						< 50	
28	0	4.40					20.0	
29	0	20.92		50.0				
30	4	0.28						12.5
32	4	-0.11						11.8
39	1	-1.65					9.0	
42	3	-0.94						10.3
45	1	1.93				15.5		
46	NR						< 140	
48	NR						< 10	
50	4	0.00				12.0		
52	3	0.94				13.7		
61	NR						< 10	
68	0	2.75					17.0	
70	NR						< 50	
74	3	-0.94					10.3	
75	4	0.28				12.5		
85	NR						< 50	
97	2	1.10				14.0		
100	4	-0.11					11.8	
103	4	0.00					12.0	
105	4	0.00					12.0	
120	0	3.72				18.8		
121	3	0.55				13.0		
127	3	0.66				13.2		
131	NR						< 100	
133	0	-2.83					6.9	
136	4	0.00				12.0		
138	4	-0.11				11.8		
141	4	-0.33					11.4	
145	0						< 4	
146	4	-0.33					11.4	
149	0	2.04				15.7		
151	3	-0.61				10.9		
167	0	-3.85				5.0		
182	0	20.92		50.0				
183	3	0.61				13.1		
196	3	-0.85						10.5
202	0	-3.85						5.0

Table 11. --Statistical summary of reported data for standard reference water sample T-121 (trace constituent)--Continued



0. Other	5. DCP
1. AA: direct air	6. ICP/MS
4. ICP	12. AA: flame emission
	N = 2 38 37 1 2 9
	Minimum = 6.90 5.10 6.49 6.94 7.30 6.45
	Maximum = 7.06 8.80 15.70 8.40 8.46
	Median = 7.20 7.25 6.95
	St Dev = 0.33 0.31 0.29

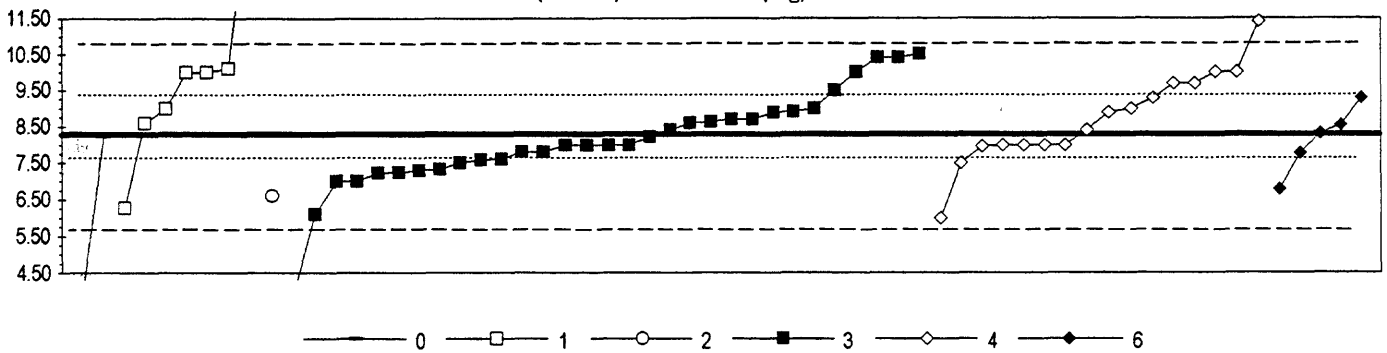
MPV = 7.19 +/- 0.04
 F-pseudostigma = 0.30
 N = 88
 Hu = 7.40
 Hl = 6.99

Lab	Rating	Z-value	0	1	4	5	6	12
1	3	-0.94		6.90				
3	2	1.04		7.50				
5	3	0.54			7.35			
8	3	-0.87			6.92			
9	3	0.71		7.40				
11	4	-0.41	7.06					
12	0	2.68			8.00			
13	0	2.68		8.00				
15	2	1.46			7.63			
16	NR				< 10			
18	3	0.71			7.40			
19	0	-2.29			6.49			
23	2	1.07		7.51				
24	3	0.81			7.43			
25	1	1.63			7.68			
28	0	28.02			15.70			
32	0	4.00				8.40		
33	3	-0.82				6.94		
36	3	-0.58						7.01
37	4	0.18		7.24				
39	2	1.37			7.60			
42	3	-0.61			7.00			
43	3	-0.61			7.00			
45	0	-2.16		6.53				
46	3	0.58			7.36			
48	3	0.71			7.40			
51	3	-0.94						6.90
52	3	-0.58			7.01			
54	4	0.05		7.20				
55	4	-0.08						7.16
57	3	-0.94			6.90			
59	3	0.71			7.40			
61	3	-0.61			7.00			
63	0	2.09		7.82				
64	4	0.12		7.22				
68	2	1.04			7.50			
69	3	-0.61						7.00
70	4	0.21			7.25			
74	4	0.41			7.31			
75	3	-0.77		6.95				
78	3	-0.94		6.90				
83	3	0.54		7.35				
84	0	4.20						8.46
85	4	0.12		7.22				
87	4	0.05		7.20				
89	3	-0.67		6.98				
90	3	0.71						7.40
92	3	0.87		7.45				
94	4	-0.40			7.06			
96	4	-0.48		7.04				

Lab	Rating	Z-value	0	1	4	5	6	12
97	4	-0.44		7.05				
100	0	2.35			7.90			
101	4	-0.28		7.10				
103	2	1.04			7.50			
105	3	-0.90			6.91			
107	2	-1.04		6.87				
109	4	0.05		7.20				
111	4	0.02		7.19				
113	1	1.69		7.70				
114	0	-5.71		5.45				
116	4	-0.28			7.10			
119	4	-0.44			7.05			
120	1	-1.62		6.69				
121	4	0.05			7.20			
122	3	0.64		7.38				
123	3	0.54		7.35				
127	3	-0.81			6.94			
129	2	-1.27		6.80				
131	4	-0.41			7.06			
133	4	-0.35			7.08			
134	3	-0.61		7.00				
136	3	-0.61		7.00				
138	4	-0.08			7.16			
139	1	-1.73						6.66
140	3	-0.61		7.00				
141	4	0.25			7.26			
145	4	-0.02			7.18			
146	1	1.96			7.78			
151	3	-0.61		7.00				
153	3	-0.94	6.90					
164	1	1.96		7.78				
167	4	0.05			7.20			
179	0	-6.86		5.10				
180	3	0.51			7.34			
182	0	-3.90		6.00				
191	4	0.38					7.30	
193	0	5.31		8.80				
201	0	-2.41						6.45
204	2	-1.27						6.80

Table 11. --Statistical summary of reported data for standard reference water sample T-121 (trace constituent)--Continued

Ni (Nickel) $\mu\text{g/L}$



0. Other	3. AA: graphite furnace
1. AA: direct air	4. ICP
2. AA: direct N2O	6. ICP/MS
	N = 2 7 1 31 16 5
	Minimum = 4.10 6.27 6.60 3.94 6.00 6.80
	Maximum = 8.24 15.10 10.50 11.40 9.30
	Median = 9.50 8.00 8.65
	St Dev = 1.47 1.09 1.28

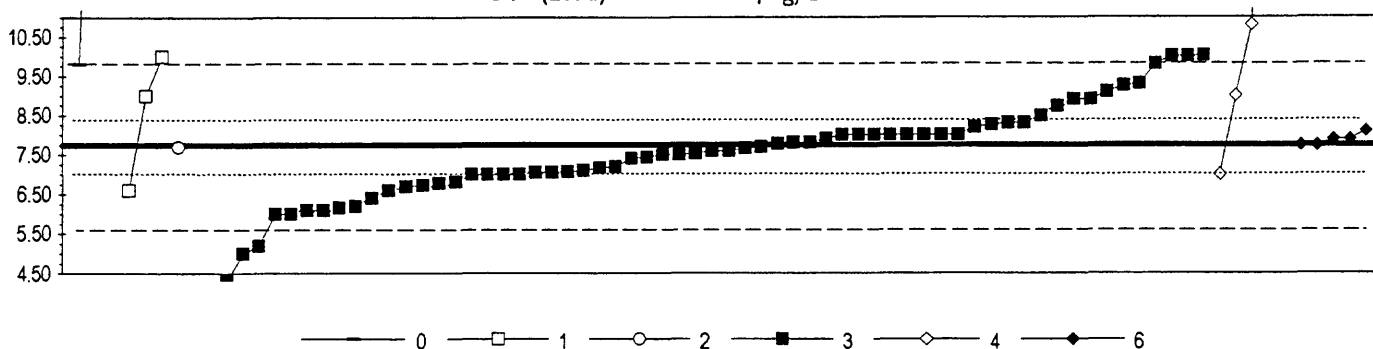
MPV = 8.29 +/- 0.22
 F-pseudosigma = 1.26
 N = 62
 Hu = 9.30
 Hl = 7.60

Lab	Rating	Z-value	0	1	2	3	4	6
1	4	0.33				8.70		
3	NR						< 20	
6	3	-0.54				7.61		
9	2	-1.02				7.00		
11	0	-3.32	4.10					
12	NR						< 20	
13	NR		< 50					
15	4	-0.38				7.80		
16	NR						< 25	
18	1	-1.81					6.00	
23	1	-1.60		6.27				
24	2	1.12					9.70	
26	NR					< 10		
28	2	1.36					10.00	
29	NR					< 10		
30	4	0.04						8.33
32	3	0.81						9.30
36	4	-0.04	8.24					
37	4	0.21						8.55
42	2	-1.18						6.80
45	0	-3.45				3.94		
46	NR						< 25	
48	3	-0.54				7.60		
50	4	-0.23				8.00		
51	2	-1.02				7.00		
52	4	-0.38				7.80		
55	4	0.09					8.40	
57	NR		< 100					
58	4	0.25				8.60		
59	2	1.36					10.00	
61	NR						< 10	
63	4	0.33				8.70		
68	3	0.81					9.30	
69	3	0.57				9.00		
70	NR						< 50	
73	3	0.57					9.00	
74	4	-0.23					8.00	
75	3	-0.76				7.33		
78	1	1.68				10.40		
85	NR						< 10	
87	NR		< 10					
89	NR					< 25		
90	3	0.96				9.50		
92	3	0.57		9.00				
94	4	-0.27					7.95	
97	4	0.50				8.91		
100	2	1.44		10.10				
101	4	0.49					8.90	
103	3	-0.62					7.50	
105	4	-0.23					8.00	

Lab	Rating	Z-value	0	1	2	3	4	6
111	3	-0.62					7.50	
113	4	0.28					8.64	
114	2	1.36		10.00				
119	1	1.76					10.50	
120	3	-0.84					7.23	
121	2	1.36					10.00	
127	4	-0.05					8.22	
131	NR							< 26
133	0	2.47						11.40
134	4	0.49					8.90	
136	4	-0.23					8.00	
138	3	-0.78					7.30	
139	3	-0.82					7.25	
140	4	0.25		8.60				
141	4	-0.23						8.00
144	1	-1.73					6.10	
145	0							< 5
146	4	-0.23						7.99
149	4	-0.23					8.00	
167	4	-0.23					8.00	
179	2	-1.34			6.60			
180	NR							< 7
182	2	1.36		10.00				
183	1	1.68					10.40	
193	NR			< 10				
196	4	-0.39						7.79
201	0	5.41		15.10				
202	4	0.09					8.40	
204	2	1.12						9.70

Table 11. --Statistical summary of reported data for standard reference water sample T-121 (trace constituent)--Continued

Pb (Lead) $\mu\text{g/L}$



0. Other	3. AA: graphite furnace
1. AA: direct air	4. ICP
2. AA: direct N2O	6. ICP/MS
	N = 3 3 1 63 5 5
	Minimum = 9.80 6.60 7.70 3.10 7.00 7.74
	Maximum = 35.30 10.00 10.02 245 8.10
	Median = 7.60
	St Dev = 1.11

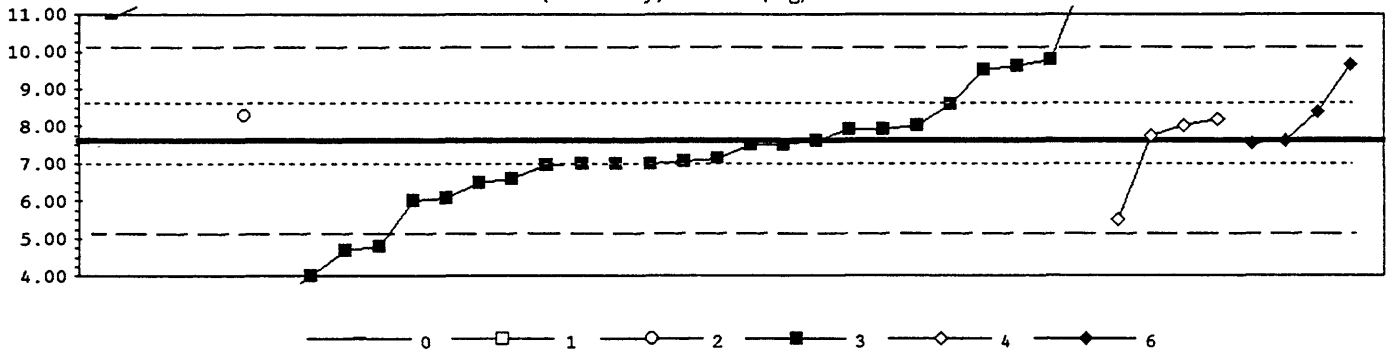
MPV = 7.75 +/- 0.16
 F-pseudostigma = 1.03
 N = 80
 Hu = 8.39
 Hl = 7.00

Lab	Rating	Z-value	0	1	2	3	4	6
1	4	0.25				8.00		
3	0	-2.47				5.20		
5	NR							< 30
6	3	-0.57				7.16		
9	0	2.19				10.00		
11	1	1.99	9.80					
12	NR					< 10		
13	3	0.71				8.48		
15	3	-0.67				7.05		
16	NR							< 30
18	3	-0.72				7.00		
23	3	-0.66				7.07		
24	4	0.25				8.00		
26	1	-1.69				6.00		
28	0	230.26						245
29	4	-0.31				7.43		
30	4	0.14						7.89
32	4	0.34						8.10
33	0	26.74	35.30					
36	3	-0.94				6.78		
37	4	0.00						7.74
42	4	0.00						7.75
45	3	-0.53				7.20		
46	4	-0.33				7.40		
48	4	-0.24				7.50		
50	4	0.25				8.00		
51	0	-3.63				4.00		
52	4	0.03				7.78		
55	3	-0.63				7.10		
57	4	0.25				8.00		
59	3	-0.72						7.00
61	1	-1.60				6.10		
63	2	-1.11				6.60		
68	1	-1.60				6.10		
69	3	-0.72				7.00		
70	4	0.05				7.80		
74	3	-0.92				6.80		
76	3	0.95				8.72		
78	4	-0.24				7.50		
79	4	-0.14				7.60		
80	4	0.25				8.00		
83	2	-1.50				6.20		
85	3	-0.72				7.00		
87	2	-1.11		6.60				
89	2	1.31				9.09		
90	2	1.12				8.90		
92	2	1.22		9.00				
94	1	-1.54				6.16		
96	4	0.16				7.91		
97	2	1.46				9.25		

Lab	Rating	Z-value	0	1	2	3	4	6
100.	1	1.99				9.80		
101.	0	2.96						10.80
103.	2	1.22						9.00
105.	2	1.12				8.90		
107.	3	-0.99				6.72		
108.	0	2.19						10.00
109.	0	-4.51						3.10
111.	4	-0.04				7.70		
113.	4	-0.07				7.67		
114.	NR				< 10			
119.	3	0.54				8.30		
120.	4	-0.21				7.53		
121.	4	0.44				8.20		
122.	4	0.25				8.00		
126.	4	0.25				8.00		
127.	3	-0.67				7.05		
131.	NR							< 100
133.	0	14.03						22.20
134.	4	0.05				7.80		
136.	3	-0.72				7.00		
138.	4	-0.14				7.60		
139.	0	2.21						10.02
140.	0	2.19		10.00				
141.	2	-1.31						6.40
144.	0	-2.66						5.00
145.	NR							< 25
146.	0							< 3
149.	1	-1.69				6.00		
158.	2	-1.01				6.70		
167.	4	0.25				8.00		
179.	4	-0.04			7.70			
180.	NR							< 12
182.	0	11.89	20.00					
183.	4	0.50				8.26		
193.	NR				< 10			
196.1	4	0.14						7.89
196.2	3	0.54				8.30		
201.	0				< 2			
202.	1	1.51				9.30		
204.	0	-3.34				4.30		

Table 11. --Statistical summary of reported data for standard reference water sample T-121 (trace constituent)--Continued

Sb (Antimony) $\mu\text{g/L}$



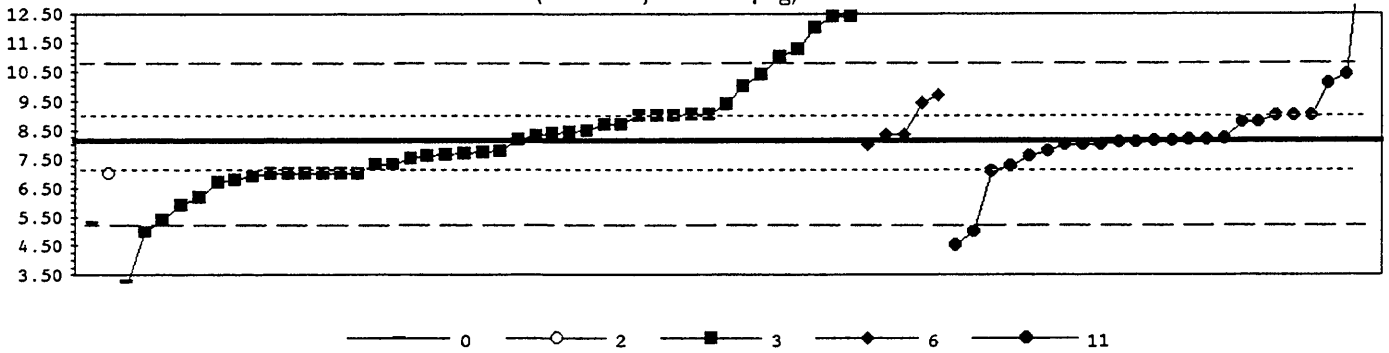
0. Other	3. AA: graphite furnace
1. AA: direct air	4. ICP
2. AA: direct N2O	6. ICP/MS
N =	2 2 1 25 4 4
Minimum =	10.90 100 8.30 3.35 5.50 7.53
Maximum =	11.30 150 12.00 8.20 9.65
Median =	7.06
St Dev =	1.47

MPV = 7.61 +/- 0.26
 F-pseudosigma = 1.20
 N = 38
 Hu = 8.60
 Hl = 6.98

Lab	Rating	Z-value	0	1	2	3	4	6
1	0	2.74	10.90					
3	1	1.66				9.60		
11	0	3.08	11.30					
12	NR							< 100
15	0	-3.54				3.35		
16	NR							< 60
23	1	1.81				9.78		
24	0	-2.42				4.70		
28	NR			< 100				
30	4	0.00						7.60
32	3	0.66						8.40
36	1	1.59				9.51		
37	4	-0.06						7.53
45	4	0.00				7.61		
48	0	-2.34				4.80		
52	4	-0.40				7.13		
55	2	-1.25				6.10		
57	NR							< 10
59	4	0.33					8.00	
61	NR							< 50
63	4	-0.09				7.50		
68	3	-0.92				6.50		
74	4	-0.09				7.50		
78	3	0.83				8.60		
85	0	-3.00				4.00		
87	4	0.33				8.00		
97	4	-0.45				7.06		
100	0	3.66				12.00		
105	4	0.25				7.90		
114	0	118.57		150				
119	4	0.25				7.90		
120	3	-0.52				6.98		
127	4	-0.50				7.00		
131	NR							< 50
133	1	-1.75						5.50
136	4	-0.50				7.00		
138	3	-0.84				6.60		
141	4	0.50					8.20	
146	4	0.10					7.73	
149	4	-0.50				7.00		
179	3	0.58			8.30			
180	NR							< 13
182	0	76.94		100				
196	1	1.70						9.65
202	2	-1.34				6.00		

Table 11. --Statistical summary of reported data for standard reference water sample T-121 (trace constituent)--Continued

Se (Selenium) $\mu\text{g/L}$



0. Other	4. ICP				
2. AA: direct N2O	6. ICP/MS				
3. AA: graphite furnace	11. AA: hydride				
N = 1	1	42	0	5	24
Minimum = 5.30	7.00	3.11	8.00	4.50	
Maximum =	12.40	9.70	15.70		
Median =	7.73	8.12			
St Dev =	1.54	1.30			

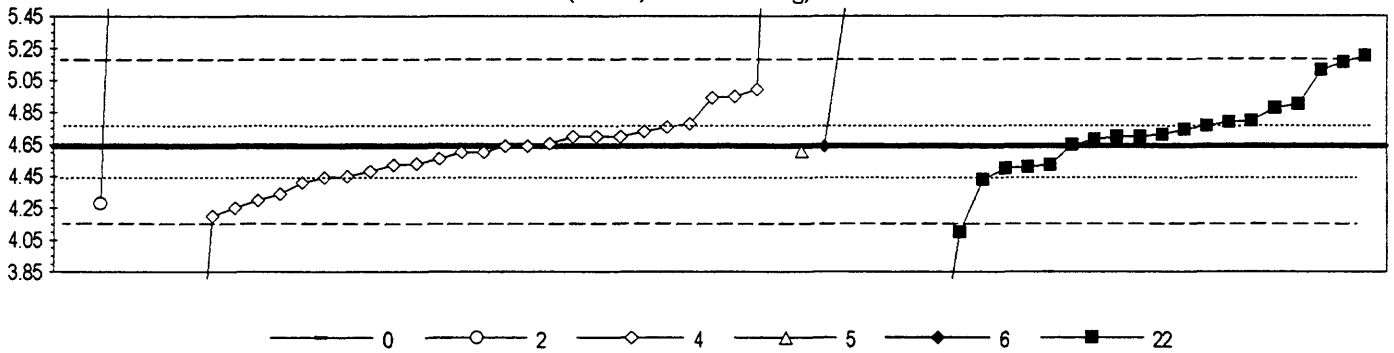
MPV = 8.12 +/- 0.22
 F-pseudostigma = 1.41
 N = 73
 Hu = 9.00
 Hl = 7.10

Lab	Rating	Z-value	0	2	3	4	6	11
1	4	0.48						8.80
3	3	-0.87			6.90			
5	NR					< 40		
8	0	-2.22						5.00
11	0	-2.00	5.30					
12	3	0.62			9.00			
13	4	0.27			8.50			
15	4	-0.03						8.08
16	3	-0.80			7.00			
18	2	1.41						10.10
23	0	-3.56			3.11			
24	1	1.62						10.40
26	3	0.62						9.00
28	4	-0.09				8.00		
29	3	0.91			9.40			
30	4	0.18				8.37		
35	4	0.01						8.13
36	3	-0.79			7.01			
37	3	0.93				9.43		
39	4	-0.23						7.80
42	2	1.12				9.70		
45	4	-0.33			7.66			
46	4	0.41			8.70			
48	3	-0.80			7.00			
50	4	-0.09						8.00
52	4	0.07						8.22
55	1	1.62			10.40			
57	4	-0.09						8.00
58	0	-2.57						4.50
61	4	-0.23			7.80			
63	3	-0.58			7.30			
68	4	0.41			8.70			
69	4	0.20			8.40			
70	3	-0.58			7.30			
74	4	0.06			8.20			
75	4	0.00						8.12
76	3	0.66			9.05			
78	2	-1.01			6.70			
79	2	1.33			10.00			
80	3	0.62			9.00			
85	4	-0.01						8.10
87	4	0.06						8.20
89	4	-0.35						7.63
90	0	2.26			11.30			
94	4	-0.28			7.73			
96	3	0.67			9.07			
97	3	0.62						9.00
100	0	-2.22			5.00			
105	4	0.23			8.44			
107	0	3.04			12.40			

Lab	Rating	Z-value	0	2	3	4	6	11
108.	3	-0.94			6.80			
109.	3	-0.80			7.00			
113.	4	-0.30			7.70			
119.	3	-0.72						7.10
120.	0	5.38						15.70
122.	3	-0.62						7.25
127.	4	-0.43			7.51			
131.	NR					< 100		
133.	1	-1.58			5.90			
134.	4	0.06						8.20
136.	3	0.62			9.00			
138.	4	0.48						8.80
139.	0	2.06			11.02			
141.	3	0.62						9.00
146.	1	-1.93			5.40			
149.	2	-1.36			6.20			
167.	3	-0.80			7.00			
179.	3	-0.80		7.00				
180.	NR					< 13		
182.	4	-0.09						8.00
183.	4	0.13			8.30			
193.	3	-0.80			7.00			
196.1	4	0.18					8.38	
196.2	0	2.75			12.00			
202.	4	-0.37			7.60			
204.	0	3.04			12.40			

Table 11. --Statistical summary of reported data for standard reference water sample T-121 (trace constituent)--Continued

SiO2 (Silica) m g/L



0. Other	5. DCP
2. AA: direct N2O	6. ICP/MS
4. ICP	22. Color: molybdate
	N = 1 2 29 1 2 23
	Minimum = 13.10 4.28 1.89 4.61 4.64 0.08
	Maximum = 8.00 8.61 5.60 5.20
	Median = 4.60 4.71
	St Dev = 0.21 0.26

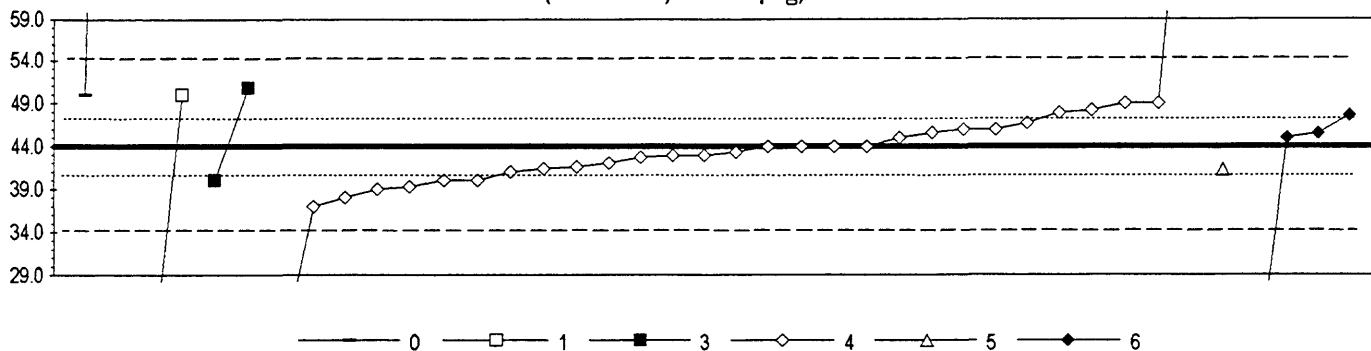
MPV = 4.64 +/- 0.05
 F-pseudostigma = 0.26
 N = 58
 Hu = 4.78
 Hl = 4.43

Lab	Rating	Z-value	0	2	4	5	6	22
1	4	0.06			4.66			
2	4	0.49					4.77	
3	4	0.23			4.70			
5	4	0.35			4.73			
8	3	-0.77			4.44			
9	0	-2.08						4.10
11	0	32.61	13.10					
13	4	-0.50						4.51
15	3	-0.73			4.45			
23	4	0.27						4.71
24	2	1.19			4.95			
25	0	-10.60			1.89			
28	2	-1.50			4.25			
29	2	-1.39		4.28				
32	0	3.70					5.60	
33	4	-0.12				4.61		
39	2	-1.16			4.34			
42	4	0.23			4.70			
43	4	0.23			4.70			
45	4	0.00			4.64			
51	4	0.04						4.65
52	0	-6.32						3.00
55	2	1.36			4.99			
57	2	-1.31			4.30			
58	0	-17.57						0.08
61	0	-9.40			2.20			
63	4	0.00			4.64			
64	3	-0.89			4.41			
70	3	0.93						4.88
75	4	0.15						4.68
78	0	12.95		8.00				
87	3	1.00						4.90
89	4	-0.46						4.52
92	3	-0.81						4.43
97	0	-5.55						3.20
100	4	-0.15			4.60			
101	4	-0.31			4.56			
103	1	-1.70			4.20			
104	3	-0.54						4.50
105	4	-0.46			4.52			
113	1	1.81						5.11
118	4	0.23						4.70
119	3	0.54			4.78			
121	4	-0.15			4.60			
127	4	-0.42			4.53			
131	3	-0.62			4.48			
134	4	0.46			4.76			
138	3	0.58						4.79
141	0	2.16						5.20
145	0	15.30			8.61			

Lab	Rating	Z-value	0	2	4	5	6	22
146	0	-8.44			2.45			
151	4	0.23						4.70
155	4	0.39						4.74
161	0	-9.75						2.11
167	3	0.62						4.80
185	0	2.00						5.16
191	4	0.00					4.64	
204	2	1.16			4.94			

Table 11. --Statistical summary of reported data for standard reference water sample T-121 (trace constituent)--Continued

Sr (Strontium) $\mu\text{g/L}$



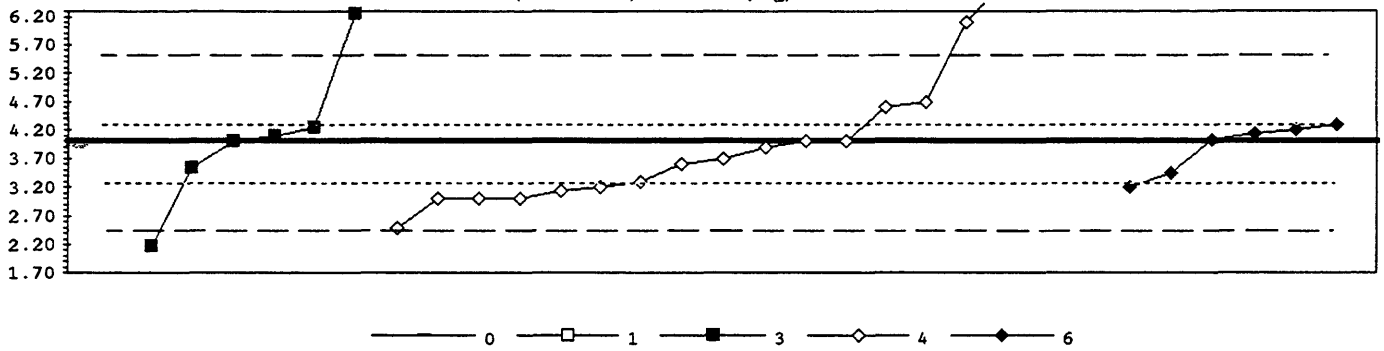
0. Other	4. ICP
1. AA: direct air	5. DCP
3. AA: graphite furnace	6. ICP/MS
N =	2 2 2 29 1 4
Minimum =	50.0 15.0 40.0 19.0 41.3 15.1
Maximum =	200.0 50.0 50.8 90.0 47.6
Median =	43.3
St Dev =	3.3

MPV = 44.0 +/- 1.1
 F-pseudostandard deviation = 4.9
 N = 40
 Hu = 47.2
 Hl = 40.5

Lab	Rating	Z-value	0	1	3	4	5	6
1	4	0.32				45.6		
3	3	-0.81				40.0		
8	4	-0.14				43.3		
9	0			< 30				
11	2	1.22	50.0					
15	3	-0.53				41.4		
16	2	-1.01				39.0		
18	2	1.01				49.0		
24	4	-0.22				42.9		
25	3	0.85				48.2		
26	NR					< 250		
28	0	9.33				90.0		
29	0	-5.88		15.0				
32	3	0.73						47.6
33	3	-0.55					41.3	
37	4	0.30						45.5
39	2	1.01				49.0		
42	4	0.41				46.0		
52	4	-0.41				42.0		
55	0	-5.07				19.0		
59	4	0.20				45.0		
63	3	0.79				47.9		
68	3	-0.81				40.0		
70	4	0.00				44.0		
74	2	-1.42				37.0		
97	2	1.38		50.8				
100	3	-0.95				39.3		
103	2	-1.22				38.0		
105	4	0.00				44.0		
109	2	1.22		50.0				
113	NR		< 200					
116	4	0.41				46.0		
121	4	0.00				44.0		
127	4	-0.22				42.9		
131	4	0.00				44.0		
134	3	-0.61				41.0		
138	4	-0.26				42.7		
141	3	-0.81		40.0				
145	4	-0.50				41.6		
146	3	0.55				46.7		
182	0	31.65	200.0					
191	4	0.20						45.0
196	0	-5.87						15.1

Table 11. --Statistical summary of reported data for standard reference water sample T-121 (trace constituent)--Continued

V (Vanadium) μ g/L

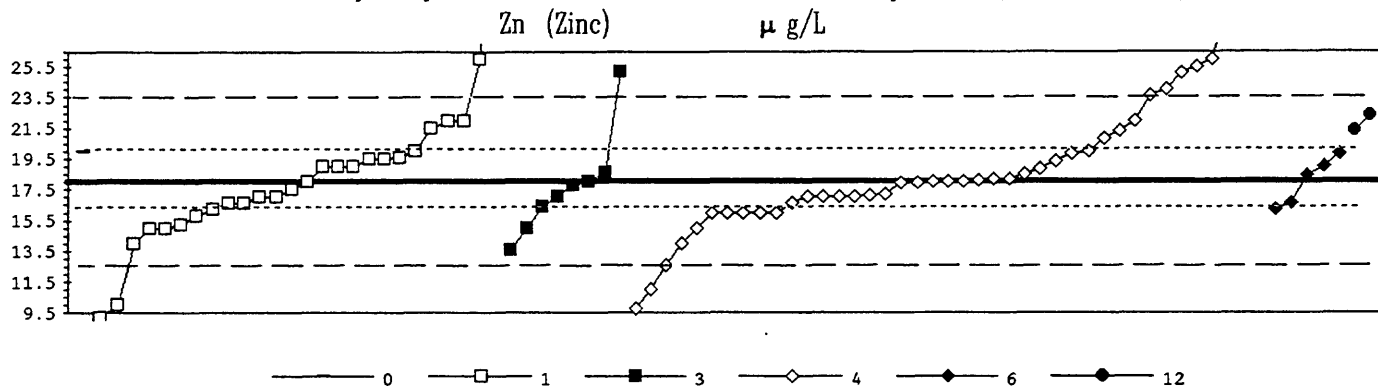


0. Other	4. ICP
1. AA: direct air	6. ICP/MS
3. AA: graphite furnace	
	N = 1 0 6 18 6
	Minimum = 4.00 2.18 2.50 3.20
	Maximum = 6.25 20.00 4.29
	Median = 3.60
	St Dev = 0.90

MPV = 4.00 +/- 0.18
 F-pseudostigma = 0.76
 N = 31
 Hu = 4.27
 Hl = 3.25

Lab	Rating	Z-value	0	1	3	4	6
1	3	-0.74					3.44
3	NR						< 10
11	4	0.00	4.00				
15	3	-0.61			3.54		
16	NR						< 10
18	2	-1.32				3.00	
24	0	4.76				7.60	
26	NR						< 100
28	0	21.16				20.00	
30	4	0.04					4.03
32	4	0.26					4.20
37	4	0.17					4.13
39	0	3.84				6.90	
42	2	-1.06					3.20
48	NR						< 200
50	NR				< 5		
52	0	-2.41			2.18		
55	1	-1.98				2.50	
57	NR						< 100
61	NR						< 5
63	NR						< 10
68	0	2.78					6.10
70	NR						< 10
74	2	-1.06					3.20
94	3	-0.93					3.30
97	0	2.98			6.25		
100	2	-1.15					3.13
101	4	0.00					4.00
103	2	-1.32					3.00
105	2	-1.32					3.00
121	4	0.00					4.00
127	4	0.33			4.25		
133	3	0.93					4.70
134	4	0.13			4.10		
136	4	0.00			4.00		
138	3	-0.53					3.60
141	4	-0.40					3.70
145	0						< 2
146	4	-0.13					3.90
167	NR						< 30
180	3	0.79					4.60
182	NR		< 200				
196	4	0.38					4.29

Table 11. --Statistical summary of reported data for standard reference water sample T-121 (trace constituent)--Continued



0. Other	4. ICP
1. AA: direct air	6. ICP/MS
3. AA: graphite furnace	12. AA: flame emission
N =	1 26 8 41 5 2
Minimum =	20.0 9.2 13.6 9.8 16.3 21.3
Maximum =	36.2 25.2 50.0 19.8 22.3
Median =	17.8 18.0
St Dev =	5.1 6.5

MPV = 18.0 +/- 0.4
 F-pseudsigma = 2.7
 N = 83
 Hu = 20.0
 Hl = 16.3

Lab	Rating	Z-value	0	1	3	4	6	12
1	2	1.21				21.3		
3	4	-0.37				17.0		
5	3	0.66				19.8		
6	2	1.21					21.3	
8	4	0.07				18.2		
9	4	-0.37			17.0			
11	3	0.73	20.0					
12	NR					< 20		
13	4	0.00		18.0				
15	4	0.29				18.8		
16	0	-2.57				11.0		
18	3	-0.73				16.0		
19	1	-1.98				12.6		
23	2	-1.03		15.2				
24	4	-0.33				17.1		
25	4	-0.04				17.9		
26	NR					< 250		
28	0	4.40				30.0		
29	4	-0.37		17.0				
30	3	-0.51					16.6	
32	4	0.37				19.0		
36	1	1.58					22.3	
37	3	0.66					19.8	
39	3	0.73				20.0		
42	4	0.15					18.4	
45	3	-0.51		16.6				
46	4	-0.04				17.9		
48	0	11.75				50.0		
50	4	0.00			18.0			
51	4	0.37		19.0				
52	4	0.07				18.2		
55	4	-0.29				17.2		
57	NR			< 20				
59	4	0.00				18.0		
61	4	-0.37				17.0		
63	4	-0.37				17.0		
68	2	-1.47				14.0		
70	4	-0.37				17.0		
73	4	0.18				18.5		
74	3	-0.51				16.6		
75	3	-0.51		16.6				
78	4	-0.18		17.5				
79	3	-0.73				16.0		
83	0	-3.23		9.2				
85	3	-0.66		16.2				
87	4	0.37		19.0				
89	NR			< 40				
90	4	-0.37		17.0				
92	2	-1.47		14.0				
94	0	2.20				24.0		

Lab	Rating	Z-value	0	1	3	4	6	12
96	2	1.47		22.0				
97	3	-0.59			16.4			
100	0	6.68		36.2				
101	0	2.75					25.5	
103	3	-0.73					16.0	
105	4	0.00					18.0	
107	3	-0.81		15.8				
111	4	0.22				18.6		
113	0	2.94		26.0				
114	3	0.73		20.0				
119	4	0.00					18.0	
120	1	-1.62				13.6		
121	2	1.47					22.0	
122	4	-0.07					17.8	
123	0	2.62					25.2	
127	3	0.55		19.5				
131	NR						< 50	
133	2	1.03					20.8	
134	3	-0.73					16.0	
136	2	-1.10				15.0		
138	4	0.04					18.1	
139	2	-1.10		15.0				
140	3	0.55		19.5				
141	0	2.06					23.6	
144	4	0.37		19.0				
145	0	-3.01					9.8	
146	0	4.18					29.4	
149	2	1.47		22.0				
151	3	0.59		19.6				
158	2	-1.10		15.0				
161	2	-1.10					15.0	
167	0	2.94					26.0	
180	4	0.48					19.3	
182	0	-2.94		10.0				
193	NR			< 40				
196	3	-0.64					16.3	
201	2	1.28		21.5				
202	3	-0.73					16.0	
204	0	2.61					25.1	

Table.12.-- *Statistical summary of reported data for standard reference sample M-124 (major constituents)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

0. Other/Not reported	=	
1. AA: direct, air	=	atomic absorption: direct,air
2. AA: direct, N2O	=	atomic absorption: direct,nitrous oxide
3. AA: graphite furnace	=	atomic absorption: graphite furnace
4. ICP	=	inductively coupled plasma
5. DCP	=	direct current plasma
6. ICP/MS	=	mass spectrometry/inductively coupled plasma
7. IC	=	ion chromatography
12. Flame photo	=	flame photometric
20. Titrate: color	=	titration: colorimetric [color reagent specified]
21. Titrate: electro	=	titration: electrometric
22. Color:	=	colorimetric [color reagent specified]
40. Ion electrode	=	ion selective electrode
41. Electro	=	electrometric: [type meter specified]
50. Gravimetric	=	gravimetric: [precipitate specified]

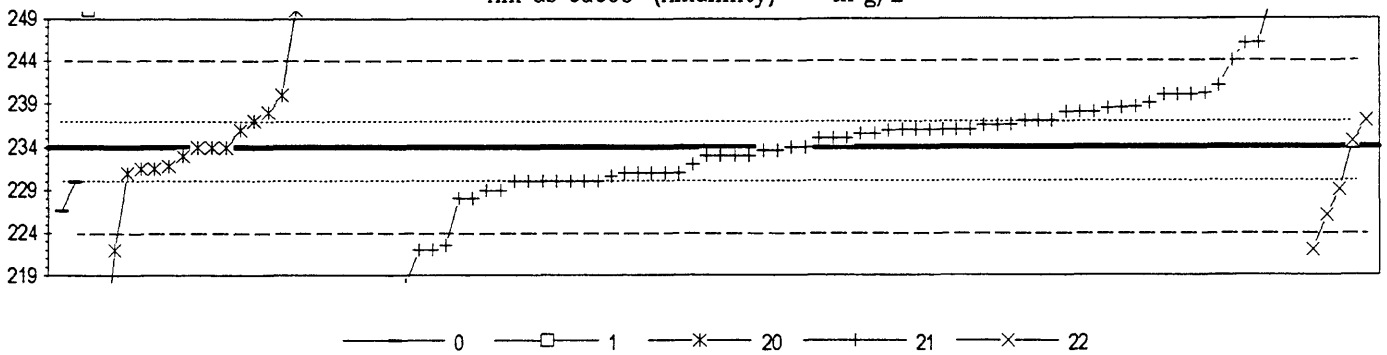
Abbreviations and symbols

N =	number of samples
St dev =	traditional standard deviation
MPV =	95% confidence most probable value
F-pseudosigma =	nonparametric statistic deviation
Hu =	upper hinge value
Hl =	lower hinge value
m g/L =	milligrams per liter
μ g/L =	micrograms per liter
μ S/cm =	microsiemens per centimeter at 25 C
Lab =	laboratory code number
NR =	not rated, less than value reported
< =	less than

<u>Constituent</u>	<u>page</u>
Alk Alkalinity as CaCO3	62
B Boron	63
Ca Calcium	64
Cl Chloride	65
DSRD Dissolved solids	66
F Fluoride	67
K Potassium	68
Mg Magnesium	69
Na Sodium	70
total P Phosphorus	71
pH	72
SiO2 Silica	73
SO4 Sulfate	74
Sp Cond Specific Conductance	75
Sr Strontium	76
V Vanadium	77

Table 12. --Statistical summary of reported data for standard reference water sample M-124 (major constituent)--Continued

Alk as CaCO3 (Alkalinity) m g/L



0. Other	21. Titration: electro
1. AA: direct air	22. Colorimetric
20. Titration: color	
N =	2 1 16 72 5
Minimum =	227 250 206 23 222
Maximum =	230 255 614 237
Median =	234 235
St Dev =	4 5

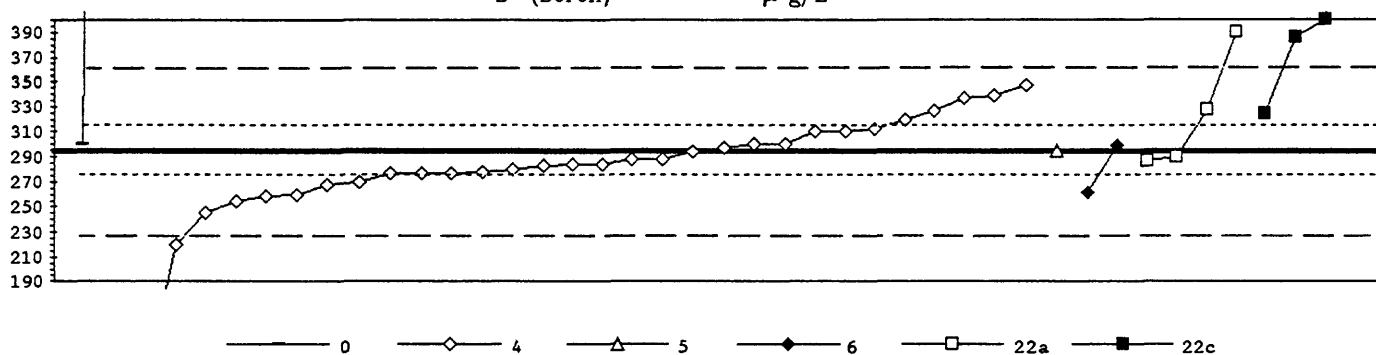
MPV = 234 +/- 1
 F-pseudostigma = 5
 N = 96
 Hu = 237
 Hl = 230

Lab	Rating	Z-value	0	1	20	21	22
1	3	0.85				238	
3	4	0.19				235	
5	4	0.48				237	
6	4	-0.48			232		
8	3	0.77				238	
10	3	0.77				238	
11	3	-0.77	230				
12	2	1.16				240	
13	0	-2.31				222	
15	3	-0.77				230	
16	4	-0.42			232		
18	0	-2.31					222
19	3	-0.58				231	
23	0	-4.24				212	
24	4	-0.08				234	
25	0	2.31				246	
26	4	0.19				235	
29	4	-0.19				233	
32	0	4.05			255		
33	4	0.37				236	
36	4	-0.19				233	
37	3	-0.58				231	
38	0	-33.91				58	
39	4	-0.19				233	
40	3	0.77				238	
42	4	-0.08				234	
43	3	0.58				237	
45	3	0.58				237	
46	4	0.39				236	
48	4	-0.19			233		
50	4	-0.19				233	
51	4	0.39				236	
52	4	0.39				236	
54	4	-0.39				232	
55	3	-0.77				230	
56	2	1.18				240	
57	4	0.00			234		
61	1	1.93				244	
63	0	-5.40			206		
68	3	0.58					237
69	4	0.12					235
70	3	-0.77				230	
74	4	0.39				236	
75	3	-0.58				231	
76	3	0.77			238		
78	0	-3.66				215	
79	3	-0.77				230	
81	3	-0.58				231	
83	4	0.48				237	
84	3	0.87				239	

Lab	Rating	Z-value	0	1	20	21	22
85	3	0.89					239
87	3	-0.77					230
89	4	0.19					235
90	0	2.33					246
91	3	-0.96					229
92	0	-8.54					190
94	4	0.39				236	
96	2	1.16					240
97	2	-1.43	227				
100	4	0.00					234
104	3	-0.77					230
105	4	0.50					237
107	2	-1.16					228
109	4	0.29					236
111	2	1.35					241
113	2	-1.16					228
114	4	0.00				234	
116	0	-3.08					218
118	3	-0.58				231	
119	2	1.16				240	
120	3	-0.58					231
122	0	-23.41					113
127	4	0.39					236
128	3	-0.96					
129	3	0.58				237	229
133	0	73.23					614
134	3	0.96					239
136	0	3.47					252
138	0	-2.31					222
139	0	-40.64					23
141	4	0.29					236
145	1	-1.54					226
146	3	0.58					237
151	2	1.16					240
153	3	-0.77					230
155	4	-0.48				232	
158	0	-2.22					223
161	0	3.08				250	
167	4	0.00					234
180	4	0.39					236
182	0	3.08				250	
183	0	-2.31				222	
197	3	-0.66					231
201	0	4.63					258
202	4	0.00				234	
204	3	-0.96					229

Table 12. --Statistical summary of reported data for standard reference water sample M-124 (major constituent)--Continued

B (Boron) μ g/L



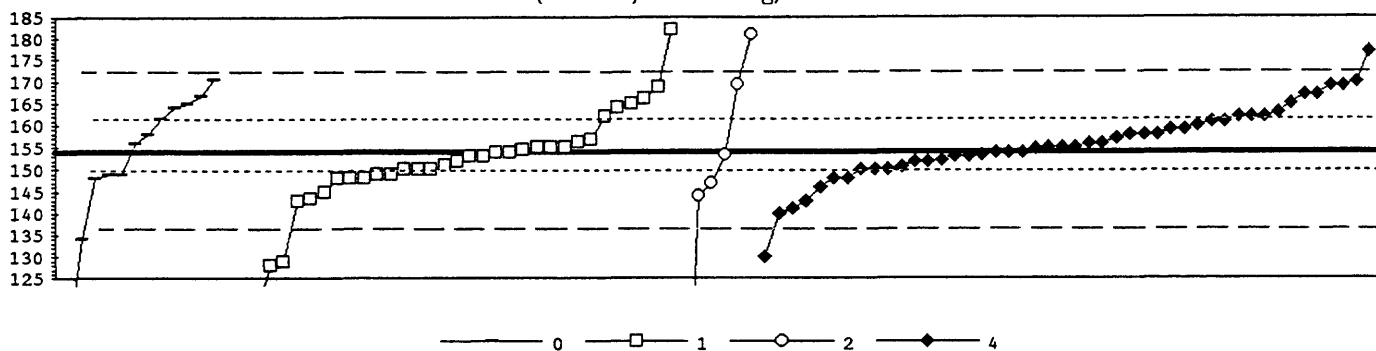
0. Other	6. ICP/MS						
4. ICP	22a. Color: azomethine						
5. DCP	22c. Color: curcumin						
	N =	2	31	1	2	4	4
	Minimum =	300	0	295	262	287	325
	Maximum =	2150	347		299	390	5640
	Median =		284				
	St Dev =		29				

MPV = 294 +/- 7
 F-pseudosigma = 34
 N = 43
 Hu = 323
 Hl = 277

Lab	Rating	Z-value	0	4	5	6	22a	22c
1	4	0.03			295			
3	3	-0.71		270				
5	4	-0.50		277				
10	3	0.92						325
11	4	0.18	300	0				
15	2	-1.04		259				
16	1	1.57		347				
18	2	-1.19		254				
24	4	-0.33		283				
25	4	-0.18		288				
29	0	55.03	2150					
32	4	0.15				299		
37	3	-0.95				262		
39	4	0.09		297				
40	4	-0.47		278				
45	4	-0.21					287	
46	0	-5.34		114				
48	4	0.47		310				
50	2	1.01					328	
52	4	-0.50		277				
55	2	-1.01		260				
57	4	0.47		310				
58	0	2.73						386
61	4	-0.50		277				
63	0		< 100					
70	3	-0.77		268				
74	3	0.56		313				
100	2	1.33		339				
103	0	-2.19		220				
119	4	0.18		300				
121	3	0.77		320				
122	4	-0.12					290	
127	4	-0.18		288				
128	2	-1.45		245				
129	0	2.85					390	
131	4	0.18		300				
134	4	-0.30		284				
141	2	1.27		337				
145	3	0.97		327				
146	4	-0.42		280				
161	0	158.50						5640
167	4	-0.30		284				
180	4	0.00		294				
182	0	3.14						400

Table 12. --Statistical summary of reported data for standard reference water sample M-124 (major constituent)--Continued

Ca (Calcium) mg/L



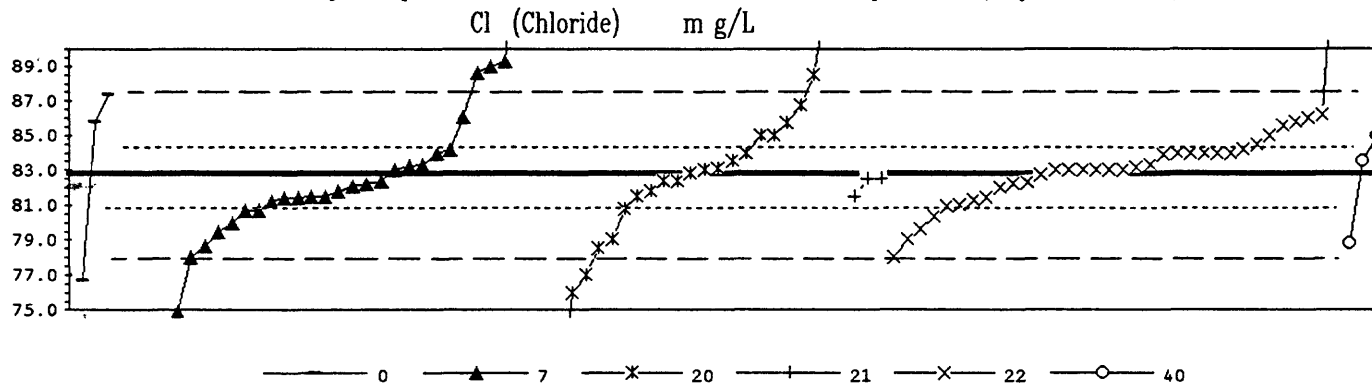
0. Other	4. ICP				
1. AA: direct air					
2. AA: direct N2O					
	N =	12	39	6	46
	Minimum =	112	5	80	130
	Maximum =	170	182	181	177
	Median =	160	153		156
	St Dev =	8	7		3

MPV = 154 +/- 1
 F-pseudosigma = 9
 N = 98
 Hu = 161
 Hl = 149

Lab	Rating	Z-value	0	1	2	4
1	4	0.11		155		
3	4	0.45				158
5	3	0.56				159
8	0	2.59				177
9	3	-0.67		148		
10	4	0.30		157		
11	3	-0.56	149			
12	3	0.79				161
13	3	-0.56		149		
15	1	1.69				169
16	2	-1.24				143
18	4	0.00				154
19	4	-0.19				152
23	3	-0.67		148		
24	4	0.11				155
25	3	0.90				162
26	2	1.12	164			
29	4	0.45	158			
30	2	1.35		166		
32	2	1.24	165			
33	3	0.82	161			
36	0	-2.25	134			
37	0	-2.81		129		
38	4	-0.08			153	
40	3	0.79				161
42	1	1.80				170
43	4	-0.45				150
45	4	0.00		154		
46	4	-0.22				152
48	0	-2.70				130
50	4	-0.11		153		
51	3	-0.90				146
52	4	0.00				154
54	4	0.11		155		
55	3	-0.67				148
56	2	-1.26		143		
57	2	1.46				167
58	0	-2.92		128		
59	2	1.24				165
61	2	-1.46				141
63	4	0.22				156
64	3	0.69				160
68	1	-1.57				140
69	2	-1.19		143		
70	4	0.34				157
74	4	0.11				155
75	4	0.00		154		
78	4	-0.11		153		
81	1	1.69				169
83	3	0.90		162		

Lab	Rating	Z-value	0	1	2	4
84	2	-1.01		145		
85	4	-0.34		151		
87	3	-0.79				147
89	4	-0.45		150		
90	2	1.42	167			
92	0	-6.63		95		
94	4	0.09				155
97	4	-0.45		150		
100	3	0.90				162
101	4	0.06		155		
103	3	-0.67				148
105	4	0.45				158
109	4	-0.45		150		
111	0	3.04				181
113	4	-0.22		152		
114	0	-8.32				80
116	3	0.90				162
119	4	-0.11				153
120	1	1.65		169		
121	4	0.45				158
122	0	-8.79		76		
123	4	0.25		156		
127	4	0.22				156
128	4	-0.11				153
129	2	1.12		164		
131	4	-0.45				150
133	4	-0.37				151
134	4	0.11				155
136	2	-1.12				144
138	4	-0.07				153
139	1	1.71				169
140	3	-0.56		149		
141	3	0.56				159
145	4	-0.25				152
146	4	-0.45				150
149	3	-0.67		148		
151	4	0.11		155		
153	3	-0.67	148			
155	1	1.84	170			
161	4	0.22	156			
179	0	-4.16		117		
180	2	1.01				163
182	0	3.15		182		
191	3	-0.56	149			
196	2	1.24		165		
201	0	-4.73	112			
202	4	0.00				154
204	2	1.46				167

Table 12. --Statistical summary of reported data for standard reference water sample M-124 (major constituent)--Continued



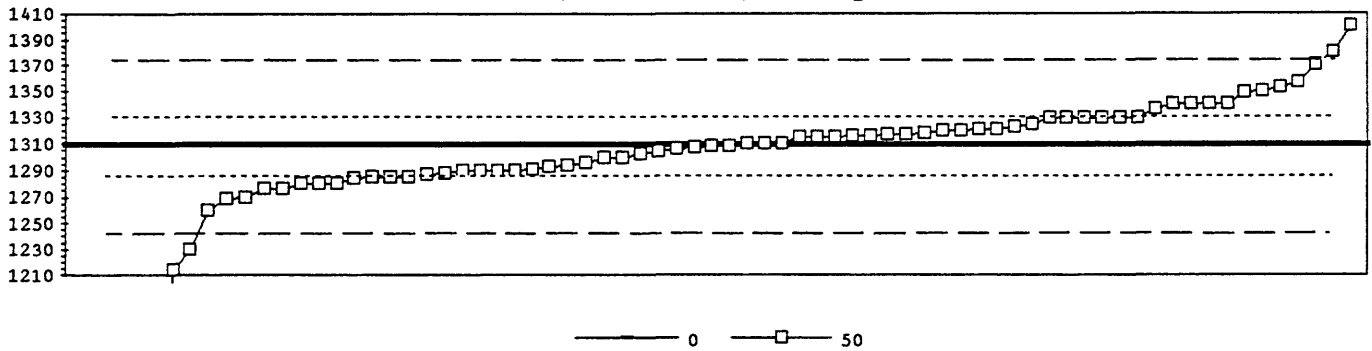
0. Other	21. Titration: electro					
7. IC	22. Color: Fe(SCN)					
20. Titration: color	40. Ion electrode					
	N = 3	31	23	3	34	3
Minimum =	76.7	21.4	65.7	81.5	78.0	78.8
Maximum =	87.4	101.0	139.0	82.5	97.0	85.0
Median =	81.5		82.9		83.0	
St Dev =	1.9		2.2		3.1	

MPV = 82.8 +/- 0.3
 F-pseudsigma = 2.4
 N = 97
 Hu = 84.2
 Hl = 80.9

Lab	Rating	Z-value	0	7	20	21	22	40
1	4	0.20	83.3					
3	2	1.31				86.0		
5	3	0.57	84.2					
6	1	-1.96				78.0		
8	2	1.35	86.1					
9	2	1.23				85.8		
10	3	-0.53			81.5			
11	2	1.23	85.8					
12	0	5.80				97.0		
13	2	1.39				86.2		
15	0	5.89	97.2					
16	3	0.57				84.2		
18	4	-0.20				82.3		
19	3	-0.53			81.5			
23	1	-1.64						78.8
24	3	-0.57				81.4		
25	4	-0.41	81.8					
26	0	-4.41	72.0					
29	0	7.44	101.0					
30	0	-8.67	61.6					
32	4	-0.16	82.4					
33	0	2.53	89.0					
36	3	0.69				84.5		
37	4	-0.25	82.2					
40	2	-1.02				80.3		
42	0	-6.87	66.0					
43	3	0.90						85.0
45	4	-0.04				82.7		
46	3	-0.78				80.9		
48	4	0.08				83.0		
50	1	-1.55				79.0		
51	0	2.37	88.6					
52	3	-0.61				81.3		
55	4	0.49				84.0		
56	4	0.29			83.5			
57	1	-1.55			79.0			
61	4	0.49				84.0		
63	4	0.49				84.0		
64	4	0.08				83.0		
68	4	0.45				83.9		
69	4	0.49				84.0		
70	3	-0.82			80.8			
74	0	-25.10	21.4					
75	4	0.49				84.0		
76	0	-3.23	74.9					
78	0	-2.78			76.0			
79	3	0.90			85.0			
81	0	-6.99			65.7			
83	4	-0.13				82.5		
84	2	-1.29						79.6

Lab	Rating	Z-value	0	7	20	21	22	40
85	4	0.08						83.0
87	3	-0.74						81.0
89	4	0.00			82.8			
92	2	1.19			85.7			
94	4	0.20						83.3
96	4	0.49			84.0			
97	4	0.16						83.2
100	3	-0.86			80.7			
101	1	1.59				86.7		
102	4	-0.33						82.0
105	2	-1.14			80.0			
107	0	4.41				93.6		
109	4	-0.12					82.5	
111	0	-2.49	76.7					
113	3	-0.53			81.5			
114	4	0.29						83.5
119	4	0.08			83.0			
120	4	-0.16			82.4			
122	1	-1.76				78.5		
127	3	-0.53			81.5			
128	4	0.08						83.0
129	1	-1.68			78.7			
131	3	-0.57			81.4			
134	3	-0.86			80.7			
136	4	0.08			83.0			
138	4	-0.25						82.2
139	0	-5.23			70.0			
140	3	0.90						85.0
141	4	0.08						83.0
145	4	0.19			83.3			
146	0	22.97			139.0			
151	4	0.49			84.0			
153	0	2.66			89.3			
158	4	0.11						83.1
161	1	-1.96			78.0			
167	1	1.88	87.4					
179	0	-2.37				77.0		
180	2	1.14						85.6
182	3	0.90			85.0			
183	4	0.12				83.1		
191	3	-0.65			81.2			
193	3	-0.57			81.4			
196	2	-1.35			79.5			
197	4	-0.29			82.1			
201	4	-0.41				81.8		
202	0	2.33			88.5			
204	4	-0.16			82.4			

Table 12. --Statistical summary of reported data for standard reference water sample M-124 (major constituent)--Continued
 DSRD (Dissolved Solids) m g/L



0. Other	
50. Gravimetric	
N =	1 71
Minimum =	1460 330
Maximum =	1400
Median =	1310
St Dev =	26

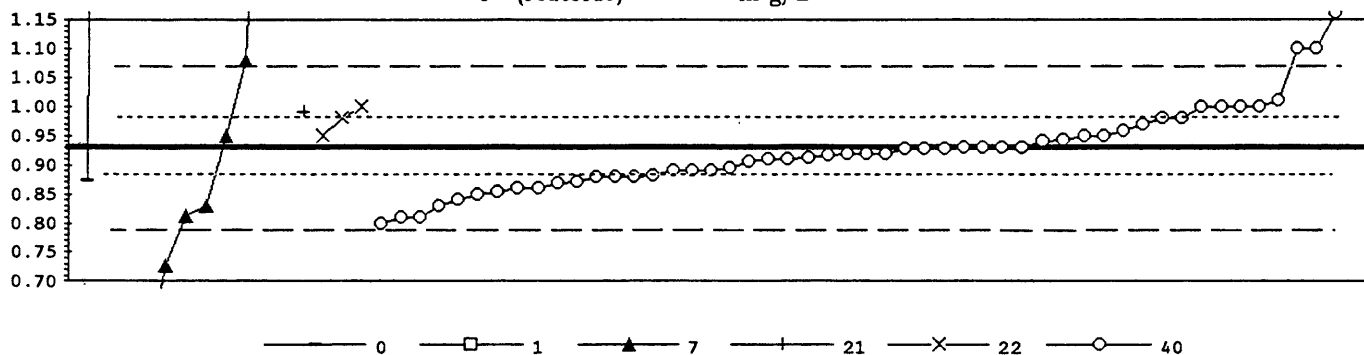
MPV = 1309 +/- 5
 F-pseudostigma = 33
 N = 72
 Hu = 1330
 Hl = 1286

Lab	Rating	Z-value	0	50
1	4	0.49		1325
3	3	0.64		1330
5	0	4.63	1460	
6	3	0.83		1336
8	2	-1.20		1270
9	3	0.64		1330
10	2	1.47		1357
12	4	0.03		1310
13	4	0.03		1310
15	4	-0.28		1300
16	4	0.43		1323
18	4	-0.21		1302
19	4	0.21		1316
23	0	-30.02	330	
25	2	1.26		1350
26	3	0.64		1330
29	4	-0.03		1308
32	3	-0.74		1285
36	3	0.64		1330
40	4	0.25		1317
43	3	0.95		1340
45	4	-0.28		1300
46	0	-6.29	1104	
48	0	-19.65	668	
50	4	0.03		1310
51	2	-1.23		1269
52	3	-0.58		1290
54	3	-0.74		1285
55	3	-0.89		1280
57	0	2.79	1400	
61	0	2.18	1380	
69	3	0.95		1340
70	4	0.37		1321
74	4	0.18		1315
75	3	0.64		1330
76	3	-0.89		1280
78	0	-20.39	644	
81	3	-0.58		1290
85	4	-0.06		1307
87	3	-0.67		1287
89	3	0.95		1340
90	2	-1.50		1260
91	2	-1.01		1276
92	4	-0.49		1293
94	4	0.28		1318
96	4	0.18		1315
97	4	0.25		1317
100	4	-0.15		1304
101	3	-0.77		1284
105	3	-0.89		1280

Lab	Rating	Z-value	0	50
109	4	0.21		1316
113	3	-0.58		1290
118	0	-2.42	1230	
119	4	-0.03		1308
120	3	-0.74		1285
122	3	0.64		1330
127	3	0.95		1340
129	0	-2.91	1214	
134	4	0.18		1315
136	2	1.35		1353
138	2	-1.01		1276
140	4	0.37		1321
141	2	1.23		1349
146	1	1.87		1370
149	3	-0.58		1290
151	4	-0.46		1294
155	3	-0.56		1291
158	4	-0.09		1306
167	4	0.34		1320
182	3	-0.64		1288
183	4	-0.40		1296
202	4	0.34		1320

Table 12. --Statistical summary of reported data for standard reference water sample M-124 (major constituent)--Continued

F (Fluoride) m g/L



0. Other	21. Titration: electro
1. AA: direct air	22. Colorimetric
7. IC	40. Ion electrode
	N = 2 1 8 1 3 51
	Minimum = 0.87 13.90 0.53 0.99 0.95 0.80
	Maximum = 5.19 2.00 1.00 2.03
	Median = 0.92
	St Dev = 0.05

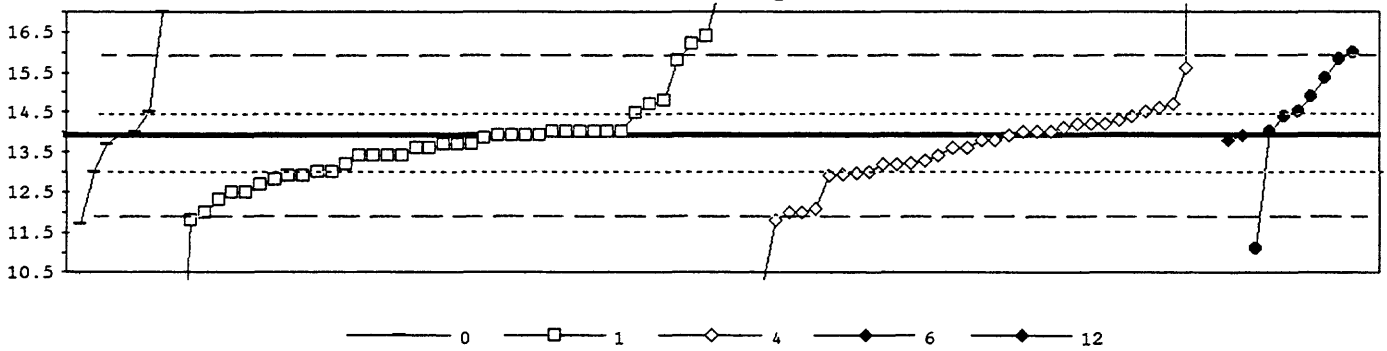
MPV = 0.93 +/- 0.01
 F-pseudostigma = 0.07
 N = 66
 Hu = 0.98
 Hl = 0.88

Lab	Rating	Z-value	0	1	7	21	22	40
1	1	-1.56		0.81				
3	3	0.98				1.00		
6	3	-0.78					0.87	
8	1	-1.72					0.80	
10	2	-1.18					0.84	
11	3	-0.74	0.87					
12	3	0.98					1.00	
13	3	0.57					0.97	
16	4	-0.15					0.92	
18	3	-0.61					0.88	
19	3	-0.51					0.89	
23	4	0.17					0.94	
24	4	0.03					0.93	
25	4	0.30					0.95	
26	0	14.47		2.00				
29	0	14.87					2.03	
33	0			< 0.01				
36	4	-0.44					0.90	
40	4	-0.20					0.91	
42	2	-1.05					0.85	
45	4	0.21					0.94	
46	4	-0.01					0.93	
50	3	0.98					1.00	
54	4	-0.24					0.91	
55	4	0.30		0.95				
57	3	0.71					0.98	
61	4	0.03					0.93	
63	4	0.30					0.95	
69	4	-0.10					0.92	
70	3	-0.51					0.89	
74	4	-0.30					0.91	
76	2	-1.01					0.85	
78	4	-0.10					0.92	
81	1	-1.59					0.81	
83	3	0.84		0.99				
85	3	0.98					1.00	
89	4	0.01					0.93	
91	4	0.30				0.95		
94	3	-0.91					0.86	
96	3	0.98					1.00	
97	0	57.50	5.19					
100	3	-0.91					0.86	
105	2	-1.32		0.83				
107	2	1.11					1.01	
109	4	-0.24					0.91	
113	4	-0.49					0.89	
119	3	-0.64					0.88	
120	3	0.71				0.98		
121	0	175.00	13.90					
122	4	0.03					0.93	

Lab	Rating	Z-value	0	1	7	21	22	40
127	4	0.01						0.93
128	3	-0.64						0.88
129	0	-5.32			0.53			
131	0	2.33						1.10
134	1	-1.59						0.81
138	2	-1.32						0.83
140	4	0.41						0.96
141	4	0.03						0.93
145	0	10.56			1.71			
149	4	-0.10						0.92
153	0	2.06			1.08			
161	3	-0.80						0.87
167	3	-0.64						0.88
180	3	0.71						0.98
182	0	3.14						1.16
183	0	2.33						1.10
196	0	-2.70			0.73			

Table 12. --Statistical summary of reported data for standard reference water sample M-124 (major constituent)--Continued

K (Potassium) m g/L



0. Other	6. ICP/MS					
1. AA: direct air	12. AA: flame emission					
4. ICP						
	N =	7	42	34	2	8
	Minimum =	11.7	5.1	10.0	13.8	11.1
	Maximum =	17.0	60.0	75.0	13.9	16.0
	Median =	13.8	13.7	13.8		14.7
	St Dev =	1.0	0.8	0.9		1.5

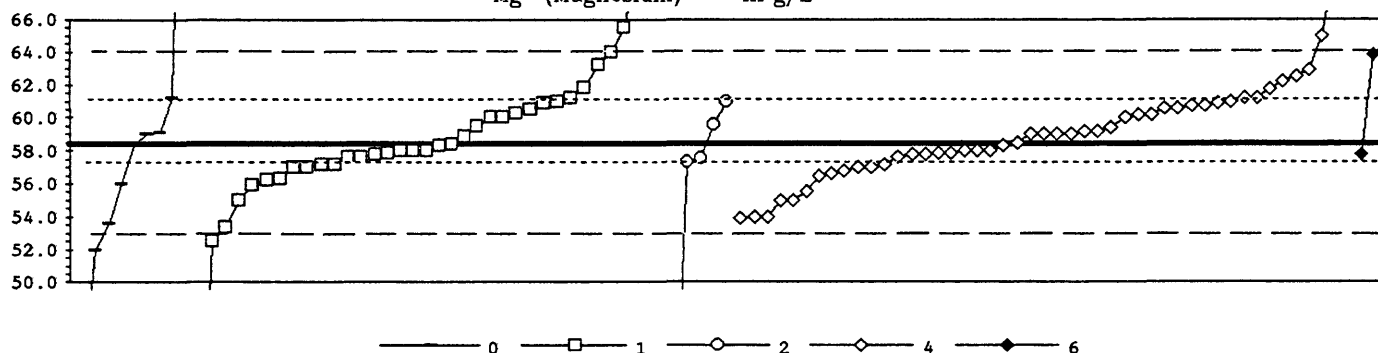
MPV = 13.9 +/- 0.1
 F-pseudostigma = 1.0
 N = 93
 Hu = 14.4
 Hl = 13.0

Lab	Rating	Z-value	0	1	4	6	12
1	4	0.10		14.0			
3	0	-2.02	11.8				
5	4	0.29			14.2		
8	1	1.64			15.6		
9	2	-1.16	12.7				
10	4	0.10		14.0			
11	3	0.58	14.5				
12	4	0.00			13.9		
13	4	-0.48		13.4			
15	0	2.41	16.4				
16	3	-0.96		12.9			
18	4	0.10			14.0		
19	0	-2.02		11.8			
23	1	-1.54		12.3			
24	4	-0.48			13.4		
25	4	0.48			14.4		
26	3	-0.87	13.0				
29	3	0.96					14.9
32	4	-0.10			13.8		
33	4	0.04	13.9				
36	0	-2.70					11.1
37	3	-0.87		13.0			
38	4	-0.19	13.7				
40	4	-0.29			13.6		
42	3	-0.96			12.9		
43	4	0.10			14.0		
45	4	-0.29		13.6			
46	4	0.39			14.3		
48	4	-0.10			13.8		
50	3	-0.87		13.0			
51	4	0.48					14.4
52	3	-0.58			13.3		
54	4	-0.19		13.7			
55	3	0.58					14.5
56	3	0.87		14.8			
57	0	3.95		18.0			
58	2	-1.35		12.5			
59	3	0.67			14.6		
61	4	0.29			14.2		
63	2	-1.06		12.8			
64	2	-1.35		12.5			
68	1	-1.83			12.0		
69	4	0.10					14.0
70	4	0.10			14.0		
74	4	0.29			14.2		
75	4	-0.48		13.4			
78	4	0.10		14.0			
81	3	0.77			14.7		
83	3	0.77		14.7			
85	4	0.00		13.9			

Lab	Rating	Z-value	0	1	4	6	12
87	4	-0.29		13.6			
89	3	-0.67		13.2			
92	1	-1.83		12.0			
94	3	-0.93				12.9	
97	3	-0.96		12.9			
100	4	-0.29				13.6	
101	4	0.00		13.9			
103	1	-1.83				12.0	
105	1	-1.73				12.1	
109	4	-0.05		13.9			
111	0	2.22				16.2	
113	4	0.00		13.9			
114	0	44.42		60.0			
119	3	-0.87				13.0	
120	3	0.57		14.5			
121	0	43.46				59.0	
122	0	-2.09	11.7				
123	4	-0.48			13.4		
127	4	-0.19		13.7			
128	3	-0.90				13.0	
129	4	0.10		14.0			
131	0	-3.76				10.0	
133	0	2.99	17.0				
134	4	0.10		14.0			
136	1	1.83		15.8			
138	3	-0.66				13.2	
139	2	1.40					15.4
140	4	-0.19		13.7			
141	4	-0.10				13.8	
145	3	-0.67				13.2	
146	0	58.87				75.0	
149	4	0.00		13.9			
151	4	-0.48		13.4			
153	4	0.10	14.0				
167	3	-0.67				13.2	
179	4	0.10		14.0			
180	4	0.19				14.1	
182	0	-8.48		5.1			
191	4	0.00				13.9	
196	0	3.66		17.7			
201	1	1.85					15.8
202	3	0.58			14.5		
204	0	2.02					16.0

Table 12. --Statistical summary of reported data for standard reference water sample M-124 (major constituent)--Continued

Mg (Magnesium) m g/L



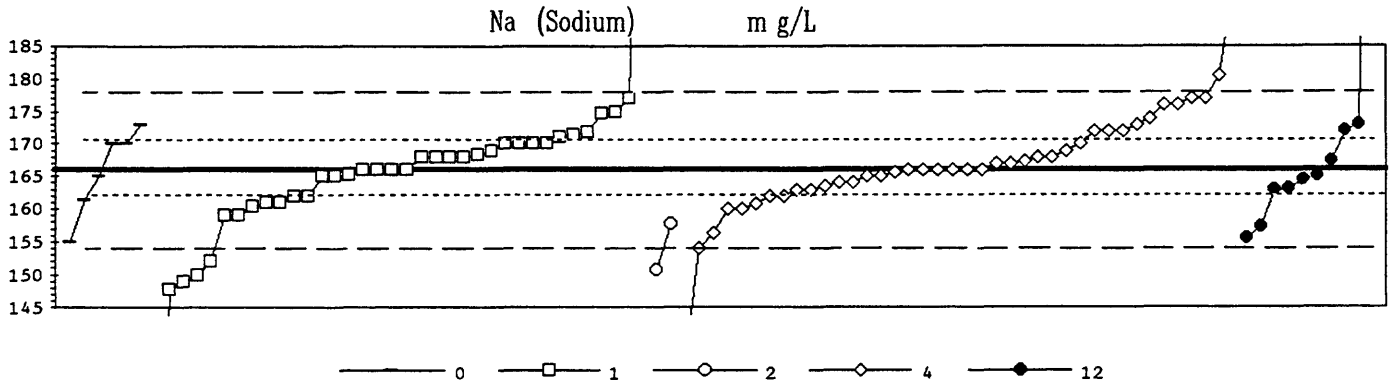
0. Other	4. ICP
1. AA: direct air	6. ICP/MS
2. AA: direct N2O	
	N = 9 36 5 47 2
	Minimum = 44.3 33.7 40.0 53.9 57.8
	Maximum = 89.4 73.4 61.0 167.0 63.8
	Median = 58.0 58.8
	St Dev = 2.2 2.3

MPV = 58.4 +/- 0.4
 F-pseudostigma = 2.7
 N = 99
 Hu = 60.8
 Hl = 57.1

Lab	Rating	Z-value	0	1	2	4	6
1	2	-1.04				55.6	
3	3	0.84				60.7	
5	4	0.29				59.2	
8	3	0.84				60.7	
9	3	0.91		60.9			
10	4	0.18		58.9			
11	4	0.26	59.1				
12	3	0.66				60.2	
13	1	1.75		63.2			
15	3	0.80				60.6	
16	2	-1.24				55.0	
18	4	-0.15				58.0	
19	2	1.02				61.2	
23	0	5.47		73.4			
24	4	-0.18				57.9	
25	4	0.36				59.4	
26	0	-2.33	52.0				
29	3	-0.88	56.0				
30	3	0.69		60.3			
32	1	1.97					63.8
33	2	1.02	61.2				
36	1	-1.75	53.6				
37	4	-0.29		57.6			
38	4	0.42			59.6		
39	3	-0.51				57.0	
40	3	0.91				60.9	
42	2	1.39				62.2	
43	3	-0.69				56.5	
45	3	0.77		60.5			
46	3	-0.66				56.6	
48	4	0.22				59.0	
50	0	2.04		64.0			
51	3	0.95		61.0			
52	4	-0.22				57.8	
54	3	-0.51		57.0			
55	2	1.02				61.2	
56	1	-1.83		53.4			
57	4	-0.15				58.0	
58	2	1.24		61.8			
59	0	2.41				65.0	
61	1	-1.60				54.0	
63	4	-0.40			57.3		
64	2	1.49				62.5	
68	1	-1.60				54.0	
69	3	-0.80		56.2			
70	3	0.95				61.0	
74	2	-1.24				55.0	
75	4	-0.22		57.8			
78	4	-0.44		57.2			
81	2	1.20				61.7	

Lab	Rating	Z-value	0	1	2	4	6
83	3	0.58		60.0			
84	3	-0.91		55.9			
85	4	-0.04		58.3			
87	4	-0.29		57.6			
89	4	-0.18		57.9			
92	2	-1.24		55.0			
94	4	0.28				59.2	
97	2	1.02		61.2			
100	1	1.64				62.9	
101	4	-0.15		58.0			
103	3	0.58				60.0	
105	1	-1.64				53.9	
109	3	-0.77		56.3			
111	3	0.95			61.0		
113	4	0.00		58.4			
114	0	-6.71			40.0		
116	4	0.22				59.0	
119	3	-0.51				57.0	
120	4	0.40		59.5			
121	0	39.59					167.0
122	0	-2.14		52.5			
123	0	4.41		70.5			
127	4	-0.22				57.8	
128	3	-0.58				56.8	
129	3	-0.51		57.0			
131	3	0.80				60.6	
133	4	-0.18				57.9	
134	4	0.22				59.0	
136	3	0.58		60.0			
138	4	-0.03				58.3	
139	4	-0.30			57.6		
140	4	-0.15		58.0			
141	4	0.22				59.0	
145	4	-0.44				57.2	
146	4	-0.15				58.0	
149	0	-9.01		33.7			
151	4	-0.44		57.2			
153	4	0.22	59.0				
155	0	-5.14	44.3				
161	4	-0.04	58.3				
167	4	-0.29				57.6	
179	0	3.86		69.0			
180	3	0.66				60.2	
182	4	-0.15		58.0			
191	4	-0.22					57.8
196	0	2.59		65.5			
201	0	11.29	89.4				
202	4	0.04				58.5	
204	0	3.86				69.0	

Table 12. --Statistical summary of reported data for standard reference water sample M-124 (major constituent)--Continued



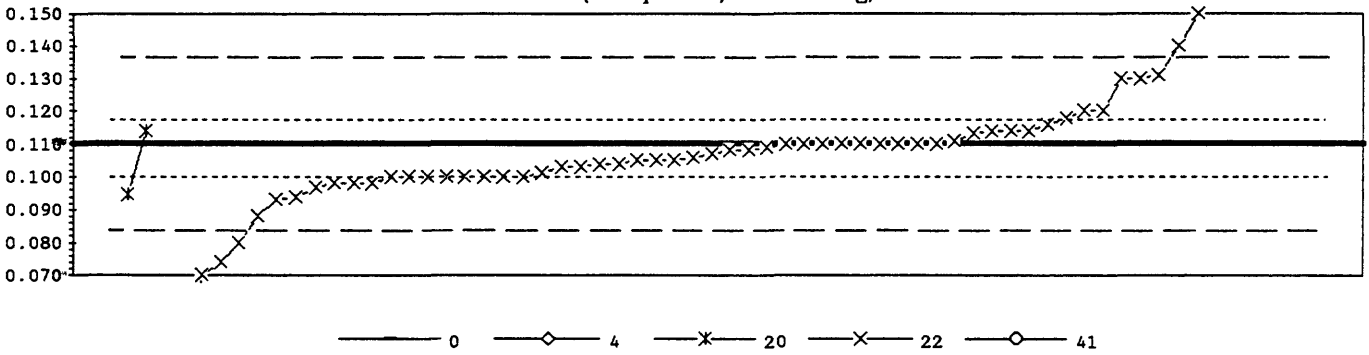
0. Other	4. ICP
1. AA: direct air	12. AA: flame emission
2. AA: direct N2O	
	N = 6 36 2 40 10
	Minimum = 155 82 151 136 156
	Maximum = 173 248 158 194 278
	Median = 168 166 165
	St Dev = 5 5 6

MPV = 166 +/- 1
 F-pseudostigma = 6
 N = 94
 Hu = 170
 Hl = 162

Lab	Rating	Z-value	0	1	2	4	12
1	3	-0.89				161	
3	2	1.18				173	
5	4	0.00				166	
8	1	1.69				176	
9	3	0.84		171			
10	4	-0.12		165			
11	4	-0.17	165				
12	4	0.34				168	
13	3	0.67		170			
15	0	4.72				194	
16	3	-0.67				162	
18	3	0.51				169	
19	1	-1.64				156	
23	4	0.34		168			
24	4	0.00				166	
25	2	1.01				172	
26	2	1.18	173				
29	2	1.01					172
32	3	0.67	170				
33	3	-0.79	161				
36	2	1.18					173
37	3	-0.67		162			
38	2	-1.42			158		
39	2	1.35				174	
40	4	0.17				167	
42	4	0.24				167	
43	3	0.67				170	
45	3	0.51		169			
48	0	-5.06				136	
50	4	0.34		168			
51	4	-0.17					165
52	4	0.00				166	
54	4	-0.17		165			
55	4	-0.25					165
56	0	-3.07		148			
57	2	1.01				172	
58	0	13.83		248			
59	1	1.85				177	
61	3	-0.51				163	
63	0	-2.58			151		
64	2	1.47		175			
68	2	-1.01				160	
69	2	-1.48					157
70	4	-0.34				164	
74	1	1.85				177	
75	3	0.67		170			
78	0	-2.87		149			
81	2	1.01				172	
83	1	1.85		177			
84	4	0.24					167

Lab	Rating	Z-value	0	1	2	4	12
85	3	-0.67			162		
87	4	0.00				166	
89	3	-0.84				161	
92	0	-2.36				152	
94	4	0.02					166
97	4	0.34			168		
100	1	1.69					176
101	4	0.00			166		
103	3	-0.51					163
105	0	2.45					181
109	3	-0.96			160		
111	3	0.67			170		
113	4	0.00			166		
114	0	-14.16			82		
116	3	-0.67					162
119	4	0.34					168
120	3	0.98			172		
122	3	0.93			172		
123	4	0.40			168		
127	4	-0.17					165
128	4	-0.34					164
129	2	-1.18			159		
131	4	0.17					167
133	4	-0.44					163
134	4	0.34			168		
136	3	0.67			170		
138	4	-0.07					166
139	1	-1.75					156
140	4	-0.17			165		
141	4	-0.17					165
145	4	0.00					166
146	2	-1.01					160
149	1	1.52			175		
151	3	-0.84			161		
153	3	0.67	170				
167	4	0.00					166
179	4	0.00			166		
180	0	-2.02					154
182	0	-2.70			150		
183	0	18.89					278
191	1	-1.85	155				
196	2	-1.18			159		
201	4	-0.49					163
204	3	-0.51					163

Table 12. --Statistical summary of reported data for standard reference water sample M-124 (major constituent)--Continued
total P (Phosphorus) m g/L



0. Other	22. Color: phosphomolybdate
4. ICP	41. Electrometric
20. Titration: color	
N =	1 1 2 63 1
Minimum =	0.110 0.268 0.095 0.010 0.325
Maximum =	0.114 2.128
Median =	0.108
St Dev =	0.258

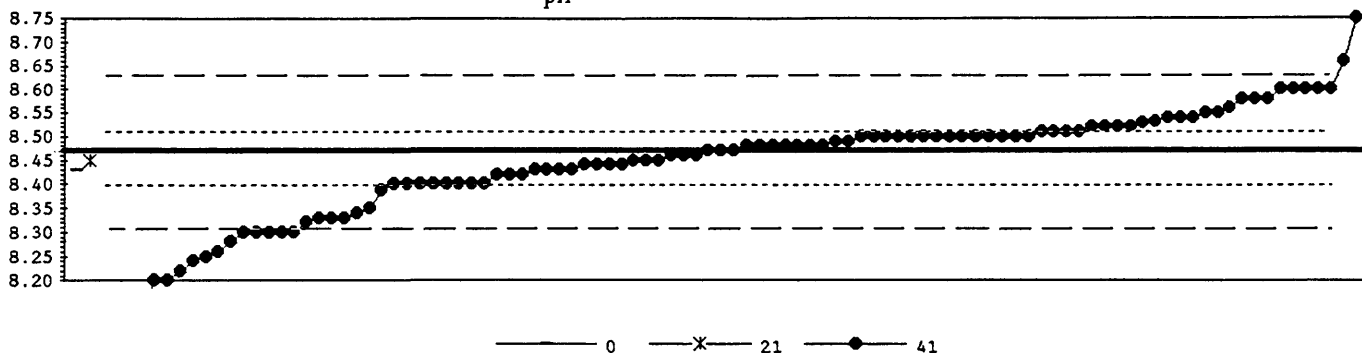
MPV = 0.110 +/- 0.002
 F-pseudosigma = 0.013
 N = 68
 Hu = 0.117
 Hl = 0.100

Lab	Rating	Z-value	0	4	20	22	41
1	4	-0.20				0.107	
3	2	-1.23				0.094	
6	0				< 0.050		
8	0	6.39				0.190	
11	4	0.04	0.110				
12	0	3.21				0.150	
13	3	-0.75				0.100	
15	4	0.12				0.111	
16	2	-1.19			0.095		
18	4	-0.28				0.106	
19	4	0.04				0.110	
23	3	-0.75				0.100	
25	0	12.58		0.268			
36	4	-0.04				0.109	
38	4	0.28				0.113	
45	4	-0.44				0.104	
46	3	-0.52				0.103	
48	4	0.04				0.110	
55	4	0.04				0.110	
57	0	15.12				0.300	
58	4	-0.12				0.108	
61	3	-0.52				0.103	
63	4	-0.36				0.105	
64	3	0.83				0.120	
68	4	0.36				0.114	
74	4	0.36			0.114		
75	3	-0.99				0.097	
78	1	1.71				0.131	
81	0	19.72				0.358	
83	3	-0.75				0.100	
85	4	-0.36				0.105	
87	0	-2.34				0.080	
89	4	-0.36				0.105	
91	0	8.77				0.220	
92	4	-0.44				0.104	
94	0	-2.82				0.074	
97	0	4.80				0.170	
100	4	0.04				0.110	
102	0	-7.18				0.019	
103	NR			< 0.1			
104	4	0.36				0.114	
105	3	0.67				0.118	
107	3	-0.91				0.098	
108	4	0.04				0.110	
111	3	-0.91				0.098	
113	3	-0.67				0.101	
114	4	0.04				0.110	
118	0	-3.13				0.070	
119	4	0.04				0.110	
120	3	-0.75				0.100	

Lab	Rating	Z-value	0	4	20	22	41
123	0	7.18				0.200	
127	3	-0.75				0.100	
128	3	-0.75				0.100	
129	0	160.17				2.128	
131	NR			< 0.1			
133	1	1.63				0.130	
134	3	-0.75				0.100	
138	4	0.04				0.110	
139	2	-1.31				0.093	
140	0	2.42				0.140	
141	3	0.83				0.120	
144	1	1.63				0.130	
145	0					< 0.02	
153	0	17.10					0.325
155	3	-0.90				0.098	
161	3	0.52				0.116	
167	4	-0.12				0.108	
180	4	0.36				0.114	
182	3	-0.75				0.100	
183	4	0.04				0.110	
202	0	-7.90				0.010	
204	1	-1.71				0.088	

Table 12. --Statistical summary of reported data for standard reference water sample M-124 (major constituent)--Continued

pH



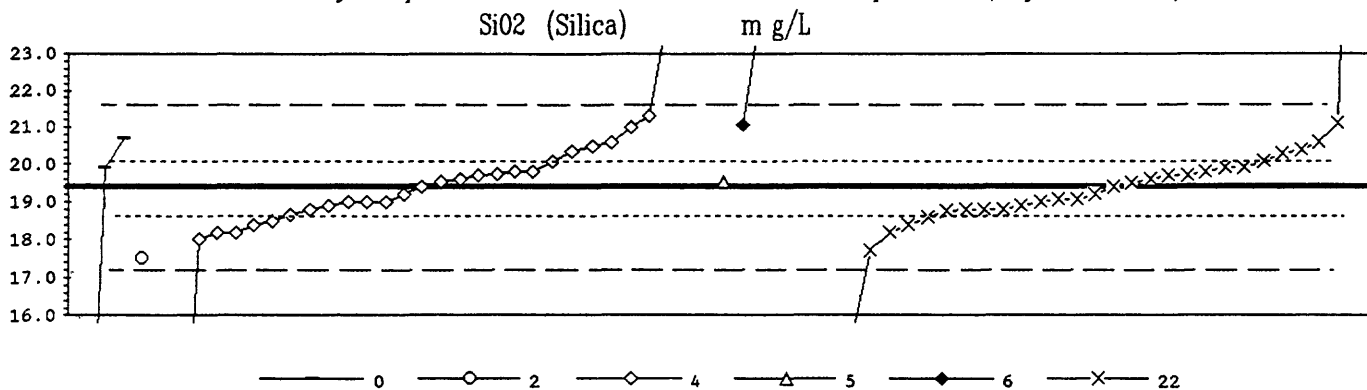
0. Other				
21. Titration: Electro				
41. Electrometric				
	N =	1	1	100
	Minimum =	8.43	8.45	7.79
	Maximum =			8.75
	Median =			8.48
	St Dev =			0.07

MPV = 8.47 +/- 0.01
 F-pseudostigma = 0.08
 N = 102
 Hu = 8.51
 Hl = 8.40

Lab	Rating	Z-value	0	21	41
1	2	-1.01			8.39
2	3	0.76			8.53
3	4	-0.49			8.43
5	1	-1.59			8.34
6	4	0.37			8.50
8	1	-1.72			8.33
10	4	0.37			8.50
11	4	-0.49	8.43		
12	4	0.37			8.50
13	3	0.86			8.54
15	0	-2.33			8.28
16	2	-1.47			8.35
18	4	0.49			8.51
19	3	0.98			8.55
23	3	0.86			8.54
24	4	-0.25			8.45
25	4	-0.25			8.45
26	4	0.37			8.50
29	4	0.25			8.49
30	3	-0.86			8.40
32	1	-1.84			8.32
33	3	-0.61			8.42
36	2	1.10			8.56
37	4	0.12			8.48
38	1	1.59			8.60
39	4	0.37			8.50
40	4	-0.25			8.45
41	0	2.33			8.66
42	3	0.86			8.54
43	1	-1.72			8.33
45	4	0.49			8.51
46	3	-0.86			8.40
48	4	0.37			8.50
50	0	-2.08			8.30
51	3	0.61			8.52
52	4	-0.12			8.46
54	4	0.37			8.50
55	3	0.61			8.52
56	4	0.00			8.47
57	0	-4.54			8.10
58	4	-0.49			8.43
61	3	-0.61			8.42
63	3	-0.86			8.40
64	4	0.12			8.48
68	0	-3.31			8.20
69	4	0.25			8.49
70	4	-0.12			8.46
74	4	0.37			8.50
75	0	-2.08			8.30
76	3	-0.61			8.42
78	4	-0.49			8.43

Lab	Rating	Z-value	0	21	41
81	0	-3.31			8.20
84	4	0.12			8.48
85	4	0.49			8.51
87	3	0.61			8.52
89	4	0.12			8.48
90	0	3.43			8.75
91	4	-0.37			8.44
92	4	-0.37			8.44
94	4	0.12			8.48
96	1	1.59			8.60
97	3	0.61			8.52
100	2	1.35			8.58
101	0	-8.34			7.79
105	4	-0.49			8.43
107	4	0.12			8.48
109	0	-2.70			8.25
113	4	-0.37			8.44
114	3	-0.86			8.40
118	0	-4.54			8.10
119	0	-2.58			8.26
120	3	-0.86			8.40
122	4	0.12			8.48
123	3	-0.86			8.40
127	1	-1.72			8.33
128	1	1.59			8.60
129	4	-0.37			8.44
131	4	0.37			8.50
133	3	-0.86			8.40
134	4	0.37			8.50
136	4	0.37			8.50
138	4	0.37			8.50
139	4	-0.12			8.46
140	4	0.00			8.47
141	0	-2.08			8.30
144	3	0.98			8.55
145	0	-2.08			8.30
146	1	1.59			8.60
151	4	-0.25	8.45		
153	0	-4.17			8.13
155	0	-3.07			8.22
158	4	0.00			8.47
161	2	1.35			8.58
167	0	-2.08			8.30
179	3	-0.86			8.40
180	4	0.37			8.50
182	4	0.37			8.50
183	1	1.59			8.60
197	2	1.35			8.58
201	4	0.49			8.51
202	3	0.74			8.53
204	0	-2.82			8.24

Table 12. --Statistical summary of reported data for standard reference water sample M-124 (major constituent)--Continued



0. Other	5. DCP
2. AA: direct N2O	6. ICP/MS
4. ICP	22. Color: molybdate
N =	3 1 30 1 2 32
Minimum =	9.7 17.5 9.2 19.5 21.1 0.7
Maximum =	20.7 37.1 24.4 37.2
Median =	19.4 19.3
St Dev =	0.9 0.8

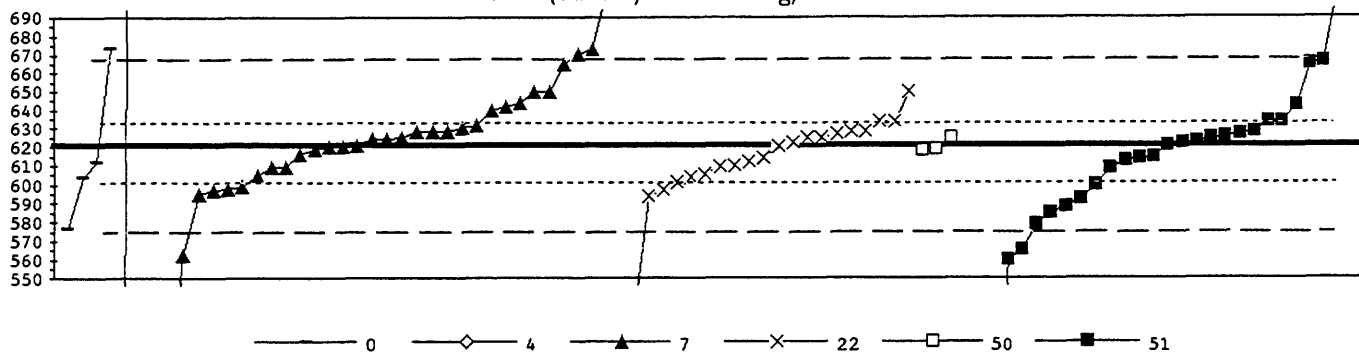
MPV = 19.4 +/- 0.2
 F-pseudostigma = 1.1
 N = 69
 Hu = 20.1
 Hl = 18.6

Lab	Rating	Z-value	0	2	4	5	6	22
1	3	-0.67			18.7			
2	0	-8.22						10.3
3	4	0.27			19.7			
5	4	0.36			19.8			
8	1	1.71			21.3			
9	4	0.27						19.7
10	2	1.17	20.7					
11	0	-8.72	9.7					
13	4	0.45						19.9
15	3	-0.90			18.4			
18	3	0.81						20.3
23	4	0.00						19.4
24	3	0.99			20.5			
25	0	4.32			24.2			
32	0	4.50					24.4	
33	4	0.12				19.5		
36	0	16.01						37.2
38	4	-0.31						19.1
39	2	-1.08			18.2			
40	4	0.31			19.7			
42	3	0.63			20.1			
43	4	0.00			19.4			
45	3	-0.81			18.5			
50	4	-0.36						19.0
51	4	0.45						19.9
52	0	-3.51						15.5
55	3	0.86			20.4			
57	2	1.44			21.0			
58	0	-16.82						0.7
59	3	-0.54						18.8
61	0	-9.17			9.2			
63	2	-1.08			18.2			
64	0	6.30			26.4			
68	2	-1.08						18.2
70	3	-0.72						18.6
74	2	1.08						20.6
75	4	0.18						19.6
78	1	-1.71	17.5					
83	4	0.27						19.7
85	4	-0.18						19.2
87	1	1.53						21.1
89	4	0.36						19.8
92	4	-0.45						18.9
97	1	-1.53						17.7
100	4	0.36			19.8			
101	4	0.13			19.6			
102	3	-0.54						18.8
103	2	-1.26			18.0			
104	3	-0.58						18.8
105	4	-0.45			18.9			

Lab	Rating	Z-value	0	2	4	5	6	22
111	4	0.09						19.5
113	3	-0.54						18.8
118	0	-13.89						4.0
119	4	-0.36			19.0			
121	4	-0.18			19.2			
127	4	-0.36			19.0			
128	3	-0.54			18.8			
131	4	0.18			19.6			
134	4	-0.37			19.0			
138	3	0.90						20.4
141	3	0.63						20.1
145	0	15.88			37.1			
146	0	-8.99			9.4			
151	4	0.45	19.9					
155	4	-0.31						19.1
161	0	-9.74						8.6
167	3	-0.90						18.4
191	1	1.51					21.1	
204	2	1.08			20.6			

Table 12. --Statistical summary of reported data for standard reference water sample M-124 (major constituent)--Continued

S04 (Sulfate) m g/L



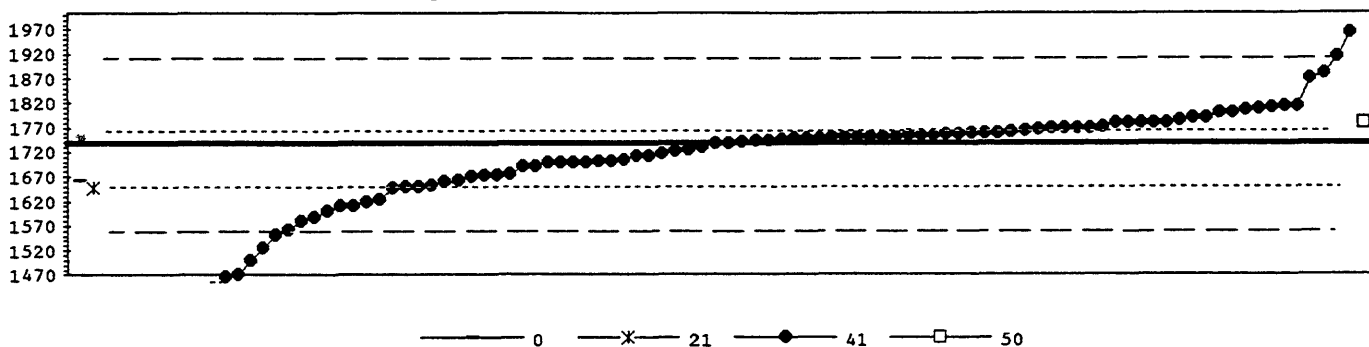
0. Other	22. Color: methyl thymol blue						
4. ICP	50. Gravimetric						
7. IC	51. Turbidimetric						
	N =	5	2	33	19	3	28
	Minimum =	577	524	483	534	618	390
	Maximum =	674	1460	709	650	625	1559
	Median =	624		620		622	
	St Dev =	18		15		23	

MPV = 621 +/- 3
 F-pseudostigma = 23
 N = 90
 Hu = 632
 Hl = 601

Lab	Rating	Z-value	0	4	7	22	50	51
1	4	-0.08			619			
3	4	0.01			621			
5	2	1.01			644			
6	2	-1.23						593
8	1	1.93			665			
9	3	0.58				634		
10	3	-0.53						609
11	4	-0.38	612					
12	0	-3.77				534		
13	2	-1.03				597		
15	3	-0.99			598			
16	4	0.07						622
18	3	-0.73				604		
19	4	0.32				628		
23	0	3.54						702
24	4	-0.38				612		
25	0	3.84			709			
26	3	0.93			642			
29	0	3.67			705			
30	3	-0.94			599			
32	3	0.84			640			
33	3	-0.51			609			
36	3	0.58						634
37	4	0.19			625			
40	4	0.14			624			
42	0	-5.82			487			
43	4	-0.12					618	
45	4	0.10						623
46	4	-0.29				614		
48	4	-0.29						614
50	4	0.19				625		
51	4	0.14			624			
52	1	1.97						666
54	3	0.58						634
55	2	1.28				650		
56	4	0.20						625
57	3	-0.90						600
61	4	-0.25						615
63	4	0.19						625
64	4	0.40				630		
69	3	0.58					634	
70	0	-2.42						565
74	2	-1.03				597		
76	2	-1.12				595		
78	0	-10.04						390
83	4	0.01						621
84	0	-2.64						560
85	4	0.49				632		
87	1	-1.81						579
89	4	0.32						628

Lab	Rating	Z-value	0	4	7	22	50	51
92	3	0.94						642
94	3	-0.51					609	
96	2	-1.42						588
97	0	2.32	674					
100	4	-0.20				616		
102	4	0.27					627	
103	0	36.52		1460				
105	4	0.19					625	
109	4	-0.07						619
111	3	-0.73	604					
113	4	0.32				628		
114	0	-8.39						428
119	4	0.32	628					
120	4	-0.47					610	
122	1	-1.90	577					
127	4	0.32				628		
128	4	0.06					622	
129	2	1.28				650		
131	4	-0.03					620	
134	4	-0.02					620	
136	2	1.28				650		
138	4	-0.34						613
139	0	40.82						1559
140	1	1.93						665
141	4	0.19						625
145	0	2.17					671	
151	0	-4.21		524				
153	0	-5.99				483		
158	3	-0.86					601	
161	0	-2.53					563	
167	4	-0.01					620	
180	2	-1.16					594	
182	0	-7.43						450
183	1	-1.55						585
191	3	-0.51					609	
193	4	0.32					628	
196	0	2.28					673	
197	3	-0.69					605	
201	4	0.27						627
204	3	-0.68					605	

Table 12. --Statistical summary of reported data for standard reference water sample M-124 (major constituent)--Continued
 Sp Cond (Specific Conductance) μ S/cm



0. Other	41. Electrometric
4. ICP	50. Gravimetric
21. Titration: electro	
N =	1 0 1 97 1
Minimum =	1664 1646 82 1780
Maximum =	1964
Median =	1739
St Dev =	222

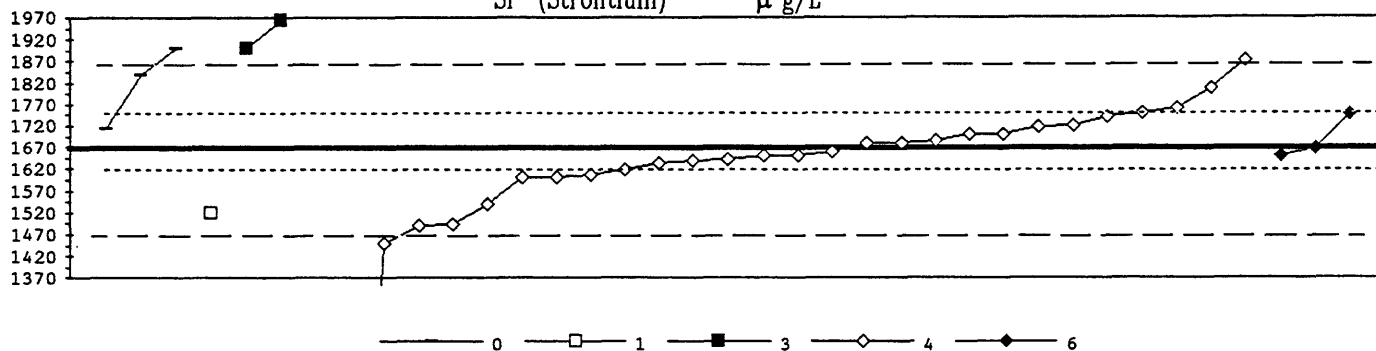
MPV = 1738 +/- 12
 F-pseudsigma = 88
 N = 100
 Hu = 1768
 Hl = 1650

Lab	Rating	Z-value	0	4	21	41	50
1	4	0.17				1753	
3	3	-0.78				1670	
5	0	-4.54				1340	
6	4	-0.01				1737	
8	4	-0.43				1700	
9	3	0.72				1801	
10	4	0.23				1758	
11	3	-0.84	1664				
12	4	0.02				1740	
13	4	-0.43				1700	
15	3	0.71				1800	
16	4	0.32				1766	
18	2	-1.31				1623	
19	3	0.55				1786	
23	3	-0.98				1652	
24	4	0.48				1780	
25	4	0.37				1770	
26	4	0.31				1765	
29	4	0.37				1770	
32	4	0.48					1780
33	4	-0.30				1712	
36	0	-18.90				82	
37	4	-0.42				1701	
38	4	-0.24				1717	
39	4	0.14				1750	
40	4	-0.31				1711	
42	3	-0.73				1674	
43	4	0.37				1770	
45	4	0.14				1750	
46	4	0.14				1750	
48	3	0.76				1805	
50	4	0.37				1770	
51	4	0.05				1742	
52	3	-1.00				1650	
54	3	-0.74				1673	
55	1	1.62				1880	
56	2	-1.04				1647	
57	3	0.82				1810	
58	0	-3.12				1465	
61	4	-0.39				1704	
63	4	-0.43				1700	
68	4	0.38				1771	
69	4	0.25				1760	
70	3	-0.84				1664	
74	0	2.02				1915	
75	4	0.14				1750	
76	3	0.79				1807	
78	4	0.26				1761	
79	0	-3.06				1470	
81	4	0.14				1750	
84	4	0.18				1754	

Lab	Rating	Z-value	0	4	21	41	50
85	0	-2.72					1500
87	4	0.48					1780
89	3	-0.55					1690
90	0	-3.37					1443
91	4	0.01					1739
92	4	0.16					1752
94	4	0.11					1748
96	3	-0.89					1660
97	4	0.21					1756
100	4	0.18					1754
101	4	-0.41					1702
102	3	-1.00					1650
103	0			< 5			
104	3	0.59					1790
105	2	-1.05			1646		
107	0	-3.90					1396
109	4	0.10					1747
111	4	-0.09					1730
113	4	-0.15					1725
114	4	0.22					1757
118	0	-6.14					1200
119	4	0.06					1743
122	1	-1.80					1580
127	4	-0.43					1700
128	3	-0.55					1690
129	3	0.86					1813
131	4	0.11					1748
134	4	0.48					1780
136	0	-8.08					1030
139	0	2.58					1964
140	4	0.48					1780
141	4	0.24					1759
144	0	-6.14					1200
145	0	-2.43					1525
146	1	1.51					1870
151	4	0.47					1779
153	2	-1.35					1620
155	3	0.87					1814
158	3	0.59					1790
161	2	-1.46					1610
167	4	-0.18					1722
179	2	-1.46					1610
180	3	-0.72					1675
182	1	-1.58					1600
183	0	-5.00					1300
193	0	-2.12					1552
197	1	-1.70					1589
201	0	-4.09					1380
202	4	0.13					1749
204	0	-2.02					1561

Table 12. --Statistical summary of reported data for standard reference water sample M-124 (major constituent)--Continued

Sr (Strontium) $\mu\text{g/L}$



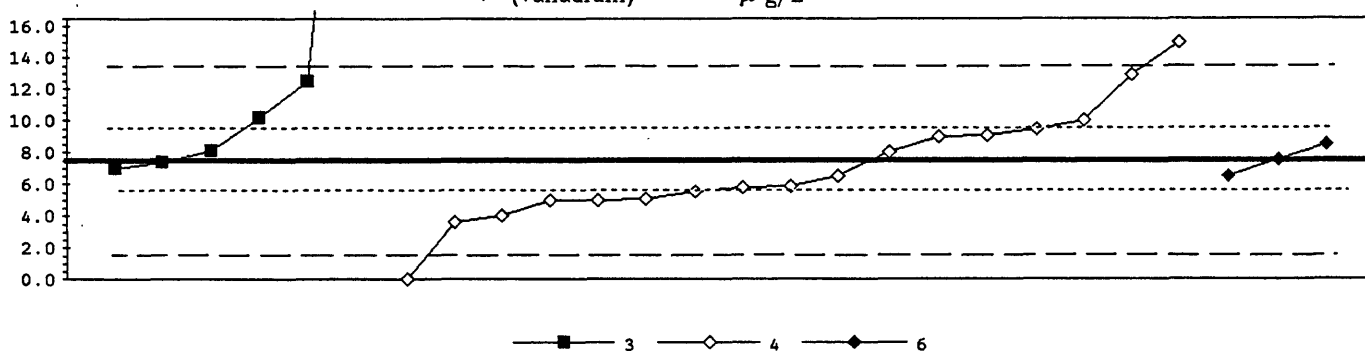
0. Other	4. ICP
1. AA: direct air	6. ICP/MS
3. AA: graphite furnace	
N =	3 1 2 28 3
Minimum =	1715 1520 1900 2 1651
Maximum =	1900 1963 1870 1745
Median =	1660
St Dev =	88

MPV = 1669 +/- 22
 F-pseudostigma = 99
 N = 37
 Hu = 1740
 Hl = 1607

Lab	Rating	Z-value	0	1	3	4	6
1	4	0.15				1684	
3	4	-0.19				1650	
8	3	0.80				1748	
9	1	-1.51	1520				
15	1	-1.81				1490	
16	1	-1.79				1492	
18	4	-0.26				1643	
24	4	-0.19				1650	
25	3	0.92				1760	
32	3	0.77					1745
33	4	0.47	1715				
37	4	-0.18					1651
39	0	2.03				1870	
40	3	-0.51				1619	
42	2	1.40				1807	
52	3	-0.70				1600	
55	3	-0.70				1600	
59	4	0.31				1700	
68	0	-2.21				1450	
70	4	0.11				1680	
74	2	-1.30				1540	
81	0	-16.86					2
97	0	2.97		1963			
100	4	0.50				1718	
105	3	0.52				1720	
113	1	1.73	1840				
116	3	0.72				1740	
121	4	-0.09				1660	
127	4	0.11				1680	
131	0	-15.11				175	
134	4	-0.29				1640	
138	4	-0.37				1632	
141	0	2.34		1900			
145	3	-0.63				1607	
146	4	0.31				1700	
182	0	2.34	1900				
191	4	0.00					1669

Table 12. --Statistical summary of reported data for standard reference water sample M-124 (major constituent)--Continued

V (Vanadium) μ g/L



1. AA: direct air	6. ICP/MS
3. AA: graphite furnace	
4. ICP	
	N = 0 6 17 3
	Minimum = 7.0 0.0 6.5
	Maximum = 46.5 15.0 8.5
	Median = 5.9
	St Dev = 2.6

MPV = 7.5 +/- 0.8
 F-pseudostandard deviation = 3.0
 N = 26
 Hu = 9.5
 Hl = 5.5

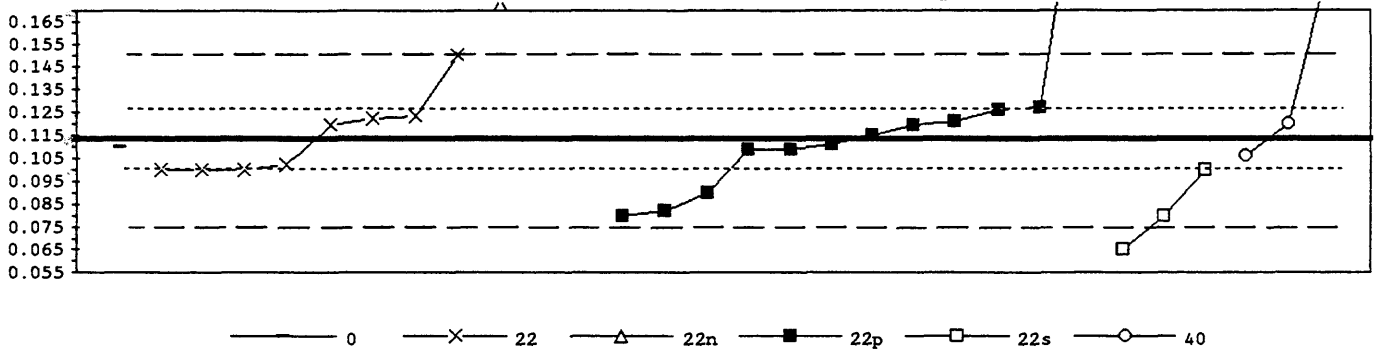
Lab	Rating	Z-value	1	3	4	6
1	4	-0.34				6.5
3	NR				< 10	
15	3	0.92		10.2		
16	NR				< 10	
18	3	-0.84			5.0	
32	4	0.34				8.5
37	4	0.03				7.6
39	3	0.51			9.0	
48	NR				< 200	
52	1	1.70		12.5		
55	2	-1.32				3.6
57	NR				< 100	
61	3	0.68			9.5	
63	0	2.55			15.0	
68	4	0.17			8.0	
70	NR				< 10	
74	3	-0.84			5.0	
81	0	-2.53			0.0	
94	NR				< 10	
97	0	13.22		46.5		
100	3	-0.67			5.5	
101	3	0.85			10.0	
105	NR				< 25	
121	2	-1.18			4.0	
127	4	0.22		8.1		
128	3	-0.57			5.8	
133	3	-0.55			5.9	
134	4	-0.03		7.4		
136	4	-0.17		7.0		
138	3	-0.81			5.1	
141	4	-0.34			6.5	
145	1	1.83			12.9	
146	NR				< 10	
167	NR				< 30	
180	3	0.55			9.1	
182	NR		< 200			

Table 13.-- *Statistical summary of reported data for standard reference sample N-36 (nutrients)*

<u>Definition of analytical methods, abbreviations, and symbols</u>		
<u>Analytical methods</u>		
0. Other/Not reported	=	ion chromatography
7. IC	=	colorimetric [color reagent specified]
22. Color:	=	specific ion electrode
40. Ion electrode	=	
<hr/>		
<u>Abbreviations and symbols</u>		
N =		number of samples
St dev =		traditional standard deviation
MPV =		95% confidence most probable value
F-pseudostigma =		nonparametric statistic deviation
Hu =		upper hinge value
Hl =		lower hinge value
mg/L =		milligrams per liter
Lab =		laboratory code number
NR =		not rated, less than value reported
< =		less than
<hr/>		
<u>Constituent</u>		<u>page</u>
NH3 as N	Ammonia as nitrogen	79 - 80
NH3+Org N as N	Ammonia plus organic nitrogen	81 - 82
NO3+NO2 as N	Nitrate plus nitrite as nitrogen	83 - 84
total P as P	total Phosphorus as phosphorus	85 - 86
PO4 as P	Orthophosphate as phosphorus	87 - 88

Table 13. --Statistical summary of reported data for standard reference water sample N-36 (preserved nutrients)--Continued

NH3 as N (Ammonia) mg/L



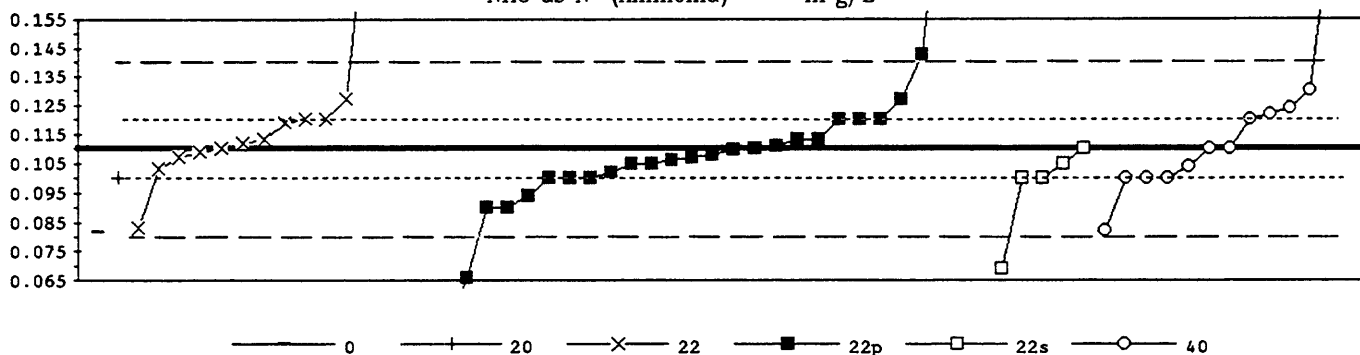
0. Other	22p. Color: indophenol				
22. Color: other	22s. Color: salicylate				
22n. Color: Nesslerization	40. Ion electrode				
N = 1	8	3	12	3	3
Minimum = 0.110	0.100	0.173	0.080	0.065	0.106
Maximum =	0.150	0.660	0.245	0.100	0.192
Median =	0.111		0.111		
St Dev =	0.018		0.017		

MPV = 0.113 +/- 0.005
 F-pseudostigma = 0.019
 N = 30
 Hu = 0.126
 Hl = 0.100

Lab	Rating	Z-value	0	22	22n	22p	22s	40
1	4	0.31				0.119		
11	4	-0.16	0.110					
15	4	-0.36					0.106	
20	NR	< 2						
23	4	0.42				0.121		
48	1	-1.71				0.080		
52	3	0.67				0.126		
61	4	-0.21				0.109		
68	3	-0.67	0.100					
74	4	-0.10				0.111		
75	3	0.52	0.123					
81	4	0.47	0.122					
88	0	-2.49					0.065	
89	3	0.73				0.127		
90	4	-0.21				0.109		
97	3	-0.67	0.100					
104	1	-1.61				0.082		
105	0	6.85				0.245		
118	2	-1.19				0.090		
119	0	4.10						0.192
120	4	0.10				0.115		
129	0	3.11		0.173				
134	3	-0.67					0.100	
139	3	-0.57	0.102					
140	1	1.92	0.150					
141	3	-0.67	0.100					
145	1	-1.71					0.080	
151	4	0.36						0.120
167	4	0.31	0.119					
182	0	15.93		0.420				
201	0	28.38		0.660				

Table 13. --Statistical summary of reported data for standard reference water sample N-36 (nonpreserved nutrients)--Continued

NH3 as N (Ammonia) m g/L



0. Other	22p. Color: indophenol
20. Titration: color	22s. Color: salicylate
22. Color: other	40. Ion electrode
N =	1 1 14 28 5 13
Minimum =	0.082 0.100 0.083 0.039 0.069 0.082
Maximum =	0.400 0.350 0.110 0.192
Median =	0.116 0.107 0.110
St Dev =	0.012 0.010 0.014

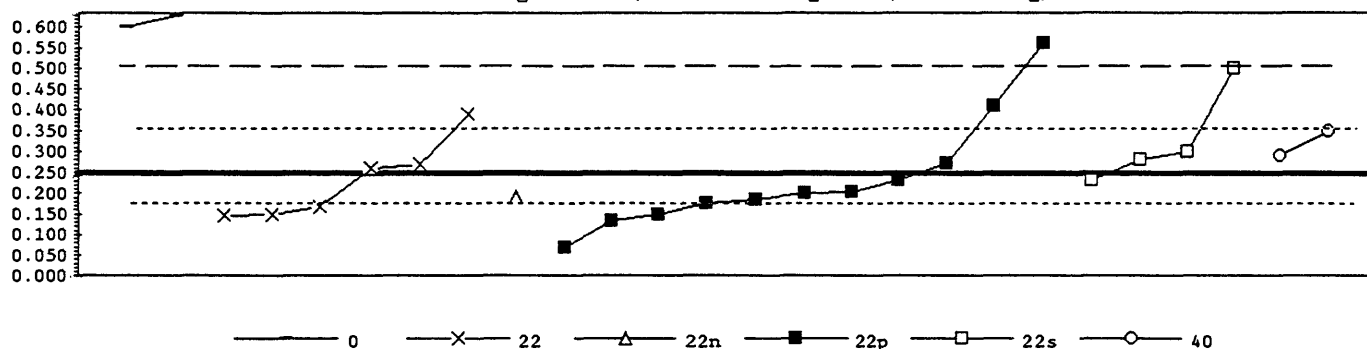
MPV = 0.110 +/- 0.003
 F-pseudosigma = 0.015
 N = 62
 Hu = 0.120
 Hl = 0.100

Lab	Rating	Z-value	0	20	22	22p	22s	40
3	1	-1.81			0.083			
6	1	-1.88					0.082	
9	3	-0.53			0.102			
10	4	0.01					0.110	
12	NR				< 0.2			
13	4	-0.33			0.105			
15	3	0.82					0.122	
16	3	-0.66	0.100					
18	0	-4.10			0.049			
19	3	0.68			0.120			
20	NR	< 2						
21	4	-0.19			0.107			
25	3	-0.66					0.100	
28	NR	< 0.1						
32	1	-1.90	0.082					
33	3	0.68			0.120			
37	0	5.74			0.195			
38	0	6.55			0.207			
46	4	0.08			0.111			
51	4	0.01					0.110	
52	2	1.16			0.127			
55	3	-0.66			0.100			
58	3	0.95					0.124	
59	3	-0.66			0.100			
63	NR	< 0.6						
68	4	-0.46			0.103			
70	2	-1.34			0.090			
76	4	-0.33			0.105			
84	0	10.80			0.270			
85	4	-0.19			0.107			
87	3	-0.66			0.100			
88	0	-2.76				0.069		
89	4	0.21			0.113			
91	4	0.01			0.110			
92	3	0.68					0.120	
94	3	0.68			0.120			
96	4	0.21			0.113			
97	4	0.01			0.110			
100	4	-0.12			0.108			
102	3	0.68			0.120			
104	4	0.21			0.113			
107	0	2.24			0.143			
111	2	-1.07			0.094			
113	0	-2.96			0.066			
114	4	-0.39					0.104	
118	2	-1.34			0.090			
119	0	5.54					0.192	
123	0	16.20			0.350			
127	4	-0.33				0.105		
129	0	7.97			0.228			

Lab	Rating	Z-value	0	20	22	22p	22s	40
133	2	1.36						0.130
134	3	-0.66					0.100	
138	3	0.68			0.120			
145	3	-0.66					0.100	
149	3	-0.66						0.100
155	4	-0.01				0.110		
158	0	-4.78			0.039			
161	0	5.14						0.186
167	4	-0.06			0.109			
180	3	0.62			0.119			
182	0	19.57			0.400			
185	4	-0.26				0.106		
197	2	1.16			0.127			
198	4	0.15			0.112			
202	3	-0.66						0.100
204	4	0.01					0.110	

Table 13. --Statistical summary of reported data for standard reference water sample N-36 (preserved nutrients)--Continued

NH3 + Org N as N (Ammonia + Organic N) m g/L



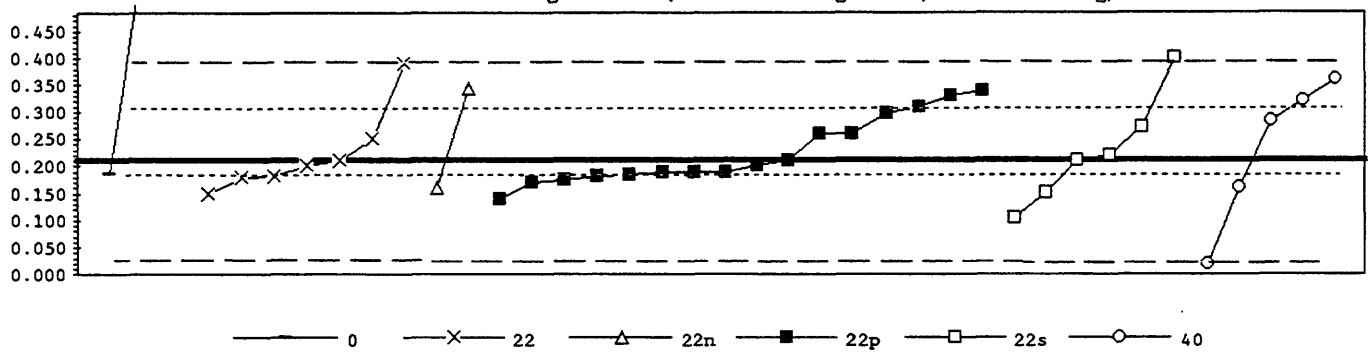
0. Other	22p. Color: indophenol				
22. Color: other	22s. Color: salicylate				
22n. Color: Nesslerization	40. Ion electrode				
N = 2	6	1	11	4	2
Minimum = 0.600	0.145	0.192	0.070	0.232	0.290
Maximum = 0.630	0.390		0.560	0.500	0.350
Median =			0.200		
St Dev =			0.138		

MPV = 0.246 +/- 0.034
 F-pseudosigma = 0.129
 N = 26
 Hu = 0.350
 H1 = 0.176

Lab	Rating	Z-value	0	22	22n	22p	22s	40
1	4	-0.46				0.187		
11	0	2.98	0.630					
15	4	0.34					0.290	
20	NR					< 5		
21	4	-0.12				0.231		
23	NR						< 0.5	
28	0	2.74	0.600					
48	4	-0.36				0.200		
52	2	-1.36				0.070		
56	3	-0.74				0.150		
61	4	0.19				0.271		
68	2	1.12	0.390					
74	3	-0.87				0.134		
79	1	1.97					0.500	
81	3	-0.60	0.168					
89	4	-0.11					0.232	
90	4	-0.33				0.204		
97	3	-0.74	0.150					
105	0	2.43				0.560		
118	2	1.27				0.410		
119	3	0.81						0.350
120	3	-0.54				0.176		
129	4	-0.42		0.192				
134	4	0.26					0.280	
139	3	-0.78	0.145					
140	4	0.19	0.270					
141	4	0.11	0.260					
145	4	0.42					0.300	

Table 13. --Statistical summary of reported data for standard reference water sample N-36 (nonpreserved nutrients)--Continued

NH3 + Org N as N (Ammonia + Organic N) m g/L

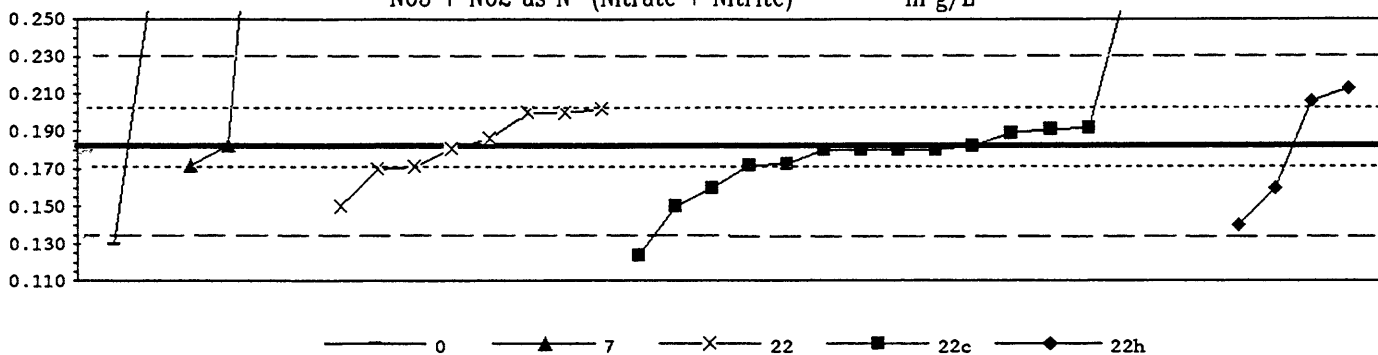


0. Other	22p. Color: indophenol
22. Color: other	22s. Color: salicylate
22n. Color: Nesslerization	40. Ion electrode
N =	3 7 2 16 6 5
Minimum =	0.187 0.150 0.160 0.140 0.105 0.020
Maximum =	0.900 0.390 0.345 0.340 0.400 0.360
Median =	0.200 0.195
St Dev =	0.080 0.063

MPV = 0.209 +/- 0.020
 F-pseudosigma = 0.091
 N = 39
 Hu = 0.304
 Hl = 0.181

Lab	Rating	Z-value	0	22	22n	22p	22s	40
3	0	3.96	0.570					
10	4	-0.21				0.190		
12	NR					< 0.3		
13	3	0.97				0.297		
15	3	0.82						0.284
16	4	-0.24	0.187					
18	4	-0.31				0.181		
20	NR					< 5		
21	4	-0.27				0.184		
28	0	7.58	0.900					
38	3	-0.54		0.160				
46	4	-0.21				0.190		
51	1	1.66						0.360
52	3	-0.76				0.140		
55	3	0.56				0.260		
59	0	2.09					0.400	
63	NR		< 0.09					
85	4	-0.32		0.180				
87	2	1.11				0.310		
89	3	-0.63					0.152	
91	4	-0.43				0.170		
94	4	-0.10				0.200		
96	4	-0.31		0.181				
97	3	-0.65		0.150				
100	2	1.33				0.330		
102	4	0.01				0.210		
104	4	-0.21				0.190		
113	NR						< 0.5	
118	3	0.56				0.260		
119	2	1.22						0.320
123	2	1.44				0.340		
127	2	-1.14					0.105	
129	2	1.49		0.345				
133	3	-0.54						0.160
134	3	0.67						0.270
138	4	-0.10		0.200				
145	4	0.01					0.210	
155	4	-0.38				0.175		
180	4	0.00		0.209				
183	0	-2.07						0.020
198	4	0.45		0.250				
202	4	0.12					0.220	
204	1	1.99		0.390				

Table 13. --Statistical summary of reported data for standard reference water sample N-36 (preserved nutrients)--Continued
 N03 + N02 as N (Nitrate + Nitrite) m g/L



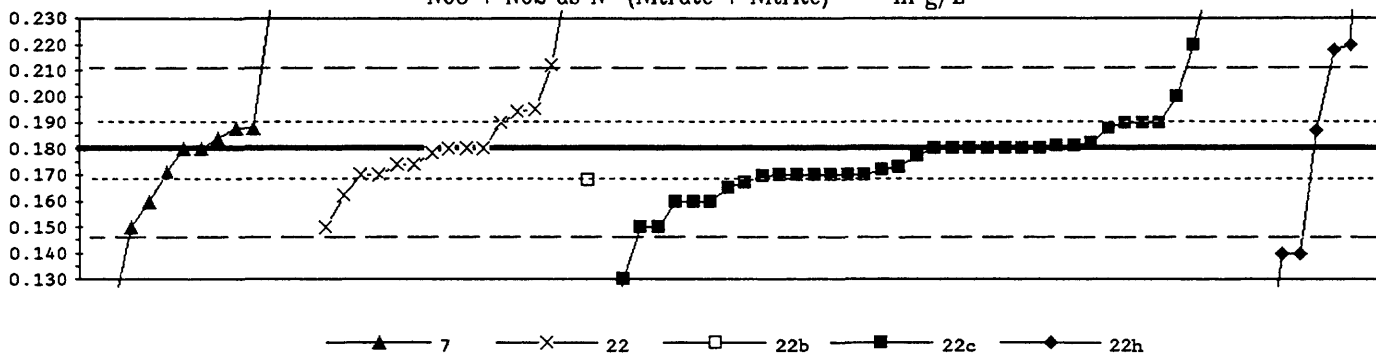
0. Other	22c. Color: Cd diazo					
7. IC	22h. Color: hydrazine diazo					
22. Color: other	N =	2	4	8	16	4
	Minimum =	0.130	0.172	0.150	0.124	0.140
	Maximum =	0.270	0.520	0.202	1.200	0.213
	Median =			0.186	0.180	
	St Dev =			0.014	0.012	

MPV = 0.182 +/- 0.005
 F-pseudosigma = 0.023
 N = 34
 Hu = 0.202
 Hl = 0.171

Lab	Rating	Z-value	0	7	22	22c	22h
1	4	0.02				0.182	
11	0	-2.24	0.130				
20	4	0.07		0.183			
21	2	1.37					0.213
23	4	-0.07				0.180	
28	0	14.73		0.520			
29	0	10.38		0.420			
42	4	-0.41		0.172			
43	2	-1.37			0.150		
45	4	0.41				0.191	
48	1	-1.81					0.140
52	4	-0.37				0.173	
53	0	-2.50				0.124	
61	4	-0.07				0.180	
74	4	0.46				0.192	
75	4	-0.07				0.180	
78	0	3.72				0.267	
81	4	-0.02			0.181		
88	0	22.21				0.692	
90	2	1.07					0.206
97	3	0.81			0.200		
105	4	-0.41				0.172	
118	3	-0.94					0.160
119	4	-0.50			0.170		
129	4	0.33				0.189	
133	2	-1.37				0.150	
134	4	-0.07				0.180	
139	4	0.20			0.186		
140	4	-0.46			0.171		
141	3	0.81			0.200		
145	3	-0.94					0.160
167	3	0.89			0.202		
182	0	44.32				1.200	
201	0	3.85	0.270				

Table 13. --Statistical summary of reported data for standard reference water sample N-36 (nonpreserved nutrients)--Continued

NO3 + NO2 as N (Nitrate + Nitrite) m g/L



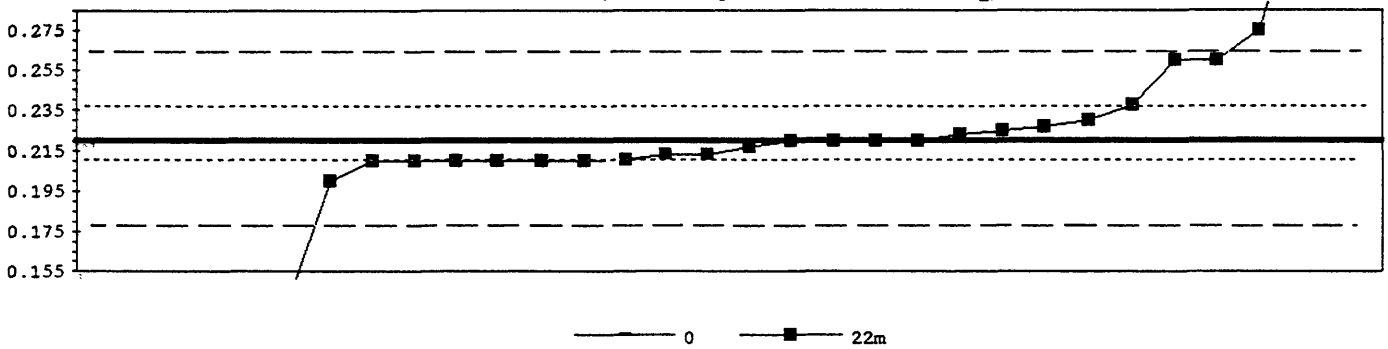
7. IC	22c. Color: Cd diazo
22. Color: other	22h. Color: hydrazine diazo
22b. Color: brucine	
N =	13 15 1 38 7
Minimum =	0.107 0.150 0.168 0.090 0.091
Maximum =	0.620 0.250 1.100 0.430
Median =	0.180 0.178 0.175 0.187
St Dev =	0.014 0.015 0.011 0.051

MPV = 0.180 +/- 0.003
 F-pseudosigma = 0.016
 N = 74
 Hu = 0.190
 Hl = 0.168

Lab	Rating	Z-value	7	22	22b	22c	22h
3	1	1.96		0.212			
6	0	2.45				0.220	
8	0	2.45					0.220
9	3	0.61				0.190	
10	4	0.00				0.180	
12	4	0.00				0.180	
13	1	-1.84				0.150	
15	0	-5.54				0.090	
16	0	4.29		0.250			
18	3	-0.80				0.167	
19	3	0.61		0.190			
20	4	0.25	0.184				
21	0	2.33					0.218
25	4	0.49	0.188				
28	0	26.98	0.620				
29	0	3.68	0.240				
32	3	-0.55	0.171				
33	0	-3.68	0.120				
37	4	-0.12		0.178			
38	4	0.06				0.181	
42	2	-1.23	0.160				
45	4	0.00				0.180	
46	4	0.06				0.181	
51	4	0.00	0.180				
52	4	-0.49				0.172	
55	3	-0.61				0.170	
56	2	1.23				0.200	
58	0	9.26	0.331				
59	4	0.00				0.180	
63	3	0.92		0.195			
68	3	-0.61		0.170			
69	3	-0.61				0.170	
70	1	-1.84				0.150	
76	4	0.49	0.188				
78	0	4.29				0.250	
83	2	-1.23				0.160	
85	4	0.00		0.180			
87	4	0.00				0.180	
88	0	31.15				0.688	
89	4	0.49				0.188	
91	0	-2.45					0.140
94	3	-0.92				0.165	
96	4	-0.37		0.174			
97	4	0.00		0.180			
100	3	0.61				0.190	
102	4	0.00				0.180	
104	4	-0.43				0.173	
107	3	0.61				0.190	
108	1	-1.84		0.150			
113	4	-0.18				0.177	

Lab	Rating	Z-value	7	22	22b	22c	22h
114	0	-5.46					0.091
118	0	-2.45					0.140
119	3	-0.61		0.170			
120	2	-1.23				0.160	
123	0	15.33					0.430
127	3	-0.61				0.170	
129	4	0.12				0.182	
133	0	-3.07				0.130	
134	4	0.00				0.180	
138	3	-0.61				0.170	
145	2	-1.23				0.160	
146	3	-0.74			0.168		
149	0	-4.48	0.107				
155	3	-0.66				0.169	
158	4	0.43					0.187
167	3	0.86		0.194			
180	4	-0.37		0.174			
182	0	56.41				1.100	
191	1	-1.84	0.150				
193	4	0.00	0.180				
197	2	-1.10		0.162			
198	4	0.00		0.180			
202	3	-0.61				0.170	
204	3	-0.61				0.170	

Table 13. --Statistical summary of reported data for standard reference water sample N-36 (preserved nutrients)--Continued
 total P as P (total Phosphorus) m g/L

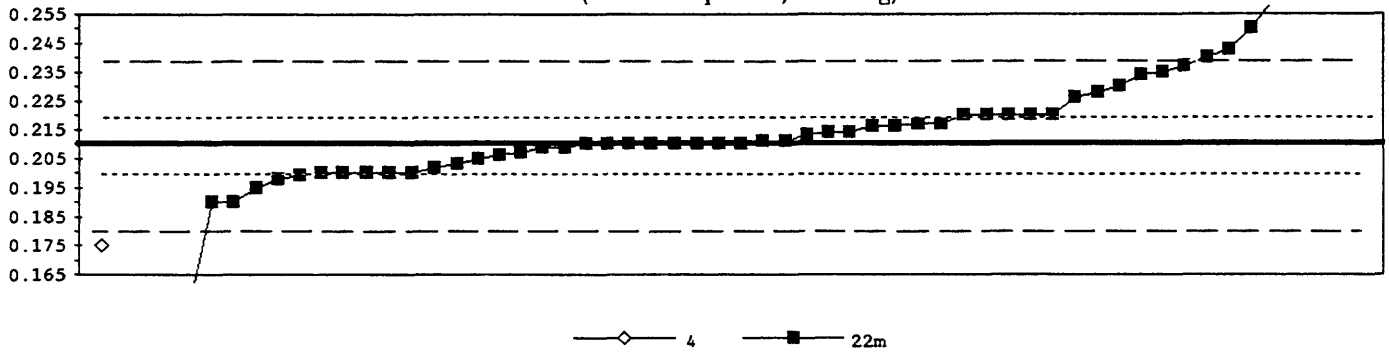


0. Other
 4. ICP
 22m. Color: phosphomolybdate
 N = 1 0 23
 Minimum = 0.300 0.110
 Maximum = 2.270
 Median = 0.219
 St Dev = 0.015

MPV = 0.220 +/- 0.005
 F-pseudosigma = 0.021
 N = 30
 Hu = 0.238
 Hl = 0.210

Lab	Rating	Z-value	0	4	22m
1	4	-0.14			0.217
11	0	3.85	0.300		
15	0	-5.30			0.110
20	4	0.00			0.220
23	4	0.48			0.230
28	0			< 0.1	
45	4	0.00			0.220
48	4	-0.48			0.210
56	4	-0.48			0.210
61	4	0.24			0.225
63	4	-0.48			0.210
68	3	0.87			0.238
74	4	0.34			0.227
75	0	98.77			2.270
78	0	5.78			0.340
79	0	-4.34			0.130
81	0	13.73			0.505
89	4	-0.48			0.210
92	4	-0.34			0.213
105	4	0.14			0.223
118	1	1.93			0.260
119	3	-0.96			0.200
129	4	-0.43			0.211
133	4	-0.48			0.210
134	4	-0.48			0.210
139	4	-0.34			0.213
140	0	-3.85			0.140
141	4	0.00			0.220
145	4	0.00			0.220
182	1	1.93			0.260
201	0	2.65			0.275

Table 13. --Statistical summary of reported data for standard reference water sample N-36 (nonpreserved nutrients)--Continued
 total P as P (total Phosphorus) m g/L



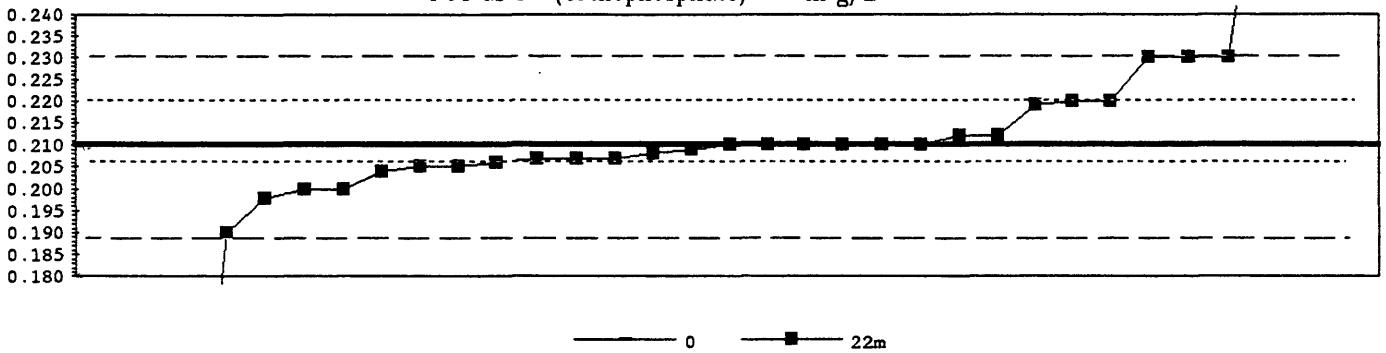
4. ICP	
22m. Color: phosphomolybdate	
N =	1 57
Minimum =	0.175 0.034
Maximum =	0.300
Median =	0.210
St Dev =	0.012

MPV = 0.210 +/- 0.003
 F-pseudostigma = 0.015
 N = 58
 Hu = 0.220
 Hl = 0.200

Lab	Rating	Z-value	4	22m
3	3	-0.81	0.198	
6	1	1.82	0.237	
8	0	6.07	0.300	
9	3	-0.74	0.199	
10	4	0.00	0.210	
12	0	3.37	0.260	
13	4	0.00	0.210	
15	0	-6.07	0.120	
16	1	1.69	0.235	
18	4	0.40	0.216	
19	4	0.00	0.210	
20	4	0.00	0.210	
21	4	0.27	0.214	
22	4	0.40	0.216	
25	0	-2.36	0.175	
28	0	< 0.1		
38	4	-0.07	0.209	
45	2	1.35	0.230	
46	4	-0.20	0.207	
51	4	-0.27	0.206	
55	4	0.00	0.210	
58	4	-0.47	0.203	
59	0	6.07	0.300	
78	4	0.27	0.214	
85	4	0.47	0.217	
87	0	-3.64	0.156	
89	4	0.00	0.210	
91	3	0.67	0.220	
92	1	1.62	0.234	
94	3	0.67	0.220	
96	2	-1.35	0.190	
97	3	0.67	0.220	
100	4	0.00	0.210	
102	0	-11.87	0.034	
104	4	0.20	0.213	
107	4	-0.34	0.205	
108	0	2.70	0.250	
111	3	-0.54	0.202	
113	2	-1.35	0.190	
114	3	-0.67	0.200	
118	0	2.02	0.240	
119	3	-0.67	0.200	
120	3	-0.67	0.200	
123	0	3.37	0.260	
127	4	0.07	0.211	
129	4	0.07	0.211	
134	3	-0.67	0.200	
138	3	-0.67	0.200	
145	3	0.67	0.220	
149	4	0.00	0.210	

Lab	Rating	Z-value	4	22m
155	4	-0.07	0.209	
158	2	1.08	0.226	
161	2	1.21	0.228	
180	4	0.47	0.217	
182	0	3.37	0.260	
183	3	0.67	0.220	
198	2	-1.01	0.195	
202	0	-5.40	0.130	
204	0	2.23	0.243	

Table 13. --Statistical summary of reported data for standard reference water sample N-36 (preserved nutrients)--Continued
 P04 as P (Orthophosphate) m g/L



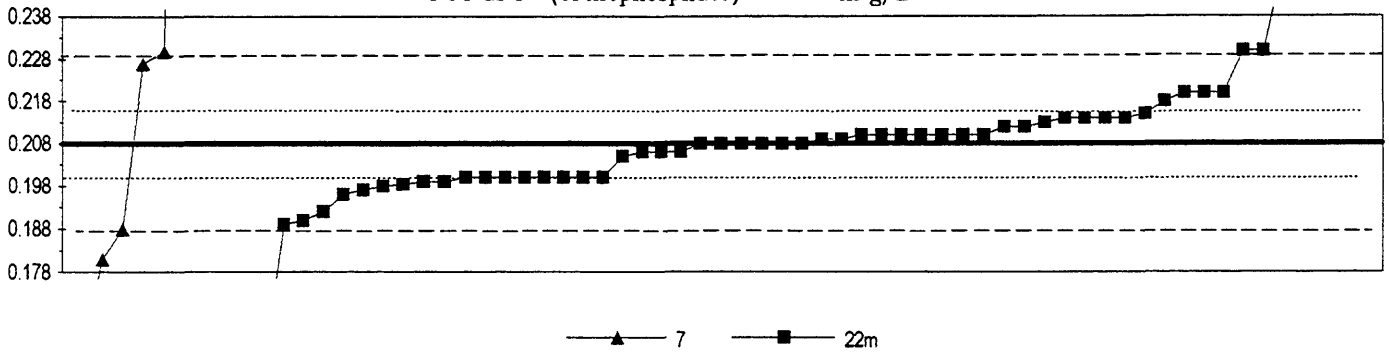
0. Other	
22m. Color: phosphomolybdate	
N =	2 31
Minimum =	0.270 0.115
Maximum =	1.200 0.450
Median =	0.210
St Dev =	0.010

MPV = 0.210 +/- 0.002
 F-pseudosigma = 0.010
 N = 33
 Hu = 0.220
 Hl = 0.206

Lab	Rating	Z-value	0	22m
1	3	-0.58		0.204
11	0	5.78	0.270	
15	4	-0.39		0.206
20	4	0.00		0.210
23	4	0.00		0.210
28	0	95.39	1.200	
29	0	7.71		0.290
45	4	-0.29		0.207
48	4	-0.29		0.207
52	1	1.93		0.230
56	4	0.00		0.210
61	2	-1.16		0.198
63	3	0.96		0.220
74	4	-0.48		0.205
75	4	-0.19		0.208
78	0	-9.15		0.115
81	0	18.31		0.400
88	0	23.13		0.450
89	4	-0.29		0.207
90	4	-0.48		0.205
92	3	0.87		0.219
97	1	1.93		0.230
105	4	-0.10		0.209
118	3	-0.96		0.200
119	3	-0.96		0.200
129	4	0.19		0.212
133	4	0.00		0.210
134	4	0.00		0.210
140	1	-1.93		0.190
141	3	0.96		0.220
145	4	0.00		0.210
167	4	0.19		0.212
182	1	1.93		0.230

Table 13. --Statistical summary of reported data for standard reference water sample N-36 (nonpreserved nutrients)--Continued

PO4 as P (Orthophosphate) m g/L



7. IC			
22m. Color: phosphomolybdate			
N =	7	58	
Minimum =	0.160	0.066	
Maximum =	1.000	0.439	
Median =	0.188	0.208	
St Dev =	0.030	0.008	

MPV = 0.208 +/- 0.002
 F-pseudosigma = 0.010
 N = 65
 Hu = 0.214
 Hl = 0.200

Lab	Rating	Z-value	7	22m
3	3	-0.77	0.200	
6	4	0.48	0.213	
8	0	8.86	0.300	
9	2	-1.16	0.196	
10	4	0.19	0.210	
12	4	0.19	0.210	
13	4	0.00	0.208	
15	4	0.00	0.208	
16	4	-0.19	0.206	
18	4	0.00	0.208	
19	3	-0.77	0.200	
20	4	0.19	0.210	
21	3	0.58	0.214	
25	0	2.12	0.230	
28	0	76.31	1.000	
29	0	8.86	0.300	
32	1	-1.93	0.188	
33	0	2.12	0.230	
37	0	34.40	0.565	
38	4	-0.19	0.206	
45	4	-0.29	0.205	
46	3	-0.87	0.199	
51	1	-1.83	0.189	
52	0	2.12	0.230	
55	4	0.19	0.210	
58	0	-13.68	0.066	
59	3	-0.77	0.200	
78	1	-1.54	0.192	
83	4	0.19	0.210	
85	3	0.58	0.214	
87	0	-5.01	0.156	
88	0	22.26	0.439	
89	4	0.39	0.212	
92	3	0.58	0.214	
96	3	0.67	0.215	
97	2	1.16	0.220	
100	1	-1.73	0.190	
102	4	0.19	0.210	
104	3	0.58	0.214	
107	4	0.00	0.208	
108	3	-0.77	0.200	
111	1	1.83	0.227	
113	2	-1.06	0.197	
118	3	-0.77	0.200	
119	3	-0.77	0.200	
120	3	-0.96	0.198	
127	4	-0.19	0.206	
129	4	0.10	0.209	
134	3	-0.77	0.200	
138	3	-0.77	0.200	

Lab	Rating	Z-value	7	22m
139	4	0.00	0.208	
145	4	0.19	0.210	
146	4	0.00	0.208	
155	3	-0.93	0.198	
158	4	0.39	0.212	
161	4	0.10	0.209	
167	3	-0.87	0.199	
180	3	0.96	0.218	
182	2	1.16	0.220	
183	2	1.16	0.220	
191	0	-4.63	0.160	
197	0	-2.60	0.181	
198	0	8.86	0.300	
202	0	-7.52	0.130	
204	0	4.05	0.250	

Table 14.-- *Statistical summary of reported data for standard reference sample N-37 (nutrients)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

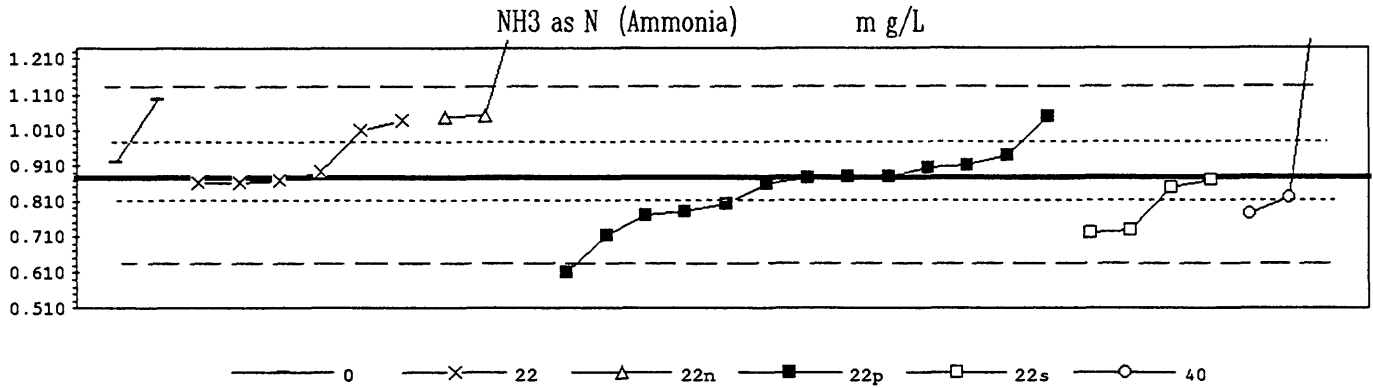
0. Other/Not reported	
7. IC	= ion chromatography
22. Color:	= colorimetric [color reagent specified]
40. Ion electrode	= specific ion electrode

Abbreviations and symbols

N	=	number of samples
St dev	=	traditional standard deviation
MPV	=	95% confidence most probable value
F-pseudostigma	=	nonparametric statistic deviation
Hu	=	upper hinge value
Hl	=	lower hinge value
mg/L	=	milligrams per liter
Lab	=	laboratory code number
NR	=	not rated, less than value reported
<	=	less than

<u>Constituent</u>		<u>page</u>
NH3 as N	Ammonia as nitrogen	90 - 91
NH3+Org N as N	Ammonia plus organic nitrogen	92 - 93
NO3+NO2 as N	Nitrate plus nitrite as nitrogen	94 - 95
total P as P	total Phosphorus as phosphorus	96 - 97
PO4 as P	Orthophosphate as phosphorus	98 - 99

Table 14. --Statistical summary of reported data for standard reference water sample N-37 (preserved nutrients)--Continued



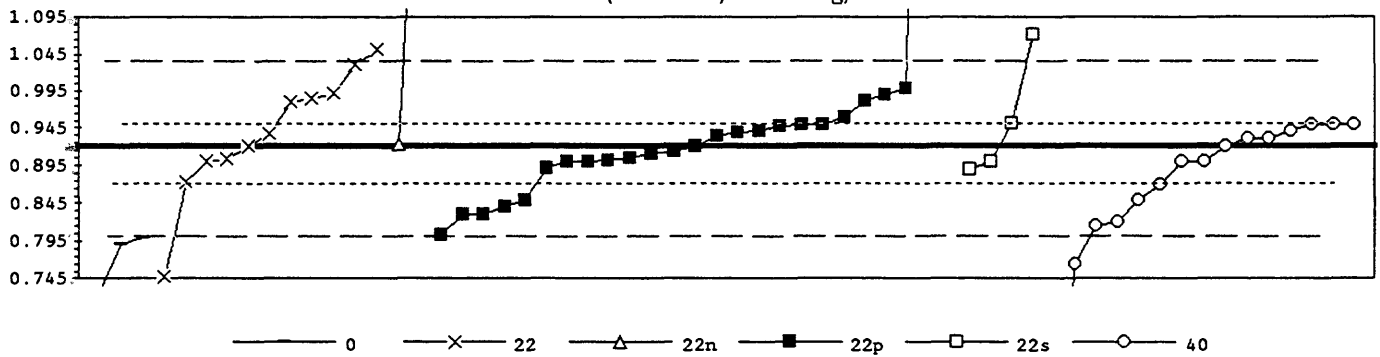
0. Other	22p. Color: indophenol				
22. Color: other	22s. Color: salicylate				
22n. Color: Nesslerization	40. Ion electrode				
N = 2	6	3	13	4	3
Minimum = 0.920	0.860	1.050	0.610	0.720	0.772
Maximum = 1.100	1.040	1.440	1.050	0.870	1.630
Median =	0.878				
St Dev =	0.089				

MPV = 0.876 +/- 0.029
 F-pseudosigma = 0.121
 N = 31
 Hu = 0.974
 Hl = 0.811

Lab	Rating	Z-value	0	22	22n	22p	22s	40
1	4	0.00				0.876		
11	4	0.36	0.920					
15	3	-0.86						0.772
20	NR	< 2						
23	4	0.28				0.910		
48	0	-2.20				0.610		
52	4	0.03				0.880		
61	4	0.02				0.879		
63	1	1.85	1.100					
68	3	-0.88				0.770		
74	3	0.51				0.938		
75	4	-0.24					0.847	
81	2	1.11		1.010				
88	2	-1.22						0.729
89	4	-0.15				0.858		
90	4	0.24				0.905		
97	4	-0.13		0.860				
104	2	-1.34				0.714		
105	2	1.44				1.050		
118	3	-0.79				0.780		
119	4	-0.46						0.820
120	3	-0.61				0.802		
129	2	1.45			1.051			
134	4	-0.05					0.870	
139	4	-0.12		0.861				
140	2	1.36		1.040				
141	4	-0.05		0.870				
145	2	-1.29					0.720	
151	0	6.24						1.630
167	4	0.16		0.895				
182	0	4.67			1.440			
201	2	1.44			1.050			

Table 14. --Statistical summary of reported data for standard reference water sample N-37 (nonpreserved nutrients)--Continued

NH3 as N (Ammonia) mg/L



0. Other	22p. Color: indophenol
22. Color: other	22s. Color: salicylate
22n. Color: Nesslerization	40. Ion electrode
N = 3	11 2 25 4 15
Minimum = 0.728	0.748 0.924 0.804 0.890 0.483
Maximum = 0.800	1.050 1.440 2.920 1.071 0.950
Median =	0.937 0.914 0.920
St Dev =	0.052 0.053 0.048

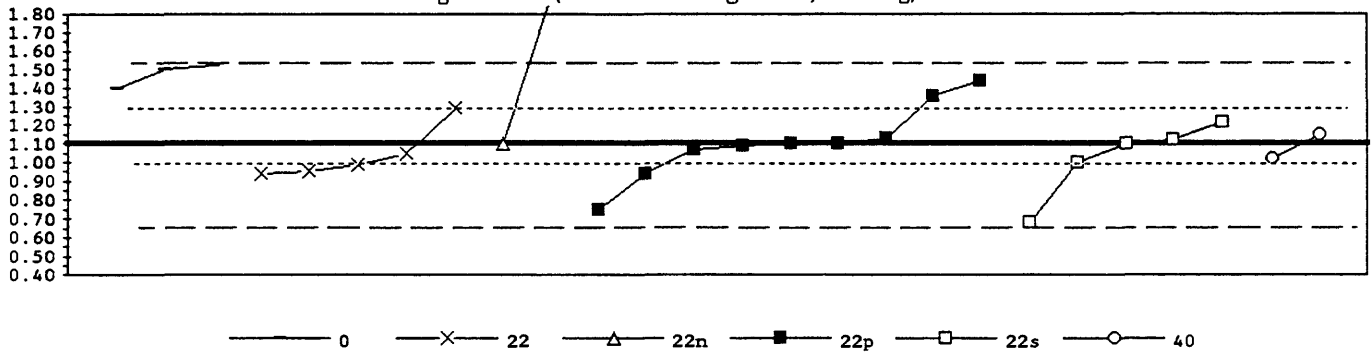
MPV = 0.920 +/- 0.010
 F-pseudosigma = 0.058
 N = 60
 Hu = 0.950
 Hl = 0.872

Lab	Rating	Z-value	0	22	22n	22p	22s	40
3	3	-0.81	0.873					
6	4	-0.34					0.900	
9	2	-1.36			0.841			
10	4	0.00					0.920	
12	4	-0.34			0.900			
13	4	-0.26			0.905			
15	4	0.17					0.930	
16	0	-3.30	0.728					
18	1	-1.99			0.804			
19	4	0.00	0.920					
20	NR	< 2						
25	4	0.34					0.940	
32	0	-2.20	0.792					
33	0	2.23	1.050					
37	1	1.89	1.030					
38	4	0.48			0.948			
41	3	0.52					0.950	
46	4	-0.50			0.891			
52	2	1.20			0.990			
55	4	-0.34			0.900			
57	1	-1.72					0.820	
58	0	-2.66					0.765	
59	4	0.34			0.940			
68	4	0.17					0.930	
70	1	-1.55			0.830			
76	4	-0.10			0.914			
84	0	15.47			1.820			
85	4	-0.34	0.900					
87	2	-1.20			0.850			
88	0	2.59					1.071	
89	4	-0.17			0.910			
91	4	0.00			0.920			
92	3	0.52					0.950	
94	3	0.52			0.950			
96	4	-0.27	0.904					
97	2	1.03	0.980					
100	4	0.24			0.934			
102	3	0.69			0.960			
104	4	0.33			0.939			
111	2	1.07			0.982			
113	2	1.36			0.999			
114	1	-1.79					0.816	
118	1	-1.55			0.830			
119	3	-0.86					0.870	
123	0	34.37			2.920			
127	3	0.53					0.951	
129	4	0.07		0.924				
133	3	0.52					0.950	
134	4	-0.34				0.900		
138	3	0.52			0.950			

Lab	Rating	Z-value	0	22	22n	22p	22s	40
145	3	-0.52					0.890	
149	4	-0.34						0.900
155	4	-0.32				0.901		
158	0	-2.96	0.748					
161	0	-7.51						0.483
167	4	0.29		0.937				
180	2	1.22		0.991				
182	0	8.94			1.440			
197	2	1.10		0.984				
198	0	-2.06	0.800					
202	2	-1.20						0.850

Table 14. --Statistical summary of reported data for standard reference water sample N-37 (preserved nutrients)--Continued

NH3 + Org N as N (Ammonia + Organic N) m g/L



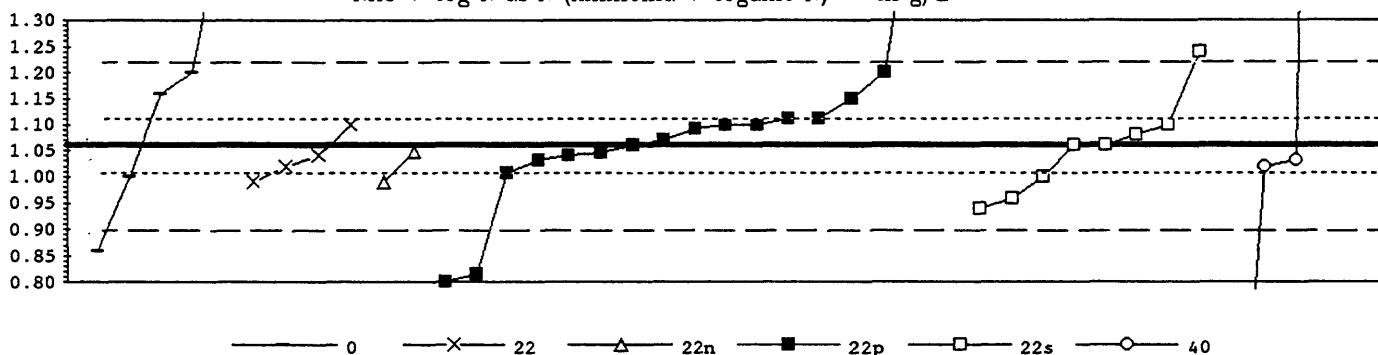
0. Other	22p. Color: indophenol
22. Color: other	22s. Color: salicylate
22n. Color: Nesslerization	40. Ion electrode
N = 3	5 2 9 5 2
Minimum = 1.40	0.94 1.10 0.75 0.68 1.02
Maximum = 1.52	1.29 1.89 1.44 1.22 1.15
Median =	1.10
St Dev =	0.20

MPV = 1.10 +/- 0.06
 F-pseudosigma = 0.22
 N = 26
 Hu = 1.29
 Hl = 1.00

Lab	Rating	Z-value	0	22	22n	22p	22s	40
1	4	-0.17				1.06		
11	1	1.95	1.52					
15	4	-0.37						1.02
20	NR				< 5			
23	3	0.56					1.22	
28	1	1.85	1.50					
48	4	0.00				1.10		
52	1	-1.61				0.75		
61	3	-0.74				0.94		
63	2	1.39	1.40					
68	3	-0.70		0.95				
74	4	0.00				1.10		
79	1	-1.95					0.68	
81	3	-0.51		0.99				
89	4	-0.47					1.00	
90	4	-0.05				1.09		
97	3	-0.74		0.94				
105	1	1.58				1.44		
118	2	1.21				1.36		
119	4	0.23						1.15
120	4	0.13				1.13		
129	0	3.65			1.89			
134	4	0.00					1.10	
139	4	-0.23		1.05				
140	3	0.88		1.29				
141	4	0.00			1.10			
145	4	0.09					1.12	

Table 14. --Statistical summary of reported data for standard reference water sample N-37 (nonpreserved nutrients)--Continued

NH3 + Org N as N (Ammonia + Organic N) m g/L



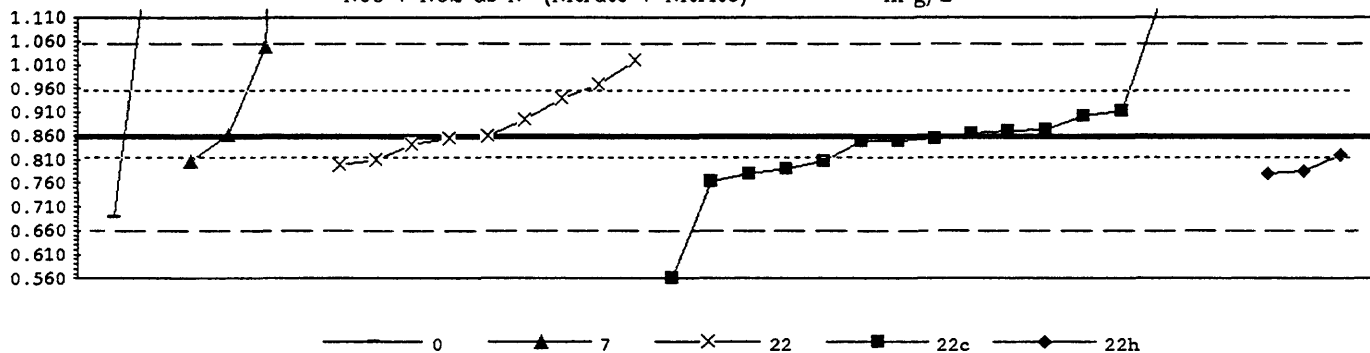
0. Other	22p. Color: indophenol
22. Color: other	22s. Color: salicylate
22n. Color: Nesslerization	40. Ion electrode
N = 5	4 2 17 8 5
Minimum = 0.86	0.99 0.99 0.80 0.94 0.21
Maximum = 1.50	1.10 1.05 2.26 1.24 5.23
Median =	1.09 1.06
St Dev =	0.05 0.09

MPV = 1.06 +/- 0.02
 F-pseudosigma = 0.08
 N = 41
 Hu = 1.11
 Hl = 1.01

Lab	Rating	Z-value	0	22	22n	22p	22s	40
3	2	1.30	1.16					
9	2	1.17				1.15		
10	4	0.00				1.06		
12	0	-3.38				0.80		
13	3	0.65				1.11		
15	3	-0.52						1.02
16	0	-2.61	0.86					
18	4	-0.18				1.05		
20	NR					< 5		
28	3	-0.78	1.00					
38	3	-0.91			0.99			
41	0	36.29						3.85
46	4	-0.39				1.03		
52	0	-3.17				0.82		
55	3	0.52				1.10		
57	0	5.72	1.50					
59	3	-0.78					1.00	
85	3	0.52		1.10				
87	3	0.52				1.10		
89	1	-1.59					0.94	
91	4	-0.26				1.04		
94	4	0.13				1.07		
96	3	-0.92		0.99				
97	4	-0.26		1.04				
100	0	15.61				2.26		
102	3	0.65				1.11		
104	4	0.40				1.09		
113	2	-1.31					0.96	
118	1	1.82				1.20		
119	4	-0.39						1.03
123	0	6.89				1.59		
127	4	0.26					1.08	
129	4	-0.16		1.05				
133	0	-11.06						0.21
134	3	0.52					1.10	
138	4	0.00					1.06	
145	4	0.00					1.06	
155	3	-0.70				1.01		
180	3	-0.52		1.02				
183	0	54.25						5.23
198	1	1.82	1.20					
202	0	2.34					1.24	

Table 14. --Statistical summary of reported data for standard reference water sample N-37 (preserved nutrients)--Continued

NO3 + NO2 as N (Nitrate + Nitrite) mg/L



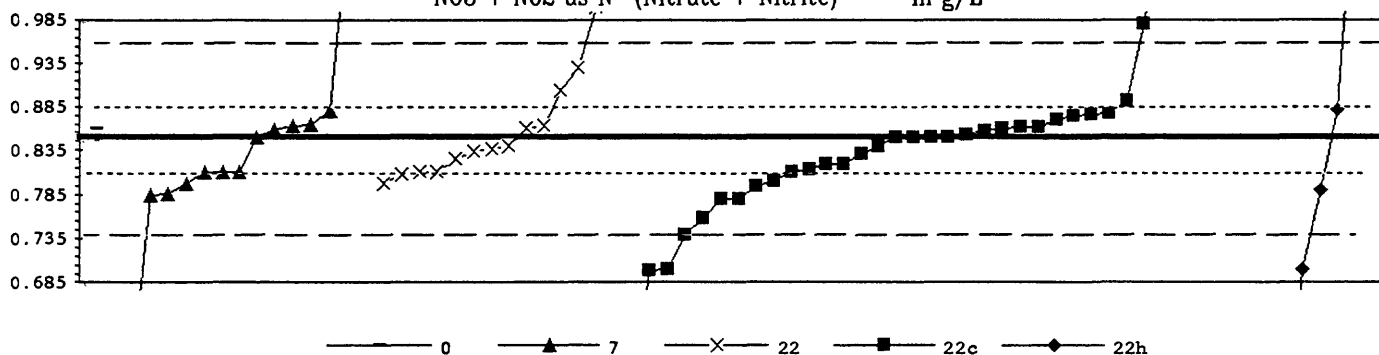
0. Other	22c. Color: Cd diazo
7. IC	22h. Color: hydrazine diazo
22. Color: other	
	N = 2 4 9 16 3
	Minimum = 0.690 0.806 0.799 0.560 0.780
	Maximum = 1.312 2.700 1.020 4.100 0.820
	Median = 0.857 0.852
	St Dev = 0.081 0.047

MPV = 0.857 +/- 0.023
 F-pseudosigma = 0.099
 N = 34
 Hu = 0.940
 H1 = 0.806

Lab	Rating	Z-value	0	7	22	22c	22h
1	4	-0.04				0.853	
11	1	-1.68	0.690				
20	4	0.07		0.863			
23	4	0.14				0.870	
28	0	18.56		2.700			
29	1	1.95		1.050			
42	3	-0.51		0.806			
43	4	0.04			0.860		
45	4	0.16				0.872	
48	3	-0.77					0.780
52	4	-0.50				0.807	
53	3	-0.92				0.765	
61	4	-0.07				0.850	
63	1	1.65			1.020		
74	3	0.58				0.914	
75	4	0.09				0.865	
78	0	2.85				1.140	
81	4	-0.04			0.853		
88	0	4.56				1.309	
90	3	-0.72					0.785
97	3	0.84			0.940		
105	3	-0.67				0.790	
118	4	-0.37					0.820
119	2	1.14			0.970		
129	4	0.45				0.901	
133	0	-2.98				0.560	
134	4	-0.07				0.850	
139	3	-0.58			0.799		
140	4	-0.49			0.808		
141	4	-0.17			0.840		
145	3	-0.77				0.780	
167	4	0.38			0.894		
182	0	32.65				4.100	
201	0	4.59	1.312				

Table 14. --Statistical summary of reported data for standard reference water sample N-37 (nonpreserved nutrients)--Continued

NO3 + NO2 as N (Nitrate + Nitrite) m g/L



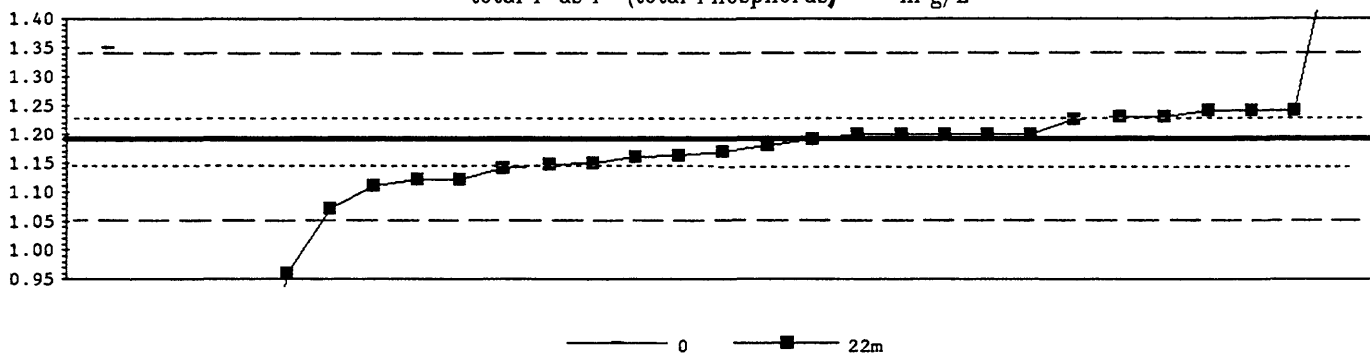
0. Other	22c. Color: Cd diazo
7. IC	22h. Color: hydrazine diazo
22. Color: other	
N =	1 15 14 37 6
Minimum =	0.860 0.570 0.797 0.530 0.417
Maximum =	5.000 1.090 3.700 2.130
Median =	0.811 0.834 0.850
St Dev =	0.035 0.037 0.048

MPV = 0.850 +/- 0.009
 F-pseudosigma = 0.054
 N = 73
 Hu = 0.880
 Hl = 0.807

Lab	Rating	Z-value	0	7	22	22c	22h
3	4	-0.24			0.837		
6	0	4.62				1.100	
8	0	5.73					1.160
9	3	0.78				0.892	
10	4	0.18				0.860	
12	3	-0.55				0.820	
13	4	0.50				0.877	
15	0	5.36				1.140	
16	0	4.44		1.090			
18	3	-0.68				0.813	
19	4	0.18			0.860		
20	4	0.17		0.859			
25	4	0.28		0.865			
28	0	76.69		5.000			
29	4	0.00		0.850			
32	3	-0.72		0.811			
33	0	-5.17		0.570			
37	4	0.24		0.863			
38	4	0.22				0.862	
41	0	5.73				1.160	
42	3	-0.98		0.797			
45	4	0.44				0.874	
46	3	0.59					0.882
52	3	-0.72				0.811	
55	3	-0.55				0.820	
57	0	-5.91				0.530	
58	0	4.81		1.110			
59	4	0.00				0.850	
68	3	-0.74			0.810		
69	4	0.37				0.870	
70	0	-2.03				0.740	
76	2	-1.20		0.785			
78	0	4.99				1.120	
83	0	-2.77				0.700	
84	0	12.94				1.550	
85	4	-0.18			0.840		
87	4	0.00				0.850	
88	0	8.59				1.315	
89	4	0.20				0.861	
91	0	-2.77					0.700
94	2	-1.02				0.795	
96	4	-0.30			0.834		
97	2	1.48			0.930		
100	4	0.48				0.876	
102	3	-0.92				0.800	
104	4	-0.35				0.831	
108	3	-0.74		0.810			
113	0	-2.79				0.699	
114	0	-8.00					0.417
118	2	-1.11					0.790

Lab	Rating	Z-value	0	7	22	22c	22h
119	0	2.77			1.000		
120	4	-0.18				0.840	
123	0	23.65					2.130
127	4	0.04				0.852	
129	4	0.13				0.857	
133	0	2.40				0.980	
134	4	0.00				0.850	
138	4	0.00				0.850	
145	2	-1.29				0.780	
146	3	-0.98			0.797		
149	3	-0.74		0.810			
155	1	-1.69				0.759	
158	4	0.24			0.863		
161	2	-1.18		0.786			
167	3	1.00				0.904	
180	4	-0.46			0.825		
182	0	52.67				3.700	
191	3	-0.74		0.810			
193	3	0.55		0.880			
196	0	-4.93		0.583			
197	3	-0.79			0.807		
198	4	0.18	0.860				
202	2	-1.29				0.780	

Table 14. --Statistical summary of reported data for standard reference water sample N-37 (preserved nutrients)--Continued
 total P as P (total Phosphorus) m g/L



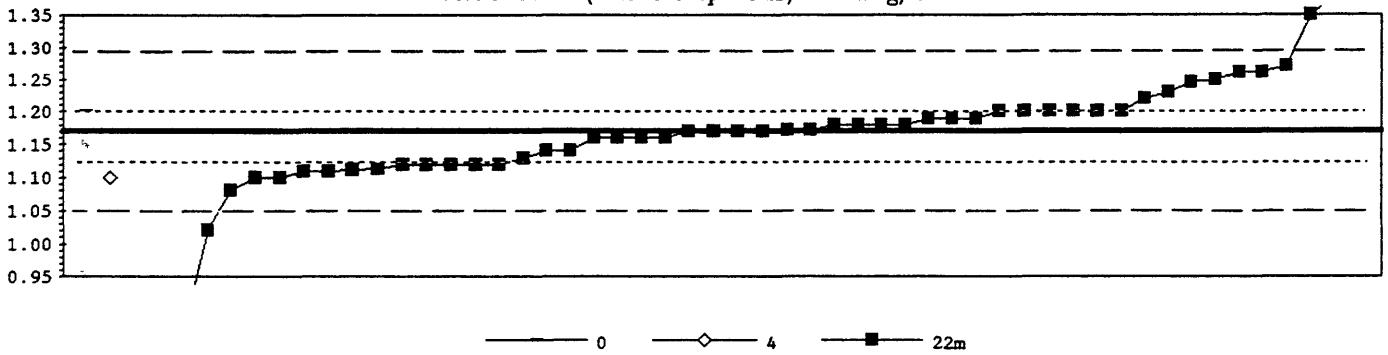
0. Other
 4. ICP
 22m. Color: phosphomolybdate
 N = 1 0 28
 Minimum = 1.35 0.12
 Maximum = 3.11
 Median = 1.19
 St Dev = 0.05

MPV = 1.19 +/- 0.02
 F-pseudostigma = 0.07
 N = 29
 Hu = 1.23
 Hl = 1.14

Lab	Rating	Z-value	0	4	22m
1	3	0.54			1.23
11	0	2.40	1.35		
15	0	-9.44			0.56
20	3	0.75			1.24
23	3	0.60			1.23
28	0		< 0.1		
45	4	-0.45			1.16
48	4	0.15			1.20
61	3	0.60			1.23
63	4	0.15			1.20
68	0	-16.07			0.12
74	3	0.75			1.24
75	4	0.00			1.19
78	0	5.70			1.57
79	0	-3.45			0.96
81	0	28.78			3.11
89	3	-0.60			1.15
92	3	-0.66			1.15
105	4	-0.30			1.17
118	4	0.15			1.20
119	2	-1.05			1.12
129	1	-1.80			1.07
133	2	-1.20			1.11
134	4	0.15			1.20
139	4	-0.42			1.16
140	4	0.15			1.20
141	3	0.75			1.24
145	3	-0.75			1.14
182	2	-1.05			1.12
201	4	-0.16			1.18

Table 14. --Statistical summary of reported data for standard reference water sample N-37 (nonpreserved nutrients)--Continued

total P as P (total Phosphorus) m g/L



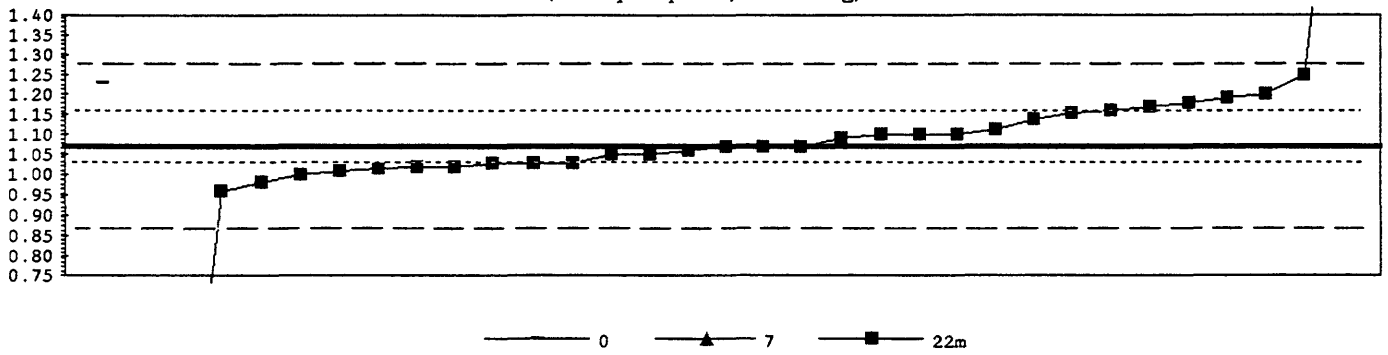
0. Other
 4. ICP
 22. Color: phosphomolybdate
 N = 1 1 52
 Minimum = 1.20 1.10 0.32
 Maximum = 5.84
 Median = 1.17
 St Dev = 0.05

MPV = 1.17 +/- 0.01
 F-pseudostigma = 0.06
 N = 54
 Hu = 1.20
 Hl = 1.12

Lab	Rating	Z-value	0	4	22m
3	1	-1.52			1.08
6	1	1.52			1.26
8	4	0.34			1.19
9	4	-0.17			1.16
10	4	0.34			1.19
12	2	1.35			1.25
13	4	0.00			1.17
15	0	-9.27			0.62
16	4	0.00			1.17
18	4	0.00			1.17
19	4	-0.17			1.16
20	0	3.54			1.38
22	4	-0.17			1.16
25	2	-1.18		1.10	
28	0			< 0.1	
38	4	0.02			1.17
45	3	-0.84			1.12
46	4	-0.17			1.16
55	3	0.51			1.20
57	3	0.51			1.20
58	0	-2.53			1.02
59	2	-1.18			1.10
78	1	1.69			1.27
85	3	-0.67			1.13
87	3	-0.84			1.12
89	4	0.17			1.18
91	3	0.51			1.20
92	4	0.02			1.17
94	2	1.26			1.25
96	4	0.34			1.19
100	4	0.17			1.18
102	0	-14.33			0.32
104	3	0.99			1.23
108	1	1.52			1.26
111	3	-0.96			1.11
113	2	-1.18			1.10
114	3	-0.51			1.14
118	3	0.51			1.20
119	2	-1.01			1.11
120	3	-0.84			1.12
123	4	0.00			1.17
127	4	0.17			1.18
129	3	-0.86			1.12
134	3	0.51			1.20
138	2	-1.01			1.11
145	3	-0.51			1.14
149	0	-5.06			0.87
155	3	-0.99			1.11
158	0	3.04			1.35
161	3	0.84			1.22

Lab	Rating	Z-value	0	4	22m
180	4	0.17			1.18
182	3	-0.84			1.12
183	0	78.75			5.84
198	3	0.51	1.20		
202	3	0.51			1.20

Table 14. --Statistical summary of reported data for standard reference water sample N-37 (preserved nutrients)--Continued
 P04 as P (Orthophosphate) m g/L

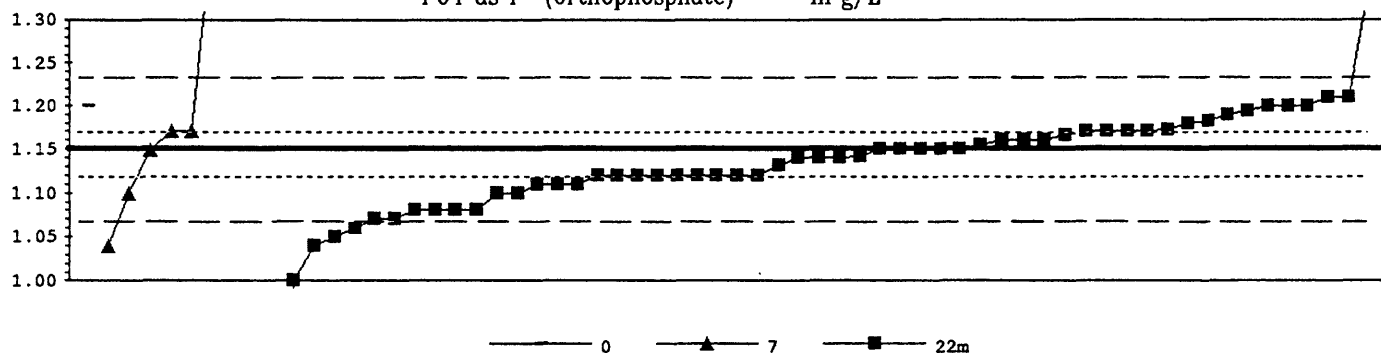


0. Other				
7. IC				
22m. Color: phosphomolybdate				
N =	1	1	31	
Minimum =	1.23	5.60	0.10	
Maximum =			2.05	
Median =			1.07	
St Dev =			0.07	

MPV = 1.07 +/- 0.02
 F-pseudosigma = 0.10
 N = 33
 Hu = 1.16
 Hl = 1.03

Lab	Rating	Z-value	0	7	22m
1	4	-0.20			1.05
11	1	1.66	1.23		
15	4	-0.42			1.03
20	3	0.93			1.16
23	2	1.04			1.17
28	0	47.01	5.60		
29	2	-1.14			0.96
45	4	0.21			1.09
48	0	-10.02			0.10
52	2	1.35			1.20
61	4	-0.42			1.03
63	4	0.31			1.1
74	2	1.14			1.18
75	3	-0.73			1.00
78	4	0.47			1.12
81	0	10.17			2.05
88	3	0.89			1.16
89	4	-0.21			1.05
90	4	0.00			1.07
92	4	0.00			1.07
97	3	0.73			1.14
105	4	-0.10			1.06
118	4	-0.42			1.03
119	3	-0.62			1.01
129	3	-0.55			1.02
133	3	-0.52			1.02
134	4	0.31			1.10
140	3	-0.93			0.98
141	4	0.31			1.10
145	4	0.00			1.07
167	2	1.26			1.19
182	1	1.87			1.25
201	3	-0.54			1.02

Table 14. --Statistical summary of reported data for standard reference water sample N-37 (nonpreserved nutrients)--Continued
 P04 as P (Orthophosphate) m g/L



0. Other			
7. IC			
22m. Color: phosphomolybdate			
N =	1	8	55
Minimum =	1.20	1.04	0.33
Maximum =		4.10	1.34
Median =		1.15	1.15
St Dev =		0.06	0.04

MPV = 1.15 +/- 0.01
 F-pseudosigma = 0.04
 N = 64
 Hu = 1.17
 Hl = 1.11

Lab	Rating	Z-value	0	7	22m
3	1	-1.70			1.07
6	4	0.33			1.16
8	3	-0.80			1.11
9	0	-2.15			1.05
10	3	1.00			1.19
12	4	0.10			1.15
13	4	-0.12			1.14
15	4	0.10			1.15
16	3	-0.57			1.12
18	4	0.46			1.17
19	3	-0.57			1.12
20	2	-1.47			1.08
25	2	1.23			1.20
28	0	66.43		4.10	
29	0	-2.37			1.04
32	4	0.08		1.15	
33	3	0.55		1.17	
37	0	54.74		3.58	
38	4	0.12			1.15
45	3	0.55			1.17
46	4	-0.12			1.14
52	0	4.37			1.34
55	4	-0.12			1.14
57	0	-3.27			1.00
58	0	-18.27			0.33
59	3	-0.57			1.12
78	2	-1.47			1.08
83	2	1.45			1.21
84	3	0.55			1.17
85	3	-0.57			1.12
87	3	-0.57			1.12
88	2	1.09			1.19
89	4	0.33			1.16
92	3	0.60			1.17
96	2	-1.02			1.10
97	3	0.78			1.18
100	3	-0.57			1.12
102	1	-1.70			1.07
104	3	0.82			1.18
108	2	-1.47			1.08
111	0	5.72		1.40	
113	4	0.10			1.15
118	1	-1.92			1.06
119	3	-0.57			1.12
120	3	-0.57			1.12
127	4	0.33			1.16
129	4	-0.08			1.14
134	2	1.23			1.20
138	3	-0.57			1.12
139	4	0.21			1.16

Lab	Rating	Z-value	0	7	22m
145	3	0.55			1.17
146	3	-0.80			1.11
155	2	-1.47			1.08
158	4	0.10			1.15
161	3	-0.80			1.11
167	4	-0.33			1.13
180	3	0.55			1.17
182	2	-1.02			1.10
183	2	1.45			1.21
191	0	-2.37		1.04	
196	2	-1.02		1.10	
197	3	0.55		1.17	
198	2	1.23	1.20		
202	2	1.23			1.20

Table 15.-- *Statistical summary of reported data for standard reference sample P-19 (low ionic strength constituents)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

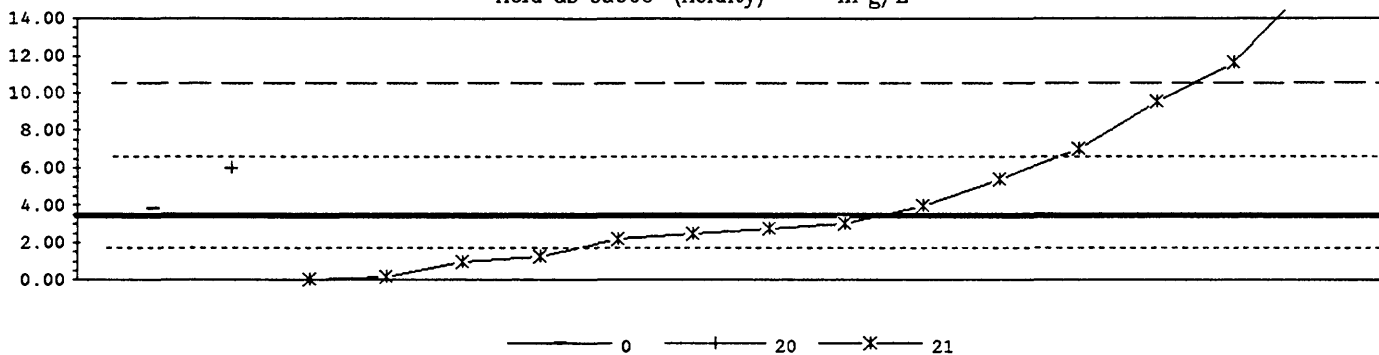
0. Other/Not reported	=	
1. AA: direct, air	=	atomic absorption: direct,air
2. AA: direct, N2O	=	atomic absorption: direct,nitrous oxide
4. ICP	=	inductively coupled plasma
5. DCP	=	direct current plasma
6. ICP/MS	=	mass spectrometry/inductively coupled plasma
7. IC	=	ion chromatography
20. Titrate: color	=	titration: colorimetric [color reagent specified]
21. Titrate: electro	=	titration: electrometric
22. Color:	=	colorimetric [color reagent specified]
40. Ion electrode	=	specific ion electrode
41. Electro	=	electrometric: [type meter specified]
50. Gravimetric	=	gravimetric: [precipitate specified]
51. Turbidimetric	=	turbidimetric: [suspension specified]

Abbreviations and symbols

N	=	number of samples
St dev	=	traditional standard deviation
MPV	=	95% confidence most probable value
F-pseudosigma	=	nonparametric statistic deviation
Hu	=	upper hinge value
Hi	=	lower hinge value
m g/L	=	milligrams per liter
μ S/cm	=	microsiemens per centimeter at 25 C
Lab	=	laboratory code number
NR	=	not rated, less than value reported
<	=	less than

<u>Constituent</u>		<u>page</u>
Acid	Acidity as CaCO3	101
Ca	Calcium	102
Cl	Chloride	103
F	Fluoride	104
K	Potassium	105
Mg	Magnesium	106
Na	Sodium	107
pH		108
PO4 as P	Orthophosphate as Phosphorus	109
SO4	Sulfate	110
Sp Cond	Specific Conductance	111

Table 15. --Statistical summary of reported data for standard reference water sample P-19 (low ionic strength)--Continued
 Acid as CaCO3 (Acidity) m g/L



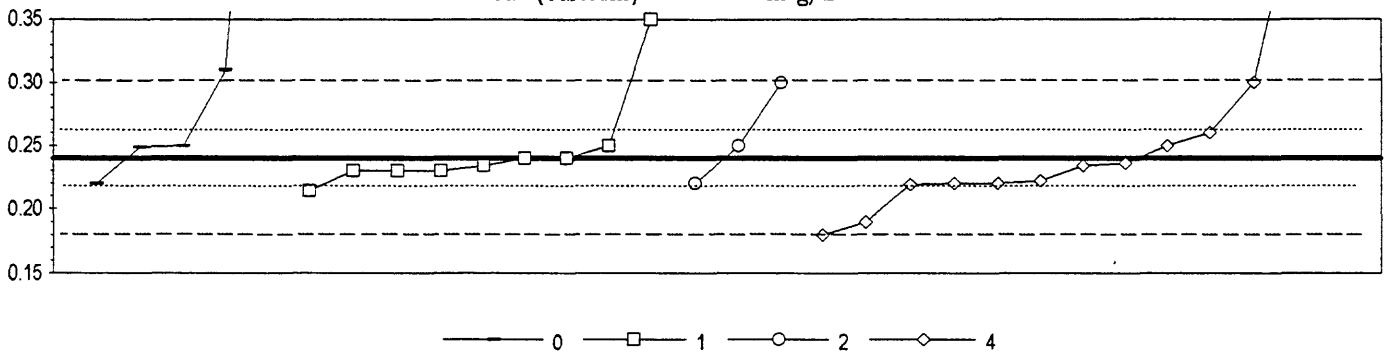
0. Other				
20. Titration: colorimetric				
21. Titration: electrometric				
	N =	1	1	14
	Minimum =	3.85	6.00	0.02
	Maximum =			15.80
	Median =			2.50
	St Dev =			2.15

MPV = 3.43 +/- 1.20
 F-pseudostigma = 3.54
 N = 16
 Hu = 6.50
 Hl = 1.72

Lab	Rating	Z-value	0	20	21
1	3	-0.96			0.02
3	2	1.01			7.00
11	4	0.12	3.85		
15	4	0.15			3.96
23	4	-0.26			2.50
38	3	-0.92			0.15
52	0	2.31			11.60
61	3	-0.61			1.25
63	3	0.73		6.00	
78	3	-0.68			1.00
89	4	-0.19			2.74
92	4	-0.35			2.19
105	3	0.56			5.40
136	0	3.49			15.80
141	1	1.71			9.50
158	4	-0.12			3.00

Table 15. --Statistical summary of reported data for standard reference water sample P-19 (low ionic strength)--Continued

Ca (Calcium) m g/L



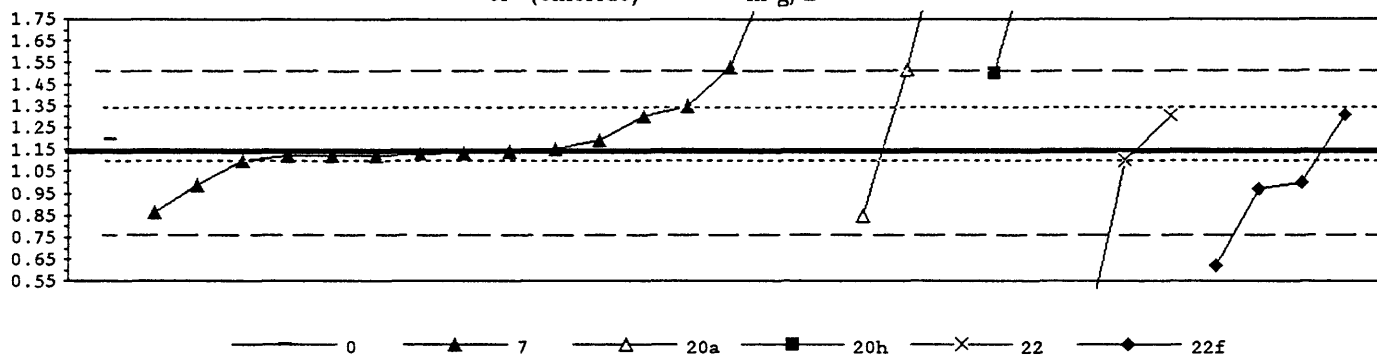
0. Other	4. ICP
1. AA: direct air	
2. AA: direct N2O	
	N = 5 9 3 13
	Minimum = 0.22 0.21 0.22 0.18
	Maximum = 0.75 0.35 0.30 12.60
	Median = 0.23 0.22
	St Dev = 0.01 0.03

MPV = 0.24 +/- 0.01
 F-pseudosigma = 0.03
 N = 30
 Hu = 0.26
 Hl = 0.22

Lab	Rating	Z-value	0	1	2	4
1	4	0.07		0.24		
2	4	0.37	0.25			
3	0	2.09				0.30
11	3	-0.61	0.22			
15	4	-0.13				0.23
23	NR				< 1	
28	0	416.91				12.60
33	4	0.40	0.25			
37	NR	< 0.244				
38	4	0.40		0.25		
39	3	0.74				0.26
46	3	-0.54				0.22
48	0	7.15				0.45
52	NR					< 0.6
58	4	-0.27	0.23			
61	3	-0.64				0.22
63	3	-0.61		0.22		
64	3	-0.61				0.22
74	4	-0.07				0.24
78	4	-0.27	0.23			
89	3	-0.81	0.21			
92	0	3.78	0.35			
101	4	0.07	0.24			
105	4	0.40				0.25
123	4	0.40	0.25			
134	3	-0.61				0.22
136	0	2.09		0.30		
141	1	-1.62				0.19
145	1	-1.96				0.18
155	0	17.27	0.75			
158	0	2.43	0.31			
164	4	-0.13	0.23			
167	NR					< 1
196	4	-0.27	0.23			

Table 15. --Statistical summary of reported data for standard reference water sample P-19 (low ionic strength)--Continued

Cl (Chloride) mg/L



0. Other	20h. Titration: Hg						
7. IC	22. Color: other						
20a. Titration: Ag	22f. Color: Fe(SCN)						
	N =	1	16	3	2	3	4
	Minimum =	1.20	0.87	0.85	1.50	0.19	0.62
	Maximum =		8.00	2.30	2.20	1.30	1.31
	Median =	1.13					
	St Dev =	0.16					

MPV = 1.14 +/- 0.05
 F-pseudostigma = 0.19
 N = 29
 Hu = 1.35
 Hl = 1.10

Lab	Rating	Z-value	0	7	20a	20h	22	22f
1	4	-0.04		1.13				
2	4	-0.07		1.13				
3	3	0.86					1.30	
11	4	0.32	1.20					
15	2	1.13		1.35				
28	3	0.86		1.30				
33	4	0.05		1.15				
37	NR			< 6				
42	4	0.00		1.14				
46	2	-1.48		0.87				
48	3	-0.76						1.00
52	3	0.92						1.31
61	0	-2.81						0.62
63	0	-5.13					0.19	
64	3	-0.92						0.97
74	0	2.10		1.53				
78	1	1.94				1.50		
89	0	2.05			1.52			
92	0	5.72				2.20		
101	0	6.26			2.30			
105	0	4.64		2.00				
134	4	-0.11		1.12				
136	0	37.02		8.00				
141	4	-0.22					1.10	
145	3	-0.81		0.99				
158	4	-0.22		1.10				
167	NR		< 1					
191	4	-0.09		1.12				
196	4	0.27		1.19				
197	4	-0.09		1.12				
202	1	-1.56			0.85			

Table 15. --Statistical summary of reported data for standard reference water sample P-19 (low ionic strength)--Continued
 F (Fluoride) m g/L

0. Other	40. Ion electrode				
7. IC					
22. Colorimetric					
	N =	1	3	0	3
	Minimum =	0.01	0.00		0.01
	Maximum =		0.05		0.06
	Median =				
	St Dev =				

Lab	Rating	Z-value	0	7	22	40
1				0.025		
3				< 0.1		
11		0.009	0			
23					< 0.1	
28				< 0.1		
33				< 0.01		
42						0.060
46						0.013
52						< 0.1
61						0.015
63						< 0.2
74						< 0.02
78						< 0.10
89						< 0.100
105				< 0.2		
134						< 1.0
141						< 0.1
145				< 0.20		
167						< 0.05
196				0.051		

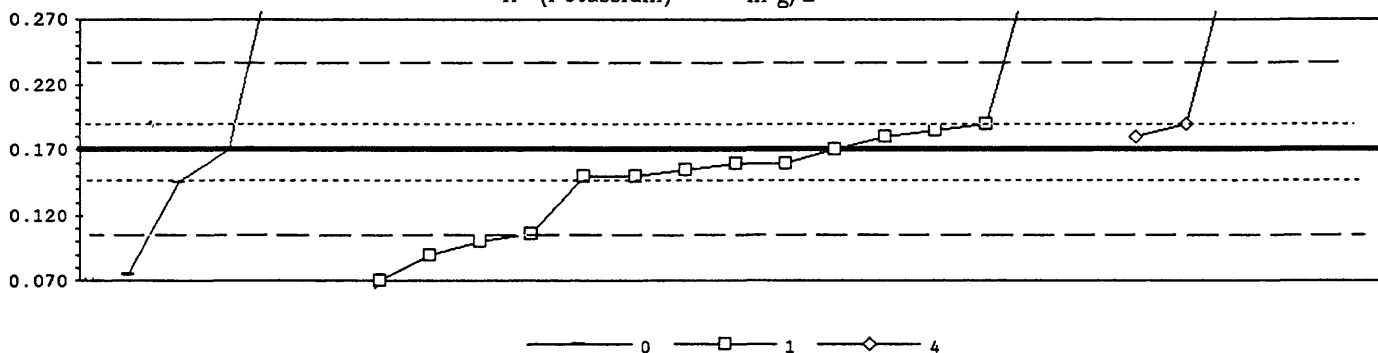
MPV = 0.020 +/- 0.015
 F-pseudostigma = 0.028
 N = 6
 Hu = 0.051
 Hl = 0.013

INSUFFICIENT DATA

NOT RATED

Table 15. --Statistical summary of reported data for standard reference water sample P-19 (low ionic strength)--Continued

K (Potassium) m g/L



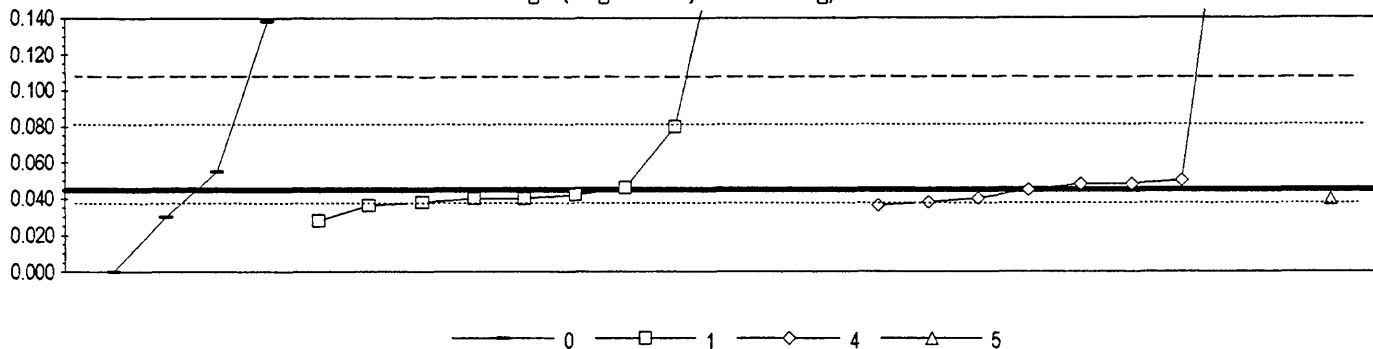
0. Other			
1. AA: direct air			
4. ICP			
	N =	3	16
	Minimum =	0.075	0.015
	Maximum =	0.330	5.750
	Median =	0.160	
	St Dev =	0.024	

MPV = 0.170 +/- 0.009
 F-pseudsigma = 0.033
 N = 25
 Hu = 0.190
 Hl = 0.146

Lab	Rating	Z-value	0	1	4
1	0	-4.75		0.015	
2	3	-0.74	0.146		
3	3	0.61		0.190	
11	0	-2.91	0.075		
15	3	-0.61		0.150	
23	4	-0.46		0.155	
28	0	71.44			2.500
33	4	0.00	0.170		
37	0	4.91	0.330		
38	4	-0.31		0.160	
46	3	0.61			0.190
48	0	5.83			0.360
52	NR				< 0.2
58	4	0.31		0.180	
61	NR				< 1
63	NR				< 0.2
64	3	-0.61		0.150	
74	4	0.31			0.180
78	0	-2.45		0.090	
89	4	0.46		0.185	
92	0	171.08		5.750	
101	4	-0.31		0.160	
105	NR				< 0.4
123	0	-2.15		0.100	
134	0	4.91		0.330	
136	0	-3.07		0.070	
141	0	5.21			0.340
145	0				< 0.1
164	1	-1.96		0.106	
167	NR				< 1
196	4	0.00		0.170	

Table 15. --Statistical summary of reported data for standard reference water sample P-19 (low ionic strength)--Continued

Mg (Magnesium) m g/L



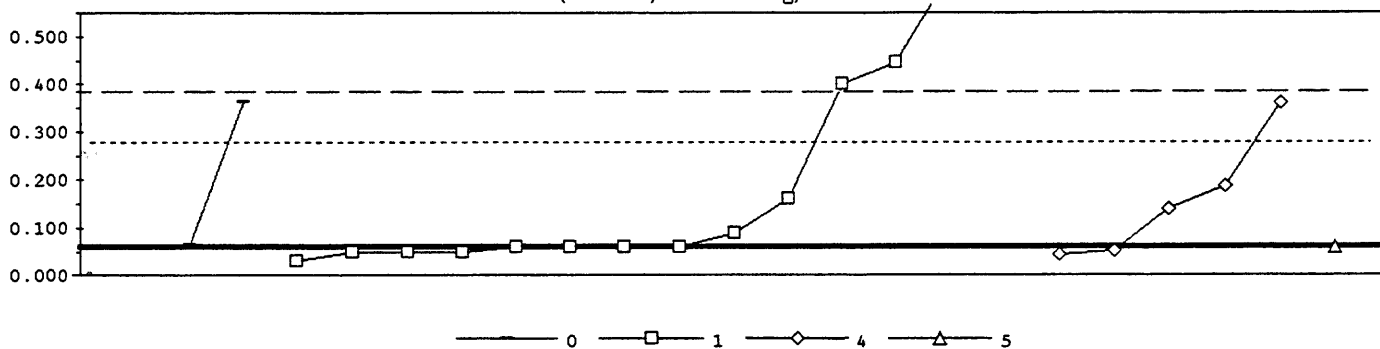
0. Other	4. ICP
1. AA: direct air	5. DCP
2. AA: direct N2O	
	N = 4 29 0 9 1
	Minimum = 0.00 0.03 0.04 0.04
	Maximum = 0.14 7.00 2.80
	Median = 4.00 0.05
	St Dev = 2.23 0.91

MPV = 0.045 +/- 0.008
 F-pseudostandard deviation = 0.031
 N = 25
 Hu = 0.080
 Hl = 0.038

Lab	Rating	Z-value	0	1	2	4	5
1	4	-0.22		0.038			
2	4	0.32	0.055				
3	NR					< 0.1	
11	4	-0.48	0.030				
15	4	0.10				0.048	
23	NR		< 0.2				
28	0	88.49				2.800	
33	4	-0.16					0.040
37	0	2.99	0.138				
38	4	0.03		0.046			
39	4	0.10				0.048	
46	4	-0.22				0.038	
48	0	6.58				0.250	
52	NR					< 0.05	
58	3	-0.55		0.028			
61	NR					< 1	
63	NR			< 0.2			
64	4	-0.16				0.040	
74	4	0.16				0.050	
78	0	13.33		0.460			
89	4	-0.29		0.036			
92	2	1.12		0.080			
101	4	-0.16		0.040			
105	4	0.00				0.045	
123	4	-0.16		0.040			
134	4	-0.29				0.036	
136	0	4.98		0.200			
145	NR					< 0.025	
155	NR	-1.45	0.000				
164	0	9.43		0.339			
167	NR					< 1	
196	4	-0.10		0.042			

Table 15. --Statistical summary of reported data for standard reference water sample P-19 (low ionic strength)--Continued

Na (Sodium) mg/L



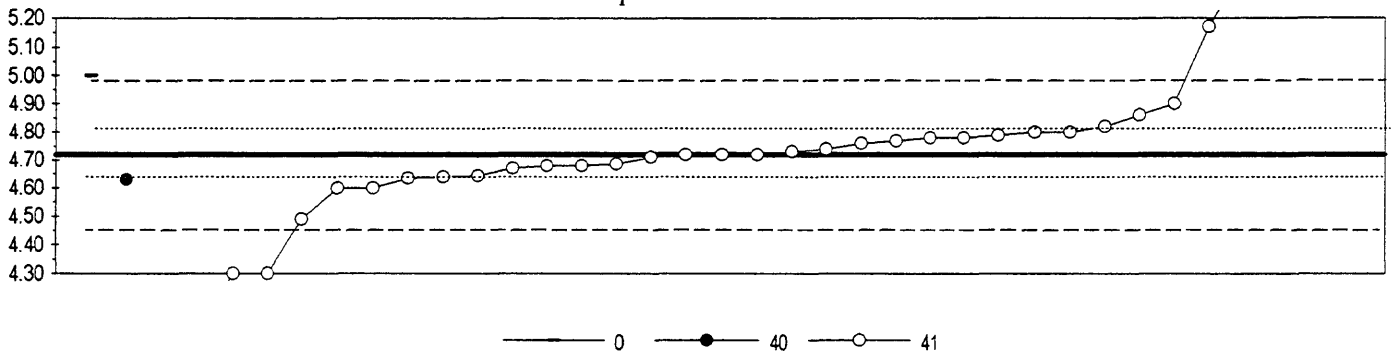
0. Other	5. DCP				
1. AA: direct air					
4. ICP					
	N =	3	14	5	1
	Minimum =	0.060	0.030	0.043	0.060
	Maximum =	0.364	1.800	0.360	
	Median =	0.060			
	St Dev =	0.036			

MPV = 0.060 +/- 0.046
 F-pseudostigma = 0.162
 N = 23
 Hu = 0.274
 Hl = 0.056

Lab	Rating	Z-value	0	1	4	5
1	4	-0.07		0.049		
2	4	0.04	0.066			
3	0	10.74		1.800		
11	4	0.00	0.060			
15	3	0.79		0.188		
23	NR			< 0.1		
33	4	0.00				0.060
37	1	1.88	0.364			
38	4	0.00	0.060			
39	4	-0.06		0.051		
46	4	-0.10		0.043		
48	1	1.85		0.360		
52	NR			< 0.03		
61	NR			< 1		
63	0	3.52		0.630		
64	4	0.00		0.060		
74	4	0.49			0.140	
78	3	0.62		0.160		
89	4	-0.06		0.050		
92	0	2.10		0.400		
101	4	-0.06		0.050		
105	NR			< 0.2		
123	4	-0.19		0.030		
134	4	0.19		0.090		
136	4	0.00		0.060		
145	NR			< 0.04		
164	0	2.38		0.446		
167	NR			< 1		
196	4	0.00		0.060		

Table 15. --Statistical summary of reported data for standard reference water sample P-19 (low ionic strength)--Continued

pH



0. Other			
40. Ion electrode			
41. Electrometric			
	N =	1	1
	Minimum =	5.00	4.63
	Maximum =		7.80
	Median =		4.72
	St Dev =		0.09

MPV = 4.72 +/- 0.03
 F-pseudostigma = 0.13
 N = 37
 Hu = 4.81
 Hl = 4.64

Lab	Rating	Z-value	0	40	41
1	3	-0.60			4.64
2	4	-0.27			4.69
3	2	1.09			4.86
11	0	2.19	5.00		
15	0	-7.27			3.79
23	0	5.16			5.38
28	2	1.41			4.90
33	4	0.31			4.76
37	0	10.32			6.04
38	3	0.63			4.80
39	0	3.52			5.17
41	0	20.18			7.30
42	4	0.00			4.72
46	4	-0.31			4.68
48	0	24.09			7.80
52	4	0.47			4.78
58	4	-0.39			4.67
61	3	0.78			4.82
63	0	-3.28			4.30
64	4	0.00			4.72
74	3	-0.63			4.64
78	3	0.55			4.79
89	4	0.08			4.73
92	4	0.39			4.77
101	1	-1.80			4.49
105	4	0.47			4.78
123	3	0.63			4.80
134	4	-0.31			4.68
136	3	-0.94			4.60
141	3	-0.94			4.60
145	0	-4.85			4.10
155	0	-3.28			4.30
158	3	-0.70	4.63		
164	3	-0.66			4.64
167	4	0.16			4.74
197	4	0.00			4.72
202	4	-0.08			4.71

Table 15. --Statistical summary of reported data for standard reference water sample P-19 (low ionic strength)--Continued
 P04 as P (Orthophosphate) m g/L

0. Other	22. Colorimetric				
7. IC	22m. Color: phosphomolybdate				
20. Titration: Color	N =	0	0	0	1 6
	Minimum =			0.003	0.000
	Maximum =				0.101
	Median =				
	St Dev =				

MPV = 0.003 +/- 0.006
 F-pseudosigma = 0.012
 N = 7
 Hu = 0.018
 Hl = 0.002

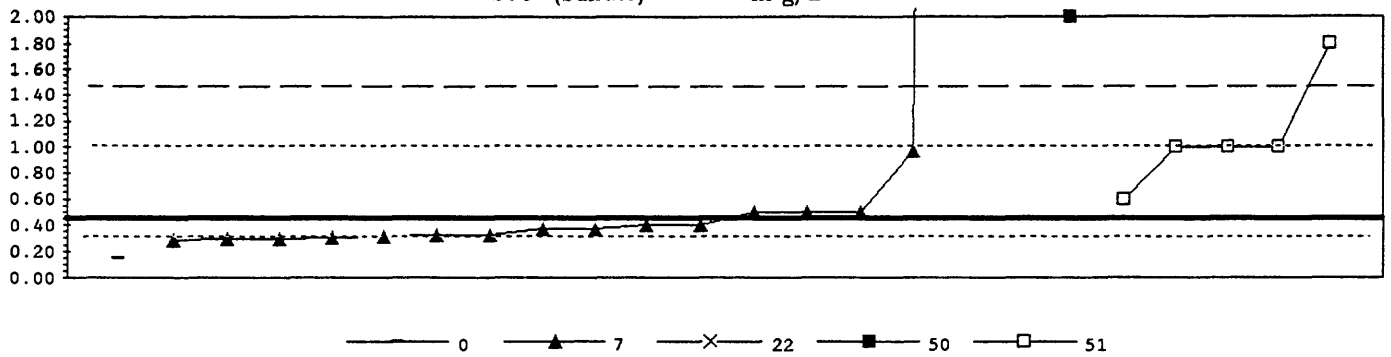
Lab	Rating	Z-value	0	7	20	22	22m
1							0.003
3						< 0.01	
11		< 0.02					
23							< 0.01
28				< 0.1			
33				< 0.01			
37				< 0.3			
38							0.001
46							< 0.002
48							< 0.005
52							< 0.005
58						0.003	
61							< 0.02
63						< 0.01	
74				< 0.002			
78							< 0.05
89							0.101
92							< 0.005
105						< 0.002	
134							< 0.01
141							< 0.05
145							< 0.01
155							0.000
167							0.025
196				< 0.03			
202							0.011

INSUFFICIENT DATA

NOT RATED

Table 15. --Statistical summary of reported data for standard reference water sample P-19 (low ionic strength)--Continued

SO4 (Sulfate) m g/L



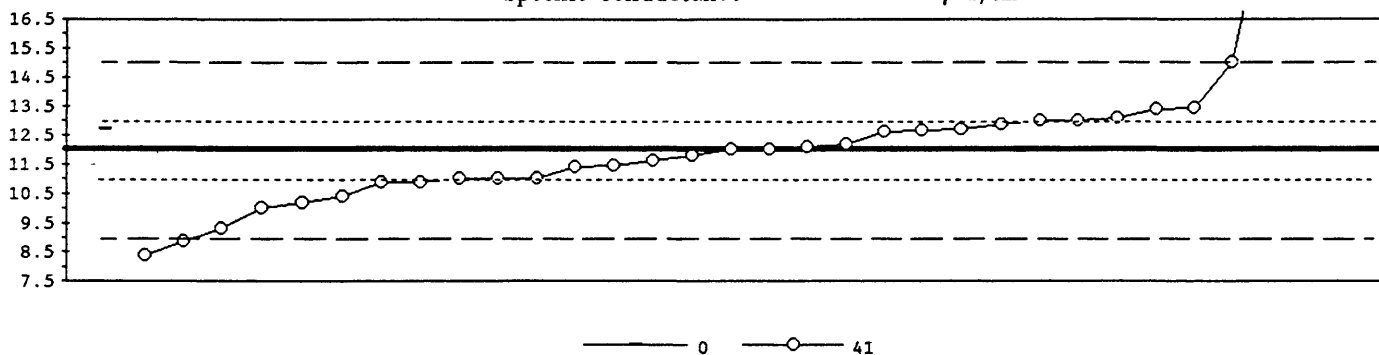
0. Other	50. Gravimetric
7. IC	51. Turbidimetric
22. Color: methyl thymol blue	
N =	1 16 1 1 5
Minimum =	0.15 0.28 6.63 2.00 0.60
Maximum =	63.00 1.80
Median =	0.37
St Dev =	0.17

MPV = 0.45 +/- 0.14
 F-pseudosigma = 0.51
 N = 24
 Hu = 1.00
 Hl = 0.32

Lab	Rating	Z-value	0	7	22	50	51
1	4	-0.26		0.32			
2	4	-0.30		0.30			
3	4	0.10		0.50			
11	3	-0.59	0.15				
23	4	0.30					0.60
28	4	0.10		0.50			
33	4	-0.25		0.32			
37	NR			< 6			
46	4	-0.25		0.32			
48	2	1.09					1.00
52	NR						< 10
61	0	2.67					1.80
63	0	3.07			2.00		
64	4	-0.29		0.30			
74	4	0.09		0.50			
78	2	1.09					1.00
89	NR						< 2
92	2	1.09					1.00
105	2	1.03		0.97			
134	4	-0.15		0.37			
136	0	123.64		63.00			
141	NR						< 5
145	4	-0.09		0.40			
158	4	-0.09		0.40			
164	4	-0.29		0.30			
167	0	12.22			6.63		
196	4	-0.16		0.37			
197	4	-0.33		0.28			

Table 15. --Statistical summary of reported data for standard reference water sample P-19 (low ionic strength)--Continued

Specific Conductance μ S/cm



0. Other			
41. Electrometric			
	N =	1	32
	Minimum =	12.7	8.4
	Maximum =		132.0
	Median =		12.0
	St Dev =		24.3

MPV = 12.0 +/- 0.3
 F-pseudostigma = 1.5
 N = 33
 Hu = 13.0
 Hl = 11.0

Lab	Rating	Z-value	0	41
1	4	0.44		12.7
2	3	-0.76		10.9
3	3	-0.67		11.0
11	4	0.47	12.7	
15	3	0.74		13.1
23	4	0.07		12.1
28	0	-2.43		8.4
33	4	0.13		12.2
37	4	-0.13		11.8
38	4	-0.40		11.4
39	3	-0.67		11.0
42	0	80.94		132.0
46	4	0.40		12.6
48	3	-0.76		10.9
52	3	0.94		13.4
58	4	0.00		12.0
61	2	-1.08		10.4
63	3	-0.67		11.0
74	4	0.47		12.7
78	0	-2.10		8.9
89	2	-1.21		10.2
101	0	47.08		81.8
105	0	2.02		15.0
123	3	0.61		12.9
134	3	0.67		13.0
136	1	-1.82		9.3
141	3	0.67		13.0
145	2	-1.35		10.0
155	3	0.96		13.4
158	4	0.00		12.0
167	4	-0.27		11.6
197	4	-0.38		11.4
202	0	6.21		21.2

Table 16-- *Statistical summary of reported data for standard reference sample Hg-15 (Mercury)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

0. Other/Not reported
 11. AA: cold vapor = atomic absorption: cold vapor

Abbreviations and symbols

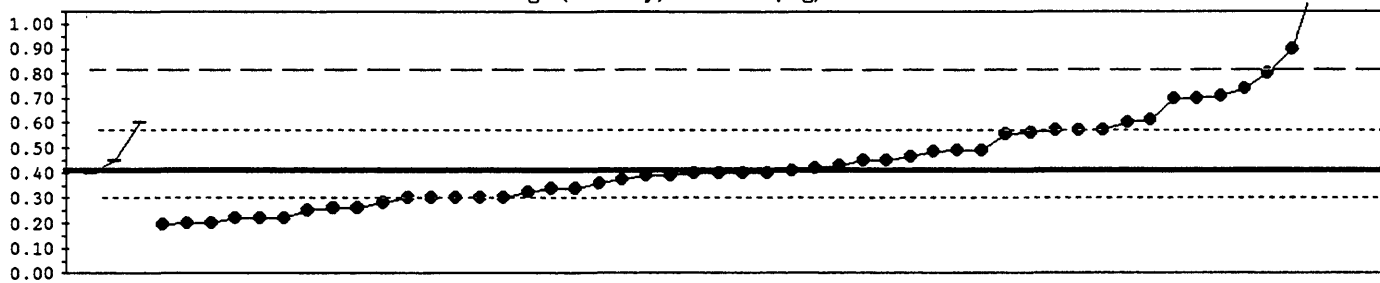
N = number of samples
 St dev = traditional standard deviation
 MPV = 95% confidence most probable value
 F-pseudostandard deviation = nonparametric statistic deviation
 Hu = upper hinge value
 Hl = lower hinge value
 μ g/L = micrograms per liter
 Lab = laboratory code number
 NR = not rated, less than value reported
 < = less than

Constituent
 Hg Mercury

page
 113

Table 16. --Statistical summary of reported data for standard reference water sample Hg-15 (mercury)--Continued

Hg (Mercury) μ g/L



————— 0 ●————— 11

0. Other			
11. AA: Cold vapor			
	N =	3	51
	Minimum =	0.40	0.20
	Maximum =	0.60	2.85
	Median =		0.40
	St Dev =		0.16

MPV = 0.41 +/- 0.04
 F-pseudostigma = 0.20
 N = 54
 Hu = 0.57
 Hl = 0.30

Lab	Rating	Z-value	0	11
1	4	-0.32		0.34
3	3	0.97	0.60	
11	0	7.97		2.00
12	2	1.47		0.70
13	3	0.79		0.56
16	4	0.22	0.45	
18	4	-0.32		0.34
24	3	-0.52		0.30
28	4	-0.02		0.40
29	3	-0.92		0.22
32	3	0.82		0.57
36	4	0.41		0.49
37	3	0.76		0.56
39	NR			< 0.5
45	4	-0.08		0.39
46	4	-0.16		0.37
48	NR			< 0.2
51	3	-0.92		0.22
52	4	0.42		0.49
55	4	0.31		0.47
59	3	-0.52		0.30
61	4	-0.02		0.40
63	4	0.41		0.49
68	2	-1.02		0.20
69	3	-0.92		0.22
70	3	-0.52		0.30
74	4	-0.42		0.32
75	3	0.82		0.57
87	3	-0.52		0.30
89	3	-0.70		0.26
90	1	1.67		0.74
92	4	0.12		0.43
96	4	-0.02	0.40	
97	3	-0.72		0.26
100	3	-0.52		0.30
105	4	-0.22		0.36
108	2	1.02		0.61
109	4	0.02		0.41
113	4	0.22		0.45
119	3	0.82		0.57
120	4	-0.07		0.39
127	4	0.06		0.42
128	1	1.97		0.80
133	2	1.47		0.70
134	3	-0.62		0.28
136	0	2.47		0.90
138	4	-0.02		0.40
139	0	12.22		2.85
141	4	0.22		0.45
144	3	-0.77		0.25

Lab	Rating	Z-value	0	11
146	2	-1.05		0.20
149	4	-0.02		0.40
167	1	1.52		0.71
179	2	-1.02		0.20
182	3	0.97		0.60
196	0	3.97		1.20
202	NR			< 0.3

Table 17. --Most probable values for constituents and properties in standard reference samples distributed in October 1992

[MPV, most probable value; ug/L, microgram per liter; mg/L, milligram per liter; uS/cm, microsiemen per centimeter at 25 degrees Celsius]

T-121 (trace constituents)

Analyte	MPV	F-pseudosigma	Analyte	MPV	F-pseudosigma
Ag	0.90	μ g/L 0.36	Li	25.0	μ g/L 2.2
Al	85.5	μ g/L 12.9	Mg	1.24	m g/L 0.07
As	8.00	μ g/L 1.11	Mn	28.5	μ g/L 2.2
B	90	μ g/L 9	Mo	12.0	μ g/L 1.8
Ba	46.3	μ g/L 4.3	Na	7.19	m g/L 0.30
Be	10.6	μ g/L 1.0	Ni	8.29	μ g/L 1.26
Ca	5.13	m g/L 0.28	Pb	7.75	μ g/L 1.03
Cd	7.17	μ g/L 1.05	Sb	7.61	μ g/L 1.20
Co	4.6	μ g/L 0.7	Se	8.12	μ g/L 1.41
Cr	16.0	μ g/L 1.6	SiO2	4.64	m g/L 0.26
Cu	4.80	μ g/L 0.67	Sr	44.0	μ g/L 4.9
Fe	140	μ g/L 12	V	4.00	μ g/L 0.76
K	0.45	m g/L 0.06	Zn	18.0	μ g/L 2.7

M-124 (major constituents)

Analyte	MPV	F-pseudosigma	Analyte	MPV	F-pseudosigma
Alkalinity	234	m g/L 5	Na	166.0	m g/L 6.0
B	294	μ g/L 34	total P	0.110	m g/L 0.013
Ca	154	m g/L 9	pH	8.47	0.08
Cl	82.8	m g/L 2.4	SiO2	19.4	m g/L 1.1
DSRD	1309	m g/L 33	SO4	621	m g/L 23
F	0.93	m g/L 0.07	Sp Cond	1738	μ S/cm 88
K	13.9	m g/L 1.0	Sr	1669	μ g/L 99
Mg	58.4	m g/L 2.7	V	7.5	μ g/L 3.0

N-36 (preserved nutrients)

Analyte	MPV	F-pseudosigma
NH3 as N	0.113	m g/L 0.019
NH3+OrgN as N	0.246	m g/L 0.129
NO3+NO2 as N	0.182	m g/L 0.023
total P as P	0.220	m g/L 0.021
PO4 as P	0.210	m g/L 0.010

N-36 (nonpreserved nutrients)

Analyte	MPV	F-pseudosigma
NH3 as N	0.110	m g/L 0.015
NH3+OrgN as N	0.209	m g/L 0.091
NO3+NO2 as N	0.180	m g/L 0.016
total P as P	0.210	m g/L 0.015
PO4 as P	0.208	m g/L 0.010

N-37 (preserved nutrients)

Analyte	MPV	F-pseudosigma
NH3 as N	0.876	m g/L 0.121
NH3+OrgN as N	1.10	m g/L 0.22
NO3+NO2 as N	0.857	m g/L 0.099
total P as P	1.19	m g/L 0.07
PO4 as P	1.07	m g/L 0.10

N-37 (nonpreserved nutrients)

Analyte	MPV	F-pseudosigma
NH3 as N	0.920	m g/L 0.058
NH3+OrgN as N	1.06	m g/L 0.08
NO3+NO2 as N	0.850	m g/L 0.054
total P as P	1.17	m g/L 0.06
PO4 as P	1.15	m g/L 0.04

P-19 (low ionic strength constituents)

Analyte	MPV	F-pseudosigma	Analyte	MPV	F-pseudosigma
Acidity	3.43	m g/L 3.54	Na	0.060	m g/L 0.162
Ca	0.24	m g/L 0.03	pH	4.72	0.13
Cl	1.14	m g/L 0.19	PO4 as P	insufficient data	
F	insufficient data		SO4	0.45	m g/L 0.51
K	0.170	m g/L 0.033	Sp Cond	12.0	μ S/cm 1.5
Mg	0.045	m g/L 0.031			

Hg-15 (mercury)

Analyte	MPV	F-pseudosigma
Hg	0.41	μ g/L 0.20