UNITED STATES
DEPARTMENT OF INTERIOR
GEOLOGICAL SURVEY

REPORT OF THE U.S. GEOLOGICAL SURVEY'S ANALYTICAL EVALUATION PROGRAM -- STANDARD REFERENCE SAMPLES T-117 (TRACE CONSTITUENTS), M-120 (MAJOR CONSTITUENTS, N-32 (NUTRIENTS), N-33 (NUTRIENTS), P-17 (LOW IONIC STRENGTH, AND Hg-13 (MERCURY).

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RESULTS OF THE U.S. GEOLOGICAL SURVEY'S ANALYTICAL EVALUATION PROGRAM FOR STANDARD REFERENCE SAMPLES DISTRIBUTED IN OCTOBER 1991:

T-117, M-120, N-32, N-33, P-18, and Hg-13

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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-117 (trace constituents), M-120 (major constituents), N-32 (nutrients), N-33 (nutrients), P-18 (low ionic strength-major constituents), and Hg-13 (mercury)--that were distributed in October 1991 to 160 laboratories registered in the U.S. Geological Survey sponsored interlaboratory testing program. Analytical data that were received from 139 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.

More than 190 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 standard reference samples 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 identifed 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:

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Purpose and Scope

This report summarizes the analytical results submitted by 139 of the 160 laboratories (table 3) that requested and were shipped SRS for the October 1991 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 14, 1991, are presented in this report:

T-117	Trace constituents
M-120	Major constituents
N-32	Nutrients--low level concentrations
N-33	Nutrients--high level concentrations
P-18	Precipitation (low ionic strength)
Hg-13	Mercury--low level concentration

It was requested that analytical results be returned by November 30, 1991 for evaluation and preparation of this report. The time was extended; however, analytical data received from laboratories after December 9, 1991 have not been included in 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. We have attempted to present the analytical data in ways that allow participants to evaluate data distribution, scatter, outliers, central tendency, bias, skewness, and method relationships.

Preparation of Standard Reference Samples

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

Trace constituent sample T-117 was prepared using water collected from the St. Vrain River near Longmont, Colorado. The water was pumped through 5- and 0.45-μm filters, in series, into a 1300-L polypropylene drum. The water was continuously stirred for 72 hours while being circulated through a 0.1-μm filter and an ultraviolet sterilizer. Following this circulation, the water was acidified to pH 2 with nitric acid and then supplemented with reagent-grade chemicals to achieve selected analyte concentrations. The water was stirred for an additional 48 hours prior to bottling. Each sample was bottled after being pumped through an ultraviolet sterilizer and a 0.1-μm 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.

Major constituent sample M-120 was prepared using water collected from the Pueblo Reservoir, near Pueblo, Colorado. The water was pumped through 5- and 0.45-μm filters, in series, into a 600-L polypropylene drum. The water was continuously stirred for 72 hours while being circulated through a 0.1-μm filter and a ultraviolet sterilizer. The water was <u>not</u> supplemented with reagent-grade chemicals to modify analyte concentrations. The water was stirred for an additional 48 hours prior to bottling. Each sample was bottled after being pumped through an ultraviolet sterilizer and a 0.1-μm 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.

Nutrient samples N-32 and N-33 were prepared using water collected from the Fall River, near Idaho Springs, Colorado. These samples were prepared the week prior to the mailing for this SRS evaluation. The water was pumped through 5- and 0.45-μm filters, in series, into a 400-L polypropylene drum and was

acidified to pH 6-7 with hydrochloric acid and continuously stirred for 72 hours while being circulated through a 0.1-μm filter and an ultraviolet sterilizer. The desired nutrient concentrations were obtained by adding reagent-grade chemicals. The water was continuously stirred for 24 hours after which a number of nonpreserved samples were bottled, after being pumped through a 0.1-μm filter. 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 stirred for 24 hours. The preserved samples were bottled using the same procedure as for the nonpreserved samples. Bottles used were new, amber, acid leached, deionized-water rinsed, polyethylene, 250 mL bottles. (Nonpreserved nutrient sample use will not be encouraged since USGS protocol calls for field preservation of nutrient samples with mercuric chloride.) Samples are refrigerated at 4 ^{o}C until requested for use.

Sample P-18 was prepared in a 400-L polypropylene drum using snowmelt collected at Guanella Pass west of Georgetown, Colorado. The collected snow was allowed to melt: after which the snowmelt was pumped into the drum through 5- and 0.45 μm filters in series. The snowmelt was continuously stirred for 72 hours while being circulated through a 0.1-μm filter and a ultraviolet sterlizer. After this initial circulation desired analyte concentrations were then obtained by adding reagent-grade chemicals. Following 24 hours of continuous stirring each sample was bottled after being pumped through an ultraviolet sterilizer and a 0.1-μm 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-13 was prepared using water collected from the Fall River, near Idaho Springs, Colo. The sample was prepared in a 90-L polypropylene drum. The creek water was pumped into this drum through 5- and 0.45-μm filters in series. The water was then continuously stirred for 72 hours while being circulated through an 0.1-μm filter and a ultraviolet sterlizer. Nitric acid (5-percent, v/v) and dichromate ion (0.05-percent, w/w) then were added to stabilize the sample. The desired mercury concentration was obtained by adding a mercury standard solution. Following an additional 24 hours of stirring the sample was bottled after being pumped through a 0.1-μm filter. Bottles used were new, acid leached, deionized water rinsed, 125 mL glass bottles with tetrafluoroethylene fluorocarbon resin caps. Samples are stored in a warehouse until requested for use.

LABORATORY ANALYSES

The participating laboratories were asked to determine analytes which are summarized in table 1. The number of analytes varied from 26 in T-117 (trace constituents) to 1 in Hg-13 (mercury).

Table 1.-- *Analytes determined in standard reference samples distributed in October 1991*

[mg/L, milligrams per liter; µg/L, micrograms per liter; µS/cm, microsiemens per centimeter at 25 degrees Celsius]

Analyte or property		Units	T-117	M-120	N-32,33	P-18	Hg-13
Alk	Alkalinity as $CaCO_3$	mg/L		X		X	
Ag	Silver	µg/L	X				
Al	Aluminum	µg/L	X				
As	Arsenic	µg/L	X				
B	Boron	µg/L	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		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			
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		units		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				

STATISTICAL PRESENTATION OF DATA

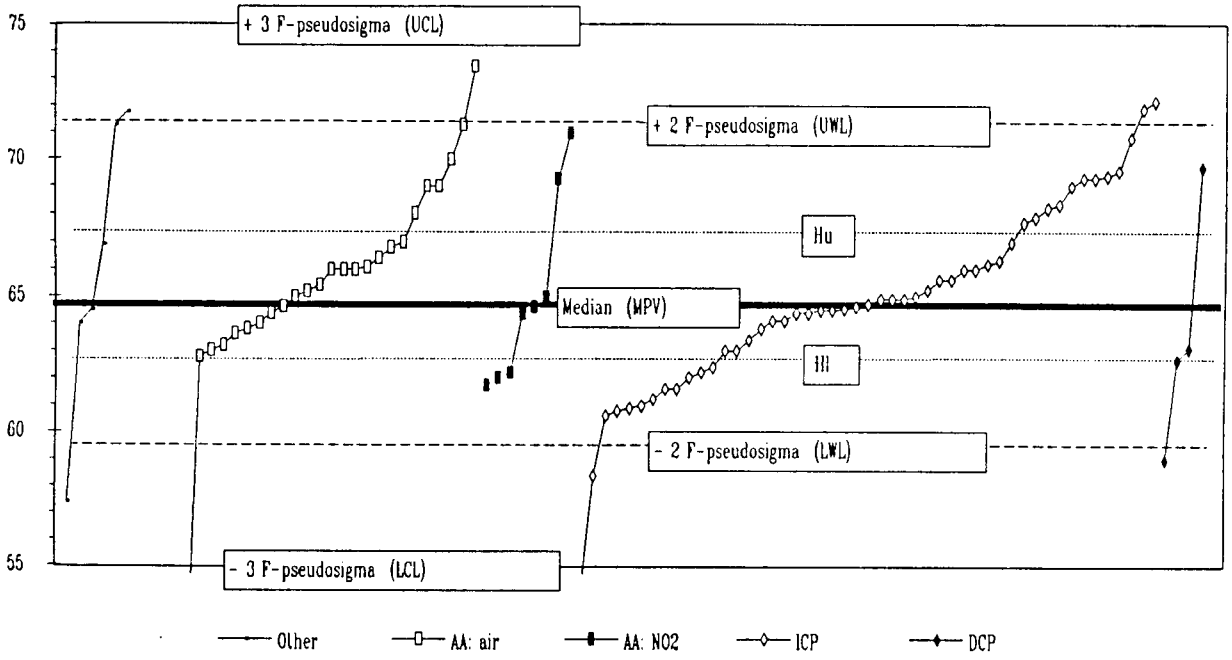
Data in this report have been evaluated using nonparametric statistics as described by Hoaglin and others (1983). This statistical approach is a resistant statistic since the median is not influenced by outliers as is the mean in traditional statistics. It presents a better treatment for analytical data that includes outliers and "less than" values at the upper, lower, or both ends of the data set.

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 (N), data range, Z-value, and the F-pseudosigma. (The Z-value is equivalent to the Z-score of traditional statistics, being the number of F-pseudosigma deviations the reported value is from the MPV. The F-pseudosigma is equivalent to the standard deviation 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 traditional standard deviation (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 range limits. 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-pseudosigma, 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-pseudosigma 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 x 0.6745 = 1.349σ. This relation allows the calculation of the F-pseudosigma = (H-spr)/1.349. The 95-percent confidence level MPV is expressed as the median +/- (1.96 x F-pseudosigma)/$\sqrt{N}$. 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 laboratory-performance rating scale is explained in the next section of this report.

The graphical plot of the reported data is shown in figure 1. We attempt to maintain the upper and lower boundaries of the graphical plots at +3 and -3 F-pseudosigma deviations from the median. (Computer-program scaling constraints do not permit these outer 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-pseudosigma, respectively. "Less than" quantification-limit values are not plotted.



NOTE: vertical scale is the concentration value of the individual analyte in appropriate units (see table 1.) Methods shown are defined in Tables 2 and 11 through 18.

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

LABORATORY PERFORMANCE RATINGS

To facilitate interlaboratory performance comparisons, laboratory performance ratings, based on the analyses reported for each SRS, are included in performance 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 <u>each</u> analyte is rated on a scale 4 to 0, based on the absolute Z-value, as listed below:

Rating	Absolute Z-value
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

Laboratories were requested to identify the method used for each determination according to table 2 codes. They also were asked to use the references listed below the table to further define the method.

Table 2.-- *Analytical-method codes*

Code	Method
0	Other
1	Atomic absorption: direct, air
2	Atomic absorption: direct, nitrous oxide
3	Atomic abosorption: graphite furnace
4	Inductively coupled argon plasma
5	Direct current plasma
6	Mass spectrometry/inductively coupled argon plasma
7	Ion chromatography
8	Atomic absorption: cold vapor
10	Atomic absorption: extraction [*specify chelating agents*]
11	Atomic absorption: hydride [*specify reducing agent*]
12	Flame photometric
20	Titration: colorimetric [*specify color reagent*]
22	Colorimetric: [*specify reducing or oxidizing agent/color reagent*]
30	Anoidic stripping voltammetry
40	Selective ion electrode
50	Gravimetric: [*specify filtration, evaporation,and so forth*]

1. American Public Health Association and others. 17th edition, 1989. Standard methods for the examination of water and wastewater: Washington, D.C., American Public Health Association, 1527p.

2. American Society for Testing and Materials. 1990. Annual book of ASTM standards: Philadelphia, v.11.01, 591p. and v.11.02, 866p.

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, 460p.

4. Fishman, M.J., and Freidman, L.C., eds., 1989. Methods for determination of inorganic substances in water and fluvial sediments (3rd ed.): U.S. Geological Survey Techniques of Water-Resources investigations, Book 5, Chapter A1, 545p.

5. Miscellaneous manufacturer's instrument manuals or references.

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. Some analyte MPV's can be observed to be "biased" by a specific method or unfairly rate a laboratory because of the methods used.

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 3.-- *Laboratory participants in the analyses of standard reference samples distributed in October 1991*

State	City	Participating Laboratory
Alaska	Fairbanks	Alaska Department of Natural Resources
Alabama	Tuscaloosa	Geological Survey of Alabama
Arizona	Phoenix	Arizona Department of Health Services
	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
	Lakeside	Helix Water District
	Los Gatos	Santa Clara Valley Water District
	Oakland	East Bay Muncipal Utility District
	Riverside	University of California - Riverside
	Sacramento	Anlab
	Sacramento	US Bureau of Reclamation
	Santa Barbara	University of California - Santa Barbara
	Santa Fe Springs	West Coast Analytical Service, Inc.
	West Sacramento	California Department of Water Resources
Colorado	Alamosa	US Bureau of Reclamation
	Arvada	USGS NWQL
	Aurora	Core Laboratories, Inc.
	Denver	Denver Water Department
	Denver	Metropolitan Denver Sewage Disposal District #1
	Denver	US Bureau of Reclamation
	Englewood	Public Service Company of Colorado
	Fort Collins	Environmental Services
	Fort Collins	US Forest Service
	Golden	EG & G, Rocky Flats Plant
	Golden	Huffman Laboratories
	Loveland	Northern Colorado Water Conservatory District
	Northglenn	Northglenn Water Treatment Plant
	Pueblo	Pueblo Board of Water Works
	Westminster	City of Westminster
Florida	Brooksville	Southwest Florida Water Management District
	Ocala	USGS
	Palatka	St. John's River Water Management District
	Tallahassee	City of Tallahassee
	Tallahassee	Florida Department of Environmental Resources
	Tallahassee	Savannah Laboratories
	Tampa	Hillsborough County Environmental Protection Commission
	West Palm Beach	South Florida Water Management District
Georgia	Atlanta	Georgia Department of Natural Resources
	Tifton	US Department of Agriculture
Hawaii	Honolulu	University of Hawaii - Manoa, Department of Oceanography
Idaho	Boise	US Bureau of Reclamation
Illinois	Champaign	Hazardous Waste Research and Information Center
	Champaign	Illinois Environmental Protection Agency
Indiana	Valparaiso	Northern Laboratories
Iowa	Des Moines	University Hygienic Laboratory, Des Moines Branch
Kansas	Lawrence	Kansas Geological Survey
	Topeka	Kansas Department of Health and Environment

Table 3.-- *Laboratory participants in the analyses of standard reference samples distributed in October 1991*

State	City	Participating Laboratory
Kentucky	Lexington	Kentucky Geological Survey
	Lexington	Lexington Commonwealth Technologies
	Louisville	Metropolitan Sewer District
Maine	Orono	Department of Plant and Soil Science, University of Maine
Maryland	Baltimore	Martel Laboratory Services, Inc.
Massachusetts	Wellesley Hills	Massachusetts Department of Public Works
Michigan	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
	St. Peter	Brown/Nicollet Health Services
Missouri	Jefferson City	Missouri Department of Health
Montana	Butte	Montana Bureau of Mines and Geology
Nevada	Las Vegas	City of Las Vegas
	Las Vegas	Clark County Sanitation District
	Reno	Nevada State Health Laboratory
	Sparks	Reno-Sparks Wastewater Treatment Facility
New Mexico	Albuquerque	City of Albuquerque
	Gallup	Bureau of Indian Affairs
New York	Albany	New York State Department of Health
	Albany	USGS
	Alfred	Alfred Analytical Laboratory
	Brockport	State University of New York - Brockport
	Buffalo	Erie County Public Health Laboratory
	Hempstead	Nassau County Department of Health
	Millbrook	Institute of Ecosystem Studies
	North Babylon	EcoTest Laboratories, Inc.
	Oakdale	Suffolk County Water Authority
	Port Washington	Nytest Environmental, Inc.
	Syracuse	Onodaga County Department of Drainage and Sanitation
	Wantagh	Cedar Creek Special Projects Laboratory
North Carolina	Brown Summit	Lake Townsend Water Filtration Plant
	Charlotte	Department of Environmental Protection
	Durham	City of Durham
	Greensboro	City of Greensboro
North Dakota	Bismarck	North Dakota State Water Commission
Ohio	Cincinnati	US EPA
	Columbus	Columbus Surveillance Laboratory
	Franklin	EOS Franklin
	Medina	Medina County Sanitary Engineer
	Tiffin	Heidelberg College, Water Quality Laboratory
Oklahoma	Norman	Oklahoma Geological Survey
	Oklahoma City	Oklahoma State Department of Health
Oregon	Corvallis	US Department of Agriculture
	Tigard	United Sewerage Agency
Pennsylvania	Harrisburg	Pennsylvania Department of Environmental Resources
	Somerset	Geochemical Testing
Puerto Rico	San Juan	Department of Natural Resources
	San Juan	Center for Energy and Environment Research

Table 3.-- *Laboratory participants in the analyses of standard reference samples distributed in October 1991*

State	City	Participating Laboratory
South Dakota	Brookings	Water Quality Laboratory
	Vermillion	South Dakota Geological Survey
Tennessee	Chattanooga	Tennessee Valley Authority
Texas	Tyler	Standard Laboratories
Utah	Salt Lake City	USGS
	Salt Lake City	Utah State Department of Health Laboratory
Vermont	Waterbury	Vermont Agency of Natural Resources
Virginia	Culpepper	Environmental Systems Service
	Richmond	Consolidated Laboratory Services
Washington	Seattle	Brooks-Rand, Ltd.
Wisconsin	Green Bay	Green Bay Metropolitan Sewerage District
	Madison	State Laboratory of Hygiene
	Milwaukee	Milwaukee Metropolitan Sewerage District
Wyoming	Cheyenne	Department of Environmental Quality
	Laramie	University of Wyoming, Department of Geology and Geophysics
	Laramie	Wyoming Department of Agriculture

Table 4.-- *Overall laboratory performance ratings for standard reference water samples distributed in October 1991*

[Lab. laboratory number; OWR. overall weighted rating for all sample types; OLR. overall laboratory rating for reported values of a sample type; V/71. number of reported values of 71 total possible values from all sample types; V/26. V/16. V/20. V/8. and V/1. number of reported values possible for T-117. M-118. P-18. N-32. N-33. Hg-13. respectively]

Standard reference sample =			T-117		M-120		N-32, N-33		P-18		Hg-13	
Lab	OWR	V/71	OLR	V/26	OLR	V/16	OLR	V/20	OLR	V/8	OLR	V/1
1	3.7	67	3.6	24	3.4	16	3.9	18	4.0	8	3	1
2	2.0	22	0.8	5	2.3	6	1.3	4	3.1	7		
3	2.9	55	3.1	23	2.4	14	2.6	9	3.3	8	3	1
4	3.0	3	3.0	1	3.0	2						
5	3.1	31	3.1	21			3.1	10				
6	1.5	24	1.4	10	2.5	6	0.9	8				
7	2.2	49	2.8	19	1.6	14	1.8	8	2.6	7	0	1
8	2.4	40	2.7	20	2.3	14	1.7	6				
9	2.4	40	2.6	16	2.4	12	3.5	6	0.8	6		
10	3.6	23			3.5	13	3.8	10				
12	2.6	31	2.6	11	2.8	11	2.5	8			2	1
13	2.7	35	2.6	14	2.7	12	2.8	8			4	1
15	2.8	60	2.8	26	2.8	15	2.4	10	3.0	8	4	1
16	2.3	40	2.4	15	1.7	14	2.7	10			4	1
18	3.0	43	2.7	21	3.2	14	3.4	8				
19	3.4	25	2.4	8	3.8	10	4.0	7				
20	2.4	19	1.3	4	3.5	4	2.9	8	1.3	3		
21	3.7	7	3.0	1			3.8	6				
23	3.5	24	3.6	8	3.4	8	3.4	8				
24	3.0	32	2.4	18	3.8	13					3	1
25	2.2	44	2.6	20	2.0	14	1.8	10				
26	0.9	20	0.8	11	1.0	8					0	1
27	2.9	23	3.3	12	3.2	6			1.4	5		
29	2.0	38	1.7	17	2.4	12	2.0	8			1	1
30	2.5	11	2.5	11								
32	2.9	42	3.0	26	2.7	15					2	1
34	3.4	34	3.1	13	3.6	12	3.6	8			4	1
38	3.3	26			2.8	10	3.8	10	3.3	6		
39	2.7	43	2.6	25	3.6	9	1.9	8			3	1
40	3.4	14			3.4	14						
41	0.9	11	0.8	6	2.0	2	0.3	3				
42	2.7	42	2.8	16	3.1	14	2.4	11			0	1
43	3.3	22	3.6	7	3.7	11	1.8	4				
44	3.3	6							3.3	6		
45	3.1	51	3.3	17	3.4	13	2.8	20			4	1
46	3.2	47	2.9	18	3.5	13	3.5	8	3.0	7	4	1
48	2.7	50	2.8	20	2.9	11	3.1	10	1.4	8	4	1
50	3.6	29	3.7	16	3.3	12					4	1
51	2.7	31	2.5	15	3.0	11	3.0	5				
52	3.5	63	3.4	24	3.5	14	3.8	18	3.5	6	4	1
53	1.0	2					1.0	2				
54	3.7	13	4.0	2	3.6	11						
55	2.8	50	2.8	25	2.9	14	2.8	10			1	1
56	2.7	13			2.4	9	3.5	4				
57	2.7	31	2.9	16	2.8	10	1.6	5				
58	2.1	36	1.9	12	2.7	9	2.0	8	1.3	6	3	1
59	3.1	38	3.1	15	2.5	8	3.6	10	3.5	4	0	1
60	1.7	15			2.3	3	1.6	12				
61	1.8	43	1.7	18	1.7	14	2.0	10			4	1
63	2.0	48	2.5	23	1.3	16	2.3	8			1	1
64	2.5	37	2.2	11	2.7	10	2.5	8	2.5	8		
65	2.3	12	1.7	6	3.5	2	1.5	2	4.0	1	3	1
66	3.4	33	3.4	16	2.8	6	3.8	10			3	1
68	2.6	49	2.5	25	2.8	13	2.6	10			2	1
69	3.0	28	3.2	14	2.9	11	1.5	2			4	1
70	3.0	48	3.1	23	3.1	15	2.3	9			4	1
71	2.1	18	1.4	8	2.6	10						
73	2.6	10	2.6	10								
74	3.2	58	3.2	23	3.1	16	3.7	10	2.6	8	4	1
75	3.4	34	3.5	15	3.7	10	2.8	8			4	1
76	3.1	28	3.1	14	2.8	10	4.0	4				
77	2.2	22	1.9	10	2.5	10	2.0	2				
78	1.8	51	2.8	19	1.4	11	1.1	12	0.9	8	4	1
79	2.7	20	2.8	14	2.5	4	4.0	1			1	1
83	2.7	19	3.1	7	3.0	7	1.6	5				
87	2.9	36	2.9	14	3.4	12	2.0	9			4	1
88	1.2	12					1.2	12				
90	2.1	25	1.4	9	2.5	6	2.4	10				
91	1.8	28	1.5	17	2.4	11						
92	2.6	31	1.3	9	3.8	6	2.9	14	0.0	1	4	1

Table 4.-- *Overall laboratory performance ratings for standard reference water samples distributed in October 1991--Continued*

Standard reference sample =			T-117		M-120		N-32 and N-33		P-18		Hg-13	
Lab	OWR	V/74	OLR	V/26	OLR	V/16	OLR	V/20	OLR	V/8	OLR	V/1
93	2.7	21			1.8	9	3.0	4	3.6	8		
95	0.4	12			0.2	6			0.7	6		
97	2.6	47	2.5	24	2.6	14	2.6	8			4	1
100	2.6	47	2.7	23	3.0	15	1.4	8			4	1
101	2.4	43	2.4	19	2.5	11	2.0	5	2.5	8		
102	2.2	9			1.7	3	3.0	5	0.0	1		
103	2.5	26	2.6	19	2.1	7						
105	2.9	57	2.9	24	3.1	14	2.5	10	3.5	8	2	1
108	1.8	13	2.0	6	1.5	2	1.5	4			3	1
109	2.6	23	2.6	8	2.3	13	4.0	2				
110	3.7	3							3.7	3		
113	2.5	42	2.7	19	2.2	14	2.4	8			3	1
117	1.3	33	1.4	21	1.4	11					0	1
119	3.2	53	3.0	21	2.8	13	3.7	18			4	1
121	2.6	29	2.7	21	2.5	8						
122	1.8	13	0.0	1	1.9	12						
123	2.2	25	2.4	8	2.6	5	1.6	7	2.4	5		
126	2.0	5	2.5	4							0	1
127	3.2	55	3.2	21	3.1	13	3.4	20			2	1
128	3.0	40	3.2	21	3.0	12	2.8	6			0	1
129	2.3	38	1.7	6	2.2	12	2.6	20				
133	2.2	27	1.7	12	2.5	4	2.6	10			2	1
134	3.4	44	3.2	20	3.5	15			3.6	8	4	1
138	3.3	44	3.5	22	3.2	11	3.2	10			4	1
140	3.0	33	3.1	12	2.9	11	3.1	10				
141	2.6	47	2.7	15	2.7	14	2.3	10	2.7	7	3	1
143	3.5	21	3.8	6	3.6	5	3.4	8	4.0	1	1	1
145	2.9	59	3.3	19	3.6	14	2.1	20	3.2	6		
146	2.8	39	2.8	25	2.8	13					4	1
149	2.2	22	2.0	14	2.5	8						
153	2.8	11	3.0	2	2.8	9						
158	3.1	16			2.5	6	3.5	10				
161	1.5	26	2.1	11	1.3	9	0.0	5			3	1
167	2.9	47	2.9	16	3.2	12	2.9	15	1.0	3	3	1
177	1.3	8			0.8	4	1.8	4				
179	2.0	40	2.9	14	1.1	7	1.6	18			4	1
180	2.6	33	2.2	22	3.4	11						
182	1.5	28	1.1	7	2.3	12	0.2	8			4	1
183	2.0	9			1.8	6	2.3	3				
184	1.9	31	0.6	13	2.9	7	2.4	6	3.0	4	4	1
188	2.8	22	3.4	5	2.8	9	0.0	1	2.9	7		
189	2.6	38	2.5	11	3.0	10	2.2	10	3.0	6	3	1
190	2.7	52	2.2	12	2.7	12	3.5	20	1.8	8		
191	2.2	26	2.1	10	2.2	10	2.3	6				
193	2.5	17	2.5	12	3.7	3	0.5	2				
194	2.3	30	2.4	14	2.5	6	2.7	6	0.3	3	3	1

Table 5.-- *Laboratory performance ratings for standard reference water sample T-117 (trace constituents)*

[MPV, most probable value; ug/L, microgram 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 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 =		1.40	µg/L	79.0	µg/L	6.90	µg/L	151.0	µg/L	98.5	µg/L	4.80	µg/L
	F-pseudosigma =		0.64		19.4		1.40		20.8		6.3		0.40	
Lab	OLR	V/26	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	3.6	24	1.50	4	74	4	6.6	4	153	4	98	4	5.1	4
2	0.8	5												
3	3.1	23	2.50	1	80	4	8.1	3	150	4	98	4	5.0	4
4	3.0	1												
5	3.1	21	0.90	3	75	4	8.1	3	148	4	101	4		
6	1.4	10	1.63	4										
7	2.8	19	< 5	NR	72	4	6.3	4	160	4	96	4	4.2	2
8	2.7	20			23	0			126	2	99	4	4.4	3
9	2.6	16					8.0	3						
12	2.6	11	1.20	4	< 100	NR	< 10	NR					< 20	NR
13	2.6	14	< 5	NR	130	0	6.0	3			104	3		
15	2.8	26	2.08	2	65	3	6.6	4	15	0	97	4	4.9	4
16	2.4	15	< 7	NR	< 300	NR	6.1	3	241	0	98	4	6.9	0
18	2.7	21	< 3	NR	79	4	6.6	4	279	0	96	4	4.1	1
19	2.4	8									86	1		
20	1.3	4												
21	3.0	1												
23	3.6	8	1.32	4			< 10	NR						
24	2.4	18	0.50	2			7.4	4	146	4				
25	2.6	20	< 34	NR	76	4			147	4	98	4	4.6	4
26	0.8	11	0.26	1			9.7	1						
27	3.3	12			76	4			148	4	95	3		
29	1.7	17	1.00	3	173	0	8.3	3			107	2		
30	2.5	11					9.7	1			102	3		
32	3.0	26	1.43	4	80	4	8.1	3	97	0	109	1	4.5	3
34	3.1	13	< 5	NR	69	3	8.5	2			96	4		
39	2.6	25	1.40	4	86	4	5.5	3	154	4	95	3	5.0	4
41	0.8	6												
42	2.8	16					7.8	3			111	1		
43	3.6	7												
45	3.3	17	0.77	3			7.0	4	162	3	95	3		
46	2.9	18	1.76	3	82	4	6.4	4	138	3	106	2	4.5	3
48	2.8	20	1.80	3	85	4	7.1	4	100	0	121	0	5.2	3
50	3.7	16	< 2	NR	84	4	6.0	3			100	4		
51	2.5	15					9.0	2						
52	3.4	24	1.54	4	72	4	6.5	4	< 150	NR	95	3	6.5	0
54	4.0	2												
55	2.8	25	0.78	3	157	0	7.3	4			114	0	8.0	0
57	2.9	16	1.70	4	< 200	NR	6.8	4	160	4	93	3		
58	1.9	12	1.00	3			4.9	2						
59	3.1	15	< 10	NR	80	4	9.0	2			95	3		
61	1.7	18	< 5	NR	52	2	6.1	3	113	0	105	2	1.2	0
63	2.5	23	1.00	3	147	0	8.0	3	146	4	98	4	20.0	0
64	2.2	11			1060	0								
65	1.7	6	< 10	NR			5.2	2						
66	3.4	16	1.89	3	74	4	6.0	3			82	0		
68	2.5	25	1.40	4	180	0	5.6	3	160	4	95	3	5.0	4
69	3.2	14	1.60	4			7.8	3			140	0		
70	3.1	23	< 5	NR	< 100	NR	5.8	3	152	4	97	4	5.0	4
71	1.4	8	1.00	3										
73	2.6	10	3.80	0	66	3	< 25	NR						
74	3.2	23	0.39	1	89	3	7.0	4			96	4	4.5	3
75	3.5	15					7.2	4			129	0		
76	3.1	14	0.54	2			6.7	4			98	4		
77	1.9	10	1.40	4			7.8	3	265	0				

Table 5.-- *Laboratory performance ratings for standard reference water sample T-117 (trace constituents)--Continued*

	Analyte =	Ag (Silver)		Al (Aluminum)		As (Arsenic)		B (Boron)		Ba (Barium)		Be (Beryllium)	
	MPV =	1.40	µg/L	79.0	µg/L	6.90	µg/L	151.0	µg/L	98.5	µg/L	4.80	µg/L
	F-pseudosigma =	0.64		19.4		1.40		20.8		6.3		0.40	
Lab	OLR	V/26	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
78	2.8	19	1.05	3	95	3	8.1	3			108	1	5.4	2
79	2.8	14	1.40	4			< 2	0			100	4	1.2	0
83	3.1	7												
87	2.9	14	< 2	NR			7.6	4			101	4		
90	1.4	9									119	0		
91	1.5	17	1.49	4			3.5	0			102	3		
92	1.3	9												
97	2.5	23	2.60	1	69	3	8.3	3			126	0		
100	2.7	23	0.46	1	73	4	6.8	4	166	3	99	4	< 1	0
101	2.4	19	1.10	4	238	0	34.6	0			96	4		
103	2.6	19							128	2	97	4		
105	2.9	24	0.51	2	63	3	7.6	4			93	3	4.5	3
108	2.0	6												
109	2.6	8	154.50	0										
113	2.7	19	0.99	3	67	3	6.6	4			149	0		
117	1.4	21	3.80	0	131	0	7.4	4			98	4	4.9	4
119	3.0	21	1.20	4	109	1	6.0	3	160	4	100	4	4.9	4
121	2.7	21	0.30	1	80	4					96	4		
122	0.0	1	3.00	0										
123	2.4	8					7.8	3						
126	2.5	4					7.2	4						
127	3.2	21	0.55	2			6.1	3			95	3	4.7	4
128	3.2	21	1.40	4	62	3	6.9	4	127	2	101	4	4.6	4
129	1.7	6							212	0				
133	1.7	12	< 5	NR			5.9	3			100	4		
134	3.2	20	2.40	1			4.6	1	169	3				
138	3.5	22	0.54	2	78	4	8.4	3			98	4	4.8	4
140	3.1	12												
141	2.7	15	< 10	NR	78	4	< 50	NR	181	1	99	4	< 10	NR
143	3.8	6					8.1	3						
145	3.3	19			68	3	< 25	NR	148	4	98	4	4.6	4
146	2.8	25	2.60	1	78	4	4.2	1	152	4	99	4	5.0	4
149	2.0	14	0.53	2	96	3	3.3	0			122	0	3.0	0
153	3.0	2												
161	2.1	11	2.00	3	90	3								
167	2.9	16			< 100	NR	5.0	2	160	4	99	4	5.1	3
179	2.9	14	1.60	4			< 5	NR					5.1	3
180	2.2	22	3.00	0	53	2	1.6	0	136	3	93	3	4.4	3
182	1.1	7					9.0	2	130	2				
184	0.6	13	0.01	0	0	0	0.0	0	0	0	0	0		
188	3.4	5			111	1								
189	2.5	11	1.20	4							91	2	< 5	NR
190	2.2	12												
191	2.1	10			128	0					100	4		
193	2.5	12	1.00	3			6.0	3			121	0		
194	2.4	14	1.00	3			< 10	NR	170	3	110	1		

Table 5.-- *Laboratory performance ratings for standard reference water sample T-117 (trace constituents)--Continued*

[MPV, most probable value; ug/L, microgram 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 values; RV, reported value; <, less than]

Rating	Absolute Z-value	Rating	Absolute Z-value
4 (Excellent)	0.00-0.50	1 (Questionat	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 =	20.90	m g/L	2.20	μ g/L	4.40	μ g/L	10.35	μ g/L	6.00	μ g/L	474.0	μ g/L	2.110	m g/L
F-pseudosigma =	1.20		0.40		0.74		1.59		1.76		18.2		0.190	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	22.0	3	2.7	1	4.0	3	9.7	4	5.7	4	480	3	2.1	4
2	20.2	3											2.5	1
3	23.4	0	2.0	3	< 30	NR	11.0	4	6.0	4	480	3	2.0	4
4											450	3		
5	22.1	2	3.0	0	< 5	NR	10.1	4	5.1	4	475	4	2.7	0
6	21.8	3	3.8	0					7.9	2	490	2		
7	20.8	4	< 5	NR	5.3	2	10.5	4	< 7	NR	454	3	2.9	0
8	21.5	3	2.5	3	4.7	4	4.7	0	7.5	3	453	3	2.0	4
9	18.0	0	2.1	4			16.3	0	6.0	4	470	4	2.2	4
12	22.0	3	2.6	2			< 20	NR	4.0	2	440	2	2.4	2
13	21.0	4	3.5	0			11.4	3	< 50	NR	445	2	2.2	4
15	20.5	4	1.8	2	2.3	0	9.2	3	4.7	3	438	1	2.3	3
16	20.2	3	< 5	NR	< 10	NR	11.9	2	< 10	NR	463	4	2.6	0
18	20.9	4	1.8	2	4.0	3	6.0	0	4.0	2	456	3	< 1	0
19	20.7	4					< 10	NR			373	0	2.0	4
20	16.5	0											1.9	3
21											456	3		
23							10.7	4	5.6	4			2.1	4
24	22.2	2	1.4	0					6.0	4	473	4	2.3	3
25	23.5	0	2.2	4	5.6	1	9.7	4	5.4	4	478	4	2.6	0
26			1.4	0			6.6	0	5.0	3	325	0		
27	20.4	4							7.1	3	470	4	2.1	4
29			2.3	4			11.5	3	4.0	2	410	0		
30			3.1	0			10.0	4	6.6	4	465	4		
32	21.8	3	2.1	4	4.3	4	10.4	4	6.1	4	610	0	2.1	4
34	20.9	4	< 5	NR			< 10	NR	11.0	0	469	4	2.1	4
39	21.5	3	3.1	0	5.0	3	13.7	0	7.0	3	474	4	1.9	3
41			2.0	3			7.0	0	13.0	0				
42	21.8	3	2.1	4					7.8	3	503	1	1.9	3
43	21.3	4									472	4	2.1	4
45	20.9	4	1.9	3			10.1	4	5.7	4	457	3	2.0	4
46	21.9	3	2.1	4	< 10	NR	9.1	3	4.0	2	500	1	2.2	4
48	21.0	4	2.2	4	< 10	NR	10.9	4	6.4	4	360	0	2.1	4
50			2.0	3	4.0	3	10.0	4	6.0	4	446	2		
51	16.7	0	1.0	0	5.0	3	12.0	2	6.0	4	475	4	2.2	4
52	20.6	4	1.9	3	4.9	3	10.3	4	5.8	4	467	4	2.0	4
54											475	4		
55	21.6	3	2.4	3	4.1	4	10.4	4	4.0	2	489	2	2.1	4
57	19.0	1	2.4	3	< 50	NR	11.0	4	< 20	NR	480	3	2.2	4
58	14.1	0	5.5	0					< 10	NR	460	4		
59	21.0	4	< 5	NR			10.0	4	10.0	0	480	3	2.0	4
61	21.7	3	< 1	0	< 10	NR	11.7	3	< 5	NR	474	4	2.7	0
63	22.6	1	2.3	4	< 40	NR	10.0	4	6.3	4	465	4	2.2	4
64	21.3	4									537	0	2.0	4
65			2.4	3			< 10	NR	< 10	NR	471	4		
66	20.2	3	2.1	4			10.5	4	5.3	4	485	3	2.3	3
68	20.3	3	2.2	4	7.7	0	12.0	2	6.3	4	460	4	2.4	2
69	20.3	3	2.1	4			9.9	4	< 20	NR	466	4	2.2	4
70	21.1	4	1.3	0	< 20	NR	13.2	1	6.4	4	463	4	2.2	4
71			2.0	3					8.0	2	520	0		
73			2.1	4			8.0	1	5.0	3	470	4		
74	20.7	4	1.8	2	4.3	4	9.0	3	5.0	3	445	2	2.2	4
75	20.9	4	2.4	3			9.1	3	< 10	NR	443	2	2.1	4
76	19.0	1	2.2	4			11.3	3			476	4	1.9	3
77	24.0	0							4.0	2	608	0	2.2	4

Table 5.-- *Laboratory performance ratings for standard reference water sample T-117 (trace constituents)--Continued*

Analyte =	Ca (Calcium)		Cd (Cadmium)		Co (Cobalt)		Cr (Chromium)		Cu (Copper)		Fe (Iron)		K (Potassium)	
MPV =	20.90	m g/L	2.20	μ g/L	4.40	μ g/L	10.35	μ g/L	6.00	μ g/L	474.0	μ g/L	2.110	m g/L
F-pseudosigma =	1.20		0.40		0.74		1.59		1.76		18.2		0.190	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
78	16.0	0	2.5	3			10.7	4	6.1	4	460	4	1.9	3
79			2.0	3			12.6	1	5.8	4	480	3	2.1	4
83	20.5	4							< 20	NR			2.0	4
87	27.0	0	< 2	NR			10.2	4	7.0	3	517	0	2.0	4
90							12.8	1	8.4	2	538	0		
91	23.3	0	2.8	0			7.2	0	5.6	4	500	1	3.4	0
92			2.0	3	< 20	NR	< 6	0	7.6	3	419	0		
97	20.0	3	1.7	1	4.7	4	12.7	1	6.5	4	465	4	1.6	0
100	22.1	2	2.7	1	6.4	0	10.3	4	8.1	2	477	4	1.9	3
101	20.9	4	2.4	3			14.4	0	6.6	4	478	4	2.3	3
103	19.3	2	2.3	4	4.0	3	11.0	4	6.0	4	420	0	1.5	0
105	20.3	3	2.1	4	7.0	0	10.9	4	9.0	1	499	1	2.1	4
108			2.3	4			12.0	2	12.0	0				
109	20.6	4									443	2	1.9	3
113	23.0	1	2.3	4			9.1	3	5.5	4	525	0	2.2	4
117	18.5	0	2.3	4	3.0	1	4.9	0	5.0	3	426	0	1.8	2
119	21.6	3	2.4	3			9.6	3	6.0	4	480	3	6.8	0
121	20.8	4	4.0	0	4.0	3	18.0	0	10.0	0	464	4	2.1	4
122														
123	23.7	0					9.2	3	4.9	3			2.0	4
126									17.0	0				
127	21.4	4	2.4	3	3.9	3	9.9	4	8.2	2	461	4	2.0	4
128	22.0	3	2.2	4	< 4	NR	8.8	2	5.0	3	455	3	2.2	4
129											290	0	2.0	4
133	22.5	2	1.0	0			9.3	3	8.0	2	501	1		
134	20.0	3	2.2	4	4.2	4			6.6	4	459	3	2.4	2
138	21.9	3	2.3	4	4.2	4	9.8	4	5.4	4	465	4	2.1	4
140	22.5	2	2.5	3			11.0	4	8.0	2	460	4	2.2	4
141	19.0	1	< 10	NR	< 10	NR	< 10	NR	< 10	NR	465	4	2.1	4
143			2.2	4					6.4	4				
145	21.0	4	< 3	NR	< 6	NR	12.0	2	13.0	0	453	3	1.9	3
146	20.7	4	2.3	4	4.6	4	13.7	0	5.1	4	512	0	2.1	4
149			2.3	4			< 0.5	0	< 5	NR	440	2		
153									3.3	2				
161			6.0	0			37.0	0	6.0	4	496	2	2.3	3
167	21.8	3	1.0	0	< 20	NR	10.0	4	< 20	NR	480	3	2.4	2
179	16.8	0	2.1	4			13.0	1	5.0	3	470	4	2.1	4
180	20.1	3	2.5	3	2.8	0	8.8	2	2.4	1	455	3	1.9	3
182	17.0	0											1.1	0
184			21.0	0							1	0	2.3	3
188	20.6	4											2.1	4
189	21.0	4	< 2	NR	< 20	NR	6.0	0	7.0	3	380	0	2.2	4
190	17.5	0					10.2	4	3.0	1	448	2	2.0	4
191	20.2	3									485	3	1.8	2
193	22.0	3	2.0	3	< 10	NR	< 10	NR	< 10	NR	531	0	2.4	2
194	20.4	4	2.2	4			11.0	4	18.0	0	710	0	2.4	2

Table 5.-- *Laboratory performance ratings for standard reference water sample T-117 (trace constituents)--Continued*

[MPV, most probable value; ug/L, microgram 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 values; RV, reported value; <, less than]

Rating	Absolute Z-value	Rating	Absolute Z-value
4 (Excellent)	0.00-0.50	1 (Questionat	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 =	20.00	µg/L	10.05	mg/L	220.0	µg/L	11.80	µg/L	20.00	mg/L	10.00	µg/L	5.00	µg/L
F-pseudosigma =	2.48		0.44		14.9		2.00		1.26		2.45		1.33	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	21.5	3	10.0	4	221	4	< 10	NR	20.3	4	8.9	4	4.9	4
2			11.7	0					23.4	0				
3	20.0	4	10.8	1	220	4	10.0	3	20.5	4	< 20	NR	4.2	3
4														
5			10.5	2	222	4	10.1	3	21.0	3	13.1	2	5.0	4
6			9.1	0	277	0					12.4	3	1.5	0
7	< 15	NR	10.4	3	201	2	13.9	2	18.9	3	< 15	NR	3.4	2
8	18.3	3	10.7	2	222	4			21.0	3	12.0	3		
9			9.8	3	270	0			19.0	3	11.0	4	6.0	3
12			10.6	2	240	2	< 30	NR	21.0	3	< 20	NR	< 10	NR
13			10.2	4	200	2			19.3	3	< 50	NR	< 5	NR
15	17.4	2	9.9	4	215	4	11.2	4	19.3	3	8.4	3	5.1	4
16	< 200	NR	9.9	4	208	3	< 30	NR	19.8	4	< 25	NR	5.9	3
18			10.4	3	228	3			20.0	4	2.0	0	5.4	4
19			10.3	3	206	3			19.7	4				
20			8.3	0					18.4	2				
21														
23					224	4	< 100	NR			12.3	3	3.8	3
24	25.0	0	10.3	3	219	4			20.7	3	17.0	0	17.8	0
25	21.6	3	10.8	1	228	3			21.4	2	< 20	NR	4.6	4
26					155	0					10.2	4	9.6	0
27			9.5	2	210	3			19.3	3			5.8	3
29	8.0	0			182	0	30.0	0			10.0	4	2.1	0
30					230	3					9.6	4	4.7	4
32	22.5	2	9.5	2	225	4	8.8	2	20.2	4	8.9	4	4.6	4
34			9.7	3	204	2			19.6	4	< 50	NR	4.3	3
39	22.0	3	10.8	1	220	4	8.0	1	20.0	4	14.0	1	16.8	0
41											13.0	2	15.0	0
42	20.0	4	10.0	4	234	3			20.4	4				
43			10.3	3	205	2			20.0	4				
45			9.8	3	232	3			19.7	4			4.8	4
46			11.0	0	229	3	< 40	NR	21.4	2	< 10	NR	4.6	4
48			10.3	3	200	2	< 10	NR	21.5	2	10.4	4	6.7	2
50	< 50	NR			222	4	12.0	4			10.0	4	5.0	4
51			9.9	4	221	4			19.0	3	8.0	3	2.0	0
52			9.7	3	212	3	9.5	2	19.2	3	8.8	3	5.0	4
54					220	4								
55	21.0	4	10.7	2	225	4	24.0	0	19.4	4	9.1	4	4.2	3
57			10.4	3	230	3	< 50	NR	18.0	1	< 100	NR	< 5	NR
58			10.1	4	220	4			15.5	0			5.3	4
59			10.0	4	210	3			24.0	0	9.0	4	5.0	4
61			11.0	0	228	3	< 10	NR	20.6	4	19.9	0	4.0	3
63	< 100	NR	10.8	1	234	3	14.0	2	21.1	3	8.0	3	3.5	2
64			10.4	3	220	4			19.8	4	665.0	0	95.0	0
65					191	1							1.0	0
66			9.9	4	210	3			20.0	4			4.9	4
68	23.0	2	10.0	4	210	3	12.0	4	19.0	3	12.0	3	25.4	0
69			9.6	2	234	3			19.3	3			5.0	4
70	20.0	4	10.4	3	226	4	10.0	3	19.8	4	7.6	3	< 1	0
71					181	0					29.0	0	14.0	0
73											9.3	4	5.6	4
74			9.5	2	206	3	10.0	3	20.0	4	10.0	4	5.5	4
75			9.9	4	219	4	12.7	4	19.9	4	10.0	4	4.9	4
76			10.4	3	212	3			20.0	4			6.0	3
77					275	0								

Table 5.-- *Laboratory performance ratings for standard reference water sample T-117 (trace constituents)--Continued*

Analyte =	Li (Lithium)		Mg (Magnesium)		Mn (Manganese)		Mo (Molybdenum)		Na (Sodium)		Ni (Nickel)		Pb (Lead)	
MPV =	20.00	µg/L	10.05	mg/L	220.0	µg/L	11.80	µg/L	20.00	mg/L	10.00	µg/L	5.00	µg/L
F-pseudosigma =	2.48		0.44		14.9		2.00		1.26		2.45		1.33	
Lab	RV Rating		RV Rating		RV Rating		RV Rating		RV Rating		RV Rating		RV ating	
78			10.6	2	220	4			19.7	4	6.1	1	5.3	4
79					230	3					8.7	3	5.7	3
83			9.7	3	230	3			18.2	2			3.7	3
87			9.8	3	236	2			20.0	4	18.0	0	< 20	NR
90					238	2			24.0	0			2.7	1
91			10.8	1	229	3			23.5	0	9.2	4	3.7	3
92					211	3					18.0	0	60.0	0
97			10.0	4	204	2	11.8	4	19.5	4	9.7	4	13.0	0
100			10.8	1	230	3	< 50	NR	21.1	3	10.8	4	5.9	3
101			10.3	3	223	4			21.0	3	13.4	2	13.1	0
103	16.0	1	10.3	3	212	3	10.0	3	21.0	3	7.0	2		
105	27.0	0	9.9	4	197	1	12.0	4	20.1	4	8.2	3	3.8	3
108											13.0	2	2.0	0
109			9.9	4	202	2			20.5	4				
113			10.1	4	208	3			20.0	4	8.2	3	6.5	2
117			9.8	3	247	1			18.1	1	5.0	0	7.0	2
119			10.7	2	223	4			19.7	4	6.0	1	5.0	4
121	19.0	4	9.8	3	226	4	31.0	0	20.0	4	7.0	2	6.0	3
122														
123			9.7	3					19.0	3				
126									20.7	3				
127			10.0	4	215	4			19.5	4	9.9	4	4.5	4
128			10.4	3	232	3	9.6	2	20.0	4	7.6	3	4.2	3
129			10.9	1	200	2			19.0	3				
133			9.4	2							4.6	0	6.5	2
134	21.0	4	9.7	3	218	4			21.0	3	9.0	4	4.6	4
138			10.4	3	212	3	11.0	4	20.2	4	11.0	4	4.4	4
140			9.9	4	230	3			20.0	4	10.0	4	2.0	0
141	20.0	4	10.2	4	216	4	15.0	1	19.3	3	< 10	NR	< 20	NR
143													4.4	4
145	18.6	3	9.9	4	220	4	11.9	4	19.6	4	9.7	4	< 30	NR
146			9.8	3	215	4	12.4	4	25.8	0	14.7	1	5.4	4
149					200	2	10.8	4			10.5	4	2.3	0
153													5.3	4
161					226	4					25.0	0	< 5	NR
167			10.3	3	230	3	< 200	NR	21.1	3	10.0	4	< 5	NR
179			13.3	0	206	3			21.5	2	10.5	4	< 5	NR
180			10.0	4	209	3			19.1	3	9.7	4	12.0	0
182			10.0	4					16.8	0				
184			10.0	4					22.0	1	0.0	0	0.0	0
188			10.1	4					19.4	4				
189			10.2	4	190	0	< 10	NR	19.0	3	< 20	NR	< 5	NR
190			8.6	0	234	3			17.1	0	10.3	4	6.1	3
191			11.5	0	234	3			22.3	1				
193			9.7	3					18.9	3	11.0	4	< 10	NR
194			9.8	3	230	3			19.8	4			< 10	NR

Table 5.-- *Laboratory performance ratings for standard reference water sample T-117 (trace constituents)--Continued*

[MPV, most probable value; ug/L, microgram 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 values; RV, reported value; <, less than]

Rating	Absolute Z-value	Rating	Absolute Z-value
4 (Excellent)	0.00-0.50	1 (Questionat	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 =	5.50	µg/L	6.00	µg/L	11.85	mg/L	265.0	µg/L	4.70	µg/L	176.0	µg/L
F-pseudosigma =	0.96		1.46		0.64		11.1		1.80		9.3	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	5.5	4	7.3	3	11.5	3	271	3	< 6	NR	179	4
2					10.4	0						
3	5.1	4	8.4	1	12.4	3	270	3	< 10	NR	181	3
4												
5	< 20	NR	5.3	4	12.3	3			4.6	4	176	4
6											140	0
7	< 38	NR	8.3	1	12.2	3	257	3	< 10	NR	172	4
8					41.7	0	279	2	4.9	4	177	4
9			7.0	3	12.4	3	102	0			180	4
12	< 100	NR	6.0	4							170	3
13			5.5	4	11.3	3					166	2
15	1.6	0	5.5	4	5.3	0	270	4	6.1	3	177	4
16	< 60	NR	5.9	4			243	1	< 10	NR	159	1
18			6.2	4			267	4	3.0	3	176	4
19											145	0
20												
21												
23											169	3
24			14.7	0	12.1	4	271	3			169	3
25	< 42	NR	5.9	4	9.5	0	288	0	< 5	NR	192	1
26			2.3	0							135	0
27											167	3
29			2.6	0	11.3	3	250	2			185	3
30			19.4	0							292	0
32	5.8	4	9.0	0	12.0	4	278	2	4.3	4	169	3
34			5.9	4							170	3
39			8.0	2	12.2	3	277	2	8.0	1	180	4
41											156	0
42	6.4	3	6.7	4	12.4	3	291	0			190	2
43					11.6	4						
45			5.3	4	11.5	3					147	0
46			6.2	4							180	4
48	5.5	4	5.3	4							160	1
50			6.0	4			260	4	4.0	4	174	4
51					11.7	4					320	0
52	4.8	3	7.2	3	12.1	4	264	4	4.3	4	178	4
54												
55	5.4	4	6.4	4	12.0	4	260	4	8.1	1	177	4
57	18.0	0	6.3	4	12.8	2			< 50	NR	180	4
58	2.4	0	3.7	1							160	1
59							260	4			180	4
61	< 40	NR	8.3	1	3.0	0			< 5	NR	187	2
63	< 10	NR	7.0	3	12.1	4	305	0	43.0	0	189	2
64					11.1	2					183	3
65			< 5	NR							157	0
66			6.0	4							175	4
68	3.3	0	4.4	2			240	0	7.0	2	170	3
69			6.4	4							171	3
70	5.0	3	4.8	3	11.5	3	271	3	3.5	3	176	4
71											170	3
73			16.2	0							182	3
74	5.5	4	5.5	4			252	2	3.8	4	169	3
75			6.4	4							180	4
76			7.5	2							174	4
77			5.6	4							190	2

Table 5.-- *Laboratory performance ratings for standard reference water sample T-117 (trace constituents)--Continued*

Analyte =	Sb (Antimony)		Se (Selenium)		SiO2 (Silica)		Sr (Strontium)		V (Vanadium)		Zn (Zinc)	
MPV =	5.50	µg/L	6.00	µg/L	11.85	mg/L	265.0	µg/L	4.70	µg/L	176.0	µg/L
F-pseudosigma =	0.96		1.46		0.64		11.1		1.80		9.3	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
78	5.6	4	8.4	1							183	3
79			5.8	4							184	3
83											170	3
87	< 200	NR	6.4	4	11.7	4					176	4
90			5.6	4							185	3
91	2.7	0	7.6	2							202	0
92					11.4	3					4	0
97	3.1	0	6.1	4	12.0	4	269	4	3.7	3	201	0
100	5.6	4	5.2	3	12.2	3	250	2	< 10	NR	182	3
101			58.9	0	12.4	3			5.3	4	192	1
103					10.9	2	275	3	3.0	3	175	4
105	5.3	4	5.8	4	12.3	3	262	4	< 20	NR	170	3
108											173	4
109					11.0	2						
113			4.7	3	11.3	3	345	0			184	3
117	18.0	0	11.6	0					0.9	0	146	0
119	6.1	3	6.9	3	12.0	4					170	3
121					11.9	4	265	4	6.0	3	193	1
122												
123											200	0
126			5.2	3								
127	7.0	1	4.5	2	11.8	4	248	1			176	4
128	< 10	NR	8.0	2	12.1	4			< 3	NR	182	3
129												
133			3.7	1							215	0
134			7.2	3	11.5	3	260	4	4.7	4	169	3
138	8.7	0	5.3	4			259	3			176	4
140											181	3
141	43.0	0			11.2	3	175	0	< 10	NR	171	3
143					11.9	4					177	4
145					12.4	3	263	4	6.6	2	175	4
146	4.6	3	4.8	3	10.5	0	267	4	5.2	4	168	3
149	5.0	3	5.4	4								
153												
161					3.4	0			< 200	NR	176	4
167			5.0	3	11.4	3			< 40	NR	170	3
179	< 5	NR	6.0	4							172	4
180	5.6	4	10.0	0					1.7	1	173	4
182					53.0	0						
184											0	0
188												
189									< 8	NR	170	3
190					11.4	3					164	2
191					12.2	3	277	2				
193			6.0	4							165	2
194			5.0	3							200	0

Table 6. -- *Laboratory performance ratings for standard reference water sample M-120 (major constituents)*

[MPV, most probable value; ug/L, microgram per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all values; V/26, number of reported values of 26 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)	

			Alkalinity		B (Boron)		Ca (Calcium)		Cl (Chloride)		DSRD	
Analyte =												
MPV =			110.0	m g/L	46.0	µ g/L	62.0	m g/L	7.60	m g/L	358.0	m g/L
F-pseudosigma =			3.7		20.8		3.7		0.67		12.2	
Lab	OLR	V/16	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	3.4	16	115	2	41	4	65.3	3	8.6	2	355	4
2	2.3	6					58.0	2				
3	2.4	14	114	2	< 50	NR	68.9	1	7.8	4	365	3
4	3.0	2							7.9	4		
6	2.5	6	110	4			65.0	3				
7	1.6	14			92	0	59.9	3	8.3	2	680	0
8	2.3	14	107	3			64.0	3	7.2	3	338	1
9	2.4	12	107	3			56.0	1	9.0	0	349	3
10	3.5	13	112	3	90	0	63.0	4	7.8	4	370	3
12	2.8	11	112	3			67.0	2	12.0	0	355	4
13	2.7	12	105	2			58.5	2	6.1	0	334	1
15	2.8	15	110	4	45	4	55.0	1	7.5	4	349	3
16	1.7	14	108	3	163	0	58.7	3	8.9	1	368	3
18	3.2	14	108	3	48	4	60.6	4	7.3	4	359	4
19	3.8	10	110	4			61.2	4	7.5	4	358	4
20	3.5	4	110	4							343	2
23	3.4	8	110	4							364	4
24	3.8	13	110	4	56	4	63.0	4	7.4	4		
25	2.0	14	111	4	0	0	69.1	1	7.7	4	364	4
26	1.0	8					58.4	2	2.1	0		
27	3.2	6	112	3					6.6	2		
29	2.4	12	100	0	40	4	67.0	2	14.0	0	359	4
32	2.7	15	112	3	26	3	63.0	4	7.3	4	341	2
34	3.6	12	108	3			62.1	4	7.6	4	360	4
38	2.8	10	27	0			59.0	3			369	3
39	3.6	9			35	3	61.9	4				
40	3.4	14	109	4	40	4	63.8	3	7.7	4	363	4
41	2.0	2	70	0								
42	3.1	14	109	4			62.5	4	7.5	4	391	0
43	3.7	11	111	4			63.1	4	7.9	4	362	4
45	3.4	13	112	3	53	4	61.9	4	7.1	3	375	2
46	3.5	13	112	3	43	4	62.4	4	8.1	3	358	4
48	2.9	11	110	4	20	2	63.0	4	8.0	3	372	2
50	3.3	12	107	3	< 100	NR	61.0	4	7.0	3	358	4
51	3.0	11	110	4			57.5	2	12.4	0	354	4
52	3.5	14	112	3	< 150	NR	62.1	4	7.7	4	367	3
54	3.6	11	110	4			59.0	3	7.9	4	347	3
55	2.9	14	110	4			63.3	4	8.0	3	360	4
56	2.4	9	110	4			58.3	2	8.2	3		
57	2.8	10	110	4	< 100	NR	61.0	4				
58	2.7	9	107	3			58.0	2	8.2	3		
59	2.5	8	112	3					6.9	2	367	3
60	2.3	3	114	2								
61	1.7	14	98	0	11	1	63.6	3	9.6	0	363	4
63	1.3	16	115	2	46	4	67.0	2	9.0	0	378	1
64	2.7	10					62.8	4	0.9	0		
65	3.5	2							7.7	4		
66	2.8	6	107	3					6.2	0	352	4
68	2.8	13	113	3	120	0	61.0	4	7.8	4		
69	2.9	11	108	3			59.3	3	8.4	2	354	4
70	3.1	15	107	3	41	4	63.2	4	7.8	4	354	4
71	2.6	10	112	3			71.0	0			365	3
74	3.1	16	110	4	47	4	63.5	3	6.0	0	366	3
75	3.7	10	109	4			62.9	4	7.7	4	365	4
76	2.8	10	110	4			72.5	0	7.3	4	362	4
77	2.5	10	114	2	240	0	65.0	3	12.0	0	350	4
78	1.4	11	105	2			95.0	0	7.1	3	230	0
79	2.5	4	100	0								
83	3.0	7	110	4			57.6	2				
87	3.4	12	108	3			62.0	4	7.3	4	368	3

Table 6. -- *Laboratory performance ratings for standard reference water sample M-120 (major constituents)--Continued*

	Analyte =	Alkalinity		B (Boron)		Ca (Calcium)		Cl (Chloride)		DSRD	
	MPV =	110.0	m g/L	46.0	μ g/L	62.0	m g/L	7.60	m g/L	358.0	m g/L
	F-pseudosigma =	3.7		20.8		3.7		0.67		12.2	
Lab	OLR	V/16	RV Rating		RV Rating		RV Rating		RV Rating		RV Rating
90	2.5	6	109	4				9.1	0	349	3
91	2.4	11	107	3			67.4 2	8.0	3	348	3
92	3.8	6	108	3						352	4
93	1.8	9					59.9 3	15.4	0		
95	0.2	6					46.5 0	6.5	1		
97	2.6	14	109	4			58.3 2	7.2	3	358	3
100	3.0	15	111	4	56	4	65.7 2	7.7	4	359	4
101	2.5	11					62.2 4	4.5	0	352	4
102	1.7	3						< 6.2	NR		
103	2.1	7			33	3	58.0 2				
105	3.1	14	112	3			60.2 3	8.0	3	348	3
108	1.5	2									
109	2.3	13	124	0	42	4	63.0 4	9.3	0	390	0
113	2.2	14	106	2			59.8 3	9.4	0	694	0
117	1.4	11	105	2			40.1 0	5.0	0	305	0
119	2.8	13	114	2	50	4	62.7 4	6.0	0	342	2
121	2.5	8			< 0.05	0	60.5 4				
122	1.9	12	112	3	189	0	31.0 0	7.4	4	808	0
123	2.6	5					68.1 1				
127	3.1	13	111	4			63.2 4	7.6	4	366	3
128	3.0	12	105	2	26	3	64.5 3	7.3	4		
129	2.2	12	108	3	110	0	61.0 4	7.2	3	348	3
133	2.5	4	106	2			66.7 2				
134	3.5	15	111	4	46	4	60.0 3	7.4	4	354	4
138	3.2	11	106	2			65.7 2	7.8	4	352	4
140	2.9	11					60.5 4	7.0	3	311	0
141	2.7	14	109	4	65	3	58.1 2	7.2	3	331	0
143	3.6	5						7.0	3	358	4
145	3.6	14	112	3	50	4	61.7 4	7.5	4		
146	2.8	13	110	4	43	4	61.8 4	9.0	0	352	4
149	2.5	8	74	0			57.4 2			357	4
153	2.8	9	112	3			63.6 3	6.6	2		
158	2.5	6	105	2				6.6	2	347	3
161	1.3	9	108	3	215	0	42.0 0				
167	3.2	12	109	4	67	2	61.7 4			358	4
177	0.8	4						12.4	0		
179	1.1	7					54.3 0	232.0	0		
180	3.4	11	111	4	30	3	60.6 4	7.6	4		
182	2.3	12	111	4			45.0 0	8.3	2		
183	1.8	6	110	4			71.7 0	7.9	4		
184	2.9	7	90	0			61.0 4	7.6	4	360	4
188	2.8	9	125	0			60.6 4	6.3	1		
189	3.0	10	112	3			62.0 4	7.5	4	420	0
190	2.7	12	112	3			57.0 2	7.0	3		
191	2.2	10	103	1			58.6 3	7.5	4		
193	3.7	3						7.5	4		
194	2.5	6	109	4				4.8	0		

Table 6.-- *Laboratory performance ratings for standard reference water sample M-120 (major constituents)--Continued*

[MPV, most probable value; ug/L, microgram per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all values; V/26, number of reported values of 26 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)	P (total Phosphorus)
MPV =	0.625 m g/L	3.90 m g/L	17.50 m g/L	25.00 m g/L	0.011 m g/L
F-pseudosigma =	0.059	0.22	0.89	1.41	0.034

Lab	F RV	F Rating	K RV	K Rating	Mg RV	Mg Rating	Na RV	Na Rating	P RV	P Rating
1	0.60	4	3.80	4	17.5	4	25.5	4	0.003	4
2			4.46	0	17.2	4	28.6	0		
3	0.68	3	3.46	1	18.8	2	26.0	3	0.011	4
4										
6	0.80	0			15.9	1				
7	0.53	1	5.32	0	17.7	4	24.0	3	0.100	0
8			3.60	2	18.6	2	26.6	2	0.050	2
9	0.62	4	3.90	4	17.0	3	25.0	4		
10	0.60	4	3.90	4	17.5	4	24.6	4		
12	0.60	4	4.20	2	18.7	2	26.0	3	< 0.02	NR
13	0.65	4	3.93	4	17.9	4	25.0	4	< 0.02	NR
15	0.69	2	4.60	0	16.8	3	23.4	2	< 0.02	NR
16	454	0	3.52	1	16.8	3	24.0	3	0.015	4
18	0.65	4	2.50	0	16.9	3	24.5	4	< 0.001	NR
19	0.64	4	3.67	3	18.1	3	25.1	4	< 0.05	NR
20									0.010	4
23	0.56	2	3.56	2					0.010	4
24	0.61	4	3.90	4	17.4	4	25.5	4		
25	0.63	4	4.36	0	18.8	2	26.6	2	0.080	0
26			10.60	0	19.5	0	21.8	0		
27			3.96	4	16.8	3	24.6	4		
29	0.69	2	4.00	4	16.0	1	27.0	2		
32	0.70	2	3.92	4	17.8	4	26.8	2		
34	0.63	4	3.70	3	16.9	3	24.9	4	0.005	4
38			3.86	4	16.9	3	23.2	2	0.008	4
39			3.70	3	17.1	4	24.0	3		
40	0.69	2	3.73	3	16.9	3	24.0	3		
41										
42	0.68	3	3.50	1	17.5	4	25.5	4	0.014	4
43			3.90	4	18.0	3	24.8	4		
45	0.56	2	3.74	3	17.3	4	24.9	4		
46	0.65	4	3.66	3	18.3	3	25.7	4	< 0.02	NR
48			4.10	3	18.0	3	26.3	3	< 0.01	NR
50	0.50	0	3.90	4	18.0	3	25.0	4		
51			4.12	3	17.0	3	25.2	4	0.000	NR
52	0.68	3	3.79	4	17.2	4	25.0	4	< 0.01	NR
54	0.61	4	3.80	4	17.3	4	24.7	4		
55	0.73	1	3.90	4	18.3	3	24.4	4	< 0.01	NR
56			3.80	4	15.4	0	23.0	2		
57	0.70	2	4.10	3	18.0	3	23.0	2	< 0.02	NR
58	0.57	3			17.5	4	18.0	0	0.010	4
59	0.59	3								
60									0.007	4
61	0.62	4	4.93	0	19.1	1	26.0	3	0.039	3
63	0.64	4	3.10	0	19.0	1	26.3	3	0.180	0
64			3.81	4	17.7	4	22.7	1	0.002	4
65									< 0.05	NR
66										
68			3.90	4	18.0	3	24.0	3	0.004	4
69	0.63	4	4.20	2	16.7	3	24.8	4		
70	0.59	3	4.10	3	18.0	3	24.8	4	0.110	0
71	0.60	4	5.20	0	17.0	3	26.0	3	0.050	2
74	0.62	4	3.80	4	16.3	2	24.4	4	0.002	4
75			3.95	4	17.4	4	25.4	4		
76	0.63	4	3.52	1	19.0	1				
77	0.72	1	3.68	3						
78	0.64	4	0.06	0	0.2	0			0.050	2
79										
83			3.72	3	16.7	3	23.3	2		
87			3.79	4	17.0	3	26.0	3	0.014	4

Table 6. -- *Laboratory performance ratings for standard reference water sample M-120 (major constituents)--Continued*

Analyte =	F (Fluoride)		K (Potassium)		Mg (Magnesium)		Na (Sodium)		P (total Phosphorus)	
MPV =	0.625	m g/L	3.90	m g/L	17.50	m g/L	25.00	m g/L	0.011	m g/L
F-pseudosigma =	0.059		0.22		0.89		1.41		0.034	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
90	0.65	4							0.150	0
91			3.18	0	18.6	2	29.5	0		
92										
93	1.29	0	3.90	4	18.6	2	23.0	2		
95			4.80	0	48.0	0	49.9	0		
97	0.60	4	3.20	0	20.9	0	24.5	4		
100	0.80	0	3.76	4	18.8	2	26.6	2	1.320	0
101			3.80	4	18.0	3	25.0	4		
102									0.000	NR
103			5.00	0	17.4	4	28.0	0	< 0.1	NR
105	0.56	2	4.51	0	17.3	4	24.1	3	< 0.02	NR
108									0.660	0
109	0.63	4	3.60	2	17.0	3	25.0	4		
113	0.80	0	3.98	4	17.1	4	26.3	3	0.004	4
117	0.59	3	3.00	0	17.4	4	23.5	2		
119	0.59	3	3.70	3	18.1	3	24.9	4	0.000	NR
121			3.90	4	17.2	4	25.0	4		
122	0.45	0	48.00	0	18.5	2	26.0	3		
123			4.00	4	17.4	4	24.1	3		
127	0.55	2	3.76	4	17.2	4	24.1	3		
128	0.55	2	3.98	4	18.0	3	25.1	4	< 0.01	NR
129	0.51	1	6.30	0	19.0	1	25.0	4		
133					16.9	3			< 0.01	NR
134	0.56	2	3.80	4	17.0	3	25.0	4		
138	0.58	3	3.98	4	18.4	2	26.0	3	< 0.05	NR
140	0.67	3	4.00	4	17.4	4	26.0	3	0.030	3
141	0.64	4	3.80	4	17.5	4	25.1	4	< 0.05	NR
143									0.003	4
145			3.58	2	17.1	4	24.7	4	0.020	4
146			3.79	4	17.3	4	20.0	0		
149	0.61	4	3.80	4	20.0	0	26.0	3		
153	0.52	1	3.76	4	17.0	3	25.4	4		
158										
161	0.63	4	4.24	2	26.5	0			< 0.01	NR
167	0.60	4	3.90	4	17.4	4	25.3	4		
177	0.69	2								
179			3.60	2	19.9	0	25.3	4	< 0.18	NR
180	0.67	3	3.97	4	17.7	4	24.6	4	< 0.01	NR
182	0.60	4	2.10	0	17.0	3	23.5	2	0.010	4
183	0.46	0								
184			4.20	2	18.0	3	26.0	3		
188			3.96	4	17.4	4	24.1	3		
189	0.57	3	4.00	4	18.0	3	23.0	2	0.040	3
190	0.62	4	3.60	2	16.0	1	23.0	2	0.004	4
191			3.81	4	20.3	0	27.7	1	< 0.03	NR
193										
194	0.60	4								

Table 6.-- *Laboratory performance ratings for standard reference water sample M-120 (major constituents)--Continued*

[MPV, most probable value; ug/L, microgram per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all values; V/26, number of reported values of 26 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 =	8.25	9.810 m g/L	155.0 m g/L	536.0 µ S/cm	717.0 µ g/L	3.80 µ g/L
F-pseudosigma =	0.19	0.445	5.2	24.5	31.9	2.15

Lab	pH RV	pH Rating	SiO2 (Silica) RV	SiO2 (Silica) Rating	SO4 (Sulfate) RV	SO4 (Sulfate) Rating	Sp Cond RV	Sp Cond Rating	Sr (Strontium) RV	Sr (Strontium) Rating	V (Vanadium) RV	V (Vanadium) Rating
1	8.23	4	9.81	4	165	1	545	4	741	3	2.95	4
2	8.28	4	9.92	4								
3	8.33	4	10.50	1	146	1	515	3	750	2	< 10	NR
4					163	2						
6	8.36	3					530	4				
7	7.70	0	10.10	3	148	2	505	2	700	3	< 10	NR
8	7.70	0	34.60	0	157	4	534	4	755	2	4.70	4
9	7.51	0	9.98	4	158	3	486	0				
10	8.26	4	9.50	3	155	4	544	4				
12	8.20	4			152	3	535	4				
13	8.22	4	9.47	3	146	1	515	3				
15	7.87	0	9.65	4	159	3	545	4	718	4	3.63	4
16	7.80	0			159	3	454	0	650	0	< 10	NR
18	8.45	2	10.20	3	159	3	550	3	725	4	< 5	NR
19	8.32	4					532	4				
20	8.20	4										
23	8.38	3			155	4	532	4				
24	8.20	4	9.94	4	151	3	549	3	714	4		
25	7.71	0			155	4	555	3	1	0	< 5	NR
26	7.75	0			163	2	540	4				
27					150	3						
29	8.22	4			158	3	560	3				
32	7.77	0	9.84	4	147	2	573	1	750	2	3.30	4
34	8.37	3			151	3	545	4				
38	8.30	4	9.57	3			511	2				
39			10.00	4	150	3			705	4	3.00	4
40	8.18	4	10.44	2	151	3	544	4	716	4		
41	8.30	4										
42	8.36	3	10.00	4	154	4	553	3	756	2		
43	8.45	2	9.90	4	153	4	546	4				
45	8.36	3	9.69	4	153	4	548	4				
46	8.22	4	9.33	2	154	4	544	4				
48	8.30	4			177	0	548	4				
50	8.10	3	9.60	4	153	4	545	4				
51	8.30	4	9.62	4	146	1	532	4				
52	8.28	4	10.60	1	154	4	514	3	721	4	3.50	4
54	8.30	4			158	3	515	3				
55	8.40	3	10.06	3	173	0	525	4	738	3	19.30	0
56	8.65	0			151	3	533	4				
57	8.20	4	10.70	0	150	3	550	3			< 50	NR
58	8.03	2			159	3						
59	8.01	2	11.40	0	158	3	546	4				
60	7.94	1										
61	7.86	0	2.40	0	158	3	568	2			< 10	NR
63	7.80	0	10.42	2	163	2	467	0	799	0	73.00	0
64	8.02	2	9.05	1	159	3	534	4				
65					151	3						
66	8.30	4			149	2	547	4				
68	8.00	2	9.69	4			2520	0	660	1	4.40	4
69	8.41	3			166	1	550	3				
70	8.13	3	9.60	4	152	3	473	0	707	4	< 20	NR
71	8.26	4			155	4						
74	8.22	4	9.31	2	151	3	543	4	673	2	2.30	3
75	8.10	3			161	2	533	4				
76	7.97	2			157	4	544	4				
77	8.20	4			157	4	530	4				
78	8.19	4			36	0	630	0				
79	8.30	4			150	3	520	3				
83			9.50	3	156	4						
87	8.24	4	9.70	4	154	4	496	1				

Table 6.-- *Laboratory performance ratings for standard reference water sample M-120 (major constituents)--Continued*

Analyte =	pH		SiO2 (Silica)		SO4 (Sulfate)		Sp Cond		Sr (Strontium)		V (Vanadium)	
MPV =	8.25		9.810	m g/L	155.0	m g/L	536.0	µ S/cm	717.0	µ g/L	3.80	µ g/L
F-pseudosigma =	0.19		0.445		5.2		24.5		31.9		2.15	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
90	8.32	4										
91	8.30	4			158	3	536	4			6.69	2
92	8.25	4	9.60	4	157	4	537	4				
93	8.45	2			164	1	503	2				
95					31	0						
97	8.35	3	9.82	4	163	2	552	3	768	1	4.67	4
100	8.32	4	9.97	4	155	4	547	4	700	3	< 10	NR
101	7.84	0	10.40	2	165	1	518	3			6.00	2
102			10.50	1	134	0	535	4				
103			9.40	3					745	3	< 2	NR
105	8.29	4	10.06	3	157	4	542	4	711	4	5.90	3
108	8.36	3										
109	7.05	0	9.28	2	150	3	526	4				
113	7.02	0	9.80	4	155	4	506	2	770	1		
117	8.08	3			126	0	490	1				
119	7.92	1	10.00	4	156	4	562	2				
121			9.90	4			790	0	2	0		
122	8.25	4			156	4	556	3				
123	8.60	1										
127	8.26	4	9.70	4	79	0	558	3	667	1		
128	8.30	4	11.10	0	156	4	550	3			< 3	NR
129	8.34	4			15	0	549	3				
133	8.10	3										
134	8.30	4	9.52	3	155	4	547	4	700	3	2.50	3
138	8.20	4			151	3			720	4	< 3	NR
140	8.41	3			162	2	523	3				
141	8.40	3	9.37	3	157	4	433	0	555	0	< 10	NR
143	8.34	4	9.40	3								
145	8.30	4	10.43	2	158	3	535	4	709	4	2.90	4
146	8.23	4	8.90	0			471	0	726	4	3.80	4
149	8.40	3										
153	8.36	3			147	2						
158	8.22	4			170	0	547	4				
161	8.39	3	2.36	0			1	0			< 200	NR
167	8.00	2	< 1	0	157	4	508	2			< 40	NR
177			7.80	0	166	1						
179	7.80	0					510	2				
180	8.28	4			140	0	550	3			< 1.5	NR
182	8.23	4	3.90	0	138	0	536	4				
183	8.38	3					330	0				
184												
188	8.33	4	10.33	2	151	3						
189					155	4					< 8	NR
190	8.30	4	9.47	3	154	4	478	0				
191	8.02	2	10.50	1	152	3			741	3		
193					159	3	525	4				
194	8.15	3			11	0	525	4				

Table 7. -- *Laboratory performance ratings for standard reference water sample N-32 (preserved nutrients)*

[MPV, most probable value; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/5, number of reported values of 5 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 =	NH3 (Ammonia)		NH3 + Org N as N (Ammonia+Organic N)		NO3 + NO2 as N (Nitrate+Nitrite)		total P as P (Phosphorus)		PO4 as P (Orthophosphate)	
	MPV =	0.057 mg/L		0.210 mg/L		0.135 mg/L		0.098 mg/L		0.092 mg/L	
	F-pseudosigma =	0.042		0.170		0.042		0.015		0.010	
Lab	OLR	V/5	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	4.0	4	0.06	4	< 0.2	NR	0.130	4	0.093	4	0.097	4
3	2.8	4	< 0.01	NR	0.869	0	0.171	3	0.100	4	0.094	4
7	1.8	4	0.090	3			0.150	4	0.760	0	2.000	0
16	2.4	5	0.112	2	0.299	3	0.107	3	0.095	4	0.063	0
20	2.5	4	< 0.156	NR	2.327	0	0.160	3	0.110	3	0.090	4
21	4.0	1					0.149	4				
29	2.0	2					0.120	4			0.150	0
42	4.0	3					0.136	4	0.102	4	0.097	4
43	4.0	1					0.120	4				
45	3.2	5	0.138	1	0.378	3	0.129	4	0.097	4	0.088	4
48	2.8	5	0.040	4	0.130	4	0.320	0	0.110	3	0.086	3
52	3.5	4	0.034	3	< 0.1	NR	0.133	4	0.087	3	0.092	4
56	3.3	3			0.080	3			0.090	3	0.090	4
58	3.0	2	0.060	4					0.080	2		
60	1.3	3	0.390	0	0.520	1			0.110	3		
63	1.5	4	< 0.5	NR	1.100	0	0.090	2	0.160	0	0.090	4
68	4.0	3	0.040	4	0.160	4			0.096	4		
75	2.8	4	0.043	4			0.115	4	0.142	0	0.100	3
76	4.0	2	0.050	4			0.130	4				
77	2.0	2					0.120	4			0.120	0
78	1.3	3					0.283	0	0.094	4	0.050	0
88	0.0	3	0.240	0			0.450	0			0.200	0
90	2.8	5	0.067	4	0.164	4	0.090	2	0.107	3	0.076	1
92	2.7	3					0.121	4	0.180	0	0.094	4
105	2.0	5	0.170	0	0.510	1	0.186	2	0.100	4	0.085	3
119	3.8	4	< 0.1	NR	0.110	3	0.140	4	0.100	4	0.090	4
127	3.0	5	0.019	3	0.148	4	0.232	0	0.098	4	0.097	4
129	2.6	5	0.054	4	0.118	3	0.311	0	0.090	3	0.082	3
133	3.5	4	0.098	3	0.203	4			0.094	4	0.086	3
140	3.2	5	0.050	4	0.240	4	0.130	4	0.070	1	0.100	3
141	2.8	5	0.057	4	0.057	3	0.180	2	0.080	2	0.100	3
145	2.4	5	0.040	4	0.210	4	0.100	3	0.140	0	0.110	1
167	2.5	4	0.050	4			0.129	4	0.080	2	0.069	0
179	2.8	4	0.057	4	< 0.6	NR	0.112	3	0.145	0	0.093	4
182	0.0	4	0.300	0			2.400	0	0.040	0	0.040	0
189	2.0	3	0.100	2	0.250	4			0.190	0		
190	3.8	5	0.037	4	0.266	4	0.143	4	0.090	3	0.091	4
194	3.0	3	< 0.1	NR	0.190	4	0.140	4			0.110	1

Table 7. -- *Laboratory performance ratings for standard reference water sample N-32 (nonpreserved nutrients)--Continued*

			Analyte = NH3 as N (Ammonia)		NH3 + Org N as N (Ammonia+Organic N)		NO3 + NO2 as N (Nitrate+Nitrite)		total P as P (Phosphorus)		PO4 as P (Orthophosphate)	
		MPV =	0.040 mg/L		0.151 mg/L		0.148 mg/L		0.096 mg/L		0.091 mg/L	
		F-pseudosigma =	0.021		0.041		0.024		0.011		0.010	
Lab	OLR	V/5	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	3.5	4	0.058	3	< 0.2	NR	0.158	4	0.093	4	0.096	3
5	3.8	5	0.035	4	0.117	4	0.162	3	0.094	4	0.092	4
6	0.8	4	0.111	0			0.301	0	0.110	2	0.101	1
8	2.0	3	0.060	3	0.210	3			0.130	0		
9	3.3	3	0.044	4			0.147	4			0.099	2
10	4.0	5	0.040	4	0.120	4	0.150	4	0.093	4	0.092	4
12	3.0	3	< 0.2	NR	< 0.30	NR	0.160	4	0.100	4	0.080	1
13	3.7	3	< 0.02	NR	< 0.02	NR	0.140	4	0.095	4	0.085	3
15	2.8	5	0.052	3	0.108	3	0.659	0	0.094	4	0.094	4
18	2.8	4	0.026	3	0.120	4	0.110	1	0.090	3		
19	4.0	3	< 0.1	NR			0.160	4	0.096	4	0.088	4
21	3.8	5	0.031	4	0.128	4	0.166	3	0.096	4	0.093	4
23	3.0	3	< 0.1	NR	< 0.50	NR	0.140	4	0.100	4	0.080	1
25	1.8	5	0.082	1	0.156	4	0.149	4	0.129	0	0.018	0
29	2.0	2					0.140	4			0.140	0
34	3.5	4	0.032	4	0.150	4	0.130	3	0.086	3		
38	4.0	5	0.042	4	0.120	4	0.141	4	0.096	4	0.090	4
39	3.0	4	0.032	4			0.110	1	0.100	4	0.095	3
42	3.7	3					0.141	4	0.102	3	0.092	4
45	2.4	5	0.141	0	0.461	0	0.155	4	0.095	4	0.094	4
46	3.8	4	0.034	4	0.140	4	0.140	4	0.089	3		
51	3.0	5	0.050	4	0.100	3	0.130	3	0.088	3	0.084	2
52	4.0	4	0.030	4	< 0.1	NR	0.148	4	0.093	4	0.091	4
53	2.0	1					0.180	2				
55	3.4	5	0.030	4	0.100	3	0.140	4	0.100	4	0.098	2
56	4.0	1					0.150	4				
58	3.0	2	0.050	4					0.080	2		
59	3.8	5	0.030	4	0.100	3	0.150	4	0.100	4	0.090	4
60	0.7	3	0.380	0	0.450	0			0.110	2		
61	1.8	5	0.210	0	0.456	0	0.120	2	0.089	3	0.089	4
64	3.5	4	0.050	4			0.140	4	0.083	2	0.091	4
66	3.8	5	0.030	4	0.151	4	0.147	4	0.106	3	0.090	4
68	0.5	2	0.255	0			0.190	1				
69	3.0	1					0.130	3				
70	1.8	4	< 0.1	NR	0.173	4	0.128	3	0.244	0	0.153	0
74	3.8	5	0.028	3	0.124	4	0.143	4	0.101	4	0.090	4
78	1.0	3					0.322	0	0.090	3	0.270	0
83	2.0	2	< 0.05	NR			0.330	0			0.090	4
87	1.8	4	< 0.1	NR	0.140	4	0.170	3	0.140	0	0.140	0
88	0.0	3	0.130	0			0.730	0			0.170	0
92	2.8	4	0.031	4			0.127	3	0.160	0	0.092	4
93	2.0	2	0.016	2			0.114	2				
97	3.2	5	0.040	4	0.140	4	0.160	4	0.080	2	0.100	2
100	1.3	4	0.020	3			0.210	0	1.620	0	0.080	2
102	3.0	5	0.030	4	0.160	4	0.100	1	0.095	4	0.082	2
109	4.0	1					0.143	4				
113	3.0	3	< 0.01	NR	< 0.5	NR	0.129	3	0.090	3	0.095	3
119	3.8	4	< 0.1	NR	0.150	4	0.150	4	0.090	3	0.090	4
123	1.3	3	0.110	0	2.360	0	0.150	4	< 0.1	NR		
127	3.6	5	0.019	3	0.158	4	0.142	4	0.100	4	0.097	3
128	1.7	3	0.021	3			0.188	1	0.078	1		
129	2.2	5	0.060	3	0.174	4	1.086	0	0.090	3	0.079	1
133	0.0	1					0.214	0				
138	2.8	5	0.030	4	0.156	4	0.129	3	0.105	3	0.106	0
143	3.3	4	0.020	3			0.119	2	0.092	4	0.088	4
145	2.0	5	0.040	4	0.230	3	0.130	3	0.150	0	0.110	0
158	3.2	5	0.070	2	0.250	2	0.140	4	0.100	4	0.090	4
161	0.0	2	< 0.02	NR					0.030	0	< 0.01	0
167	2.3	3	< 0.05	NR			0.156	4	0.090	3	0.069	0
177	2.0	2	0.050	4			0.321	0				
179	1.8	4	0.045	4	< 0.6	NR	0.126	3	0.240	0	0.104	0
183	3.5	2							0.106	3	0.090	4
184	3.5	2			0.170	4	0.130	3				
189	2.0	2					0.250	0			0.090	4
190	3.6	5	0.027	3	0.175	4	0.150	4	0.088	3	0.092	4
191	2.3	3					0.142	4	0.090	3	0.060	0
193	1.0	1					0.190	1				
194	2.3	3	< 0.1	NR	0.120	4	0.170	3			0.150	0

Table 8.-- *Laboratory performance ratings for standard reference water sample N-33 (preserved nutrients)*

[MPV, most probable value; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/5, number of reported values of 5 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 = NH3 as N (Ammonia)		NH3 + Org N as N (Ammonia+Organic N)		NO3 + NO2 as N (Nitrate+Nitrite)		total P as P (Phosphorus)		PO4 as P (Orthophosphate)	
MPV =	1.330 mg/L		1.392 mg/L		0.592 mg/L		0.840 mg/L		0.820 mg/L	
F-pseudosigma =	0.133		0.258		0.059		0.047		0.042	

Lab	OLR	V/5	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	4.0	5	1.323	4	1.378	4	0.592	4	0.840	4	0.839	4
2	1.5	2	1.550	1							0.877	2
3	2.4	5	1.160	2	2.320	0	0.584	4	0.875	3	0.856	3
7	1.8	4	1.410	3			0.610	4	8.170	0	17.600	0
16	3.0	5	1.123	1	1.497	4	0.643	3	0.854	4	0.797	3
20	3.3	4	1.520	2			0.630	3	0.850	4	0.830	4
29	2.0	2			0.640	0			0.820	4		
41	0.3	3	1.660	0	2.330	0	0.690	1				
42	1.7	3					0.554	3	0.747	1	0.746	1
43	4.0	1					0.600	4				
45	2.8	5	1.150	2	1.710	2	0.546	3	0.847	4	0.847	3
48	3.4	5	1.140	2	1.430	4	0.620	4	0.840	4	0.795	3
52	4.0	5	1.290	4	1.390	4	0.582	4	0.826	4	0.800	4
58	1.5	2	1.410	3					0.710	0		
60	3.0	3	1.520	2	1.340	4			0.810	3		
63	3.0	4	1.390	4	< 2	NR	0.590	4	0.900	2	0.870	2
65	3.0	1	1.430	3								
68	3.3	3	1.230	3	1.220	3			0.828	4		
75	2.8	4	1.430	3			0.595	4	1.000	0	0.800	4
76	4.0	2	1.330	4			0.580	4				
78	0.3	3			0.671	0	0.834	0	0.752	1		
79	4.0	1	1.280	4								
88	2.7	3	1.340	4			0.890	0			0.840	4
90	2.0	5	1.390	4	1.300	4	0.520	2	0.713	0	0.697	0
92	2.7	3					0.655	2	0.900	2	0.813	4
105	3.0	5	1.410	3	2.180	0	0.576	4	0.830	4	0.820	4
119	3.8	5	1.350	4	1.460	4	0.650	3	0.850	4	0.820	4
127	3.6	5	1.320	4	1.380	4	0.622	3	0.863	4	0.853	3
129	3.2	5	1.250	3	1.392	4	0.562	3	0.831	4	0.758	2
133	3.0	4	1.070	1	1.180	3			0.840	4	0.800	4
140	3.0	5	1.330	4	1.600	3	0.588	4	0.720	0	0.830	4
141	1.8	5	1.200	3	1.200	3	0.640	3	0.740	0	0.910	0
145	2.0	5	1.100	1	1.150	3	0.510	2	0.770	2	0.870	2
167	3.3	4	1.170	2			0.593	4	0.811	3	0.803	4
179	1.4	5	2.424	0	2.360	0	0.482	1	0.870	3	0.784	3
182	0.3	4	1.900	0			0.500	1	1.290	0	1.290	0
189	2.0	3	1.250	3	1.600	3			0.940	0		
190	3.2	5	1.312	4	1.616	3	0.587	4	0.798	3	0.776	2

Table 8. -- *Laboratory performance ratings for standard reference water sample N-33 (nonpreserved nutrients)--Continued*

	Analyte =	NH3 as N (Ammonia)		NH3 + Org N as N (Ammonia+Organic N)		NO3 + NO2 as N (Nitrate+Nitrite)		total P as P (Phosphorus)		PO4 as P (Orthophosphate)	
	MPV =	1.300 mg/L		1.390 mg/L		0.610 mg/L		0.839 mg/L		0.836 mg/L	
	F-pseudosigma =	0.082		0.091		0.033		0.045		0.037	
Lab	OLR	V/5	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	4.0	5	1.276	4	1.366	4	0.608	4	0.834	4	0.854	4
2	1.0	2	1.566	0							0.878	2
5	2.4	5	1.300	4	1.190	0	0.607	4	0.832	4	0.937	0
6	1.0	4	1.680	0			0.801	0	0.943	0	0.842	4
8	1.3	3	0.780	0	1.460	3			0.920	1		
9	3.7	3	1.280	4			0.623	4			0.858	3
10	3.6	5	1.360	3	1.390	4	0.630	3	0.850	4	0.840	4
12	2.2	5	1.400	2	1.300	3	1.080	0	0.900	2	0.840	4
13	2.2	5	1.270	4	1.470	3	0.612	4	0.943	0	0.913	0
15	2.0	5	1.200	2	1.340	3	0.537	0	0.900	2	0.856	3
18	4.0	4	1.330	4	1.390	4	0.611	4	0.820	4		
19	4.0	4	1.330	4			0.620	4	0.820	4	0.820	4
23	3.6	5	1.330	4	1.470	3	0.600	4	0.850	4	0.810	3
25	1.8	5	1.300	4	2.570	0	0.630	3	0.772	2	0.278	0
29	2.0	2					0.610	4			0.680	0
34	3.8	4	1.310	4	1.400	4	0.600	4	0.808	3		
38	3.6	5	1.358	3	1.360	4	0.597	4	0.882	3	0.823	4
39	0.8	4	1.080	0	0.470	0	0.900	0	0.880	3		
42	0.0	3	0.547	0	0.747	0	0.746	0				
45	2.8	5	1.230	3	1.580	0	0.594	4	0.857	4	0.857	3
46	3.3	4	1.167	1	1.380	4	0.609	4	0.825	4		
52	3.6	5	1.350	3	1.370	4	0.602	4	0.818	4	0.810	3
53	0.0	1					0.720	0				
55	2.2	5	1.330	4	1.450	3	0.600	4	0.950	0	0.940	0
57	1.6	5	1.100	0	1.600	0	0.650	2	0.800	3	0.800	3
58	0.5	2	1.160	1					0.710	0		
59	3.4	5	1.300	4	1.400	4	0.640	3	0.900	2	0.830	4
60	1.3	3	1.510	0	0.950	0			0.830	4		
61	2.2	5	0.620	0	2.530	0	0.610	4	0.870	3	0.842	4
64	1.5	4	1.480	0			0.120	0	0.800	3	0.800	3
65	0.0	1	1.550	0								
66	3.8	5	1.290	4	1.380	4	0.618	4	0.833	4	0.803	3
68	1.5	2	2.500	0			0.580	3				
69	0.0	1			0.590	0						
70	2.8	5	1.258	3	1.316	3	0.578	3	0.824	4	0.774	1
74	3.6	5	1.280	4	1.390	4	0.640	3	0.869	3	0.832	4
78	1.7	3					0.741	0	0.838	4	0.764	1
83	1.3	3	1.760	0			0.750	0			0.850	4
87	2.2	5	1.290	4	1.290	2	0.600	4	0.912	1	0.912	0
88	2.0	3	1.380	3			1.370	0			0.870	3
92	3.5	4	1.300	4			0.624	4	0.900	2	0.836	4
93	4.0	2	1.330	4			0.608	4				
97	1.7	3	1.430	1			0.670	1			0.860	3
100	1.5	4	1.330	4			0.560	1	2.440	0	0.900	1
101	2.0	5	1.020	0	1.380	4	0.520	0	0.866	3	0.800	3
108	1.5	4	1.410	2			0.600	4	1.100	0	0.740	0
109	4.0	1					0.594	4				
113	2.0	5	1.877	0	1.532	1	0.573	2	0.875	3	0.842	4
119	3.4	5	1.260	4	1.410	4	0.660	1	0.830	4	0.820	4
123	1.8	4	1.280	4	2.720	0	0.580	3	0.540	0		
127	3.4	5	1.360	3	1.400	4	0.608	4	0.865	3	0.855	3
128	4.0	3	1.260	4			0.615	4	0.839	4		
129	2.2	5	1.344	3	1.532	1	0.558	1	0.812	3	0.806	3
133	0.0	1					0.680	0				
138	3.6	5	1.370	3	1.390	4	0.611	4	0.800	3	0.842	4
143	3.5	4	1.340	4			0.569	2	0.830	4	0.830	4
145	2.0	5	1.220	3	1.090	0	0.590	3	0.780	2	0.890	2
158	3.8	5	1.290	4	1.400	4	0.630	3	0.820	4	0.820	4
161	0.0	3	0.846	0					0.700	0	< 0.01	0
167	3.5	4	1.180	2			0.598	4	0.824	4	0.819	4
177	1.5	2	1.250	3			0.794	0				
179	0.8	5	1.484	0	1.760	0	0.492	0	0.870	3	0.774	1
183	0.0	1									0.956	0
184	1.8	4	1.400	2	1.600	0	0.610	4	0.750	1		
188	0.0	1	0.835	0								
189	3.0	2					0.580	3			0.860	3
190	3.4	5	1.336	4	1.475	3	0.628	3	0.881	3	0.833	4
191	2.3	3					0.630	3	0.860	4	0.730	0
193	0.0	1					0.740	0				

Table 9.-- *Laboratory performance ratings for standard reference water sample P-18 (low ionic strength constituents)*

[MPV, most probable value; ug/L, microgram per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all values; V/8, number of reported values of 8 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 =	INSUFF DATA		0.89 mg/L		0.94 mg/L		INSUFF DATA		0.07 mg/L	
			F-pseudosigma =			0.67		0.15				0.07	
Lab	OLR	V/8		RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	4.0	8		0.04	NR	0.90	4	0.89	4	0.02	NR	0.10	4
2	3.1	7				0.84	3	0.94	4			0.07	4
3	3.3	8		< 10	NR	0.86	4	0.82	3	< 0.05	NR	0.08	4
7	2.6	7				0.93	3	0.82	3			< 1.2	NR
9	0.8	6				< 1	NR	2.00	0	0.05	NR	< 1	NR
15	3.0	8		1.80	NR	0.80	2	1.02	3	< 0.1	NR	0.05	4
20	1.3	3				< 2	NR	1.75	0			< 2	NR
27	1.4	5				0.85	3	0.74	2				
38	3.3	6		0.76	NR	0.90	4					0.05	4
44	3.2	6				0.89	4	0.96	4			0.07	4
46	3.0	7				0.81	2	0.98	4	< 0.05	NR	< 0.05	NR
48	1.4	8				0.95	3	1.00	4			0.27	0
52	3.5	6		< 2	NR	0.91	4	0.95	4	< 0.2	NR	< 0.2	NR
58	1.3	6				0.89	4	2.00	0	0.01	NR		
59	3.5	4						0.80	3	< 0.05	NR		
64	2.5	8				0.83	3	7.60	0			0.05	4
65	4.0	1						0.98	4				
74	2.6	8		< 1	NR	0.80	2	0.71	1	< 0.02	NR	0.06	4
78	0.9	8				59.00	0	1.00	4	< 0.1	NR	2.55	0
92	0.0	1											
93	3.6	8				0.88	4	0.86	3			0.06	4
95	0.7	6				0.69	0	1.22	1			0.28	0
101	2.5	8				0.94	3	1.20	1			0.06	4
102	0.0	1						< 1.2	NR				
105	3.5	8		2.40	NR	0.90	4	0.88	4	< 0.2	NR	0.07	4
110	3.7	3						0.85	3				
123	2.4	5				0.90	4					0.20	1
134	3.6	8				0.93	3	0.84	3	< 0.1	NR	0.07	4
141	2.7	7		4.00	NR	0.87	4	< 1	NR	< 0.05	NR	0.10	4
143	4.0	1											
145	3.2	6				0.91	4	0.77	2			< 0.11	NR
167	1.0	3		3.00	NR	< 1	NR	< 1	NR	0.04	NR	< 1	NR
184	3.0	4				0.79	2						
188	2.9	7				0.78	1	0.67	1			0.06	4
189	3.0	6				0.92	4	0.93	4	< 0.1	NR	0.24	0
190	1.8	8				0.50	0	0.80	3	0.02	NR	0.03	3
194	0.3	3						2.00	0	< 0.2	NR	< 0.5	NR

Table 9.-- *Laboratory performance ratings for standard reference water sample P-18 (low ionic strength constituents)--Continued*

Analyte =	Mg (Magnesium)		Na (Sodium)		pH		PO4 as P		SO4 (Sulfate)		Sp. Cond.	
MPV =	0.170 mg/L		0.78 mg/L		6.60		INSUFF DATA		1.60 mg/L		11.74	µ S/cm
F-pseudosigma =	0.015		0.09		0.29				0.37		0.64	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	0.17	4	0.82	4	6.69	4	< 0.01	NR	1.63	4	11.7	4
2	0.16	3	0.91	2	6.24	2			1.73	4		
3	0.16	3	0.77	4	6.46	4	< 0.005	NR	10.90	0	11.7	4
7	0.19	2	0.74	4	8.20	0	< 0.166	NR	1.37	3	11.3	3
9	< 0.1	0	1.00	0	7.28	0	0.01	NR	1.00	1	11.5	4
15	0.16	3	0.75	4	5.91	0	< 0.02	NR	1.69	4	11.6	4
20	< 2	NR	< 2	NR	6.82	3	0.01	NR	2.28	1		
27	0.22	0	0.44	0					1.20	2		
38	0.16	3	0.71	3	6.60	4	0.00	NR			10.8	2
44	0.20	0	0.73	3					1.65	4		
46	0.15	2	0.73	3	6.79	3	< 0.002	NR	1.60	4	12.2	3
48	0.35	0	1.04	0	6.30	2	< 0.005	NR	2.00	2	10.4	0
52	0.15	2	0.80	4	6.59	4	0.01	NR	< 10	NR	11.3	3
58	0.17	4	0.58	0	8.11	0			0.82	0		
59					6.34	3	< 0.05	NR	1.50	4	12.0	4
64	0.15	2	0.74	4	8.05	0	0.00	NR	1.50	4	12.3	3
65							< 0.05	NR	< 10	NR		
74	0.14	0	0.76	4	6.42	3	< 0.001	NR	1.57	4	12.1	3
78	16.00	0	24.50	0	6.75	3	0.04	NR	2.60	0	14.5	0
92									4.40	0		
93	0.18	3	0.74	4	6.60	4			1.68	4	11.4	3
95	0.12	0	0.85	3					2.37	0		
101	0.17	4	0.79	4	5.97	0			0.60	0	11.5	4
102							0.00	NR	< 3.5	NR	< 10	0
105	0.17	4	0.79	4	6.50	4	< 0.002	NR	1.50	4	14.0	0
110					6.74	4			1.59	4		
123	0.16	3	0.90	2	6.90	2						
134	0.17	4	0.87	3	6.50	4	< 0.01	NR	1.60	4	11.8	4
141	0.18	3	0.87	3	6.40	3	< 0.05	NR	2.00	2	17.0	0
143					6.62	4	0.00	NR				
145	0.18	3	0.84	3	6.80	3	< 0.01	NR	1.57	4	< 100	NR
167	< 1	NR	< 1	NR	6.30	2			29.00	0	10.5	1
184	0.18	3	0.78	4					1.40	3		
188	0.16	3	0.77	4	6.60	4			1.26	3		
189	0.16	3	0.69	3			< 0.01	NR	1.70	4		
190	0.10	0	0.60	0	6.58	4	0.00	NR	1.60	4	14.0	0
194					5.92	0			< 10	NR	12.8	1

Table 10.-- *Laboratory performance ratings for standard reference water sample Hg-13 (mercury)*

[MPV, most probable value; ug/L, micrograms per liter; Lab, laboratory number; RV, reported values]

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-13 (mercury)
MPV = 5.035 µg/L
F-pseudosigma = 0.815

Lab	RV	Rating
1	5.83	3
3	5.60	3
7	2.45	0
12	6.00	2
13	4.85	4
15	4.72	4
16	5.12	4
24	4.40	3
26	2.80	0
29	3.41	1
32	5.93	2
34	5.35	4
39	5.80	3
42	6.80	0
45	4.82	4
46	4.82	4
48	5.30	4
50	5.30	4
52	5.08	4
55	3.80	1
58	4.40	3
59	7.50	0
61	5.22	4
63	6.60	1
65	4.22	3
66	4.40	3
68	3.90	2
69	5.17	4
70	4.70	4
74	5.03	4
75	5.05	4
78	5.24	4
79	3.80	1
87	5.20	4
92	4.70	4
97	5.03	4
100	4.72	4
105	6.05	2
108	5.51	3
113	5.50	3
117	3.00	0
119	5.00	4
126	2.10	0
127	5.97	2
128	2.30	0
133	4.20	2
134	5.30	4
138	5.25	4
141	4.30	3
143	6.39	1
146	4.72	4
161	4.60	3
167	5.50	3
179	4.70	4
182	5.20	4
184	5.02	4
189	4.28	3
194	5.58	3

Table 11.-- *Statistical summary of reported data for standard reference sample T-117 (trace constituents)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

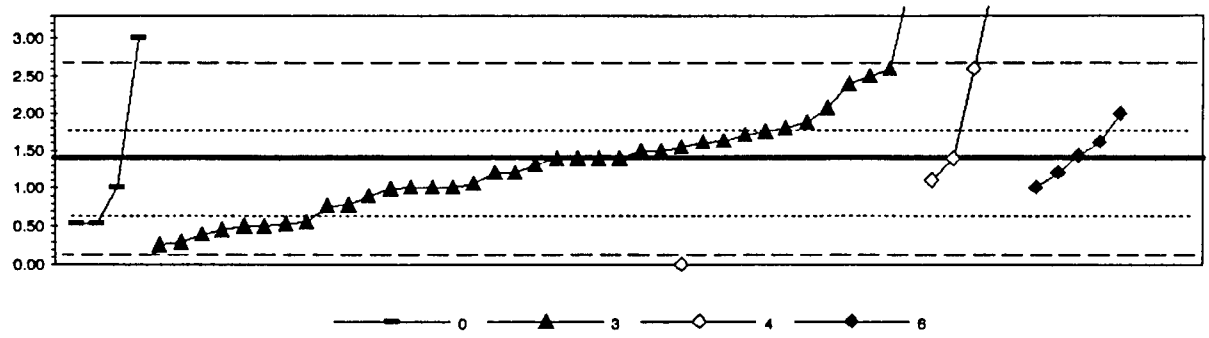
0. Other/Not reported		
1. AA: direct, air	=	atomic absorption: direct,air
2. AA: direct, N2O	=	atomic absorption: direct,nitrous oxide
3. AA: graphite furnace	=	atomic absorption: graphite furnace
4. ICP	=	inductively coupled plasma
5. DCP	=	direct coupled plasma
6. MS/ICP	=	mass spectrometry/inductively coupled plasma
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-pseudosigma	=	nonparametric statistic deviation
Hu	=	upper hinge value
Hl	=	lower hinge value
μ g/L	=	micrograms per liter
mg/L	=	milligrams per liter
Lab	=	laboratory code number
NR	=	not rated, less than value reported
<	=	less than

Table 11.-- *Statistical summary of reported data for standard reference water sample T-117 (trace constituents)--Continued*

Ag (Silver) **μ g/L**



0. Other		6. MS/ICP		
3. AA: graphite furnace				
4. ICP				
N =	4	41	7	1
Minimum =	0.53	0.26	0.01	1.43
Maximum =	3.00	3.80	155	1.43
Median =		1.43		
St Dev =		0.62		

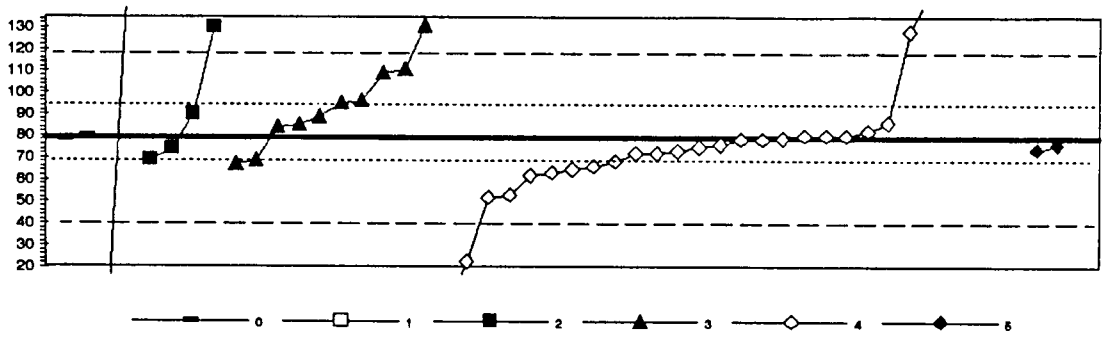
95% confidence MPV =	1.40	+/-	0.17
F-pseudosigma =	0.64		
N =	53		
Hu =	1.76		
Hl =	0.90		

Lab	Rating	Z-value	0	3	4	6
1	4	0.16		1.50		
3	1	1.72		2.50		
5	3	-0.78		0.90		
6	4	0.36		1.63		
7	NR				< 5	
12	4	-0.31		1.20		
13	NR			< 5		
15	2	1.08		2.08		
16	NR				< 7	
18	NR				< 3	
23	4	-0.13		1.32		
24	2	-1.41		0.50		
25	NR				< 34	
26	1	-1.78		0.26		
29	3	-0.63		1.00		
32	4	0.05				1.43
34	NR		< 5			
39	4	0.00			1.40	
45	3	-0.98		0.77		
46	3	0.56		1.76		
48	3	0.63		1.80		
50	NR			< 2		
52	4	0.22		1.54		
55	3	-0.97		0.78		
57	4	0.47		1.70		
58	3	-0.63		1.00		
59	NR				< 10	
61	NR				< 5	
63	3	-0.63		1.00		
65	NR		< 10			
66	3	0.77		1.89		
68	4	0.00		1.40		
69	4	0.31		1.60		
70	NR			< 5		
71	3	-0.63	1.00			
73	0	3.75			3.80	
74	1	-1.58		0.39		
76	2	-1.34		0.54		
77	4	0.00		1.40		
78	3	-0.55		1.05		
79	4	0.00		1.40		
87	NR		< 2			
91	4	0.14		1.49		
97	1	1.88		2.60		
100	2	-1.47		0.46		

Lab	Rating	Z-value	0	3	4	6
101	4	-0.47			1.10	
105	2	-1.39		0.51		
109	0	239.22			154.5	
113	3	-0.64		0.99		
117	0	3.75		3.80		
119	4	-0.31		1.20		
121	1	-1.72		0.30		
122	0	2.50	3.00			
127	2	-1.32		0.55		
128	4	0.00		1.40		
133	NR				< 5	
134	1	1.56		2.40		
138	2	-1.34	0.54			
141	NR				< 10	
146	1	1.88			2.60	
149	2	-1.38	0.53			
161	3	0.94		2.00		
179	4	0.31		1.60		
180	0	2.50			3.00	
184	0	-2.18			0.01	
189	4	-0.31		1.20		
193	3	-0.63		1.00		
194	3	-0.63	1.00			

Table 11.-- *Statistical summary of reported data for standard reference water sample T-117 (trace constituents)--Continued*

Al (Aluminum) μ g/L



0. Other		3. AA: graphite furnace					
1. AA: direct, air		4. ICP					
2. AA: direct, N2O		5. DCP					
N =	2	2	4	10	28	2	
Minimum =	78	1	69	67	0	74	
Maximum =	80	173	130	131	1060	76	
Median =				82.0	77.0		
St Dev =				19.6	21.4		

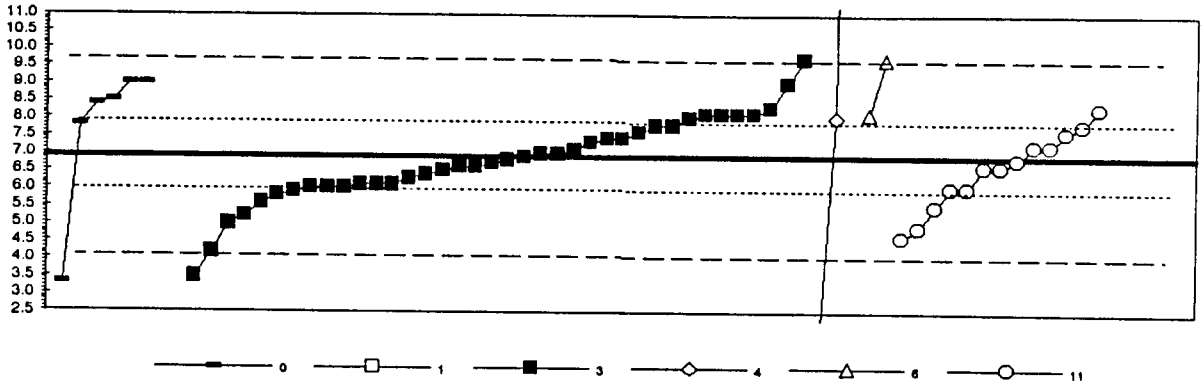
95% confidence MPV = 79.0 +/- 5.5
F-pseudosigma = 19.4
N = 47
Hu = 95.0
HI = 69.0

Lab	Rating	Z-value	0	1	2	3	4	5
1	4	-0.24						74
3	4	0.08					80	
5	4	-0.21					75	
7	4	-0.36					72	
8	0	-2.86					23	
12	NR						< 100	
13	0	2.65			130			
15	3	-0.69					65	
16	NR						< 300	
18	4	0.03					79	
25	4	-0.11					78	
27	4	-0.13						76
29	0	4.87		173				
32	4	0.08					80	
34	4	-0.49			69			
39	4	0.39					86	
46	4	0.18					82	
48	4	0.33				85		
50	4	0.28				84		
52	4	-0.32					72	
55	0	4.04					157	
57	NR						< 200	
59	4	0.08	80					
61	2	-1.37					52	
63	0	3.53					147	
64	0	50.54					1060	
66	4	-0.23			74			
68	0	5.23					180	
70	NR						< 100	
73	3	-0.66					66	
74	3	0.54				89		
78	3	0.83				95		
97	4	-0.48				69		
100	4	-0.26					73	
101	0	8.21					238	
105	3	-0.78					63	
113	3	-0.58				67		
117	0	2.70				131		
119	1	1.57				109		
121	4	0.08					80	
128	3	-0.84					62	
138	4	-0.03	78					
141	4	-0.03					78	
145	3	-0.56					68	
146	4	-0.03					78	

Lab	Rating	Z-value	0	1	2	3	4	5
145	3	-0.56					68	
146	4	-0.03	3				78	
149	3	0.90				96		
161	3	0.59			90			
167	NR						< 100	
180	2	-1.30					53	
184	0	-4.04					0	
188	1	1.65				111		
191	0	2.55					128	

Table 11.-- *Statistical summary of reported data for standard reference water sample T-117 (trace constituents)--Continued*

As (Arsenic) μ g/L



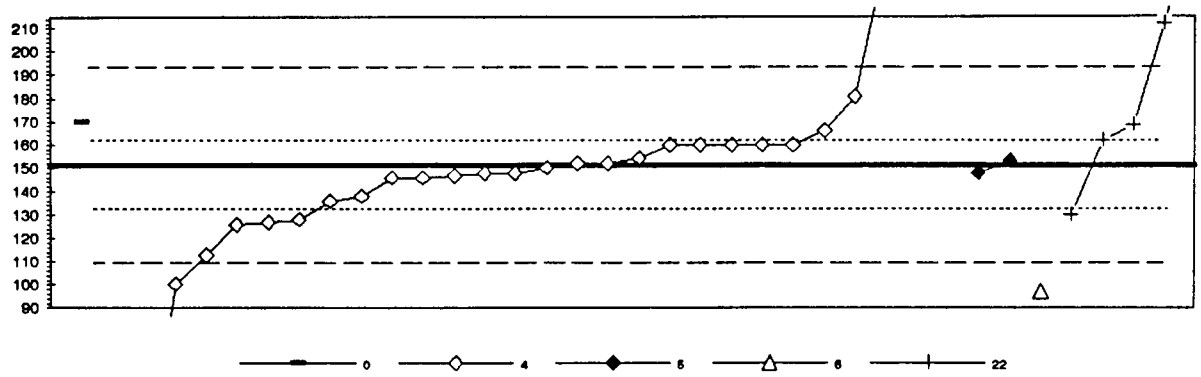
0. Other			4. ICP			
1. AA: direct, air			6. MS/ICP			
3. AA: graphite furnace			11. AA: hydride			
N =	6	1	38	3	2	13
Minimum =	3.30	0.00	3.50	1.60	8.10	4.60
Maximum =	9.00	0.00	9.70	34.60	9.70	8.30
Median =			6.75			6.60
St Dev =			1.25			1.11

95% confidence MPV =	6.90	+/-	0.35
F-pseudosigma =	1.40		
N =	63		
Hu =	7.90		
Hl =	6.00		

Lab	Rating	Z-value	0	1	3	4	6	11
1	4	-0.21						6.6
3	3	0.86			8.1			
5	3	0.86			8.1			
7	4	-0.43			6.3			
9	3	0.79				8.0		
12	NR				< 10			
13	3	-0.62			6.0			
15	4	-0.20			6.8			
16	3	-0.57			6.1			
18	4	-0.21						6.6
23	NR				< 10			
24	4	0.36			7.4			
26	0	2.00			9.7			
29	3	1.00			8.3			
30	1	1.99					9.7	
32	3	0.82					8.1	
34	2	1.15	8.5					
39	3	-1.00						5.5
42	3	0.61						7.8
45	4	0.08			7.0			
46	4	-0.36			6.4			
48	4	0.14			7.1			
50	3	-0.64						6.0
51	2	1.50			9.0			
52	4	-0.26			6.5			
55	4	0.29			7.3			
57	4	-0.07						6.8
58	2	-1.43						4.9
59	2	1.50	9.0					
61	3	-0.57			6.1			
63	3	0.79			8.0			
65	2	-1.20			5.2			
66	3	-0.61			6.0			
68	3	-0.93			5.6			
69	3	0.64			7.8			
70	3	-0.79			5.8			
73	NR					< 25		
74	4	0.07			7.0			
75	4	0.24						7.2
76	4	-0.12			6.7			
77	3	0.64			7.8			
78	3	0.86			8.1			
79	0				< 2			
87	4	0.50						7.6
91	0	-2.46			3.5			
97	3	0.97						8.3
100	4	-0.07			6.8			
101	0	19.79				34.6		
105	4	0.50			7.6			
113	4	-0.22			6.6			
117	4	0.32			7.4			
119	3	-0.64						6.0
123	3	0.64	7.8					
126	4	0.21						7.2
127	3	-0.55			6.1			
128	4	0.00			6.9			
133	3	-0.71			5.9			
134	1	-1.64						4.6
138	2	1.07	8.4					
141	NR					< 50		
143	3	0.89			8.1			
145	NR					< 25		
146	1	-1.93			4.2			
149	0	-2.57	3.3					
167	2	-1.36			5.0			
179	NR				< 5			
180	0	-3.79				1.6		
182	2	1.50	9.0					
184	0	-4.92		0.0				
193	3	-0.64			6.0			
194	NR			< 10				

Table 11.-- *Statistical summary of reported data for standard reference water sample T-117 (trace constituents)--Continued*

B (Boron) **μ g/L**



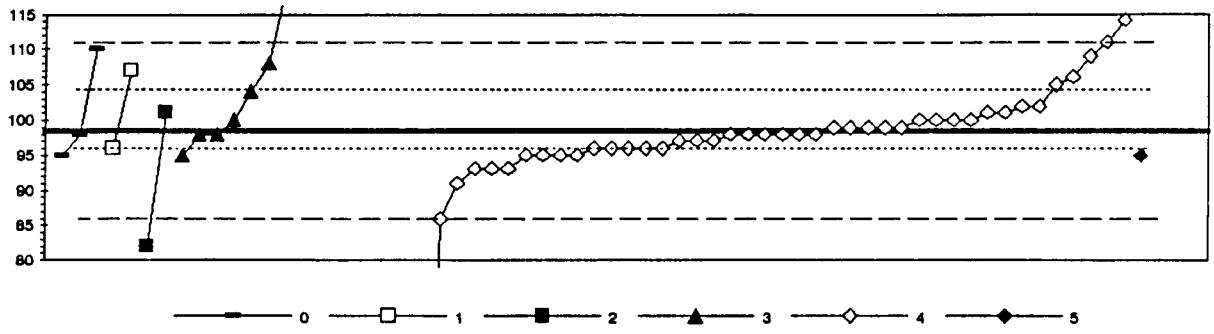
0. Other			6. MS/ICP			
4. ICP			22. Color: azomethine			
5. DCP						
	N =	1	27	2	1	5
	Minimum =	170.0	0.0	148.0	97.0	130.0
	Maximum =		279.0	153.0		265.0
	Median =		148.0			
	St Dev =		18.1			

95% confidence MPV = 151.0 +/- 24.1
F-pseudosigma = 20.8
N = 36
Hu = 161.0
HI = 133.0

Lab	Rating	Z-value	0	4	5	6	22
1	4	0.10			153		
3	4	-0.05		150			
5	4	-0.14		148			
7	4	0.43		160			
8	2	-1.20		126			
15	0	-8.54		15			
16	0	4.33		241			
18	0	6.15		279			
24	4	-0.24		146			
25	4	-0.19		147			
27	4	-0.14			148		
32	0	-2.60				97	
39	4	0.14		154			
45	3	0.53					162
46	3	-0.63		138			
48	0	-2.45		100			
52	NR	-7.26		< 150			
57	4	0.43		160			
61	1	-1.83		113			
63	4	-0.24		146			
68	4	0.43		160			
70	4	0.05		152			
77	0	5.48					265
100	3	0.72		166			
103	2	-1.11		128			
119	4	0.43		160			
128	2	-1.15		127			
129	0	2.93					212
134	3	0.87					169
141	2	1.44		181			
145	4	-0.14		148			
146	4	0.05		152			
167	4	0.43		160			
180	3	-0.72		136			
182	2	-1.01					130
184	0	-7.26		0			
194	3	0.91	170				

Table 11.-- *Statistical summary of reported data for standard reference water sample T-117 (trace constituents)--Continued*

Ba (Barium) **μ g/L**



0. Other		3. AA: graphite furnace				
1. AA: direct, aair		4. ICP				
2. AA: direct, N2O		5. DCP				
N =	3	2	2	14	42	1
Minimum =	95	98	82	95	0	95
Maximum =	110	107	101	149	114	95
Median =				120.0	98.0	
St Dev =				12.4	5.1	

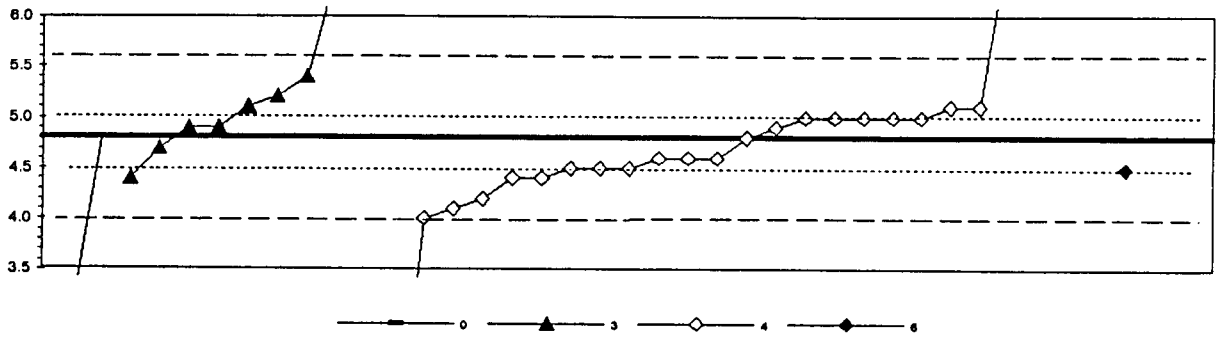
95% confidence MPV =	98.5	+/- 19.5
F-pseudosigma =	6.3	
N =	64	
Hu =	104.5	
Hl =	96.0	

Lab	Rating	Z-value	0	1	2	3	4	5
1	4	-0.08					98	
3	4	-0.08					98	
5	4	0.40					101	
7	4	-0.40					96	
8	4	0.08					99	
13	3	0.87				104		
15	4	-0.24					97	
16	4	-0.08					98	
18	4	-0.40					96	
19	1	-1.98					86	
25	4	-0.08					98	
27	3	-0.56						95
29	2	1.35		107				
30	3	0.56					102	
32	1	1.87					109	
34	4	-0.40		96				
39	3	-0.56					95	
42	1	1.98					111	
45	3	-0.56					95	
46	2	1.19					106	
48	0	3.57				121		
50	4	0.24				100		
52	3	-0.56					95	
55	0	2.46					114	
57	3	-0.87					93	
59	3	-0.56	95					
61	2	1.03					105	
63	4	-0.08					98	
66	0	-2.62			82			
68	3	-0.56					95	
69	0	6.59				140		
70	4	-0.24					97	
74	4	-0.40					96	
75	0	4.84				129		
76	4	-0.08				98		
78	1	1.51				108		
79	4	0.24					100	
87	4	0.40			101			
90	0	3.25				119		
91	3	0.56					102	
97	0	4.37				126		
100	4	0.08					99	
101	4	-0.40					96	
103	4	-0.24					97	
105	3	-0.87					93	

Lab	Rating	Z-value	0	1	2	3	4	5
113	0	8.02				149		
117	4	-0.08				98		
119	4	0.24					100	
121	4	-0.40					96	
127	3	-0.56				95		
128	4	0.40					101	
133	4	0.24					100	
138	4	-0.08	98					
141	4	0.08					99	
145	4	-0.08					98	
148	4	0.08					99	
149	0	3.73				122		
167	4	0.08					99	
180	3	-0.87					93	
184	0	-15.63					0	
189	2	-1.19					91	
191	4	0.24					100	
193	0	3.57				121		
194	1	1.83	110					

Table 11.-- *Statistical summary of reported data for standard reference water sample T-117 (trace constituents)--Continued*

Be (Beryllium) **μ g/L**



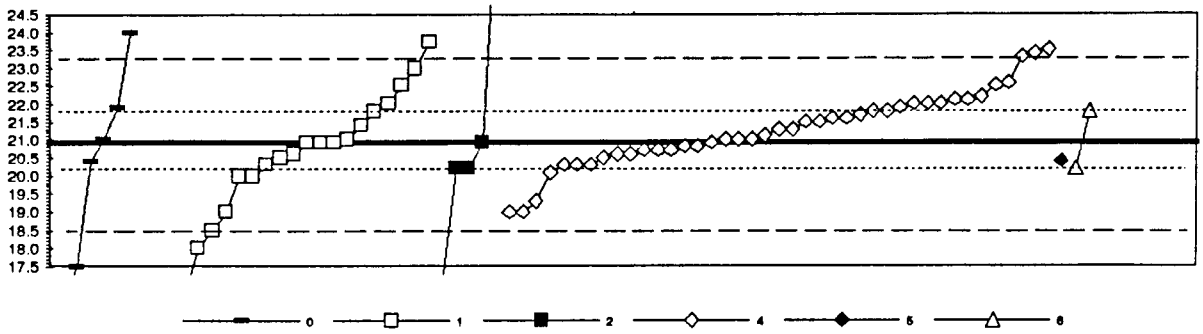
0. Other		6. MS/ICP		
3. AA: graphite furnace				
4. ICP				
N =	2	8	25	1
Minimum =	3.0	4.4	1.2	4.5
Maximum =	4.8	6.5	20.0	4.5
Median =			4.60	
St Dev =			0.59	

95% confidence MPV =	4.80	+/-	0.13
F-pseudosigma =	0.40		
N =	36		
Hu =	5.00		
Hl =	4.50		

Lab	Rating	Z-value	0	3	4	6
1	3	0.63			5.1	
3	4	0.50			5.0	
7	2	-1.50			4.2	
8	3	-1.00			4.4	
12	NR				< 20	
15	4	0.23			4.9	
16	0	5.25			6.9	
18	1	-1.75			4.1	
25	3	-0.63			4.6	
32	3	-0.75				4.5
39	4	0.50			5.0	
46	3	-0.75			4.5	
48	3	1.00		5.2		
52	0	4.25		6.5		
55	0	8.00			8.0	
57	0	-2.00			4.0	
61	0	-9.00			1.2	
63	0	38.00			20.0	
68	4	0.50			5.0	
70	4	0.50			5.0	
74	3	-0.75			4.5	
78	2	1.50		5.4		
79	0	-9.00			1.2	
87	2	-1.08		4.4		
100	0	-9.50			< 1	
103	4	0.00			4.8	
105	3	-0.75			4.5	
117	4	0.25		4.9		
119	4	0.25		4.9		
127	4	-0.35		4.7		
128	4	-0.50			4.6	
138	4	0.00	4.8			
141	NR				< 10	
145	3	-0.63			4.6	
146	4	0.50			5.0	
149	0	-4.50	3.0			
167	3	0.75			5.1	
179	3	0.75		5.1		
180	3	-1.00			4.4	
189	NR				< 5	

Table 11.-- *Statistical summary of reported data for standard reference water sample T-117 (trace constituents)--Continued*

Ca (Calcium) mg/L



0. Other		4. ICP					
1. AA: direct, air		5. DCP					
2. AA: direct, N2O		6. MS/ICP					
N =	6	22	5	41	1	2	
Minimum =	16.5	14.1	17.0	19.0	20.4	20.2	
Maximum =	24.0	23.7	27.0	23.5	20.4	21.8	
Median =		20.55		21.30			
St Dev =		1.88		1.05			

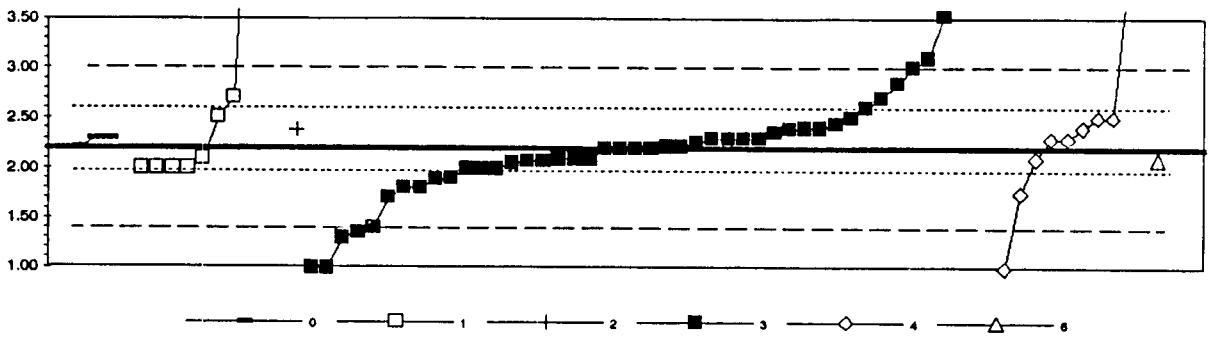
95% confidence MPV = 20.90 +/- 0.27
F-pseudosigma = 1.20
N = 77
Hu = 21.80
HI = 20.20

Lab	Rating	Z-value	0	1	2	4	5	6
1	3	0.90				22.0		
2	3	-0.60			20.2			
3	0	2.08				23.4		
5	3	1.00				22.1		
6	3	0.75		21.8				
7	4	-0.08				20.8		
8	4	0.50				21.5		
9	0	-2.42		18.0				
12	3	0.92				22.0		
13	4	0.08		21.0				
15	4	-0.33				20.5		
16	3	-0.55				20.3		
18	4	0.02				20.9		
19	4	-0.14				20.7		
20	0	-3.70	16.5					
24	2	1.08				22.2		
25	0	2.19				23.5		
27	4	-0.44					20.4	
32	3	0.75						21.8
34	4	0.00			20.9			
39	4	0.50				21.5		
42	3	0.75				21.8		
43	4	0.33				21.3		
45	4	0.00		20.9				
46	3	0.83				21.9		
48	4	0.08				21.0		
51	0	-3.50		16.7				
52	4	-0.25				20.6		
55	3	0.62				21.6		
57	1	-1.58				19.0		
58	0	-5.67		14.1				
59	4	0.08	21.0					
61	3	0.67				21.7		
63	2	1.42				22.6		
64	4	0.33				21.3		
66	3	-0.62			20.2			
68	4	-0.50				20.3		
69	4	-0.50		20.3				
70	4	0.17				21.1		
74	4	-0.17				20.7		
75	4	0.00		20.9				
78	1	-1.58		19.0				
77	0	2.58	24.0					
78	0	-4.08		16.0				
83	4	-0.37		20.5				

Lab	Rating	Z-value	0	1	2	4	5	6
87	0	5.08			27.0			
91	0	2.00				23.3		
97	3	-0.75		20.0				
100	3	1.00				22.1		
101	4	0.00		20.9				
103	2	-1.33				19.3		
105	4	-0.50				20.3		
109	4	-0.29		20.6				
113	1	1.75		23.0				
117	0	-2.00		18.5				
119	3	0.58				21.6		
121	4	-0.08				20.8		
123	0	2.33		23.7				
127	4	0.42		21.4				
128	3	0.89				22.0		
133	2	1.33				22.5		
134	3	-0.75		20.0				
138	3	0.83	21.9					
140	2	1.33		22.5				
141	1	-1.58				19.0		
145	4	0.07				21.0		
148	4	-0.17				20.7		
167	3	0.75				21.8		
179	0	-3.42		16.8				
180	3	-0.64				20.1		
182	0	-3.25			17.0			
188	4	-0.25				20.6		
189	4	0.08				21.0		
190	0	-2.83	17.5					
191	3	-0.58						20.2
193	3	0.92		22.0				
194	4	-0.42	20.4					

Table 11.-- *Statistical summary of reported data for standard reference water sample T-117 (trace constituents)--Continued*

Cd (Cadmium) μ g/L



0. Other		3. AA: graphite furnace					
1. AA: direct, air		4. ICP					
2. AA: direct, N2O		6. MS/ICP					
N =	4	8	1	44	10	2	
Minimum =	2.2	2.0	2.4	1.0	1.0	2.1	
Maximum =	2.3	6.0	2.4	5.5	21.0	3.1	
Median =				2.20	2.35		
St Dev =				0.74	5.96		

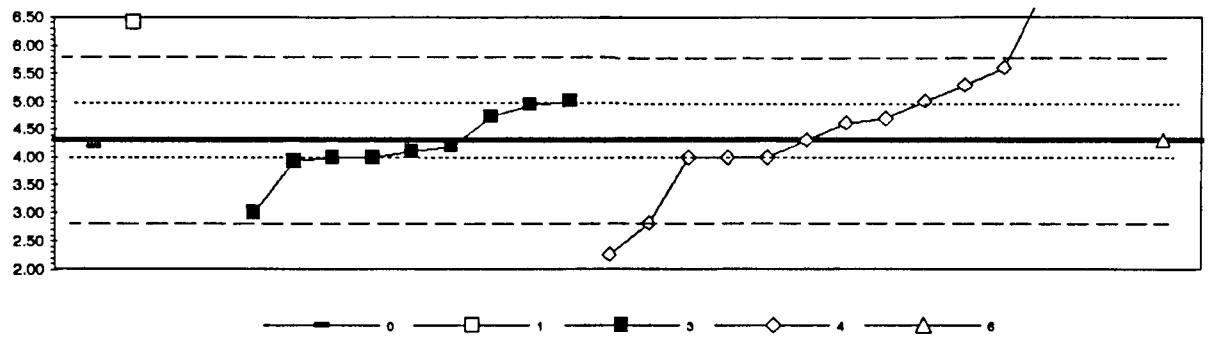
95% confidence MPV =	2.20	+/- 0.09
F-pseudosigma =	0.40	
N =	69	
Hu =	2.60	
HI =	2.00	

Lab	Rating	Z-value	0	1	2	3	4	6
1	2	1.25				2.70		
3	4	-0.50				2.00		
5	0	2.00				3.00		
6	0	4.10				3.84		
7	NR						< 5	
8	3	0.75					2.50	
9	4	-0.25				2.10		
12	3	1.00				2.60		
13	0	3.33				3.53		
15	2	-1.13					1.75	
16	NR						< 5	
18	3	-1.00				1.80		
24	0	-2.00				1.40		
25	4	0.02	2.21					
26	0	-2.13				1.35		
29	4	0.25				2.30		
30	0	2.25						3.10
32	4	-0.25						2.10
34	NR			< 5				
38	0	2.25				3.10		
41	4	-0.50		2.00				
42	4	-0.25		2.10				
45	3	-0.75				1.90		
46	4	-0.35				2.08		
48	4	0.00				2.20		
50	4	-0.50				2.00		
51	0	-3.00				1.00		
52	3	-0.78				1.89		
55	4	0.48				2.39		
57	4	0.50				2.40		
58	0	8.25				5.50		
59	NR		< 5					
61	0	-3.00					< 1	
63	4	0.25				2.30		
65	4	0.45			2.38			
66	4	-0.30				2.08		
68	4	0.00				2.20		
69	4	-0.25				2.10		
70	0	-2.25				1.30		
71	4	-0.50		2.00				
73	4	-0.25					2.10	
74	3	-0.98				1.81		
75	3	0.60				2.44		
76	4	0.05				2.22		
78	3	0.75				2.50		

Lab	Rating	Z-value	0	1	2	3	4	6
79	4	-0.50				2.00		
87	NR			< 2				
91	1	1.60				2.84		
92	4	-0.50		2.00				
97	2	-1.25				1.70		
100	2	1.25		2.70				
101	4	0.50					2.40	
103	4	0.25					2.30	
105	4	-0.30				2.08		
108	4	0.25				2.30		
113	4	0.15				2.26		
117	4	0.25				2.30		
119	4	0.50				2.40		
121	0	4.50					4.00	
127	4	0.38				2.35		
128	4	0.00				2.20		
133	0	-3.00					1.00	
134	4	0.00				2.20		
138	4	0.25	2.30					
140	3	0.75		2.50				
141	NR						< 10	
143	4	0.05				2.22		
145	NR						< 3	
146	4	0.25					2.30	
148	4	0.25	2.30					
161	0	9.50		6.00				
167	0	-3.00				1.00		
179	4	-0.25				2.10		
180	3	0.75					2.50	
184	0	47.00					21.00	
189	NR					< 2		
193	4	-0.50		2.00				
194	4	0.00	2.20					

Table 11.-- *Statistical summary of reported data for standard reference water sample T-117 (trace constituents)--Continued*

Co (Cobalt) **μ g/L**



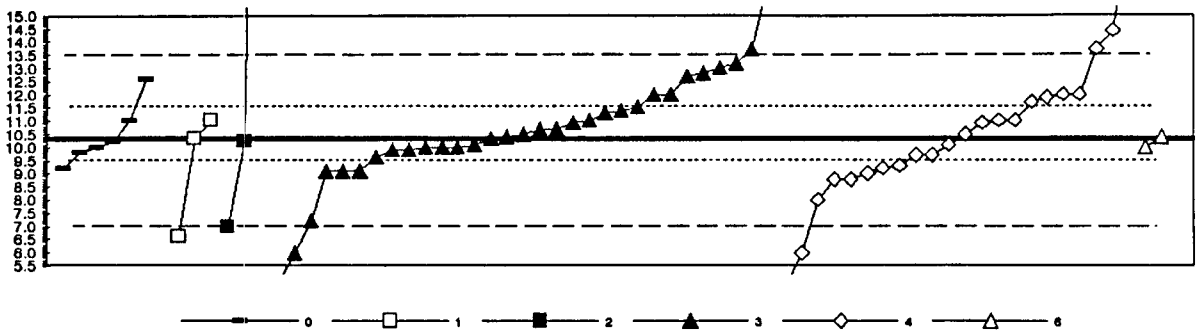
0. Other		4. ICP				
1. AA: direct, air		6. MS/ICP				
3. AA: graphite furnace						
N =	1	1	9	13	1	
Minimum =	4.20	6.40	3.00	2.27	4.30	
Maximum =			5.00	7.70		
Median =			4.10	4.60		
St Dev =			0.62	0.80		

95% confidence MPV =	4.30	+/-	0.29
F-pseudosigma =	0.74		
N =	25		
Hu =	5.00		
HI =	4.00		

Lab	Rating	Z-value	0	1	3	4	6
1	4	-0.41			4.00		
3	NR					< 30	
5	NR					< 5	
7	2	1.35				5.30	
8	3	0.54				4.70	
15	0	-2.74				2.27	
16	NR					< 10	
18	4	-0.41				4.00	
25	1	1.78				5.60	
32	4	0.00					4.30
39	3	0.95				5.00	
46	NR					< 10	
48	NR					< 10	
50	4	-0.41			4.00		
51	3	0.95			5.00		
52	3	0.85			4.93		
55	4	-0.27			4.10		
57	NR					< 50	
61	NR					< 10	
63	NR					< 40	
68	0	4.59				7.70	
70	NR					< 20	
74	4	0.00				4.30	
92	NR			< 20			
97	3	0.55			4.71		
100	0	2.84		6.40			
103	4	-0.41				4.00	
105	0	3.65				7.00	
117	1	-1.78			3.00		
121	4	-0.41				4.00	
127	4	-0.50			3.93		
128	NR					< 4	
134	4	-0.14			4.20		
138	4	-0.14	4.20				
141	NR					< 10	
145	NR					< 6	
146	4	0.41				4.60	
167	NR					< 20	
180	0	-2.03				2.80	
189	NR					< 20	
193	NR			< 10			

Table 11.-- *Statistical summary of reported data for standard reference water sample T-117 (trace constituents)--Continued*

Cr (Chromium) μ g/L



0. Other		3. AA: graphite furnace					
1. AA: direct, air		4. ICP					
2. AA: direct, N2O		6. MS/ICP					
	N =	6	3	3	31	22	2
	Minimum =	9.20	6.60	7.00	4.90	4.70	10.00
	Maximum =	12.60	11.00	37.00	16.30	18.00	10.40
	Median =				10.50	10.30	
	St Dev =				1.69	1.96	

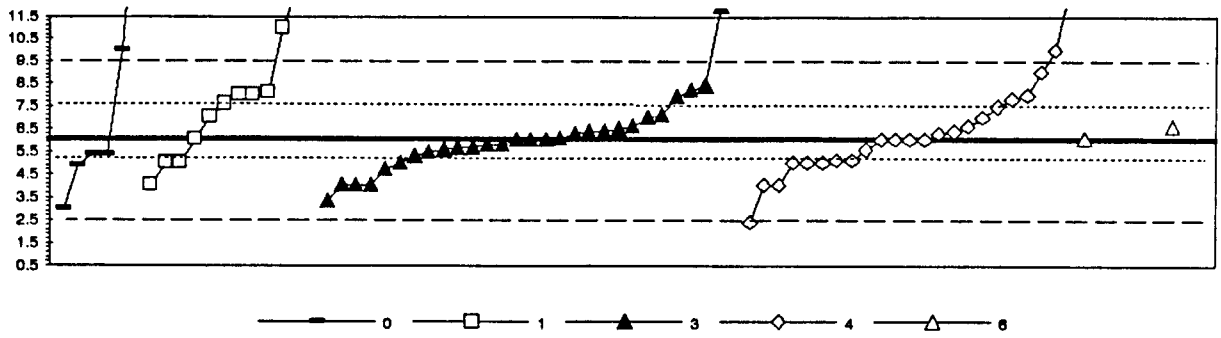
95% confidence MPV =	10.30	+/-	0.38	
F-pseudosigma =	1.59			
N =	67			
Hu =	11.60			
Hl =	9.45			

Lab	Rating	Z-value	0	1	2	3	4	6
1	4	-0.40					9.7	
3	4	0.44					11.0	
5	4	-0.13					10.1	
7	4	0.13					10.5	
8	0	-3.52					4.7	
9	0	3.77				16.3		
12	NR						< 20	
13	3	0.69				11.4		
15	3	-0.67					9.2	
16	2	1.01					11.9	
18	0	-2.70					6.0	
19	NR		< 10					
23	4	0.25				10.7		
25	4	-0.41					9.7	
26	0	-2.33		6.6				
29	3	0.75				11.5		
30	4	-0.16						10.0
32	4	0.06						10.4
34	NR			< 10				
39	0	2.14				13.7		
41	0	-2.08			7.0			
45	4	-0.13				10.1		
46	3	-0.75				9.1		
48	4	0.38				10.9		
50	4	-0.19				10.0		
51	2	1.07				12.0		
52	4	0.00				10.3		
55	4	0.06				10.4		
57	4	0.44				11.0		
59	4	-0.19	10.0					
61	3	0.88					11.7	
63	4	-0.19				10.0		
65	NR				< 10			
66	4	0.11				10.5		
68	2	1.07					12.0	
69	4	-0.25				9.9		
70	1	1.82				13.2		
73	2	-1.45					8.0	
74	3	-0.82					9.0	
75	3	-0.74				9.1		
76	3	0.63				11.3		
78	4	0.25				10.7		
79	2	1.45	12.6					
87	4	-0.06			10.2			
90	1	1.57				12.8		

Lab	Rating	Z-value	0	1	2	3	4	6
91	1	-1.97				7.2		
92	NR			< 6				
97	1	1.51				12.7		
100	4	0.00		10.3				
101	0	2.58					14.4	
103	4	0.44					11.0	
105	4	0.38					10.9	
108	2	1.07				12.0		
113	3	-0.76				9.1		
117	0	-3.40				4.9		
119	4	-0.44				9.6		
121	0	4.84					18.0	
123	3	-0.69	9.2					
127	4	-0.28				9.9		
128	3	-0.94					8.8	
133	3	-0.63					9.3	
138	4	-0.31	9.8					
140	4	0.44		11.0				
141	NR						< 10	
145	2	1.07					12.0	
146	0	2.14					13.7	
149	0		< 0.5					
161	0	16.79			37.0			
167	4	-0.19				10.0		
179	1	1.70				13.0		
180	3	-0.94					8.8	
189	0	-2.70				6.0		
190	4	-0.06	10.2					
193	NR			< 10				
194	4	0.44	11.0					

Table 11.-- *Statistical summary of reported data for standard reference water sample T-117 (trace constituents)--Continued*

Cu (Copper) **μ g/L**



0. Other	3. AA: graphite furnace				
1. AA: direct, air	4. ICP				
2. AA: direct, N2O	6. MS/ICP				
N =	6	12	28	23	2
Minimum =	3.00	4.00	3.30	2.40	6.10
Maximum =	18.00	17.00	12.00	13.00	6.60
Median =		7.80	6.00	6.00	
St Dev =		2.04	1.25	1.71	

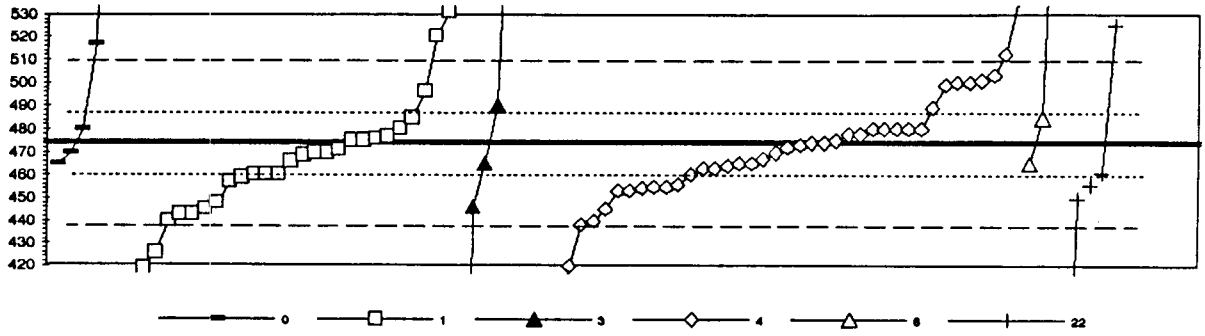
95% confidence MPV =	6.00 +/- 0.41
F-pseudosigma =	1.76
N =	71
Hu =	7.55
Hl =	5.17

Lab	Rating	Z-value	0	1	3	4	6
1	4	-0.17			5.7		
3	4	0.00				6.0	
5	3	-0.51				5.1	
6	2	1.10			7.9		
7	NR					< 7.0	
8	3	0.85				7.5	
9	4	0.00			6.0		
12	2	-1.14			4.0		
13	NR				< 50		
15	3	-0.72			4.7		
16	NR					< 10	
18	2	-1.14				4.0	
23	4	-0.20			5.6		
24	4	-0.02				6.0	
25	4	-0.34	5.4				
26	3	-0.57		5.0			
27	3	0.64			7.1		
29	2	-1.14		4.0			
30	4	0.34					6.6
32	4	0.06					6.1
34	0	2.84		11.0			
39	3	0.57				7.0	
41	0	3.98		13.0			
42	2	1.02				7.8	
45	4	-0.19			5.7		
46	2	-1.14			4.0		
48	4	0.23			6.4		
50	4	0.00			6.0		
51	4	0.00			6.0		
52	4	-0.10			5.8		
55	2	-1.14				4.0	
57	NR			< 20			
58	NR			< 10			
59	0	2.27	10.0				
61	NR					< 5	
63	4	0.17			6.3		
65	NR			< 10			
66	4	-0.38			5.3		
68	4	0.17				6.3	
69	NR			< 20			
70	4	0.23				6.4	
71	2	1.14		8.0			
73	3	-0.57				5.0	
74	3	-0.57				5.0	
75	NR			< 10			

Lab	Rating	Z-value	0	1	3	4	6
77	2	-1.14			4.0		
78	4	0.06			6.1		
79	4	-0.11			5.8		
83	NR			< 20			
87	3	0.57		7.0			
90	2	1.36			8.4		
91	4	-0.22				5.8	
92	3	0.91		7.8			
97	4	0.30			6.5		
100	2	1.19		8.1			
101	4	0.34				6.6	
103	4	0.00				6.0	
105	1	1.70				9.0	
108	0	3.41			12.0		
113	4	-0.31			5.5		
117	3	-0.57		5.0			
119	4	0.00				6.0	
121	0	2.27				10.0	
123	3	-0.63	4.9				
126	0	6.25		17.0			
127	2	1.23			8.2		
128	3	-0.57				5.0	
133	2	1.14				8.0	
134	4	0.34			6.6		
138	4	-0.34	5.4				
140	2	1.14		8.0			
141	NR					< 10	
143	4	0.20			6.4		
145	0	3.98				13.0	
146	3	-0.51				5.1	
149	NR			< 5			
153	1	-1.53			3.3		
161	4	0.00		6.0			
167	NR					< 20	
179	3	-0.57			5.0		
180	0	-2.05				2.4	
189	3	0.57			7.0		
190	1	-1.70	3.0				
193	NR			< 10			
194	0	6.82	18.0				

Table 11.-- *Statistical summary of reported data for standard reference water sample T-117 (trace constituents)--Continued*

Fe (Iron) **μ g/L**



0. Other		4. ICP					
1. AA: direct, air		6. MS/ICP					
AA: graphite furnace		22. Colorimetric					
N =	5	29	4	42	3	5	
Minimum =	465	325	446	0	465	290	
Maximum =	710	538	608	537	610	525	
Median =		466		469			
St Dev =		19.9		19.9			

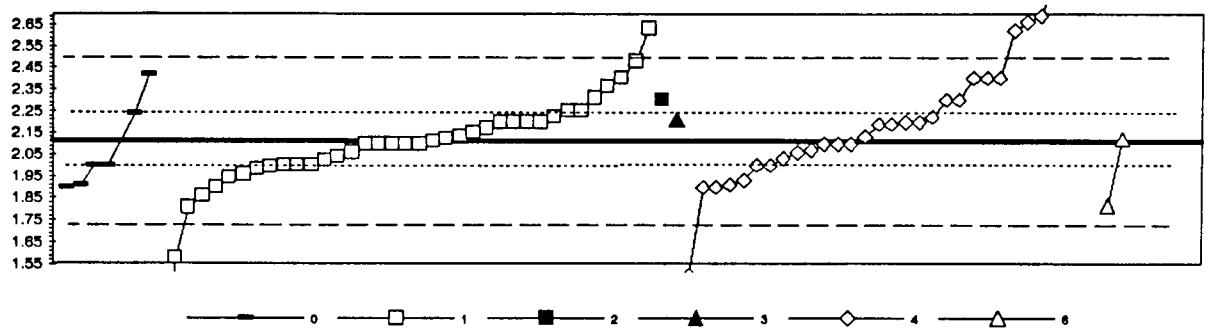
95% confidence MPV =	474.0	+/-	3.8
F-pseudosigma =	18.2		
N =	88		
Hu =	487.0		
Hl =	462.5		

Lab	Rating	Z-value	0	1	3	4	6	22
1	4	0.35				480		
3	4	0.33				480		
4	2	-1.32						450
5	4	0.06				475		
6	3	0.88			490			
7	2	-1.10				454		
8	2	-1.16				453		
9	4	-0.22		470				
12	1	-1.87				440		
13	1	-1.60		445				
15	1	-1.98				438		
16	3	-0.81				463		
18	3	-0.99				456		
19	0	-5.55				373		
21	3	-0.99						456
24	4	-0.06				473		
25	4	0.22				478		
26	0	-8.20		325				
27	4	-0.22	470					
29	0	-3.52		410				
30	3	-0.51					465	
32	0	7.49					610	
34	4	-0.28		469				
39	4	0.00				474		
42	1	1.60				503		
43	4	-0.11				472		
45	3	-0.94		457				
46	2	1.43				500		
48	0	-6.28				360		
50	1	-1.54			446			
51	4	0.06		475				
52	4	-0.39				467		
54	4	0.06		475				
55	3	0.83				489		
57	4	0.33		480				
58	3	-0.77		460				
59	4	0.33	480					
61	4	0.00				474		
63	4	-0.50				465		
64	0	3.47				537		
65	4	-0.17		471				
66	3	0.61		485				
68	3	-0.77				460		
69	4	-0.44		466				
70	3	-0.61				463		

Lab	Rating	Z-value	0	1	3	4	6	22
71	0	2.53		520				
73	4	-0.22				470		
74	1	-1.60				445		
75	1	-1.71		443				
76	4	0.11		476				
77	0	7.38			608			
78	3	-0.77		460				
79	4	0.33				480		
87	0	2.37	517					
90	0	3.52		538				
91	2	1.43				500		
92	0	-3.03		419				
97	4	-0.50			465			
100	4	0.17		477				
101	4	0.22				478		
103	0	-2.97				420		
105	2	1.38				499		
109	1	-1.71		443				
113	0	2.81						525
117	0	-2.64		426				
119	4	0.33				480		
121	3	-0.55				464		
127	3	-0.72						461
128	2	-1.05				455		
129	0	-10.13						290
133	2	1.49				501		
134	3	-0.83		459				
138	4	-0.50	465					
140	3	-0.77		460				
141	4	-0.50				465		
145	2	-1.18				453		
148	0	2.09				512		
149	1	-1.87		440				
161	2	1.21		496				
167	4	0.33				480		
179	4	-0.22		470				
180	2	-1.05				455		
184	0	-26.08				0		
189	0	-5.18				380		
190	2	-1.43		448				
191	3	0.61					485	
193	0	3.14		531				
194	0	13.00	710					

Table 11.-- *Statistical summary of reported data for standard reference water sample T-117 (trace constituents)--Continued*

K (Potassium) **mg/L**



0. Other		3. AA: graphite furnace					
1. AA: direct, air		4. ICP					
2. AA: direct, N2O		6. MS/ICP					
N =	7	37	1	1	30	2	
Minimum =	1.90	1.10	2.30	2.21	1.50	1.82	
Maximum =	2.42	2.63	2.30	2.21	6.80	2.12	
Median =		2.10			2.19		
St Dev =		0.19			0.23		

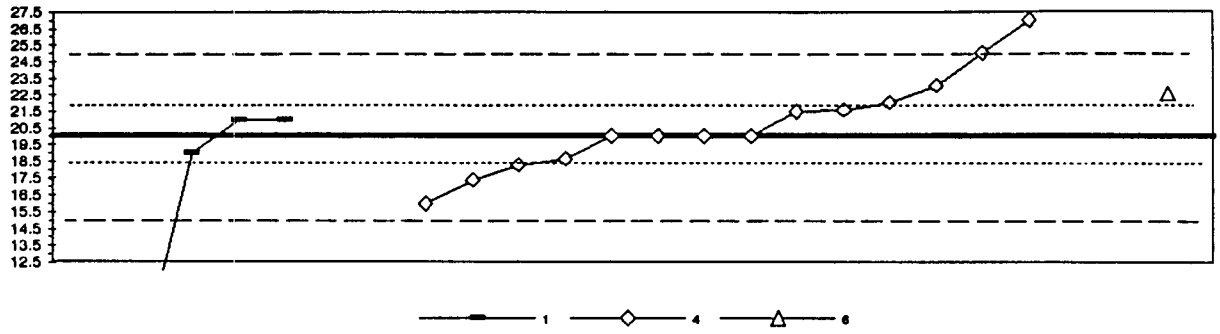
95% confidence MPV =	2.110	+/-	0.042
F-pseudosigma =	0.190		
N =	78		
Hu =	2.25		
Hl =	2.00		

LAB #	Rating	Z-value	0	1	2	3	4	6
1	4	-0.05		2.10				
2	1	1.94		2.48				
3	3	-0.79		1.96				
5	0	2.89					2.66	
7	0	4.05					2.88	
8	3	-0.58					2.00	
9	4	0.47		2.20				
12	1	1.53					2.40	
13	4	0.21		2.15				
15	3	0.74		2.25				
16	0	2.74		2.63				
18	0	-5.84					< 1	
19	4	-0.42					2.03	
20	2	-1.06	1.91					
23	4	-0.26		2.06				
24	3	1.00					2.30	
25	0	2.68					2.62	
27	4	0.07		2.12				
32	4	0.05						2.12
34	4	-0.05		2.10				
39	2	-1.11	1.90					
42	2	-1.11					1.90	
43	4	-0.05					2.10	
45	3	-0.58		2.00				
46	3	0.53				2.21		
48	4	-0.05					2.10	
51	3	0.68	2.24					
52	3	-0.58					2.00	
55	4	0.11		2.13				
57	4	0.47		2.20				
59	3	-0.58	2.00					
61	0	3.05					2.69	
63	4	0.42					2.19	
64	3	-0.68		1.98				
66	3	1.00			2.30			
68	1	1.53					2.40	
69	4	0.47		2.20				
70	4	0.47					2.20	
74	4	0.47					2.20	
75	4	0.00		2.11				
76	3	-0.89		1.94				
77	3	0.58		2.22				
78	2	-1.11		1.90				
79	4	-0.05					2.10	
83	3	-0.63		1.99				

LAB #	Rating	Z-value	0	1	2	3	4	6
87	4	-0.47		2.02				
91	0	6.63					3.37	
97	0	-2.79		1.58				
100	2	-1.11					1.90	
101	3	0.74		2.25				
103	0	-3.21					1.50	
105	4	-0.26					2.06	
109	2	-1.32		1.86				
113	4	0.32		2.17				
117	1	-1.58		1.81				
119	0	24.68					6.80	
121	4	-0.05		2.10				
123	3	-0.58		2.00				
127	4	-0.37		2.04				
128	4	0.42					2.19	
129	3	-0.58		2.00				
134	1	1.53		2.40				
138	4	0.00	2.11					
140	4	0.47		2.20				
141	4	0.11					2.13	
145	3	-0.95					1.93	
146	4	-0.21					2.07	
161	2	1.05		2.31				
167	1	1.53					2.40	
179	4	-0.05		2.10				
180	2	-1.05					1.91	
182	0	-5.32		1.10				
184	3	1.00					2.30	
188	4	-0.05		2.10				
189	3	0.58					2.22	
190	3	-0.58	2.00					
191	1	-1.53						1.82
193	2	1.32		2.36				
194	1	1.63	2.42					

Table 11.-- *Statistical summary of reported data for standard reference water sample T-117 (trace constituents)--Continued*

Li (Lithium) **μ g/L**



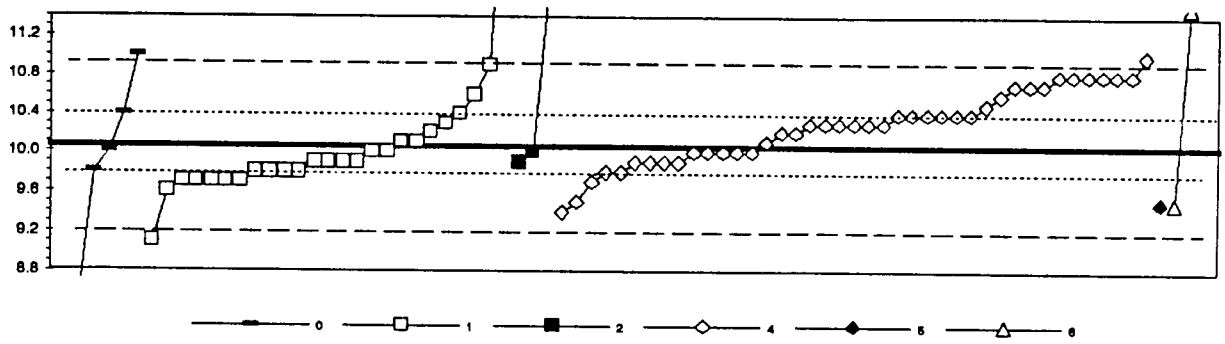
0. Other		6. MS/ICP	
1. AA: direct, air			
4. ICP			
N =	5	14	1
Minimum =	0.0	18.0	22.5
Maximum =	21.0	27.0	22.5
Median =		20.0	
St Dev =		2.9	

95% confidence MPV =	20.00	+/-	1.09
F-pseudosigma =	2.48		
N =	20		
Hu =	21.80		
Hl =	18.45		

Lab	Rating	Z-value	1	4	6
1	3	0.60		21.5	
3	4	0.00		20.0	
7	NR			< 15	
8	3	-0.69		18.3	
15	2	-1.05		17.4	
16	NR			< 200	
24	0	2.02		25.0	
25	3	0.65		21.6	
29	0	-4.84	8.0		
32	2	1.01			22.5
39	3	0.81		22.0	
42	4	0.00		20.0	
50	NR		< 50		
55	4	0.40	21.0		
63	NR		< 100		
68	2	1.21		23.0	
70	4	0.00		20.0	
100	0	-8.06	0.0		
103	1	-1.61		16.0	
105	0	2.82		27.0	
121	4	-0.40	19.0		
134	4	0.40	21.0		
141	4	0.00		20.0	
145	3	-0.56		18.6	

Table 11.-- *Statistical summary of reported data for standard reference water sample T-117 (trace constituents)--Continued*

Mg (Magnesium) mg/L



0. Other		4. ICP					
1. AA: direct, air		5. DCP					
2. AA: direct, N2O		6. MS/ICP					
N =	6	25	3	41	1	2	
Minimum =	8.3	9.1	9.9	9.4	9.5	9.5	
Maximum =	11.0	13.3	11.7	11.0	9.5	11.5	
Median =		9.9		10.3			
St Dev =		0.36		0.39			

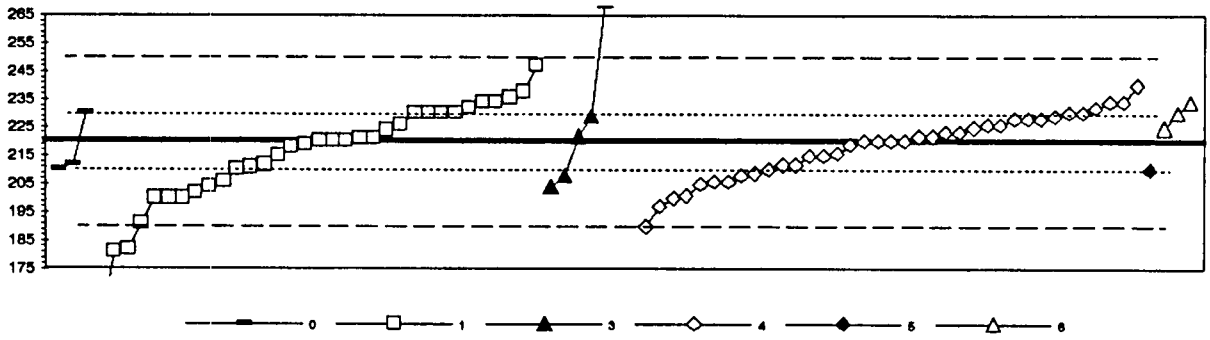
95% confidence MPV = 10.05 +/- 0.10
F-pseudosigma = 0.44
N = 78
Hu = 10.40
Hl = 9.80

Lab	Rating	Z-value	0	1	2	4	5	6
1	4	-0.11				10.0		
2	0	3.75			11.7			
3	1	1.70				10.8		
5	2	1.02				10.5		
6	0	-2.16		9.1				
7	3	0.80				10.4		
8	2	1.48				10.7		
9	3	-0.57		9.8				
12	2	1.25				10.6		
13	4	0.34		10.2				
15	4	-0.34				9.9		
16	4	-0.34				9.9		
18	3	0.80				10.4		
19	3	0.57				10.3		
20	0	-3.98	8.3					
24	3	0.57				10.3		
25	1	1.70				10.8		
27	2	-1.25					9.5	
32	2	-1.25						9.5
34	3	-0.80		9.7				
39	1	1.70				10.8		
42	4	-0.11				10.0		
43	3	0.57				10.3		
45	3	-0.57		9.8				
46	0	2.16	11.0					
48	3	0.57				10.3		
51	4	-0.34		9.9				
52	3	-0.80				9.7		
55	2	1.48				10.7		
57	3	0.80				10.4		
58	4	0.11		10.1				
59	4	-0.11	10.0					
61	0	2.16				11.0		
63	1	1.70				10.8		
64	3	0.80				10.4		
66	4	-0.34			9.9			
68	4	-0.11				10.0		
69	2	-1.02		9.6				
70	3	0.80				10.4		
74	2	-1.25				9.5		
75	4	-0.34		9.9				
76	3	0.80		10.4				
78	2	1.25		10.6				
83	3	-0.80		9.7				
87	3	-0.57		9.8				

Lab	Rating	Z-value	0	1	2	4	5	6
91	1	1.70				10.8		
97	4	-0.11		10.0				
100	1	1.70				10.8		
101	3	0.57		10.3				
103	3	0.57				10.3		
105	4	-0.34				9.9		
109	4	-0.34		9.9				
113	4	0.11		10.1				
117	3	-0.57		9.8				
119	2	1.48				10.7		
121	3	-0.57				9.8		
123	3	-0.80		9.7				
127	4	-0.11		10.0				
128	3	0.80				10.4		
129	1	1.93		10.9				
133	2	-1.48				9.4		
134	3	-0.80		9.7				
138	3	0.80	10.4					
140	4	-0.34		9.9				
141	4	0.34				10.2		
145	4	-0.34				9.9		
146	3	-0.57				9.8		
167	3	0.57				10.3		
179	0	7.39		13.3				
180	4	-0.11				10.0		
182	4	-0.11			10.0			
184	4	-0.11				10.0		
188	4	0.11				10.1		
189	4	0.34				10.2		
190	0	-3.30	8.6					
191	0	3.30						11.5
193	3	-0.80		9.7				
194	3	-0.57	9.8					

Table 11.-- *Statistical summary of reported data for standard reference water sample T-117 (trace constituents)--Continued*

Mn (Manganese) **μ g/L**



0. Other		4. ICP				
1. AA: direct, air		5. DCP				
3. AA: graphite furnace		6. MS/ICP				
N =	3	33	7	37	1	3
Minimum =	210	155	204	190	210	225
Maximum =	230	247	277	240	210	234
Median =		220		220		
St Dev =		16.1		11.8		

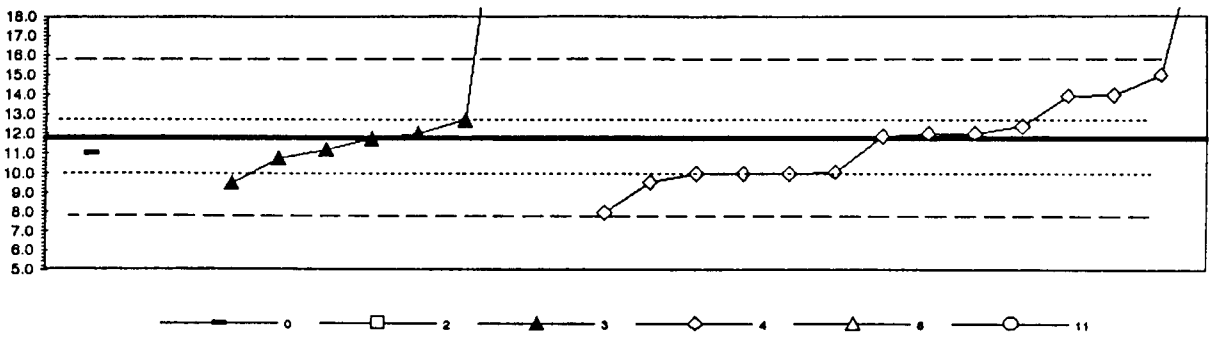
95% confidence MPV =	220.0	+/-	3.2
F-pseudosigma =	14.9		
N =	84		
Hu =	229.8		
Hl =	209.7		

Lab	Rating	Z-value	0	1	3	4	5	6
1	4	0.07		221				
3	4	0.00				220		
5	4	0.13				222		
6	0	3.83			277			
7	2	-1.28				201		
8	4	0.15				222		
9	0	3.36			270			
12	2	1.34				240		
13	2	-1.34		200				
15	4	-0.34				215		
16	3	-0.81				208		
18	3	0.54				228		
19	3	-0.92				206		
23	4	0.26		224				
24	4	-0.07				219		
25	3	0.54				228		
26	0	-4.36		155				
27	3	-0.67					210	
29	0	-2.55		182				
30	3	0.64						230
32	4	0.34						225
34	2	-1.07		204				
39	4	0.00				220		
42	3	0.94				234		
43	2	-1.01				205		
45	3	0.81		232				
46	3	0.60			229			
48	2	-1.34				200		
50	4	0.13			222			
51	4	0.07		221				
52	3	-0.54				212		
54	4	0.00		220				
55	4	0.34				225		
57	3	0.67		230				
58	4	0.00		220				
59	3	-0.67	210					
61	3	0.54				228		
63	3	0.94				234		
64	4	0.00				220		
65	1	-1.95		191				
66	3	-0.67		210				
68	3	-0.67				210		
69	3	0.94		234				
70	4	0.40				226		
71	0	-2.62		181				

Lab	Rating	Z-value	0	1	3	4	5	6
74	3	-0.94				206		
75	4	-0.07		219				
76	3	-0.54		212				
77	0	3.69			275			
78	4	0.00		220				
79	3	0.67				230		
83	3	0.67		230				
87	2	1.07		236				
90	2	1.21		238				
91	3	0.60				229		
92	3	-0.60		211				
97	2	-1.07			204			
100	3	0.67		230				
101	4	0.20				223		
103	3	-0.54				212		
105	1	-1.54				197		
109	2	-1.22		202				
113	3	-0.79			208			
117	1	1.78		247				
119	4	0.20				223		
121	4	0.40				226		
127	4	-0.34		215				
128	3	0.81				232		
129	2	-1.34		200				
134	4	-0.13		218				
138	3	-0.54	212					
140	3	0.67		230				
141	4	-0.27				216		
145	4	0.00				220		
148	4	-0.34				215		
149	2	-1.34		200				
161	4	0.40		226				
167	3	0.67				230		
179	3	-0.94		208				
180	3	-0.72				209		
189	0	-2.01				190		
190	3	0.94		234				
191	3	0.94						234
194	3	0.67	230					

Table 11.-- *Statistical summary of reported data for standard reference water sample T-117 (trace constituents)--Continued*

Mo (Molybdenum) **μ g/L**



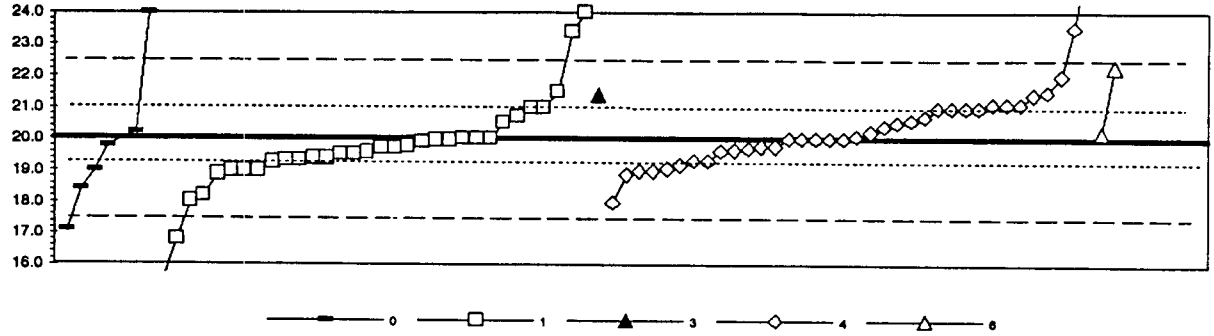
0. Other			4. ICP				
2. AA: direct, N2O			6. MS/ICP				
3. AA: graphite furnace			11. AA: hydride				
N =	1	1	7	14	1	1
Minimum =	11.00	30.00	9.51	8.00	8.80	10.00
Maximum =			31.00	24.00		
Median =				11.95		
St Dev =				2.05		

95% confidence MPV =	11.80	+/-	0.78
F-pseudosigma =	2.00		
N =	25		
Hu =	12.70		
HI =	10.00		

Lab	Rating	Z-value	0	2	3	4	6	11
1	NR					< 10		
3	3	-0.90				10.0		
5	3	-0.85				10.1		
7	2	1.05				13.9		
12	NR					< 30		
15	4	-0.30			11.2			
18	NR					< 30		
23	NR			< 100				
29	0	9.10		30.0				
32	2	-1.50					8.8	
39	1	-1.90				8.0		
46	NR				< 40			
48	NR					< 10		
50	4	0.10			12.0			
52	2	-1.15			9.5			
55	0	6.10				24.0		
57	NR					< 50		
61	NR					< 10		
63	2	1.10				14.0		
68	4	0.10				12.0		
70	3	-0.90				10.0		
74	3	-0.90				10.0		
75	4	0.45			12.7			
97	4	0.00			11.8			
100	NR					< 50		
103	3	-0.90						10.0
105	4	0.10				12.0		
121	0	9.60			31.0			
128	2	-1.10				9.6		
138	4	-0.40	11.0					
141	1	1.60				15.0		
145	4	0.05				11.9		
146	4	0.30				12.4		
149	4	-0.50			10.8			
167	NR					< 200		
189	NR					< 10		

Table 11.-- *Statistical summary of reported data for standard reference water sample T-117 (trace constituents)--Continued*

Na (Sodium) mg/L



0. Other		4. ICP				
1. AA: direct, air		6. MS/ICP				
3. AA: graphite furnace						
N =	7	32	1	36	2	
Minimum =	17.10	15.50	21.40	18.00	20.20	
Maximum =	24.00	24.00	21.40	25.80	22.30	
Median =		19.65		20.05		
St Dev =		1.15		1.05		

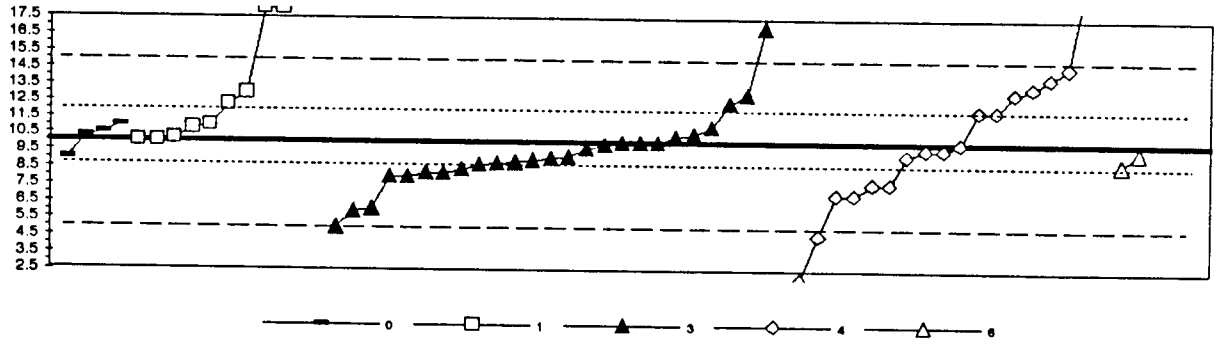
95% confidence MPV = 20.00 +/- 0.3
F-pseudosigma = 1.26
N = 78
Hu = 21.00
Hl = 19.30

Lab	Rating	Z-value	0	1	3	4	6
1	4	0.20				20.3	
2	0	2.69		23.4			
3	4	0.40				20.5	
5	3	0.79				21.0	
7	3	-0.87				18.9	
8	3	0.79				21.0	
9	3	-0.79		19.0			
12	3	0.79				21.0	
13	3	-0.56		19.3			
15	3	-0.56				19.3	
16	4	-0.16				19.8	
18	4	0.00				20.0	
19	4	-0.26				19.7	
20	2	-1.26	18.4				
24	3	0.56				20.7	
25	2	1.11				21.4	
27	3	-0.57		19.3			
32	4	0.16					20.2
34	4	-0.32		19.6			
39	4	0.00	20.0				
42	4	0.32				20.4	
43	4	0.00				20.0	
45	4	-0.24		19.7			
46	2	1.11			21.4		
48	2	1.19				21.5	
51	3	-0.79	19.0				
52	3	-0.63				19.2	
55	4	-0.48		19.4			
57	1	-1.59				18.0	
58	0	-3.57		15.5			
59	0	3.17	24.0				
61	4	0.48				20.6	
63	3	0.87				21.1	
64	4	-0.16		19.8			
66	4	-0.02		20.0			
68	3	-0.79				19.0	
69	3	-0.56		19.3			
70	4	-0.16				19.8	
74	4	0.00				20.0	
75	4	-0.08		19.9			
76	4	0.00		20.0			
78	4	-0.24		19.7			
83	2	-1.44		18.2			
87	4	0.00		20.0			
90	0	3.17		24.0			

Lab	Rating	Z-value	0	1	3	4	6
91	0	2.78				23.5	
97	4	-0.40		19.5			
100	3	0.87				21.1	
101	3	0.79		21.0			
103	3	0.79				21.0	
105	4	0.08				20.1	
109	4	0.40		20.5			
113	4	-0.01		20.0			
117	1	-1.55		18.1			
119	4	-0.24				19.7	
121	4	0.00				20.0	
123	3	-0.79		19.0			
126	3	0.56		20.7			
127	4	-0.40		19.5			
128	4	0.00				20.0	
129	3	-0.79		19.0			
134	3	0.79		21.0			
138	4	0.16	20.2				
140	4	0.00		20.0			
141	3	-0.56				19.3	
145	4	-0.29				19.8	
146	0	4.60				25.8	
167	3	0.87				21.1	
179	2	1.19		21.5			
180	3	-0.73				19.1	
182	0	-2.54		16.8			
184	1	1.59				22.0	
188	4	-0.48		19.4			
189	3	-0.79				19.0	
190	0	-2.30	17.1				
191	1	1.83					22.3
193	3	-0.87		18.9			
194	4	-0.16	19.8				

Table 11.-- *Statistical summary of reported data for standard reference water sample T-117 (trace constituents)--Continued*

Ni (Nickel) **μ g/L**



0. Other		4. ICP			
1. AA: direct, air		6. MS/ICP			
3. AA: graphite furnace					
N =	4	11	25	19	2
Minimum =	9.0	10.0	5.0	0.0	8.9
Maximum =	11.0	29.0	17.0	665.0	9.6
Median =		12.3	9.1	9.7	
St Dev =		3.23	2.39	3.00	

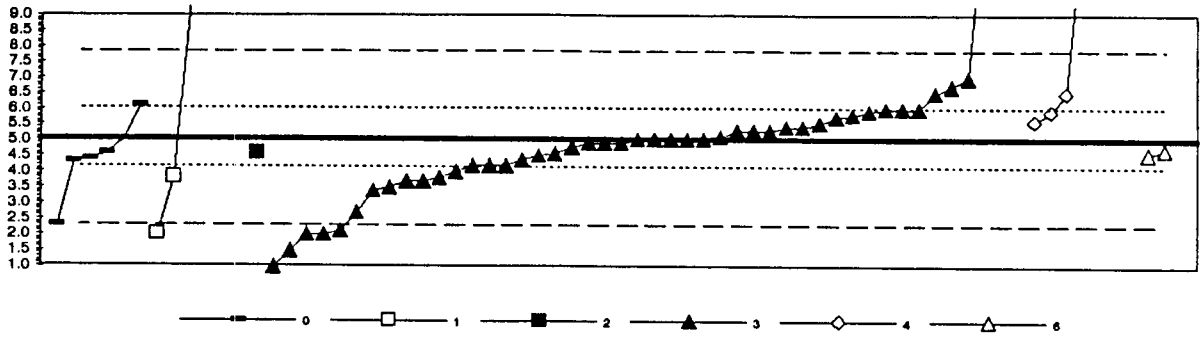
95% confidence MPV =	10.00	+/-	0.61
F-pseudosigma =	2.45		
N =	61		
Hu =	12.00		
HI =	8.70		

Lab	Rating	Z-value	0	1	3	4	6
1	4	-0.45			8.9		
3	NR	-4.08				< 20	
5	2	1.27				13.1	
6	3	0.98			12.4		
7	NR					< 15	
8	3	0.82				12.0	
9	4	0.41			11.0		
12	NR					< 20	
13	NR	-4.08			< 50		
15	3	-0.64			8.4		
16	NR					< 25	
18	0	-3.27				2.0	
23	3	0.93		12.3			
24	0	2.86			17.0		
25	NR					< 20	
26	4	0.08		10.2			
29	4	0.00		10.0			
30	4	-0.18					9.6
32	4	-0.45					8.9
34	NR			< 50			
39	1	1.63				14.0	
41	2	1.22		13.0			
46	NR				< 10		
48	4	0.16			10.4		
50	4	0.00			10.0		
51	3	-0.82			8.0		
52	3	-0.51			8.8		
55	4	-0.37			9.1		
57	NR			< 100			
59	4	-0.41	9.0				
61	0	4.04				19.9	
63	3	-0.82			8.0		
64	0	267.35				665.0	
68	3	0.82				12.0	
70	3	-0.98				7.6	
71	0	7.76		29.0			
73	4	-0.29				9.3	
74	4	0.00				10.0	
75	4	0.00			10.0		
78	1	-1.59			6.1		
79	3	-0.53			8.7		
87	0	3.27		18.0			
91	4	-0.33			9.2		
92	0	3.27		18.0			
97	4	-0.11			9.7		

Lab	Rating	Z-value	0	1	3	4	6
100	4	0.33		10.8			
101	2	1.39				13.4	
103	2	-1.22				7.0	
105	3	-0.73			8.2		
108	2	1.22			13.0		
113	3	-0.74			8.2		
117	0	-2.04			5.0		
119	1	-1.63			6.0		
121	2	-1.22				7.0	
127	4	-0.02			9.9		
128	3	-0.98				7.6	
133	0	-2.20				4.6	
134	4	-0.41			9.0		
138	4	0.41	11.0				
140	4	0.00		10.0			
141	NR					< 10	
145	4	-0.12				9.7	
146	1	1.92				14.7	
149	4	0.20	10.5				
161	0	6.12		25.0			
167	4	0.00			10.0		
179	4	0.20			10.5		
180	4	-0.12				9.7	
184	0	-4.08				0.0	
189	NR					< 20	
190	4	0.12	10.3				
193	4	0.41		11.0			

Table 11.-- *Statistical summary of reported data for standard reference water sample T-117 (trace constituents)--Continued*

Pb (Lead) **μ g/L**



0. Other		3. AA: graphite furnace					
1. AA: direct, air		4. ICP					
2. AA: direct, N2O		6. MS/ICP					
N =	6	6	1	46	7	2	
Minimum =	2.3	2.0	4.6	1.0	5.6	4.6	
Maximum =	6.1	60.0		25.4	95.0	4.7	
Median =				5.0			
St Dev =				1.39			

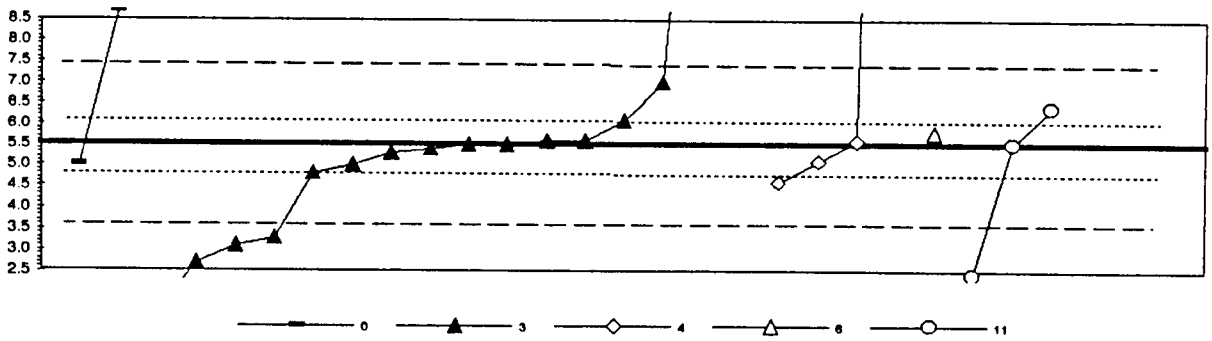
95% confidence MPV =	5.00	+/-	0.31	
F-pseudosigma =	1.33			
N =	69			
Hu =	6.00			
HI =	4.20			

Lab	Rating	Z-value	0	1	2	3	4	6
1	4	-0.08				4.9		
3	3	-0.60				4.2		
5	4	0.00				5.0		
6	0	-2.62				1.5		
7	2	-1.20				3.4		
9	3	0.75				6.0		
12	NR					< 10		
13	NR					< 5		
15	4	0.11				5.1		
16	3	0.68					5.9	
18	4	0.30				5.4		
23	3	-0.94		3.8				
24	0	9.62					17.8	
25	4	-0.33	4.6					
26	0	3.46		9.6				
27	3	0.61				5.8		
29	0	-2.18				2.1		
30	4	-0.20						4.7
32	4	-0.30						4.6
34	3	-0.51	4.3					
39	0	8.87				16.8		
41	0	7.52		15.0				
45	4	-0.12				4.8		
46	4	-0.30			4.6			
48	2	1.28				6.7		
50	4	0.00				5.0		
51	0	-2.26				2.0		
52	4	0.01				5.0		
55	3	-0.60				4.2		
57	NR					< 5		
58	4	0.23				5.3		
59	4	0.00	5.0					
61	3	-0.75				4.0		
63	2	-1.13				3.5		
64	0	67.67					95.0	
65	0	-3.00				1.0		
66	4	-0.06				4.9		
68	0	15.34				25.4		
69	4	0.00				5.0		
70	0					< 1		
71	0	6.77		14.0				
73	4	0.45					5.6	
74	4	0.38				5.5		
75	4	-0.08				4.9		
76	3	0.76				6.0		

Lab	Rating	Z-value	0	1	2	3	4	6
78	4	0.23				5.3		
79	3	0.53				5.7		
83	3	-0.98				3.7		
87	NR			< 20				
90	1	-1.73				2.7		
91	3	-0.98				3.7		
92	0	41.35		60.0				
97	0	8.02				13.0		
100	3	0.65				5.9		
101	0	8.09					13.1	
105	3	-0.90				3.8		
108	0	-2.28				2.0		
113	2	1.13				6.5		
117	2	1.50				7.0		
119	4	0.00				5.0		
121	3	0.75				6.0		
127	4	-0.36				4.5		
128	3	-0.60				4.2		
133	2	1.13					6.5	
134	4	-0.30				4.6		
138	4	-0.45	4.4					
140	0	-2.26		2.0				
141	NR						< 20	
143	4	-0.46				4.4		
145	NR						< 30	
146	4	0.30				5.4		
149	0	-2.03	2.3					
153	4	0.23				5.3		
161	NR					< 5		
167	NR					< 5		
179	NR					< 5		
180	0	5.26					12.0	
184	0	-3.76					0.0	
189	NR					< 5		
190	3	0.80	6.1					
193	NR			< 10				
194	NR		< 10					

Table 11.-- *Statistical summary of reported data for standard reference water sample T-117 (trace constituents)--Continued*

Sb (Antimony) **μ g/L**



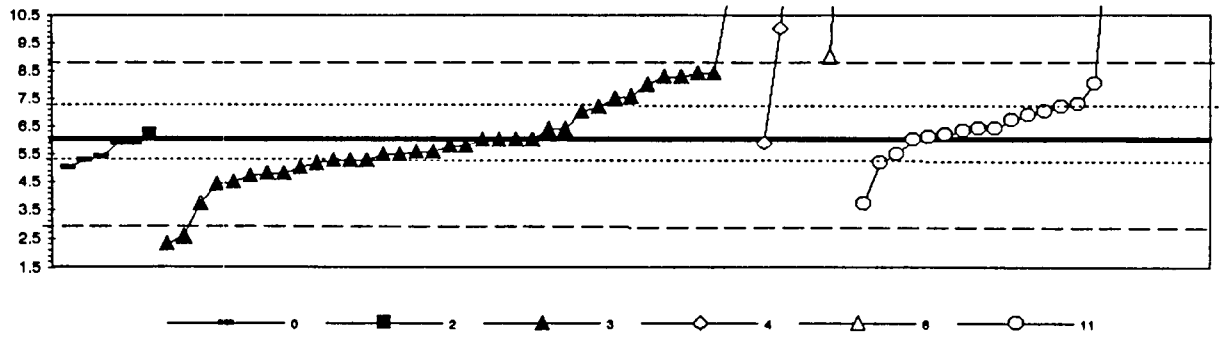
0. Other			6. MS/ICP			
3. AA: graphite furnace			11. AA: hydride			
4. ICP						
	N =	2	16	4	1	3
	Minimum =	5.0	1.6	4.6	5.8	2.4
	Maximum =	8.7	18.0	43.0	5.8	6.4
	Median =		5.5			
	St Dev =		1.24			

95% confidence MPV =	5.50	+/-	0.37
F-pseudosigma =	0.96		
N =	26		
Hu =	6.10		
Hl =	4.80		

Lab	Rating	Z-value	0	3	4	6	11
1	4	0.00					5.5
3	4	-0.42			5.1		
5	NR				< 20		
7	NR				< 38		
12	NR			< 100			
15	0	-4.06		1.6			
16	NR				< 60		
25	NR				< 42		
32	4	0.31				5.8	
42	3	0.94					6.4
48	4	0.00		5.5			
52	3	-0.73		4.8			
55	4	-0.10		5.4			
57	0	13.02		18.0			
58	0	-3.23					2.4
61	NR				< 40		
63	NR				< 10		
68	0	-2.29		3.3			
70	3	-0.52		5.0			
74	4	0.00		5.5			
78	4	0.10		5.6			
87	NR			< 200			
91	0	-2.82		2.7			
97	0	-2.50		3.1			
100	4	0.10		5.6			
105	4	-0.21		5.3			
117	0	13.02		18.0			
119	3	0.63		6.1			
127	1	1.56		7.0			
128	NR				< 10		
138	0	3.33	8.7				
141	0	39.06			43.0		
146	3	-0.94			4.6		
149	3	-0.52	5.0				
179	NR			< 5			
180	4	0.10			5.6		

Table 11.-- *Statistical summary of reported data for standard reference water sample T-117 (trace constituents)--Continued*

Se (Selenium) **μ g/L**



0. Other			4. ICP				
2. AA. direct, N2O			6. MS/ICP				
3. AA. graphite furnace			11. AA: hydride				
N =	5	1	35	4	2	16
Minimum =	5.0	6.2	2.3	5.9	9.0	3.7
Maximum =	5.9		11.6	58.9	19.4	14.7
Median =			5.8			6.5
St Dev =			1.53			1.02

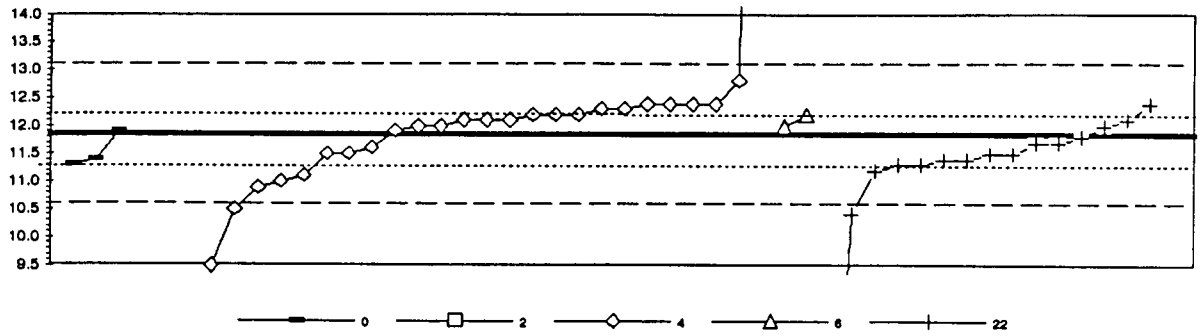
95% confidence MPV =	6.00	+/-	0.36
F-pseudosigma =	1.46		
N =	63		
Hu =	7.27		
HI =	5.30		

Lab	Rating	Z-value	0	2	3	4	6	11
1	3	0.89						7.3
3	1	1.64			8.4			
5	4	-0.48			5.3			
7	1	1.58			8.3			
9	3	0.68						7.0
12	4	0.00			6.0			
13	4	-0.34			5.5			
15	4	-0.34						5.5
16	4	-0.07				5.9		
18	4	0.14						6.2
24	0	5.96						14.7
25	4	-0.07	5.9					
26	0	-2.53			2.3			
29	0	-2.33			2.6			
30	0	9.17					19.4	
32	0	2.05					9.0	
34	4	-0.06	5.9					
39	2	1.37						8.0
42	4	0.48						6.7
45	4	-0.49			5.3			
46	4	0.14		6.2				
48	4	-0.48			5.3			
50	4	0.00						6.0
52	3	0.84			7.2			
55	4	0.27			6.4			
57	4	0.21						6.3
58	1	-1.58						3.7
61	1	1.58			8.3			
63	3	0.68			7.0			
65	NR				< 5			
66	4	-0.02			6.0			
68	2	-1.10			4.4			
69	4	0.27			6.4			
70	3	-0.82			4.8			
73	0	6.99				16.2		
74	4	-0.34			5.5			
75	4	0.25						6.4
76	2	1.01			7.5			
77	4	-0.27			5.6			
78	1	1.64			8.4			
79	4	-0.14			5.8			
87	4	0.27						6.4
90	4	-0.27			5.6			
91	2	1.12			7.6			
97	4	0.05						6.1

Lab	Rating	Z-value	0	2	3	4	6	11
100	3	-0.55			5.2			
101	0	36.23				58.9		
105	4	-0.12			5.8			
113	3	-0.87			4.7			
117	0	3.80			11.6			
119	3	0.62						6.9
126	3	-0.55						5.2
127	2	-1.04			4.5			
128	2	1.37			8.0			
133	1	-1.58			3.7			
134	3	0.82						7.2
138	4	-0.48	5.3					
146	3	-0.82			4.8			
149	4	-0.41	5.4					
167	3	-0.68			5.0			
179	4	0.00			6.0			
180	0	2.74				10.0		
193	4	0.00			6.0			
194	3	-0.68	5.0					

Table 11.-- *Statistical summary of reported data for standard reference water sample T-117 (trace constituents)--Continued*

SiO2 (Silica) mg/L



0. Other		6. MS/ICP				
2. AA: direct, N2O		22. Colorimetric				
4. ICP						
N =	3	1	27	2	15	
Minimum =	11.3	53.0	3.0	12.0	3.4	
Maximum =	11.9		41.7	12.2	12.4	
Median =			12.1		11.5	
St Dev =			0.58		0.48	

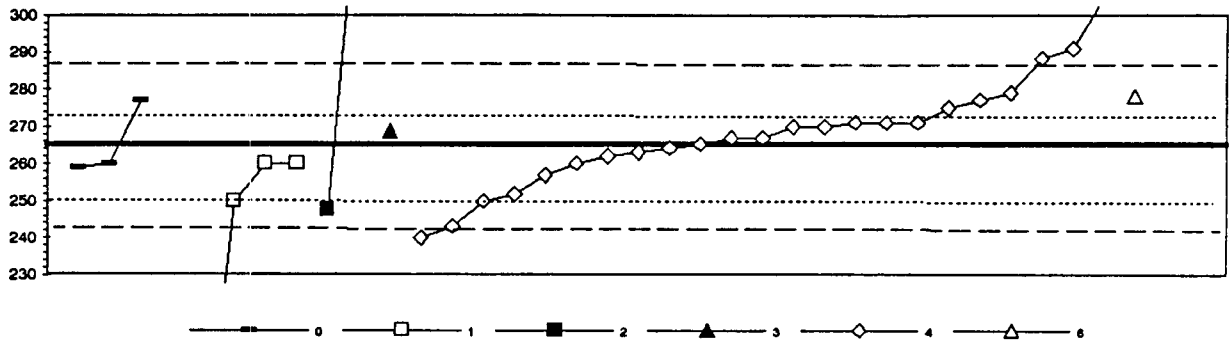
95% confidence MPV =	11.85	+/-	0.18
F-pseudosigma =	0.84		
N =	48		
Hu =	12.19		
Hl =	11.32		

Lab	Rating	Z-value	0	2	4	6	22
1	3	-0.52			11.5		
2	0	-2.25					10.4
3	3	0.86			12.4		
5	3	0.70			12.3		
7	3	0.55			12.2		
8	0	46.64			41.7		
9	3	0.86					12.4
13	3	-0.86					11.3
15	0	-10.30			5.3		
24	4	0.39			12.1		
25	0	-3.61			9.5		
29	3	-0.80	11.3				
32	4	0.23				12.0	
39	3	0.55			12.2		
42	3	0.86			12.4		
43	4	-0.39			11.8		
45	3	-0.55			11.5		
51	4	-0.30					11.7
52	4	0.39					12.1
55	4	0.17			12.0		
57	2	1.48			12.8		
61	0	-13.83			3.0		
63	4	0.41			12.1		
64	2	-1.17			11.1		
70	3	-0.55					11.5
87	4	-0.23					11.7
92	3	-0.70					11.4
97	4	0.23					12.0
100	3	0.55			12.2		
101	3	0.86			12.4		
103	2	-1.48			10.9		
105	3	0.64			12.3		
109	2	-1.39			11.0		
113	3	-0.86					11.3
119	4	0.23			12.0		
121	4	0.08			11.9		
127	4	-0.08					11.8
128	4	0.39			12.1		
134	3	-0.63					11.5
141	3	-1.00					11.2
143	4	0.08	11.9				
145	3	0.86			12.4		
146	0	-2.11			10.5		
161	0	-13.20					3.4
167	3	-0.70					11.4

Lab	Rating	Z-value	0	2	4	6	22
182	0	64.30		53.0			
190	3	-0.68	11.4				
191	3	0.55				12.2	

Table 11.-- *Statistical summary of reported data for standard reference water sample T-117 (trace constituents)--Continued*

Sr (Strontium) **μ g/L**



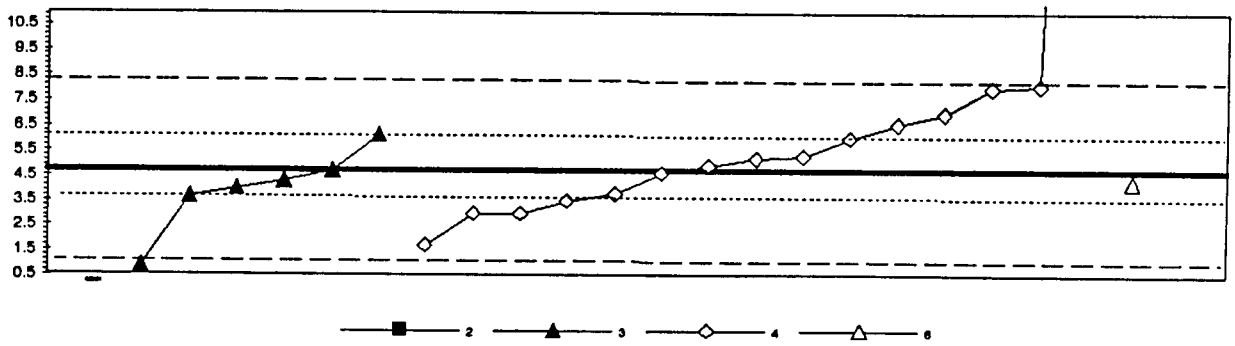
0. Other		3. AA: graphite furnace				
1. AA: direct, air		4. ICP				
2. AA: direct, N2O		6. MS/ICP				
N =	3	5	2	1	23	1
Minimum =	259	102	248	269	240	278
Maximum =	277	260	345		305	
Median =					267	
St Dev =					12.7	

95% confidence MPV =	265.0	+/-	3.7
F-pseudosigma =	11.1		
N =	35		
Hu =	273.0		
Hl =	258.0		

Lab	Rating	Z-value	0	1	2	3	4	6
1	3	0.51					271	
3	4	0.45					270	
7	3	-0.72					257	
8	2	1.23					279	
9	0	-14.66		102				
15	4	0.45					270	
16	1	-1.98					243	
18	4	0.18					267	
24	3	0.54					271	
25	0	2.07					288	
29	2	-1.35		250				
32	2	1.17						278
39	2	1.08					277	
42	0	2.34					291	
50	4	-0.45		260				
52	4	-0.09					264	
55	4	-0.45					260	
59	4	-0.45	260					
63	0	3.60					305	
68	0	-2.25					240	
70	3	0.54					271	
74	2	-1.17					252	
97	4	0.38				269		
100	2	-1.35					250	
103	3	0.90					275	
105	4	-0.27					262	
113	0	7.19			345			
121	4	0.00					265	
127	1	-1.53			248			
134	4	-0.45		260				
138	3	-0.54	259					
141	0	-8.09		175				
145	4	-0.18					263	
146	4	0.18					267	
191	2	1.08	277					

Table 11.-- *Statistical summary of reported data for standard reference water sample T-117 (trace constituents)--Continued*

V (Vanadium) **μ g/L**



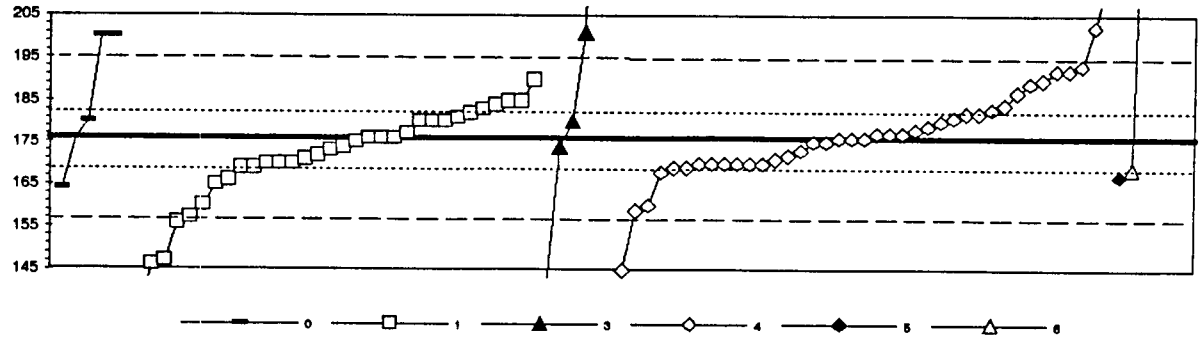
2. AA: direct, N2O			5. DCP	
3. AA: graphite furnace			6. MS/ICP	
4. ICP				
N =	0	6	15	1
Minimum =		0.9	1.7	4.3
Maximum =		6.1	43.0	
Median =			5.2	
St Dev =			1.94	

95% confidence MPV =	4.70	+/-	0.75
F-pseudosigma =	1.80		
N =	22		
Hu =	6.10		
Hl =	3.70		

Lab	Rating	Z-value	2	3	4	6
1	NR				< 6	
3	NR				< 10	
5	4	-0.04			4.6	
7	NR				< 10	
8	4	0.11			4.9	
15	3	0.78		6.1		
16	NR				< 10	
18	3	-0.94			3.0	
25	NR				< 5	
32	4	-0.22				4.3
39	1	1.83			8.0	
50	4	-0.39		4.0		
52	4	-0.22		4.3		
55	1	1.89			8.1	
57	NR				< 50	
61	NR				< 5	
63	0	21.28			43.0	
68	2	1.28			7.0	
70	3	-0.67			3.5	
74	4	-0.50			3.8	
97	3	-0.56		3.7		
100	NR				< 10	
101	4	0.33			5.3	
103	3	-0.94			3.0	
105	NR				< 20	
117	0	-2.14		0.9		
121	3	0.72			6.0	
128	NR				< 3	
134	4	0.00		4.7		
141	NR				< 10	
145	2	1.06			6.6	
146	4	0.28			5.2	
161	NR		< 200			
167	NR				< 40	
180	1	-1.67			1.7	
189	NR				< 8	

Table 11.-- *Statistical summary of reported data for standard reference water sample T-117 (trace constituents)--Continued*

Zn (Zinc) **μ g/L**



0. Other			4. ICP			
1. AA: direct, air			5. DCP			
3. AA: graphite furnace			6. MS/ICP			
N =	5	33	5	40	1	2
Minimum =	184	4	140	0	187	169
Maximum =	200	190	320	215		292
Median =		173		176		
St Dev =		8.4		11.0		

95% confidence MPV = 176.0 +/- 2.0
F-pseudosigma = 9.3
N = 86
Hu = 182.0
HI = 169.4

Lab	Rating	Z-value	0	1	3	4	5	6
1	4	0.37				179		
3	3	0.54				181		
5	4	0.00				176		
6	0	-3.85			140			
7	4	-0.43				172		
8	4	0.15				177		
9	4	0.43		180				
12	3	-0.64				170		
13	2	-1.07		166				
15	4	0.11				177		
16	1	-1.82				159		
18	4	0.00				176		
19	0	-3.32				145		
23	3	-0.71		169				
24	3	-0.75				169		
25	1	1.71				192		
26	0	-4.39		135				
27	3	-0.96					167	
29	3	0.96		185				
30	0	12.44						292
32	3	-0.75						169
34	3	-0.64		170				
39	4	0.43				180		
41	0	-2.14		156				
42	2	1.50				190		
45	0	-3.10		147				
46	4	0.43			180			
48	1	-1.71				160		
50	4	-0.21			174			
51	0	15.42			320			
52	4	0.21				178		
55	4	0.11				177		
57	4	0.43		180				
58	1	-1.71		160				
59	4	0.43	180					
61	2	1.18				187		
63	2	1.39				189		
64	3	0.75				183		
65	0	-2.03		157				
66	4	-0.11		175				
68	3	-0.64				170		
69	3	-0.54		171				
70	4	0.00				176		
71	3	-0.64		170				
73	3	0.64				182		

Lab	Rating	Z-value	0	1	3	4	5	6
74	3	-0.75				169		
75	4	0.43		180				
76	4	-0.21		174				
77	2	1.50		190				
78	3	0.75		183				
79	3	0.86				184		
83	3	-0.64		170				
87	4	0.00		176				
90	3	0.96		185				
91	0	2.78				202		
92	0	-18.42		4				
97	0	2.68			201			
100	3	0.64		182				
101	1	1.71				192		
103	4	-0.11				175		
105	3	-0.64				170		
108	4	-0.32		173				
113	3	0.86		184				
117	0	-3.27		148				
119	3	-0.64				170		
121	1	1.82				193		
123	0	2.57	200					
127	4	0.00		176				
128	3	0.64				182		
133	0	4.18				215		
134	3	-0.75		169				
138	4	0.00	176					
140	3	0.54		181				
141	3	-0.54				171		
143	4	0.11		177				
145	4	-0.11				175		
146	3	-0.86				168		
161	4	0.00		176				
167	3	-0.64				170		
179	4	-0.43		172				
180	4	-0.31				173		
184	0	-18.83				0		
189	3	-0.64				170		
190	2	-1.28	164					
193	2	-1.18		165				
194	0	2.57	200					

Table 12.-- *Statistical summary of reported data for standard reference sample M-120 (major constituents)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

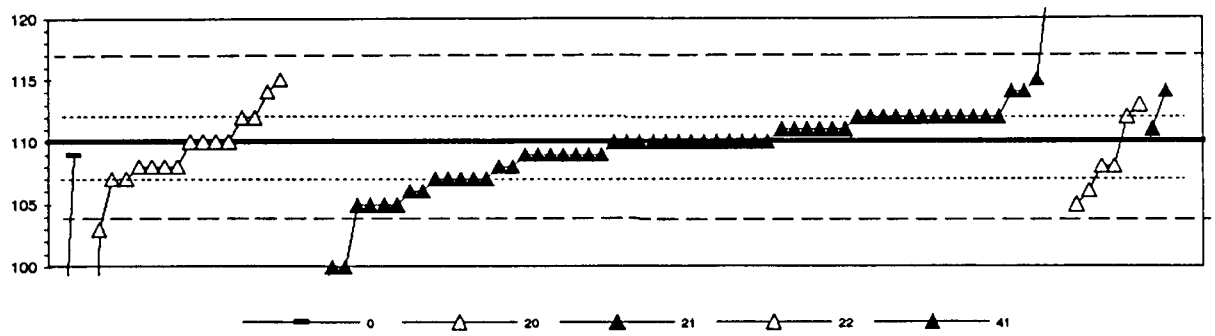
0. Other/Not reported		
1. AA: direct, air	=	atomic absorption: direct,air
2. AA: direct, N2O	=	atomic absorption: direct,nitrous oxide
3. AA: graphite furnace	=	atomic absorption: graphite furnace
4. ICP	=	inductively coupled plasma
5. DCP	=	direct coupled plasma
6. MS/ICP	=	mass spectrometry/inductively 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	=	specific ion 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
μ g/L	=	micrograms per liter
mg/L	=	milligrams per liter
Lab	=	laboratory code number
NR	=	not rated, less than value reported
<	=	less than

Table 12.-- *Statistical summary of reported data for standard reference water sample M-120 (major constituents)--Continued*

Alk (Alkalinity as CaCO3) mg/L



0. Other		22. Colorimetric			
20. Titrate: color		41. Electrometric			
21. Titrate: electro		5. DCP			
N =	2	18	61	6	2
Minimum =	90	74	27	105	111
Maximum =	109	115	125	113	114
Median =		109	110		
St Dev =		3.02	3.31		

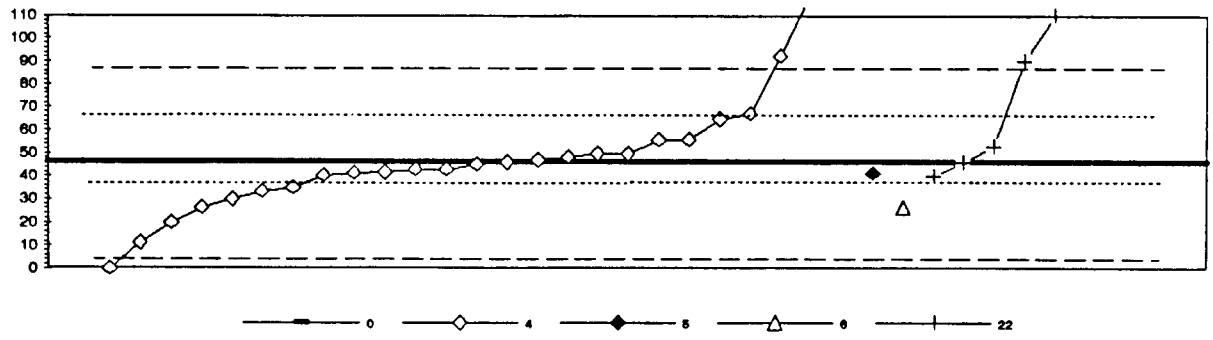
95% confidence MPV =	110.0	+/- 0.8
F-pseudosigma =	3.7	
N =	87	
Hu=	112.0	
Hl=	107.0	

Lab	Rating	Zvalue	0	20	21	22	41
1	2	1.35			115		
3	2	1.08			114		
6	4	0.00		110			
8	3	-0.81		107			
9	3	-0.81		107			
10	3	0.54			112		
12	3	0.54			112		
13	2	-1.35			105		
15	4	0.00			110		
16	3	-0.54		108			
18	3	-0.54				108	
19	4	0.00			110		
20	4	0.00			110		
23	4	0.00			110		
24	4	0.00			110		
25	4	0.27					111
27	3	0.54			112		
29	0	-2.70			100		
32	3	0.54			112		
34	3	-0.54		108			
38	0	-22.43			27		
40	4	-0.27			109		
41	0	-10.81			70		
42	4	-0.27			109		
43	4	0.27			111		
45	3	0.54			112		
46	3	0.54			112		
48	4	0.00			110		
50	3	-0.81			107		
51	4	0.00			110		
52	3	0.54			112		
54	4	0.00			110		
55	4	0.00			110		
56	4	0.00			110		
57	4	0.00		110			
58	3	-0.81			107		
59	3	0.54			112		
60	2	1.08			114		
61	0	-3.24			98		
63	2	1.35		115			
66	3	-0.81			107		
68	3	0.81				113	
69	3	-0.54				108	
70	3	-0.81			107		
71	3	0.54		112			

Lab	Rating	Zvalue	0	20	21	22	41
74	4	0.00			110		
75	4	-0.27			109		
76	4	0.00		110			
77	2	1.08					114
78	2	-1.35			105		
79	0	-2.70			100		
83	4	0.00			110		
87	3	-0.54			108		
90	4	-0.27			109		
91	3	-0.81			107		
92	3	-0.54			108		
97	4	-0.27			109		
100	4	0.27			111		
105	3	0.54			112		
109	0	3.78			124		
113	2	-1.08				106	
117	2	-1.35			105		
119	2	1.08		114			
122	3	0.54			112		
127	4	0.27			111		
128	2	-1.35				105	
129	3	-0.54		108			
133	2	-1.08			106		
134	4	0.27			111		
138	2	-1.08			106		
141	4	-0.27			109		
145	3	0.54				112	
146	4	0			110		
149	0	-8.73		74			
153	3	0.54			112		
158	2	-1.35			105		
161	3	-0.54		108			
167	4	-0.27			109		
180	4	0.27			111		
182	4	0.27			111		
183	4	0		110			
184	0	-5.41	90				
188	0	4.05			125		
189	3	0.54		112			
190	3	0.54			112		
191	1	-1.89		103			
194	4	-0.27	109				

Table 12.-- *Statistical summary of reported data for standard reference water sample M-120 (major constituents)--Continued*

B (Boron) **μ g/L**



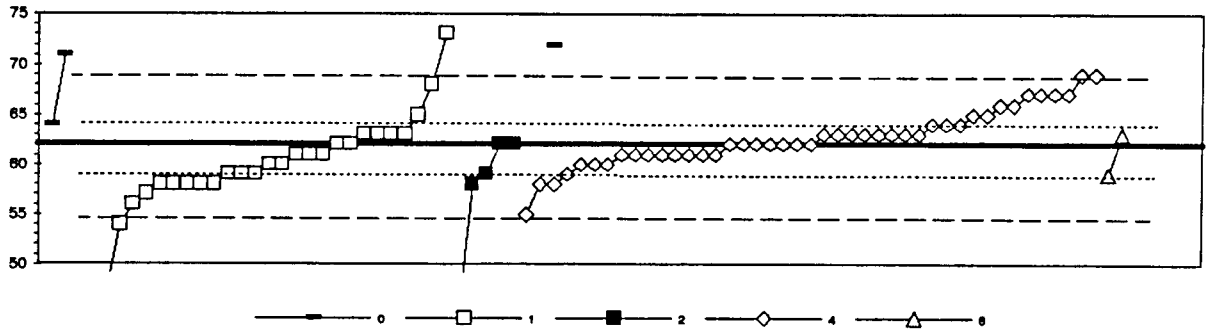
0. Other		6. MS/ICP				
4. ICP		22. Colorimetric				
5. DCP						
N =	1	25	1	1	7	
Minimum =	189	0.04	41	26	40	
Maximum =		163			240	
Median =		45				
St Dev =		19.1				

95% confidence MPV = 46.0 +/- 6.9
F-pseudosigma = 20.8
N = 35
Hu= 66.0
Hl= 38.0

Lab	Rating	Zvalue	0	4	5	6	22
1	4	-0.24			41		
3	NR			< 50			
7	0	2.22		92			
10	0	2.12					90
15	4	-0.05		45			
16	0	5.64		163			
18	4	0.10		48			
24	4	0.48		56			
25	0	-2.20		0.04			
29	4	-0.29					40
32	3	-0.96				26	
39	3	-0.53		35			
40	4	-0.29		40			
45	4	0.34					53
46	4	-0.14		43			
48	2	-1.25		20			
50	NR						< 100
52	NR			< 150			
57	NR			< 100			
61	1	-1.69		11			
63	4	0.00		46			
68	0	3.57		120			
70	4	-0.24		41			
74	4	0.05		47			
77	0	9.35					240
100	4	0.48		56			
103	3	-0.63		33			
109	4	-0.19		42			
119	4	0.19		50			
121	NR	-2.20	< 0.05				
122	0	6.89	189				
128	3	-0.96		26			
129	0	3.08					110
134	4	0.00					46
141	3	0.92		65			
145	4	0.19		50			
146	4	-0.14		43			
161	0	8.14					215
167	2	1.01		67			
180	3	-0.77		30			

Table 12.-- *Statistical summary of reported data for standard reference water sample M-120 (major constituents)--Continued*

Ca (Calcium) mg/L



0. Other		4. ICP					
1. AA: direct, air		6. MS/ICP					
2. AA: direct, N2O		7. Ion Chromatography					
N =	2	28	5	43	2	6	
Minimum =	64	31	45	55	59	57	
Maximum =	71	73	62	69	63	95	
Median =		60		62			
St Dev =		4.0		2.9			

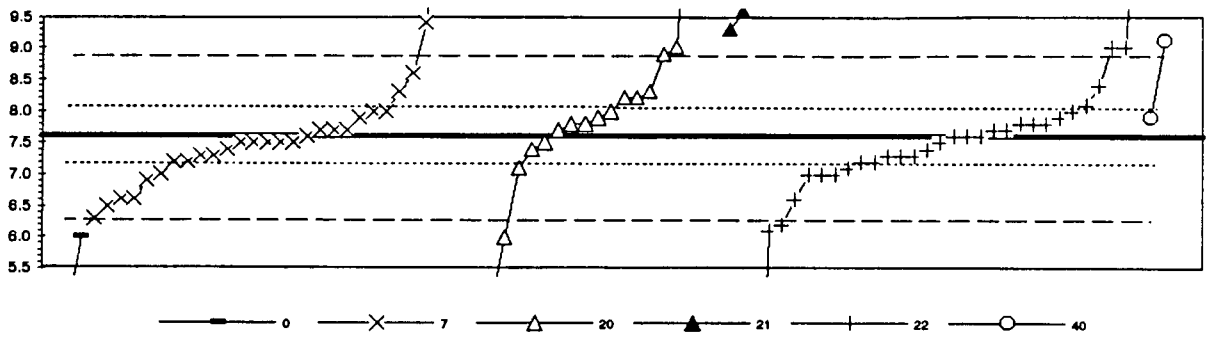
95% confidence MPV =	62.0	+/- 0.8
F-pseudosigma =	3.7	
N =	88	
Hu=	64.0	
Hl=	59.0	

Lab	Rating	Zvalue	0	1	2	4	6	7
1	3	0.81				65		
2	2	-1.08			58			
3	1	1.89				69		
6	3	0.81		65				
7	3	-0.54				60		
8	3	0.54				64		
9	1	-1.62		56				
10	4	0.27		63				
12	2	1.35				67		
13	3	-0.81		59				
15	1	-1.89				55		
16	3	-0.81				59		
18	4	-0.27				61		
19	4	-0.27				61		
24	4	0.27				63		
25	1	1.89				69		
26	2	-1.08						58
29	2	1.35						67
32	4	0.27					63	
34	4	0.00			62			
38	3	-0.81			59			
39	4	0.00				62		
40	3	0.54				64		
42	4	0.27				63		
43	4	0.27				63		
45	4	0.00		62				
46	4	0.00				62		
48	4	0.27				63		
50	4	-0.27		61				
51	2	-1.08		58				
52	4	0.00				62		
54	3	-0.81		59				
55	4	0.27				63		
56	2	-1.08		58				
57	4	-0.27				61		
58	2	-1.08		58				
61	3	0.54				64		
63	2	1.35				67		
64	4	0.27				63		
68	4	-0.27				61		
69	3	-0.81		59				
70	4	0.27				63		
71	0	2.43	71					
74	3	0.54	64					
75	4	0.27		63				

Lab	Rating	Zvalue	0	1	2	4	6	7
76	0	2.97		73				
77	3	0.81						65
78	0	8.92						95
83	2	-1.08		58				
87	4	0.00			62			
91	2	1.35				67		
93	3	-0.54				60		
95	0	-4.05		47				
97	2	-1.08		58				
100	2	1.08				66		
101	4	0.00		62				
103	2	-1.08				58		
105	3	-0.54				60		
109	4	0.27		63				
113	3	-0.54		60				
117	0	-5.95		40				
119	4	0.27				63		
121	4	-0.27				61		
122	0	-8.38		31				
123	1	1.62		68				
127	4	0.27		63				
128	3	0.81				65		
129	4	-0.27		61				
133	2	1.35				67		
134	3	-0.54		60				
138	2	1.08				66		
140	4	-0.27		61				
141	2	-1.08				58		
145	4	0				62		
146	4	0				62		
149	2	-1.35		57				
153	3	0.54						64
161	0	-5.41						
167	4	0				62		
179	0	-2.16		54				
180	4	-0.27				61		
182	0	-4.59			45			
183	0	2.7						
184	4	-0.27				61		
188	4	-0.27				61		
189	4	0				62		
190	2	-1.35						57
191	3	-0.81					59	

Table 12.-- *Statistical summary of reported data for standard reference water sample M-120 (major constituents)--Continued*

Cl (Chloride) mg/L



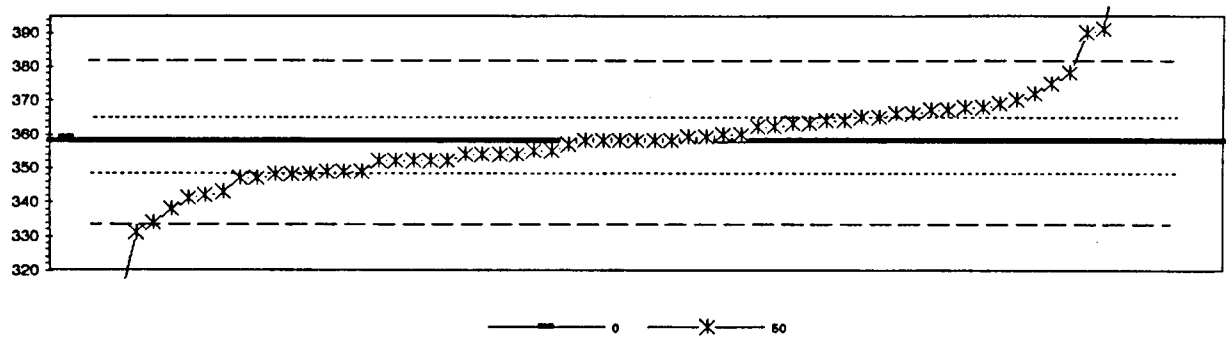
0. Other			21: Titrate: electro				
7. Ion chromatography			22. Colorimetric				
20. Titrate: color			40. Ion electrode				
N =	3	29	19	2	30	2	
Minimum =	2.1	6.3	4.5	9.3	0.9	7.9	
Maximum =	6.0	15.4	232.0	9.6	12.0	9.1	
Median =		7.5	7.9		7.8		
St Dev =		0.67	0.75		0.87		

95% confidence MPV =	7.60	+/- 0.14
F-pseudosigma =	0.87	
N =	85	
Hu=	8.10	
HI=	7.20	

Lab	Rating	Zvalue	0	7	20	21	22	40
1	2	1.49		8.6				
3	4	0.30					7.8	
4	4	0.45		7.9				
7	2	1.04		8.3				
8	3	-0.60		7.2				
9	0	2.09					9.0	
10	4	0.30			7.8			
12	0	6.57					12.0	
13	0	-2.24					6.1	
15	4	-0.15		7.5				
16	1	1.94			8.9			
18	4	-0.45					7.3	
19	4	-0.15			7.5			
24	4	-0.30					7.4	
25	4	0.15		7.7				
26	0	-8.21	2.1					
27	2	-1.49		6.6				
29	0	9.55		14.0				
32	4	-0.45		7.3				
34	4	0.00					7.6	
40	4	0.15		7.7				
42	4	-0.15		7.5				
43	4	0.45						7.9
45	3	-0.75					7.1	
46	3	0.75					8.1	
48	3	0.60			8.0			
50	3	-0.90					7.0	
51	0	7.16		12.4				
52	4	0.15					7.7	
54	4	0.45					7.9	
55	3	0.60					8.0	
56	3	0.90			8.2			
58	3	0.90			8.2			
59	2	-1.04		6.9				
61	0	2.99				9.6		
63	0	2.09					9.0	
64	0	-10.00					0.9	
65	4	0.15			7.7			
66	0	-2.09					6.2	
68	4	0.30					7.8	
69	2	1.19					8.4	
70	4	0.30			7.8			
74	0	-2.39	6.0					
75	4	0.15					7.7	
76	4	-0.45		7.3				
77	0	6.57			12.0			
78	3	-0.75			7.1			
87	4	-0.45					7.3	
90	0	2.24						9.1
91	3	0.60		8.0				
93	0	11.64		15.4				
95	1	-1.64		6.5				
97	3	-0.60					7.2	
100	4	0.15		7.7				
101	0	-4.63			4.5			
102	NR						< 6.2	
105	3	0.60		8.0				
109	0	2.54				9.3		
113	0	2.69		9.4				
117	0	-3.88			5.0			
119	0	-2.39			6.0			
122	4	-0.30			7.4			
127	4	0.00		7.6				
128	4	-0.45					7.3	
129	3	-0.60		7.2				
134	4	-0.30		7.4				
138	4	0.30					7.8	
140	3	-0.90					7.0	
141	3	-0.60					7.2	
143	3	-0.90					7.0	
145	4	-0.15					7.5	
148	0	2.09			9.0			
153	2	-1.49		6.6				
158	2	-1.49					6.6	
177	0	7.16			12.4			
179	0	334.93			232.0			
180	4	0.00					7.6	
182	2	1.04			8.3			
183	4	0.45			7.9			
184	4	0.00					7.6	
188	1	-1.94		6.3				
189	4	-0.15		7.5				
190	3	-0.90		7.0				
191	4	-0.15		7.5				
193	4	-0.15		7.5				
194	0	-4.18	4.8					

Table 12.-- *Statistical summary of reported data for standard reference water sample M-120 (major constituents)--Continued*

DSRD (Dissolved solids) **mg/L**



0. Other
50. Gravimetric: evap

N =	1	64
Minimum =	350	230
Maximum =		808
Median =		358
St Dev =		11.6

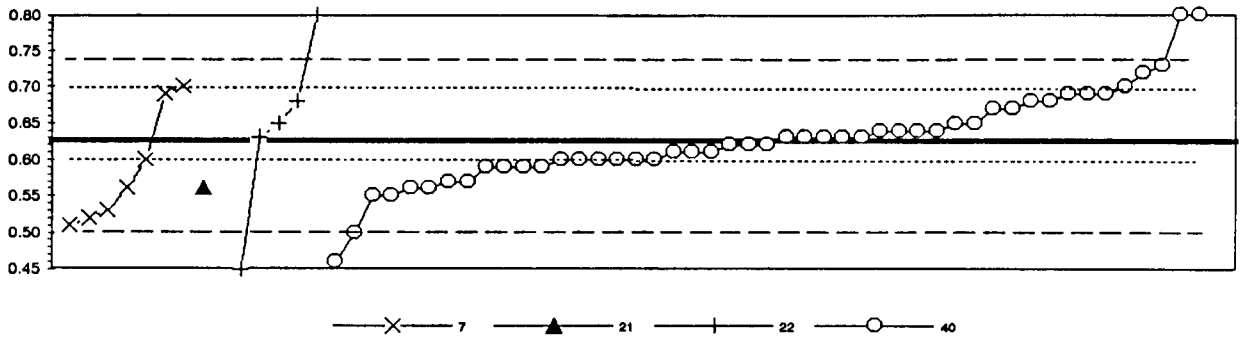
95% confidence MPV = 358.0 +/- 2.9
F-pseudosigma = 12.2
N = 67
Hu= 365.5
Hl= 349.0

Lab	Rating	Zvalue	0	50
1	4	-0.25		355
3	3	0.57		365
7	0	26.33		680
8	1	-1.64		338
9	3	-0.74		349
10	3	0.98		370
12	4	-0.25		355
13	1	-1.96		334
15	3	-0.74		349
16	3	0.82		368
18	4	0.08		359
19	4	0.00		358
20	2	-1.23		343
23	4	0.49		364
25	4	0.49		364
29	4	0.08		359
32	2	-1.39		341
34	4	0.16		360
38	3	0.90		369
40	4	0.41		363
42	0	2.70		391
43	4	0.33		362
45	2	1.39		375
46	4	0.00		358
48	2	1.14		372
50	4	0.00		358
51	4	-0.33		354
52	3	0.74		367
54	3	-0.90		347
55	4	0.16		360
59	3	0.74		367
61	4	0.41		363
63	1	1.64		378
66	4	-0.49		352
69	4	-0.33		354
70	4	-0.33		354
71	3	0.57	365	
74	3	0.65		366
75	3	0.57		365
76	4	0.33		362
77	3	-0.66	350.0	
78	0	-10.47		230
87	3	0.82		368
90	3	-0.74		349
91	3	-0.82		348

Lab	Rating	Zvalue	0	50
92	4	-0.49		352
97	4	0.00		358
100	4	0.08	359	
101	4	-0.49		352
105	3	-0.82		348
109	0	2.62		390
113	0	27.47		694
117	0	-4.33		305
119	2	-1.31		342
122	0	36.79		808
127	3	0.65		366
129	3	-0.82		348
134	4	-0.33		354
138	4	-0.49		352
140	0	-3.84		311
141	0	-2.21		331
143	4	0.00		358
146	4	-0.49		352
149	4	-0.08		357
158	3	-0.90		347
167	4	0.00		358
184	4	0.16	360	
189	0	5.07		420

Table 12.-- *Statistical summary of reported data for standard reference water sample M-120 (major constituents)--Continued*

F (Fluoride) **mg/L**



7. Ion chromatography			22s. Color: SPADNS		
21. Titrate: electro			40. Ion electrode		
22e. Color: eriochrome					
N =	11	1	5	49	
Minimum =	0.51	0.58	0.63	0.46	
Maximum =	0.70	0.58	0.80	454	
Median =	0.60			0.63	
St Dev =	0.080			0.064	

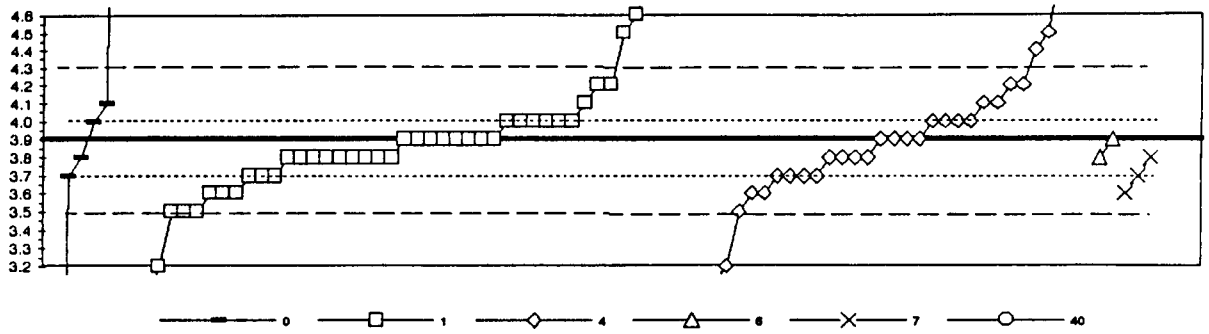
95% confidence MPV =	0.625	+/-	0.014
F-pseudosigma =	0.059		
N =	66		
Hu=	0.70		
Hl=	0.60		

Lab	Rating	Zvalue	7	21	22 code	40
1	4	-0.42	0.60			
3	3	0.93			0.68	
6	0	2.97				0.80
7	1	-1.61	0.53			
9	4	-0.08				0.62
10	4	-0.42				0.60
12	4	-0.42				0.60
13	4	0.42				0.65
15	2	1.10				0.69
16	0	7688				454
18	4	0.42			0.65	
19	4	0.25				0.64
23	2	-1.10				0.56
24	4	-0.25				0.61
25	4	0.08				0.63
29	2	1.10	0.69			
32	2	1.27	0.70			
34	4	0.08			0.63	
40	2	1.10				0.69
42	3	0.93				0.68
45	2	-1.10				0.56
46	4	0.42				0.65
50	0	-2.12				0.50
52	3	0.93				0.68
54	4	-0.25				0.61
55	1	1.78				0.73
57	2	1.27				0.70
58	3	-0.93				0.57
59	3	-0.59				0.59
61	4	-0.08				0.62
63	4	0.25				0.64
68	4	0.08				0.63
70	3	-0.59				0.59
71	4	-0.42				0.60
74	4	-0.08	0.62			
76	4	0.08				0.63
77	1	1.61				0.72
78	4	0.25				0.64
90	4	0.42	0.65			
93	0	11.27				1.29
97	4	-0.42				0.60
100	0	2.97				0.80
105	2	-1.10	0.56			
109	4	0.08				0.63
113	0	2.97			0.80 spadns	

Lab	Rating	Zvalue	7	21	22	code	40
117	3	-0.59					0.59
119	3	-0.59					0.59
122	0	-2.97			0.45	spadns	
127	2	-1.27					0.55
128	2	-1.27					0.55
129	1	-1.95	0.51				
134	2	-1.10		0.56			
138	3	-0.76	0.58				
140	3	0.76					0.67
141	4	0.25					0.64
149	4	-0.25					0.61
153	1	-1.78	0.52				
161	4	0.08					0.63
167	4	-0.42					0.60
177	2	1.10					0.69
180	3	0.76					0.67
182	4	-0.42					0.60
183	0	-2.80					0.46
189	3	-0.93					0.57
190	4	-0.08					0.62
194	4	-0.42	0.60				

Table 12.-- *Statistical summary of reported data for standard reference water sample M-120 (major constituents)--Continued*

K (Potassium) mg/L



0. Other		6. MS/ICP					
1. AA: direct, air		7. Ion chromatography					
4. ICP		40. Ion electrode					
N =	6	44	31	2	3	1
Minimum =	0.1	2.1	2.5	3.8	3.6	18.4
Maximum =	10.6	48.0	5.3	3.9	3.8	
Median =		3.9	3.9			
St Dev =		0.33	0.31			

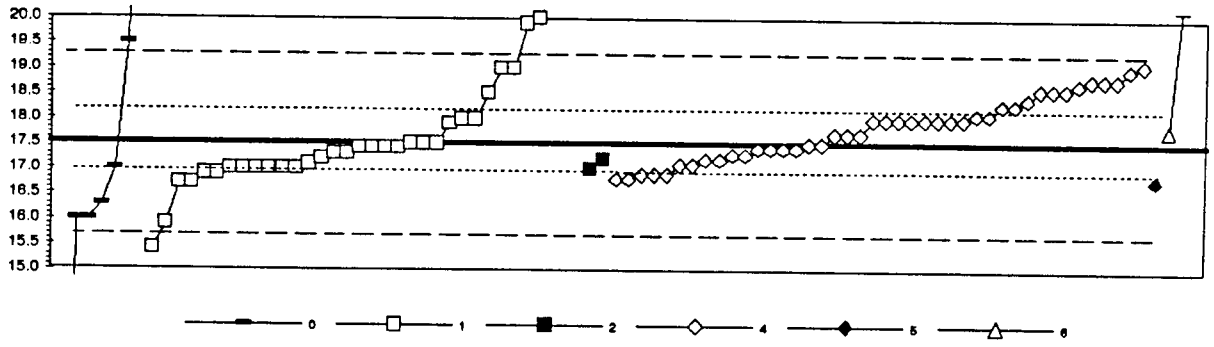
95% confidence MPV =	3.90	+/- 0.05
F-pseudosigma =	0.22	
N =	87	
Hu=	4.00	
Hl=	3.70	

Lab	Rating	Zvalue	0	1	4	6	7	40
1	4	-0.45		3.8				
2	0	2.73		4.5				
3	1	-1.82		3.5				
7	0	6.36			5.3			
8	2	-1.36			3.6			
9	4	0.00		3.9				
10	4	0.00		3.9				
12	2	1.36			4.2			
13	4	0.00		3.9				
15	0	3.18		4.6				
16	1	-1.82		3.5				
18	0	-6.36			2.5			
19	3	-0.91			3.7			
23	2	-1.36		3.6				
24	4	0.00			3.9			
25	0	2.27			4.4			
26	0	30.45	10.6					
27	4	0.45		4.0				
29	4	0.45	4.0					
32	4	0.00				3.9		
34	3	-0.91		3.7				
38	4	0.00		3.9				
39	3	-0.91					3.7	
40	3	-0.91			3.7			
42	1	-1.82			3.5			
43	4	0.00			3.9			
45	3	-0.91		3.7				
46	3	-0.91			3.7			
48	3	0.91			4.1			
50	4	0.00		3.9				
51	3	0.91	4.1					
52	4	-0.45			3.8			
54	4	-0.45		3.8				
55	4	0.00		3.9				
56	4	-0.45		3.8				
57	3	0.91		4.1				
61	0	4.55			4.9			
63	0	-3.64			3.1			
64	4	-0.45		3.8				
68	4	0.00			3.9			
69	2	1.36		4.2				
70	3	0.91			4.1			
71	0	5.91		5.2				
74	4	-0.45	3.8					
75	4	0.45		4.0				

Lab	Rating	Zvalue	0	1	4	6	7	40
76	1	-1.82		3.5				
77	3	-0.91	3.7					
78	0	-17.27	0.1					
83	3	-0.91		3.7				
87	4	-0.45		3.8				
91	0	-3.18			3.2			
93	4	0.00		3.9				
95	0	4.09		4.8				
97	0	-3.18		3.2				
100	4	-0.45			3.8			
101	4	-0.45		3.8				
103	0	5.00			5.0			
105	0	2.73			4.5			
109	2	-1.36		3.6				
113	4	0.45		4.0				
117	0	-4.09		3.0				
119	3	-0.91			3.7			
121	4	0.00		3.9				
122	0	200.45		48.0				
123	4	0.45		4.0				
127	4	-0.45		3.8				
128	4	0.45			4.0			
129	0	10.91		6.3				
134	4	-0.45		3.8				
138	4	0.45			4.0			
140	4	0.45		4.0				
141	4	-0.45			3.8			
145	2	-1.36			3.6			
148	4	-0.45			3.8			
149	4	-0.45		3.8				
153	4	-0.45					3.8	
161	2	1.36		4.2				
167	4	0.00			3.9			
179	2	-1.36		3.6				
180	4	0.45			4.0			
182	0	-8.18		2.1				
184	2	1.36			4.2			
188	4	0.45		4.0				
189	4	0.45			4.0			
190	2	-1.36					3.6	
191	4	-0.45				3.8		

Table 12.-- *Statistical summary of reported data for standard reference water sample M-120 (major constituents)--Continued*

Mg (Magnesium) mg/L



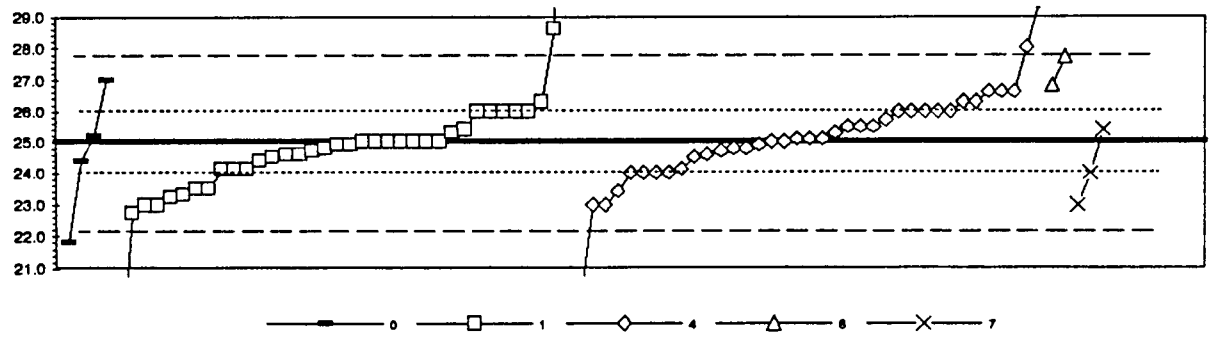
0. Other		4. ICP					
1. AA: direct, air		5. DCP					
2. AA: direct, N2O		6. MS/ICP					
N =	7	33	2	42	1	2	
Minimum =	0.2	15.4	17.0	16.8	16.8	17.8	
Maximum =	26.5	48.0	17.2	19.1	16.8	20.3	
Median =		17.4		18.0			
St Dev =		1.14		0.66			

95% confidence MPV = 17.50 +/- 0.19
F-pseudosigma = 0.89
N = 87
Hu= 18.20
Hl= 17.00

Lab	Rating	Zvalue	0	1	2	4	5	6
1	4	0.00		17.5				
2	4	-0.34			17.2			
3	2	1.46				18.8		
6	1	-1.80		15.9				
7	4	0.22				17.7		
8	2	1.24				18.6		
9	3	-0.56		17.0				
10	4	0.00		17.5				
12	2	1.35				18.7		
13	4	0.45		17.9				
15	3	-0.79				16.8		
16	3	-0.79				16.8		
18	3	-0.67				16.9		
19	3	0.67				18.1		
24	4	-0.11				17.4		
25	2	1.46				18.8		
26	0	2.25	19.5					
27	3	-0.79					16.8	
29	1	-1.69	16.0					
32	4	0.34						17.8
34	3	-0.67		16.9				
38	3	-0.67		16.9				
39	4	-0.45				17.1		
40	3	-0.67				16.9		
42	4	0.00				17.5		
43	3	0.56				18.0		
45	4	-0.22		17.3				
46	3	0.90				18.3		
48	3	0.56				18.0		
50	3	0.56		18.0				
51	3	-0.56		17.0				
52	4	-0.34				17.2		
54	4	-0.22		17.3				
55	3	0.90				18.3		
56	0	-2.36		15.4				
57	3	0.56				18.0		
58	4	0.00		17.5				
61	1	1.80				19.1		
63	1	1.69				19.0		
64	4	0.22				17.7		
68	3	0.56				18.0		
69	3	-0.90		16.7				
70	3	0.56				18.0		
71	3	-0.56		17.0				
74	2	-1.35	16.3					
75	4	-0.11		17.4				
76	1	1.69		19.0				
78	0	-19.44	0.2					
83	3	-0.90		16.7				
87	3	-0.56		17.0				
91	2	1.24				18.6		
93	2	1.24				18.6		
95	0	34.27		48.0				
97	0	3.82		20.9				
100	2	1.46				18.8		
101	3	0.56		18.0				
103	4	-0.11				17.4		
105	4	-0.22				17.3		
109	3	-0.56		17.0				
113	4	-0.45		17.1				
117	4	-0.11		17.4				
119	3	0.67				18.1		
121	4	-0.34				17.2		
122	2	1.12		18.5				
123	4	-0.11		17.4				
127	4	-0.34		17.2				
128	3	0.56				18.0		
129	1	1.69		19.0				
133	3	-0.67				16.9		
134	3	-0.56		17.0				
138	2	1.01				18.4		
140	4	-0.11		17.4				
141	4	0.00				17.5		
145	4	-0.45				17.1		
146	4	-0.22				17.3		
149	0	2.81		20.0				
153	3	-0.56	17.0					
161	0	10.11	26.5					
167	4	-0.11				17.4		
179	0	2.70		19.9				
180	4	0.22				17.7		
182	3	-0.56			17.0			
184	3	0.56				18.0		
188	4	-0.11				17.4		
189	3	0.56				18.0		
190	1	-1.69	16.0					
191	0	3.15						20.3

Table 12.-- *Statistical summary of reported data for standard reference water sample M-120 (major constituents)--Continued*

Na (Sodium) mg/L



0. Other		6. MS/ICP			
1. AA: direct, air		7. Ion chromatography			
4. ICP					
N =	4	36	37	2	3
Minimum =	21.8	18.0	20.0	26.8	23.0
Maximum =	27.0	49.9	29.5	27.7	25.4
Median =		24.9	25.1		
St Dev =		1.18	1.30		

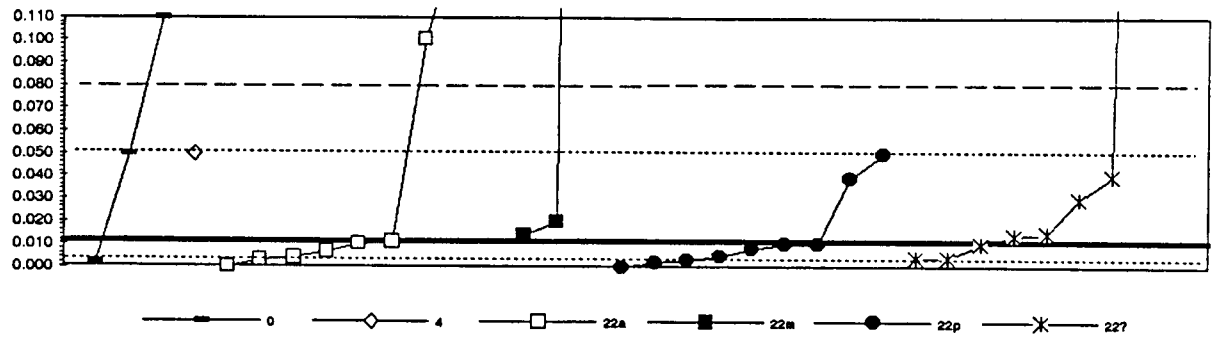
95% confidence MPV =	25.00 +/- 0.31
F-pseudosigma =	1.41
N =	82
Hu=	26.00
Hl=	24.10

Lab	Rating	Zvalue	0	1	4	6	7
1	4	0.35			25.5		
2	0	2.55		28.6			
3	3	0.71			26.0		
7	3	-0.71			24.0		
8	2	1.13			26.6		
9	4	0.00		25.0			
10	4	-0.28		24.6			
12	3	0.71			26.0		
13	4	0.00		25.0			
15	2	-1.13			23.4		
16	3	-0.71			24.0		
18	4	-0.35			24.5		
19	4	0.07			25.1		
24	4	0.35			25.5		
25	2	1.13			26.6		
26	0	-2.27	21.8				
27	4	-0.28		24.6			
29	2	1.42	27.0				
32	2	1.28				26.8	
34	4	-0.07		24.9			
38	2	-1.28		23.2			
39	3	-0.71					24.0
40	3	-0.71			24.0		
42	4	0.35			25.5		
43	4	-0.14			24.8		
45	4	-0.07		24.9			
46	4	0.50			25.7		
48	3	0.92			26.3		
50	4	0.00		25.0			
51	4	0.14	25.2				
52	4	0.00			25.0		
54	4	-0.21		24.7			
55	4	-0.43		24.4			
56	2	-1.42		23.0			
57	2	-1.42			23.0		
58	0	-4.96		18.0			
61	3	0.71			26.0		
63	3	0.92			26.3		
64	1	-1.63		22.7			
68	3	-0.71			24.0		
69	4	-0.14		24.8			
70	4	-0.14			24.8		
71	3	0.71		26.0			
74	4	-0.43	24.4				
75	4	0.28		25.4			

Lab	Rating	Zvalue	0	1	4	6	7
83	2	-1.21		23.3			
87	3	0.71		26.0			
91	0	3.19			29.5		
93	2	-1.42		23.0			
95	0	17.66		49.9			
97	4	-0.35		24.5			
100	2	1.13			26.6		
101	4	0.00		25.0			
103	0	2.13			28.0		
105	3	-0.64			24.1		
109	4	0.00		25.0			
113	3	0.92		26.3			
117	2	-1.06		23.5			
119	4	-0.07			24.9		
121	4	0.00			25.0		
122	3	0.71		26.0			
123	3	-0.64		24.1			
127	3	-0.64		24.1			
128	4	0.07			25.1		
129	4	0.00		25.0			
134	4	0.00		25.0			
138	3	0.71			26.0		
140	3	0.71		26.0			
141	4	0.07			25.1		
145	4	-0.21			24.7		
146	0	-3.55			20.0		
149	3	0.71		26.0			
153	4	0.28					25.4
167	4	0.21			25.3		
179	4	0.21		25.3			
180	4	-0.28			24.6		
182	2	-1.06		23.5			
184	3	0.71			26.0		
188	3	-0.64		24.1			
189	2	-1.42			23.0		
190	2	-1.42					23.0
191	1	1.91				27.7	

Table 12.-- *Statistical summary of reported data for standard reference water sample M-120 (major constituents)--Continued*

total P (Phosphorus) mg/L



0. Other		22m. Color: molybdo	
4. ICP		22p. Color: phenate	
22a. Color: ascorbic		22?: Color: not reported	
N =	3	1	29
Minimum =	0.002	0.050	0.000
Maximum =	0.110		1.320
Median =			0.010
St Dev =			0.022

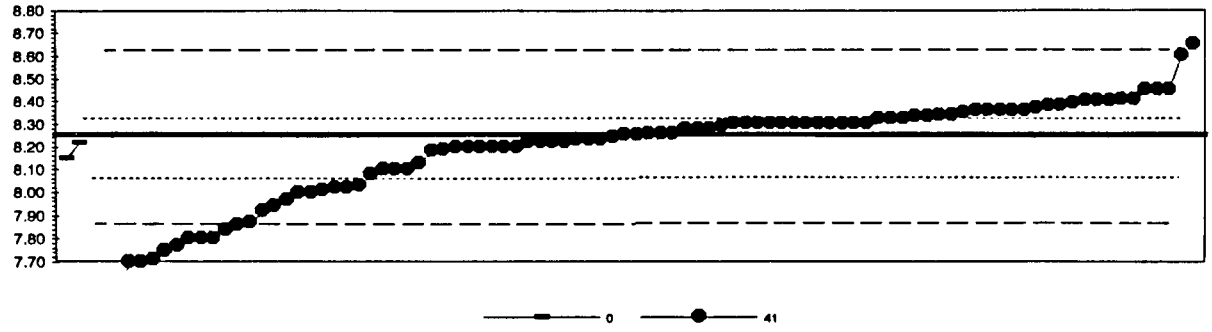
95% confidence MPV =	0.011	+/-	0.011
F-pseudosigma =	0.034		
N =	34		
Hu=	0.050		
Hl=	0.004		

Lab	Rating	Zvalue	0	4	22 code
1	4	-0.24			0.003 p
3	4	0.00			0.011 a
7	0	2.62			0.100 a
8	2	1.15		0.050	
12	NR				< 0.02 p
13	NR				< 0.02 a
15	NR				< 0.02 m
16	4	0.12			0.015
19	NR				< 0.05 a
20	4	-0.03			0.010 p
23	4	-0.03			0.010 p
25	NR		< 0.077		
34	4	-0.18			0.005 p
38	4	-0.09			0.008 p
42	4	0.09			0.014 m
46	NR				< 0.02 a
48	NR				< 0.01 a
51	NR				0.000 a
52	NR				< 0.01
55	NR				< 0.01 a
57	NR				< 0.02 a
58	4	-0.03			0.010 a
60	4	-0.12			0.007 a
61	3	0.82			0.039 p
63	0	4.97			0.180 a
64	4	-0.26			0.002 p
65	NR				a
68	4	-0.21			0.004
70	0	2.91	0.110		
71	2	1.15			0.050 p
74	4	-0.26	0.002		
78	2	1.15	0.050		
87	4	0.09			0.014
90	0	4.09			0.150 a
100	0	38.50			1.320 m
102	NR				0.000 a
103	NR			< 0.1	
105	NR				< 0.02
108	0	19.09			0.660
113	4	-0.21			0.004 a
119	NR				0.00 a
128	NR				< 0.01 a
133	NR				< 0.01 p
138	NR				< 0.05 a
140	3	0.56			0.030

Lab	Rating	Zvalue	0	4	22 code
141	NR				< 0.05 a
143	4	-0.24			0.003 a
145	4	0.26			0.020 m
161	NR				< 0.01
179	NR		< 0.18		
180	NR				< 0.01 a
182	4	-0.03			0.010
189	3	0.85			0.040
190	4	-0.21			0.004
191	NR		< 0.03		

Table 12.-- *Statistical summary of reported data for standard reference water sample M-120 (major constituents)--Continued*

pH



0. Other
41. Electrometric

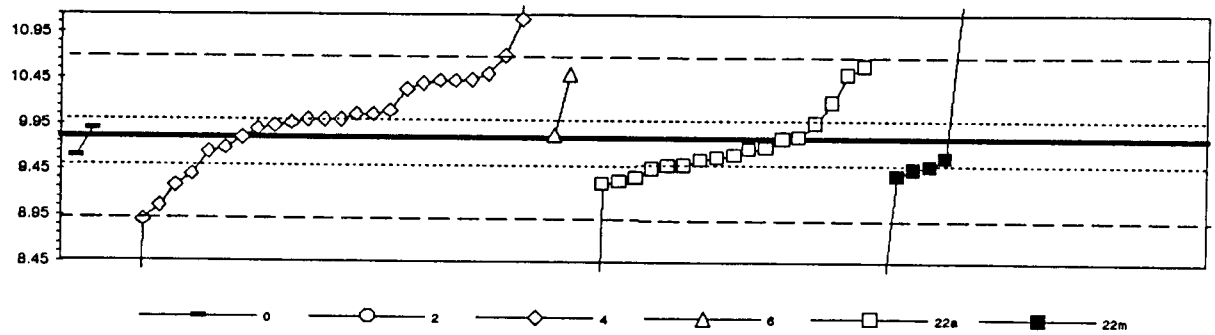
	0	41
N =	2	92
Minimum =	8.15	7.02
Maximum =	8.22	8.65
Median =		8.255
St Dev =		0.21

95% confidence MPV = 8.25 +/- 0.06
F-pseudosigma = 0.19
N = 34
Hu= 8.33
Hl= 8.08

Lab	Rating	Zvalue	0	41
1	4	-0.11		8.23
2	4	0.16		8.28
3	4	0.42		8.33
6	3	0.58		8.36
7	0	-2.89		7.70
8	0	-2.89		7.70
9	0	-3.89		7.51
10	4	0.05		8.26
12	4	-0.26		8.20
13	4	-0.16		8.22
15	0	-2.00		7.87
16	0	-2.37		7.80
18	2	1.05		8.45
19	4	0.37		8.32
20	4	-0.26		8.20
23	3	0.68		8.38
24	4	-0.26		8.20
25	0	-2.84		7.71
26	0	-2.63		7.75
29	4	-0.16		8.22
32	0	-2.53		7.77
34	3	0.63		8.37
38	4	0.26		8.30
40	4	-0.37		8.18
41	4	0.26		8.30
42	3	0.58		8.36
43	2	1.05		8.45
45	3	0.58		8.36
46	4	-0.16		8.22
48	4	0.26		8.30
50	3	-0.79		8.10
51	4	0.26		8.30
52	4	0.16		8.28
54	4	0.26		8.30
55	3	0.79		8.40
56	0	2.11		8.65
57	4	-0.26		8.20
58	2	-1.16		8.03
59	2	-1.26		8.01
60	1	-1.63		7.94
61	0	-2.05		7.86
63	0	-2.37		7.80
64	2	-1.21		8.02
66	4	0.26		8.30
68	2	-1.32		8.00
69	3	0.84		8.41
70	3	-0.63		8.13
71	4	0.05		8.26
74	4	-0.16	8.22	
75	3	-0.79		8.10
76	2	-1.47		7.97
77	4	-0.26		8.20
78	4	-0.32		8.19
79	4	0.26		8.30
87	4	-0.05		8.24
90	4	0.37		8.32
91	4	0.26		8.30
92	4	0.00		8.25
93	2	1.05		8.45
97	3	0.53		8.35
100	4	0.37		8.32
101	0	-2.16		7.84
105	4	0.21		8.29
108	3	0.58		8.36
109	0	-6.32		7.05
113	0	-6.47		7.02
117	3	-0.89		8.08
119	1	-1.74		7.92
122	4	0.00		8.25
123	1	1.84		8.60
127	4	0.05		8.26
128	4	0.26		8.30
129	4	0.47		8.34
133	3	-0.79		8.10
134	4	0.26		8.30
138	4	-0.26		8.20
140	3	0.84		8.41
141	3	0.79		8.40
143	4	0.47		8.34
145	4	0.26		8.30
146	4	-0.11		8.23
149	3	0.79		8.40
153	3	0.58		8.36
158	4	-0.16		8.22
161	3	0.74		8.39
167	2	-1.32		8.00
179	0	-2.37		7.80
180	4	0.16		8.28
182	4	-0.11		8.23
183	3	0.68		8.38
188	4	0.42		8.33
190	4	0.26		8.30
191	2	-1.21		8.02
194	3	-0.53	8.15	

Table 12.-- *Statistical summary of reported data for standard reference water sample M-120 (major constituents)--Continued*

SiO2 (Silica) mg/L



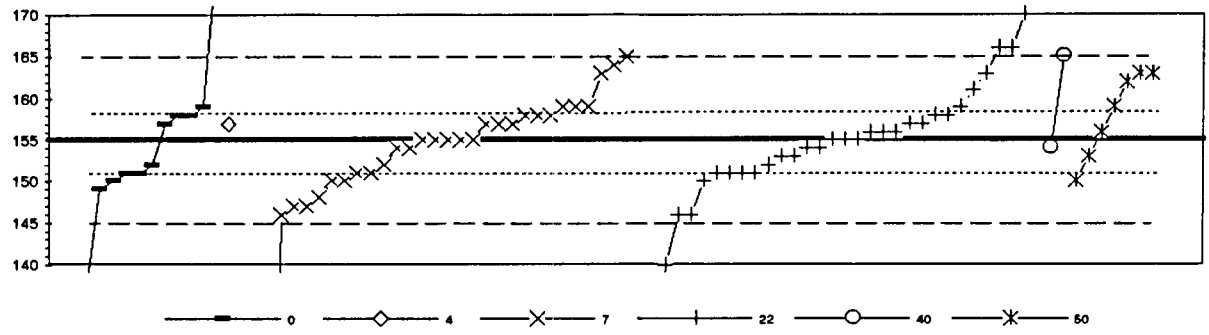
0. Other		6. MS/ICP				
1. AA: direct, N2O		22. Colorimetric				
4. ICP						
N =	4	1	26	2	24	
Minimum =	9.60	3.90	2.40	9.84	2.36	
Maximum =	9.92	3.90	34.60	10.50	11.40	
Median =			10.00		9.59	
St Dev =			0.51		0.36	

95% confidence MPV = 9.81 +/- 0.11
F-pseudosigma = 0.44
N = 57
Hu= 10.10
Hl= 9.50

Lab	Rating	Zvalue	0	2	4	6	22 code
1	4	0.00			9.81		
2	4	0.25	9.92				
3	1	1.57			10.50		
7	3	0.66			10.10		
8	0	56.34			34.60		
9	4	0.39					9.98
10	3	-0.70					9.50 mo
13	3	-0.77					9.47 mo
15	4	-0.36			9.65		
18	3	0.89					10.20
24	4	0.30			9.94		
32	4	0.07				9.84	
38	3	-0.55					9.57 a
39	4	0.43			10.00		
40	2	1.43			10.44		
42	4	0.43			10.00		
43	4	0.20			9.90		
45	4	-0.27			9.69		
46	2	-1.09					9.33 a
50	4	-0.48					9.60 mo
51	4	-0.43					9.62 a
52	1	1.80					10.60
55	3	0.57			10.06		
57	0	2.02			10.70		
59	0	3.61					11.40 mo
61	0	-16.84			2.40		
63	2	1.39			10.42		
64	1	-1.73			9.05		
68	4	-0.27					9.69
70	4	-0.48					9.60
74	2	-1.14					9.31
83	3	-0.70					9.50
87	4	-0.25					9.70
92	4	-0.48	9.60				
97	4	0.02					9.82
100	4	0.36			9.97		
101	2	1.34			10.40		
102	1	1.57					10.50 a
103	3	-0.93			9.40		
105	3	0.57			10.06		
109	2	-1.20			9.28		
113	4	-0.02					9.80 a
119	4	0.43			10.00		
121	4	0.20	9.90				
127	4	-0.25	9.70				
128	0	2.93			11.10		
134	3	-0.66					9.52 a
141	3	-1.00					9.37
143	3	-0.93					9.40 mo
145	2	1.41			10.43		
148	0	-2.07			8.90		
161	0	-16.93					2.36
177	0	-4.57					7.80 mo
182	0	-13.43		3.90			
188	2	1.18			10.33		
190	3	-0.77					9.47
191	1	1.57				10.50	

Table 12.-- *Statistical summary of reported data for standard reference water sample M-120 (major constituents)--Continued*

SO4 (Sulfate) mg/L



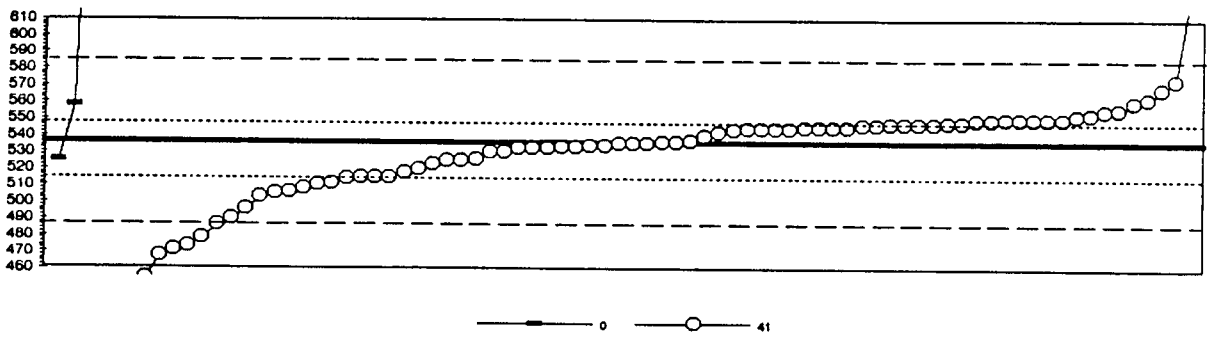
0. Other			22. Colorimetric			
4. ICP			40. Ion electrode			
7. IC			50. Gravimetric			
N =	13	1	31	32	2	7
Minimum =	11	157	15	126	154	150
Maximum =	177		165	173	165	163
Median =	151		155	155		
St Dev =	6.3		5.0	7.0		

95% confidence MPV = 155.0 +/- 1.1
F-pseudosigma = 5.2
N = 86
Hu= 158.0
Hl= 151.0

Lab	Rating	Z-value	0	4	7	22	40	50
1	1	1.92			165			
3	1	-1.73				146		
4	2	1.54			163			
7	2	-1.35			148			
8	4	0.38			157			
9	3	0.58				158		
10	4	0.00				155		
12	3	-0.58				152		
13	1	-1.73				146		
15	3	0.77			159			
16	3	0.77	159					
18	3	0.77				159		
23	4	0.00				155		
24	3	-0.77				151		
25	4	0.00			155			
26	2	1.54						163
27	3	-0.96			150			
29	3	0.58			158			
32	2	-1.54			147			
34	3	-0.77				151		
39	3	-0.96			150			
40	3	-0.77			151			
42	4	-0.19			154			
43	4	-0.38						153
45	4	-0.38				153		
46	4	-0.19				154		
48	0	4.23	177					
50	4	-0.38				153		
51	1	-1.73			146			
52	4	-0.19					154	
54	3	0.58	158					
55	0	3.46				173		
56	3	-0.77				151		
57	3	-0.96				150		
58	3	0.77						159
59	3	0.58			158			
61	3	0.58	158					
63	2	1.54						163
64	3	0.77			159			
65	3	-0.77	151					
66	2	-1.15	149					
69	1	2.12				166		
70	3	-0.58	152					
71	4	0.00				155		
74	3	-0.77	151					
75	2	1.15				161		
76	4	0.38			157			
77	4	0.38			157			
78	0	-22.88	36					
79	3	-0.96	150					
83	4	0.19				156		
87	4	-0.19				154		
91	3	0.58			158			
92	4	0.38	157					
93	1	1.73			164			
95	0	-23.85			31			
97	2	1.54				163		
100	4	0.00			155			
101	1	1.92					165	
102	0	-4.04				134		
105	4	0.38				157		
109	3	-0.96						150
113	4	0.00			155			
117	0	-5.58				126		
119	4	0.19				156		
122	4	0.19						156
127	0	-14.62			79			
128	4	0.19				156		
129	0	-26.92			15			
134	4	0.00			155			
138	3	-0.77				151		
140	2	1.35						162
141	4	0.38		157				
145	3	0.58				158		
153	2	-1.54			147			
158	0	2.88				170		
167	4	0.38				157		
177	1	2.12				166		
180	0	-2.88				140		
182	0	-3.27	138					
188	3	-0.77			151			
189	4	0.00			155			
190	4	-0.19			154			
191	3	-0.58			152			
193	3	0.77			159			
194	0	-27.69	11					

Table 12.-- *Statistical summary of reported data for standard reference water sample M-120 (major constituents)--Continued*

SpCond (Specific Conductance) **μ S/cm**



0. Other
41. Electrometric

	0	41
N =	3	78
Minimum =	558	433
Maximum =	790	2520
Median =		537
St Dev =		22.9

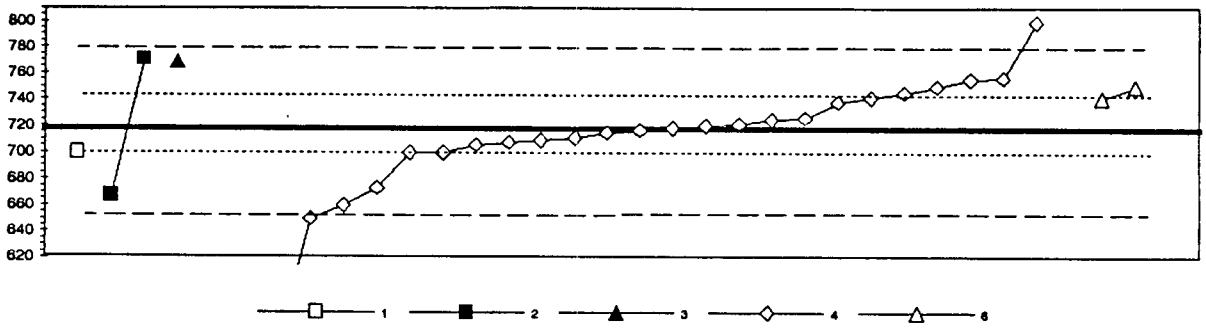
95% confidence MPV = 536.0 +/- 5.3
F-pseudosigma = 24.5
N = 81
Hu= 548.0
Hl= 515.0

Lab	Rating	Z-value	0	41
1	4	0.37		545
3	3	-0.86		515
6	4	-0.24		530
7	2	-1.27		505
8	4	-0.08		534
9	0	-2.04		488
10	4	0.33		544
12	4	-0.04		535
13	3	-0.86		515
15	4	0.37		545
16	0	-3.35		454
18	3	0.57		550
19	4	-0.16		532
23	4	-0.16		532
24	3	0.53		549
25	3	0.78		555
26	4	0.16		540
29	3	0.98		560
32	1	1.51		573
34	4	0.37		545
38	2	-1.02		511
40	4	0.33		544
42	3	0.69		553
43	4	0.41		546
45	4	0.49		548
46	4	0.33		544
48	4	0.49		548
50	4	0.37		545
51	4	-0.16		532
52	3	-0.90		514
54	3	-0.86		515
55	4	-0.45		525
56	4	-0.12		533
57	3	0.57		550
59	4	0.41		546
61	2	1.31		568
63	0	-2.82		467
64	4	-0.08		534
66	4	0.45		547
68	0	80.98		2520
69	3	0.57		550
70	0	-2.57		473
74	4	0.29		543
75	4	-0.12		533
76	4	0.33		544

Lab	Rating	Z-value	0	41
77	4	-0.24		530
78	0	3.84		630
79	3	-0.65		520
87	1	-1.83		496
91	4	0.00		536
92	4	0.04		537
93	2	-1.35		503
97	3	0.65		552
100	4	0.45		547
101	3	-0.73		518
102	4	-0.04		535
105	4	0.24		542
109	4	-0.41		526
113	2	-1.22		506
117	1	-1.88		490
119	2	1.06		562
121	0	10.37	790	
122	3	0.82		556
127	3	0.90	558	
128	3	0.57		550
129	3	0.53		549
134	4	0.45		547
140	3	-0.53		523
141	0	-4.20		433
145	4	-0.04		535
148	0	-2.65		471
158	4	0.45		547
161	0	-21.84		1
167	2	-1.14		508
179	2	-1.06		510
180	3	0.57		550
182	4	0.00		536
183	0	-8.41		330
190	0	-2.37		478
193	4	-0.45		525
194	4	-0.45	525	

Table 12.-- *Statistical summary of reported data for standard reference water sample M-120 (major constituents)--Continued*

Sr (Strontium) **μ g/L**



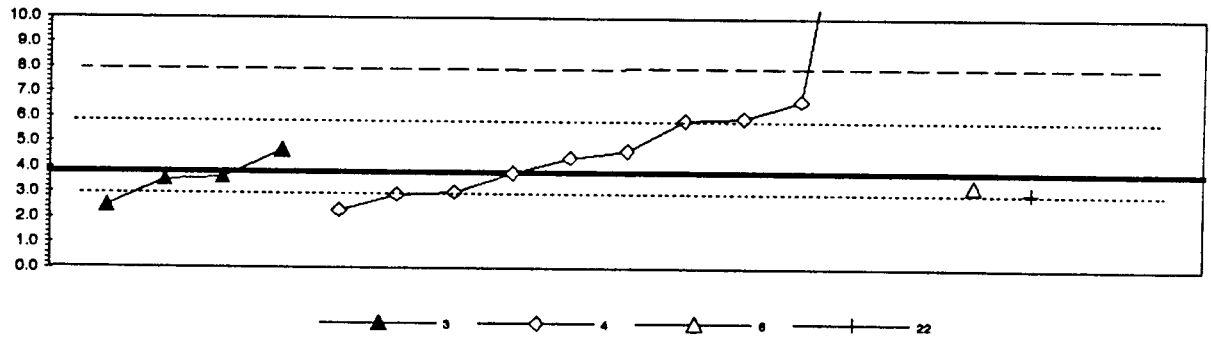
1. AA: direct air			4. ICP			
2. AA: direct,N2O			6. MS/ICP			
3. AA: graphite furnace						
N =	1	2	1	28	2	
Minimum =	700	667	768	1	741	
Maximum =		770		799	750	
Median =				715		
St Dev =				198.2		

95% confidence MPV = 717.0 +/- 11.1
F-pseudosigma = 31.9
N = 32
Hu= 743.0
Hl= 700.0

Lab	Rating	Z-value	1	2	3	4	6
1	3	0.75				741	
3	2	1.03				750	
7	3	-0.53				700	
8	2	1.19				755	
15	4	0.03				718	
18	0	-2.10				650	
18	4	0.25				725	
24	4	-0.09				714	
25	0	-22.45				1	
32	2	1.03					750
39	4	-0.38				705	
40	4	-0.03				716	
42	2	1.22				756	
52	4	0.13				721	
55	3	0.66				738	
63	0	2.57				799	
68	1	-1.79				660	
70	4	-0.31				707	
74	2	-1.38				673	
97	1	1.60			768		
100	3	-0.53				700	
103	3	0.88				745	
105	4	-0.19				711	
113	1	1.66		770			
121	0	-22.41				2	
127	1	-1.57		667			
134	3	-0.53	700				
138	4	0.09				720	
141	0	-5.08				555	
145	4	-0.25				709	
146	4	0.28				726	
191	3	0.75					741

Table 12.-- *Statistical summary of reported data for standard reference water sample M-120 (major constituents)--Continued*

V (Vanadium) **μ g/L**



3. AA: graphite furnace			22. Colorimetric	
4. ICP				
6. MS/ICP				
N =	4	11	1	1
Minimum =	2.5	2.3	3.3	3.0
Maximum =	4.7	73		
Median =		4.7		
St Dev =		0.8995		

95% confidence MPV =	3.80	+/-	1.02
F-pseudosigma =	2.15		
N =	17		
Hu=	5.90		
Hl=	3.00		

Lab	Rating	Z-value	3	4	6	22
1	4	-0.37				3.0
3	NR			< 10		
7	NR			< 10		
8	4	0.42		4.7		
15	4	-0.09	3.6			
16	NR			< 10		
18	NR			< 5		
25	NR			< 5		
32	4	-0.23			3.3	
38	4	-0.37		3.0		
52	4	-0.14	3.5			
55	0	7.21		19.3		
57	NR			< 50		
61	NR			< 10		
63	0	32.19		73.0		
68	4	0.28		4.4		
70	NR			< 20		
74	3	-0.70		2.3		
91	2	1.35		6.7		
97	4	0.42	4.7			
100	NR			< 10		
101	2	1.02		6.0		
103	NR			< 2		
105	3	0.98		5.9		
128	NR			< 3		
134	3	-0.60	2.5			
138	NR		< 3			
141	NR			< 10		
145	4	-0.42		2.9		
146	4	0.00		3.8		
167	NR			< 40		
180	NR			< 1.5		
189	NR			< 8		

Table 13-- *Statistical summary of reported data for standard reference sample N-32 (nutrients)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

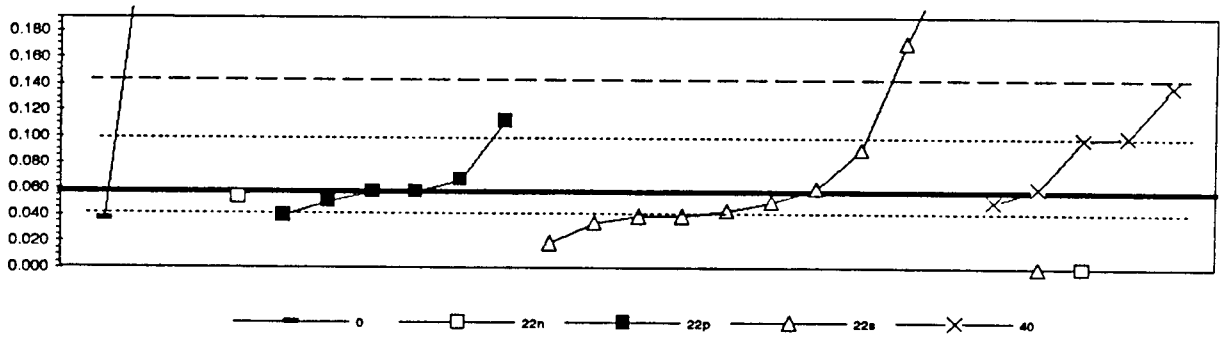
0. Other/Not reported		
7. IC	=	ion chromatography
22. Color:	=	colorimetric [color reagent specified]
40. Ion electrode	=	specific ion electrode

Abbreviations and symbols

N	=	number of samples
St dev	=	traditional standard deviation
MPV	=	95% confidence most probable value
F-pseudosigma	=	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

Table 12.-- *Statistical summary of reported data for standard reference water sample N-32 (preserved nutrient)--Continued*

NH3 as N (Ammonia as N) mg/L



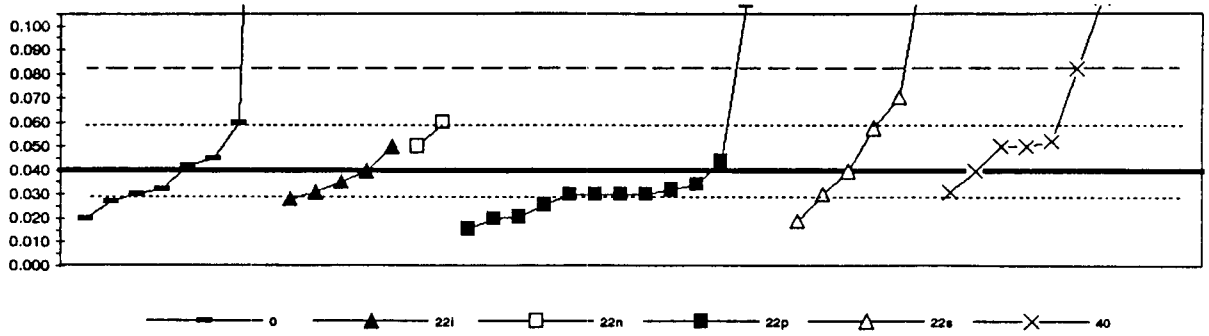
0. Other		22s. Color: salicylate	
22n. Color: nesslerization		40. Ion electrode	
22p. Color: phenate			
N =	3	17	5
Minimum =	0.037	0.019	0.050
Maximum =	0.390	0.240	0.138
Median =		0.054	
St Dev =		0.056	

95% confidence MPV =	0.057 +/- 0.017
F-pseudosigma =	0.044
N =	25
	0.100
	0.043

Lab	Rating	Z-value	0	22 code	40
1	4	0.07		0.060 s	
3	NR			< 0.01 p	
7	3	0.79		0.090 s	
16	2	1.31		0.112 p	
20	NR			< 0.156 p	
45	1	1.93			0.138
48	4	-0.40		0.040 p	
52	3	-0.55		0.034 s	
58	4	0.07			0.060
60	0	7.93	0.390		
63	NR			< 0.5 s	
68	4	-0.40		0.040 s	
75	4	-0.33		0.043 s	
76	4	-0.17		0.050 p	
88	0	4.36		0.240 s	
90	4	0.24		0.067 p	
105	0	2.69		0.170 s	
119	NR				< 0.1
127	3	-0.90		0.019 s	
129	4	-0.07		0.054 n	
133	3	0.98			0.098
140	4	-0.17		0.050 s	
141	4	0.00		0.057 p	
145	4	-0.40		0.040 s	
167	4	-0.17			0.050
179	4	0.00		0.057 p	
182	0	5.79	0.300		
189	2	1.02			0.100
190	4	-0.48	0.037		
194	NR		< 0.1		

Table 13.-- *Statistical summary of reported data for standard reference water sample N-32 (nonpreserved nutrient)--Continued*

NH3 as N (Ammonia as N) mg/L



0. Other		22p.Color: phenate	
22i. Color indophenol		22s. Color: salicylate	
22n. Color: nessierization		40. Ion electrode	
N =	8	26	9
Minimum =	0.020	0.018	0.031
Maximum =	0.380	0.210	0.255
Median =		0.033	0.052
St Dev =		0.027	0.017

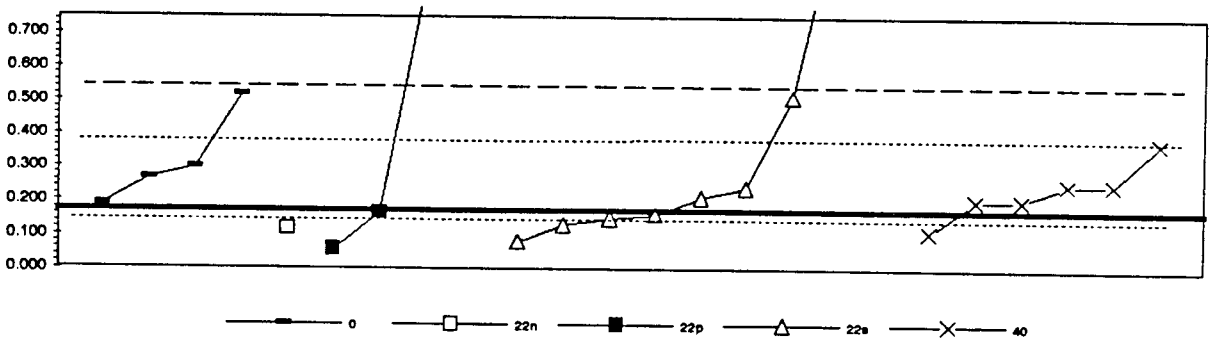
95% confidence MPV =	0.040	+/-	0.006
F-pseudosigma =	0.021		
N =	43		
Hu =	0.059		
Hl =	0.030		

Lab	Rating	Z-value	0	22 code	40
1	3	0.86		0.058 s	
5	4	-0.24		0.035 l	
6	0	3.38			0.111
8	3	0.95	0.060		
9	4	0.19		0.044 p	
10	4	0.00			0.040
12	NR			< 0.2 p	
13	NR			< 0.02 i	
15	NR	0.57			0.052
18	3	-0.67		0.026 p	
19	NR		< 0.1		
21	4	-0.43		0.031 l	
23	NR			< 0.1 s	
25	1	2.00			0.082
34	4	-0.38		0.032 p	
38	4	0.10	0.042		
39	4	-0.38	0.032		
45	0	4.81			0.141
46	4	-0.29		0.034 p	
51	4	0.48			0.050
52	4	-0.48		0.030 s	
55	4	-0.48		0.030 p	
58	4	0.48			0.050
59	4	-0.48		0.030 p	
60	0	16.19	0.380		
61	0	8.10		0.210 p	
64	4	0.48		0.050 l	
66	4	-0.48		0.030 p	
68	0	10.24			0.255
70	NR		< 0.1		
74	3	-0.57		0.028 l	
83	NR			< 0.05	
87	NR			< 0.1 s	
88	0	4.29		0.130 s	
92	4	-0.43			0.031
93	2	-1.14		0.016 p	
97	4	0.00		0.040 l	
100	3	-0.95	0.020		
102	4	-0.48		0.030 p	
113	NR			< 0.01 p	
119	NR				< 0.1
123	0	3.33		0.110 p	
127	3	-1.00		0.018 s	
128	3	-0.90		0.021 p	
129	3	0.95		0.060 n	

Lab	Rating	Z-value	0	22 code	40
138	4	-0.48	0.030		
143	3	-0.95		0.020 p	
145	4	0.00		0.040 s	
158	2	1.43		0.070 s	
161	NR				< 0.02
167	NR				< 0.05
177	4	0.48		0.050 n	
179	4	0.24	0.045		
190	3	-0.62	0.027		
194	NR		< 0.1	< 0.1 p	

Table 13.-- *Statistical summary of reported data for standard reference water sample N-32 (preserved nutrient)--Continued*

NH3 + OrgN as N (Ammonia + Organic nitrogen as N) **mg/L**



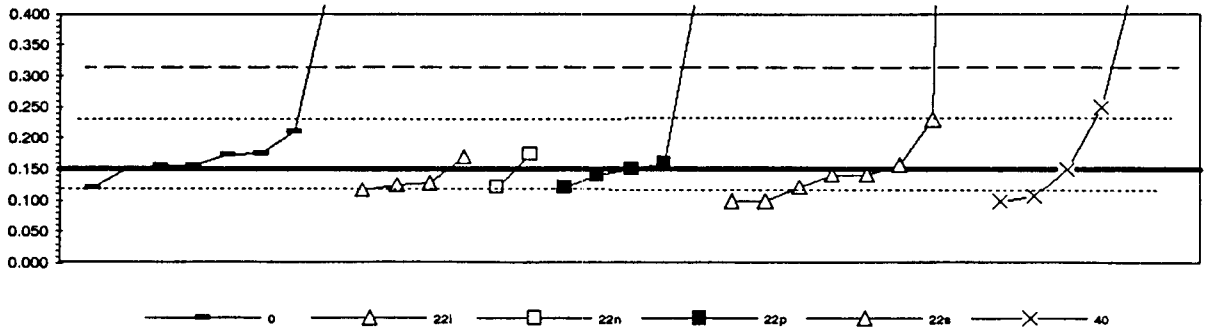
0. Other			22s. Color: salicylate	
22n. Color: nesslerization			40. Ion electrode	
22p. Color: Color: phenate				
N =	4		13	4
Minimum =	0.19		0.08	0.11
Maximum =	0.52		2.327	0.378
Median =			0.164	
St Dev =			0.6443	

95% confidence MPV =	0.210	+/-	0.073
F-pseudosigma =	0.170		
N =	21		
Hu =	0.378		
Hl =	0.148		

Lab	Rating	Z-value	0	22 code	40
1	NR			< 0.2 s	
3	0	3.88		0.869 p	
16	3	0.52	0.299		
20	0	12.45		2.327 s	
45	3	0.99			0.378
48	4	-0.47		0.130 s	
52	NR			< 0.1 s	
56	3	-0.76		0.080	
60	1	1.82	0.520		
63	0	5.24		1.100 s	
68	4	-0.29		0.160 s	
90	4	-0.27		0.164 p	
105	1	1.76		0.510 s	
119	3	-0.59			0.110
127	4	-0.36		0.148 s	
129	3	-0.54		0.118 n	
133	4	-0.04			0.203
140	4	0.18		0.240 s	
141	3	-0.90		0.057 p	
145	4	0.00		0.210 s	
179	NR			< 0.6 p	
189	4	0.24			0.250
190	4	0.33	0.266		
194	4	-0.12	0.190		

Table 13.-- *Statistical summary of reported data for standard reference water sample N-32 (nonpreserved nutrient)--Continued*

NH3 + OrgN as N (Ammonia + Organic nitrogen as N) **mg/L**



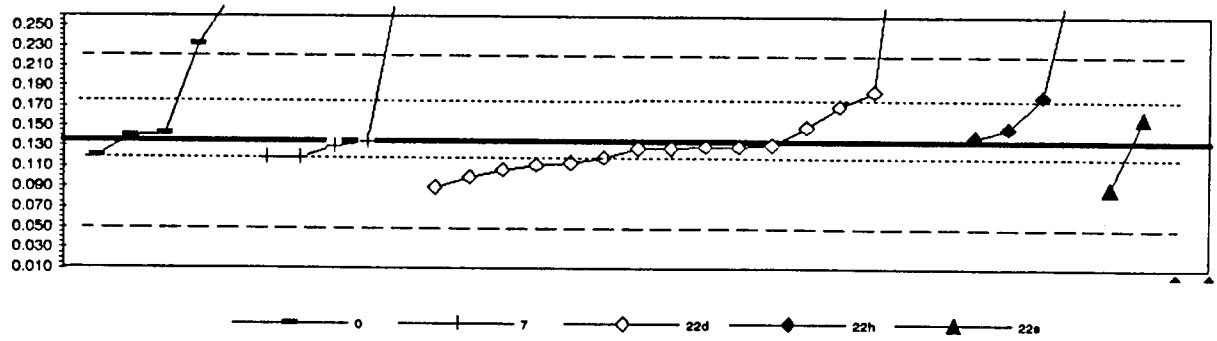
0. Other			22p. Color: phenate	
22i. Color: indophenol			22s. Color: salicylate	
22n. Color: nesslerization			40. Ion electrode	
N =	8		19	5
Minimum =	0.120		0.100	0.100
Maximum =	0.450		2.360	0.461
Median =			0.140	
St Dev =			0.032	

95% confidence MPV =	0.151	+/-	0.028
F-pseudosigma =	0.082		
N =	32		
Hu =	0.230		
Hi =	0.120		

Lab	Rating	Z-value	0	22 code	40
1	NR			< 0.2 s	
5	4	-0.41		0.117 i	
8	3	0.72	0.210		
10	4	-0.38		0.120 s	
12	NR			< 0.3 p	
13	NR			< 0.02 i	
15	3	-0.52			0.108
18	4	-0.38		0.120 p	
21	4	-0.28		0.128 i	
23	NR			< 0.5 s	
25	4	0.06	0.156		
34	4	-0.01		0.150 p	
38	4	-0.38		0.120 n	
45	0	3.78			0.461
46	4	-0.13		0.140 p	
51	3	-0.62			0.100
52	NR			< 0.1 s	
55	3	-0.62		0.100 s	
59	3	-0.62		0.100 s	
60	0	3.65	0.450		
61	0	3.72		0.456 p	
66	4	0.00	0.151		
70	4	0.27	0.173		
74	4	-0.33		0.124 i	
87	4	-0.13		0.140 s	
97	4	-0.13		0.140 s	
102	4	0.11		0.160 p	
113	NR			< 0.5 s	
119	4	-0.01			0.150
123	0	28.94		2.360 s	
127	4	0.09		0.158 s	
129	4	0.28		0.174 n	
138	4	0.06	0.156		
145	3	0.96		0.230 s	
158	2	1.21			0.250
179	NR		< 0.6		
184	4	0.23		0.170 i	
190	4	0.29	0.175		
194	4	-0.38	0.120		

Table 13.-- *Statistical summary of reported data for standard reference water sample N-32 (preserved nutrient)--Continued*

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



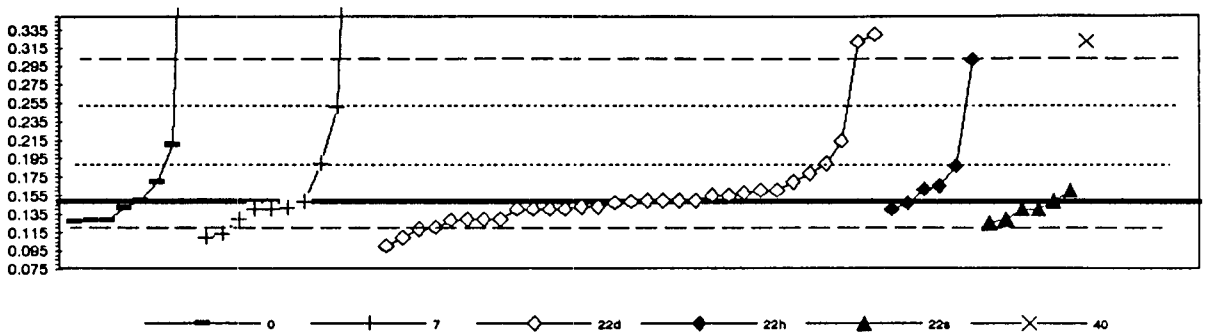
0. Other			22h. Color: hydrazine
7. IC			22s. Color: sulfanilamide
22d. Color: diazotization			
N =	3	5	24
Minimum =	0.121	0.120	0.090
Maximum =	0.283	0.311	2.400
Median =			0.132
St Dev =			0.028

95% confidence MPV =	0.135	+/-	0.015
F-pseudosigma =	0.042		
N =	32		
Hu =	0.176		
Hl =	0.120		

Lab	Rating	Z-value	0	7	22 code
1	4	-0.12			0.130 d
3	3	0.86			0.171 d
7	4	0.36			0.150 d
18	3	-0.67			0.107 d
20	3	0.60			0.160 s
21	4	0.33			0.149 h
29	4	-0.36		0.120	
42	4	0.02		0.136	
43	4	-0.36			0.120 d
45	4	-0.14			0.129 d
48	0	4.40			0.320 h
52	4	-0.05			0.133 d
63	2	-1.07			0.090 s
75	4	-0.48			0.115 d
76	4	-0.12		0.130	
77	4	-0.36		0.120	
78	0	3.52	0.283		
88	0	7.50			0.450 d
90	2	-1.07			0.090 d
92	4	-0.33	0.121		
105	2	1.21			0.186 d
119	4	0.12			0.140 h
127	0	2.31	0.232		
129	0	4.19		0.311	
140	4	-0.12			0.130 d
141	2	1.07			0.180 h
145	3	-0.83			0.100 d
167	4	-0.14			0.129 d
179	3	-0.55			0.112 d
182	0	53.93			2.400 d
190	4	0.19	0.143		
194	4	0.12	0.140		

Table 13.-- *Statistical summary of reported data for standard reference water sample N-32 (preserved nutrient)--Continued*

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



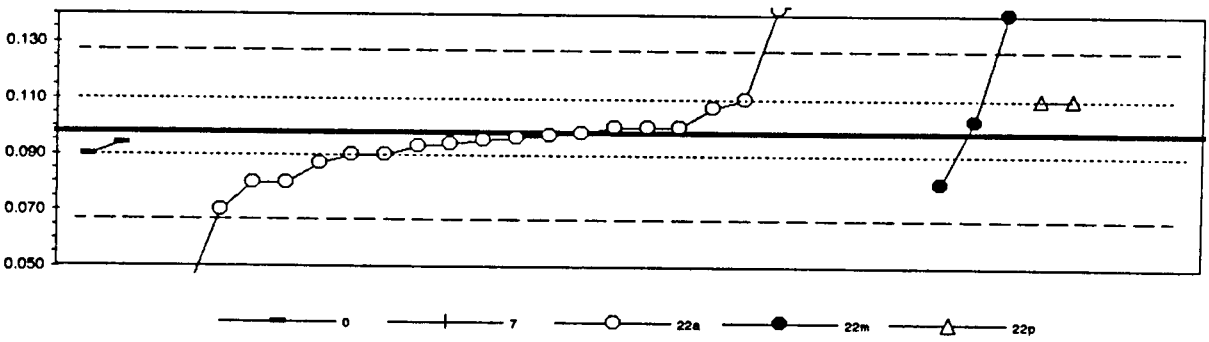
0. Other			22h. Color: hydrazine		
7. IC			22s. Color: sulfanilamide		
22d. Color: diazotization			40. Ion electrode		
N =	9	11	42	1	
Minimum =	0.127	0.110	0.100	0.321	
Maximum =	0.730	1.086	0.330		
Median =		0.142	0.148		
St Dev =		0.025	0.022		

95% confidence MPV =	0.148	+/-	0.006
F-pseudosigma =	0.024		
N =	63		
Hu =	0.168		
Hl =	0.135		

Lab	Rating	Z-value	0	7	22 code	40
1	4	0.42			0.158 d	
5	3	0.58			0.162 h	
6	0	6.38	0.301			
9	4	-0.04			0.147 d	
10	4	0.08			0.150 d	
12	4	0.50			0.160 d	
13	4	-0.33			0.140 d	
15	0	21.29		0.659		
18	1	-1.58			0.110 d	
19	4	0.50			0.160 s	
21	3	0.75			0.166 h	
23	4	-0.33			0.140 s	
25	4	0.04		0.149		
29	4	-0.33		0.140		
34	3	-0.75			0.130 d	
38	4	-0.29			0.141 s	
39	1	-1.58		0.110		
42	4	-0.29		0.141		
45	4	0.29			0.155 d	
46	4	-0.33			0.140 d	
51	3	-0.75		0.130		
52	4	0.00			0.148 d	
53	2	1.33			0.180 d	
55	4	-0.33			0.140 d	
56	4	0.08			0.150 d	
59	4	0.08			0.150 d	
61	2	-1.17			0.120 d	
64	4	-0.33			0.140 d	
66	4	-0.04			0.147 h	
68	1	1.75			0.190 d	
69	3	-0.75			0.130 d	
70	3	-0.83	0.128			
74	4	-0.21			0.143 d	
78	0	7.25			0.322 d	
83	0	7.58			0.330 d	
87	3	0.92			0.170 d	
88	0	24.25	0.730			
92	3	-0.88	0.127			
93	2	-1.42		0.114		
97	4	0.50			0.160 d	
100	0	2.58	0.210			
102	1	-2.00			0.100 d	
109	4	-0.21			0.143 d	
113	3	-0.79			0.129 d	
119	4	0.08			0.150 d	
123	4	0.08			0.150 s	
127	4	-0.25	0.142			
128	1	1.67			0.188 h	
129	0	39.08		1.086		
133	0	2.75			0.214 d	
138	3	-0.79	0.129			
143	2	-1.21			0.119 d	
145	3	-0.75			0.130 d	
158	4	-0.33			0.140 h	
167	4	0.33			0.156 d	
177	0	7.21				0.321
179	3	-0.92	0.126			
184	3	-0.75	0.130			
189	0	4.25		0.250		
190	4	0.08	0.150			
191	4	-0.25		0.142		
193	1	1.75		0.190		
194	3	0.92	0.170			

Table 13.-- *Statistical summary of reported data for standard reference water sample N-32 (preserved nutrient)--Continued*

total P as P (Phosphorus) **mg/L**



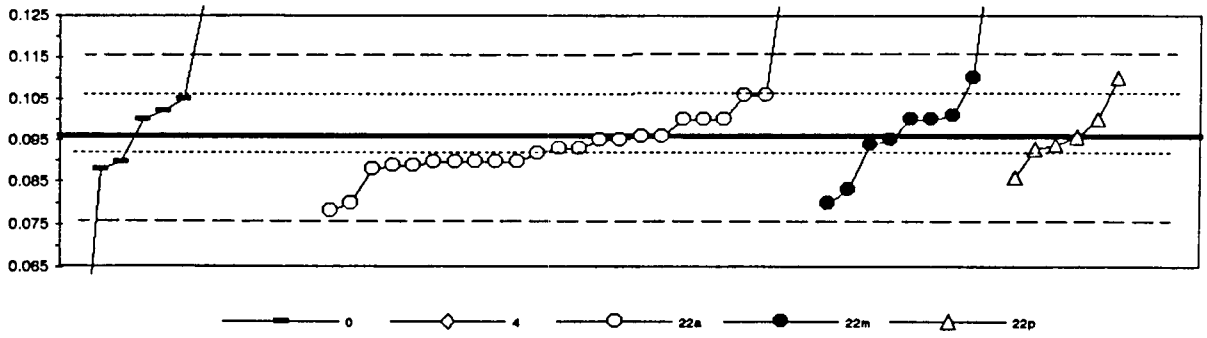
0. Other		22m. Color: molybdate	
7. IC		22p. Color: persulfate	
22a. Color: ascorbic, phosphomolybdate			
N =	2	1	28
Minimum =	0.090	0.190	0.040
Maximum =	0.094		0.760
Median =			0.099
St Dev =			0.019

95% confidence MPV =	0.098	+/-	0.005
F-pseudosigma =	0.015		
N =	31		
Hu =	0.110		
Hl =	0.090		

Lab	Rating	Z-value	0	7	22 code
1	4	-0.33			0.093 a
3	4	0.13			0.100 a
7	0	44.13			0.760 a
16	4	-0.20			0.095 a
20	3	0.80			0.110 p
42	4	0.27			0.102 m
45	4	-0.07			0.097 a
48	3	0.80			0.110 a
52	3	-0.73			0.087 a
56	3	-0.53			0.090 a
58	2	-1.20			0.080 a
60	3	0.80			0.110 p
63	0	4.13			0.160 a
68	4	-0.13			0.096 a
75	0	2.93			0.142 a
78	4	-0.27	0.094		
90	3	0.80			0.107 a
92	0	5.47			0.180 a
105	4	0.13			0.100 a
118	4	0.13			0.100 a
127	4	0.00			0.098 a
129	3	-0.53			0.090 a
133	4	-0.27			0.094 a
140	1	-1.87			0.070 a
141	2	-1.20			0.080 m
145	0	2.80			0.140 m
167	2	-1.20			0.080 a
179	0	3.13			0.145 a
182	0	-3.87			0.040 a
189	0	6.13		0.190	
190	3	-0.53	0.090		

Table 13.-- *Statistical summary of reported data for standard reference water sample N-32 (nonpreserved nutrient)--Continued*

total P as P (Phosphorus) mg/L



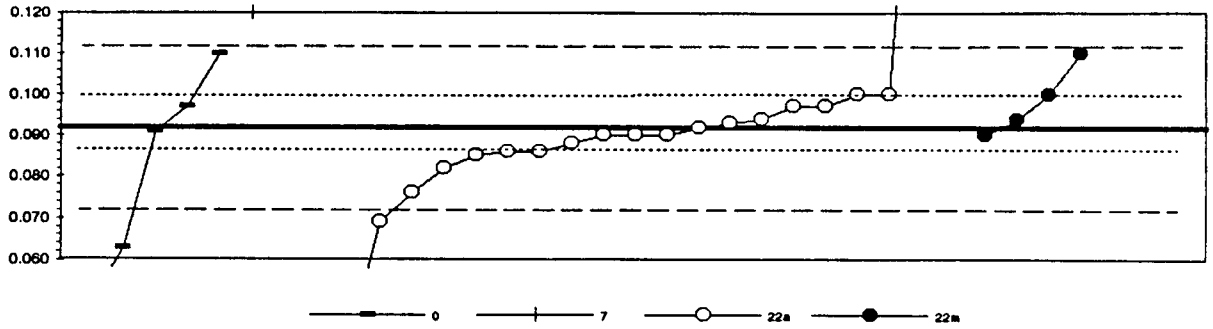
0. Other		22m. Color: molybdate	
4. ICP		22p. Color: persulfate	
22a. Color: ascorbic, phosphomolybdate			
N =	10	1	40
Minimum =	0.030	0.129	0.078
Maximum =	1.620		0.160
Median =	0.105		0.095
St Dev =	0.015		0.008

95% confidence MPV =	0.096	+/-	0.003
F-pseudosigma =	0.010		
N =	51		
Hu =	0.108		
Hl =	0.093		

Lab	Rating	Z-value	0	4	22	code
1	4	-0.30			0.093	a
5	4	-0.20			0.094	p
6	2	1.40			0.110	m
8	0	3.40	0.130			
10	4	-0.30			0.093	p
12	4	0.40			0.100	m
13	4	-0.10			0.095	m
15	4	-0.20			0.094	m
18	3	-0.60			0.090	a
19	4	0.00			0.096	a
21	4	0.00			0.096	p
23	4	0.40			0.100	a
25	0	3.30		0.129		
34	3	-1.00			0.086	p
38	4	0.00			0.096	a
39	4	0.40	0.100			
42	3	0.60	0.102			
45	4	-0.10			0.095	a
46	3	-0.70			0.089	a
51	3	-0.80			0.088	a
52	4	-0.30			0.093	a
55	4	0.40			0.100	a
58	1	-1.60			0.080	a
59	4	0.40			0.100	a
60	2	1.40			0.110	p
61	3	-0.70			0.089	a
64	2	-1.30			0.083	m
66	3	1.00			0.106	a
70	0	14.80	0.244			
74	4	0.50			0.101	m
78	3	-0.60			0.090	P
87	0	4.40			0.140	a
92	0	6.40			0.160	a
97	1	-1.60			0.080	m
100	0	152.40	1.620			
102	4	-0.10			0.095	a
113	3	-0.60			0.090	a
119	3	-0.60			0.090	a
123	NR				< 0.1	m
127	4	0.40			0.100	m
128	1	-1.80			0.078	a
129	3	-0.60			0.090	a
138	3	0.90	0.105			
143	4	-0.40			0.092	a
145	0	5.40			0.150	m
158	4	0.40			0.100	p
161	0	-6.60	0.030			
167	3	-0.60			0.090	a
179	0	14.40	0.240			
183	3	1.00			0.106	a
190	3	-0.80	0.088			
191	3	-0.60	0.090			

Table 13.-- *Statistical summary of reported data for standard reference water sample N-32 (preserved nutrient)--Continued*

PO4 as P (orthophosphate) **mg/L**



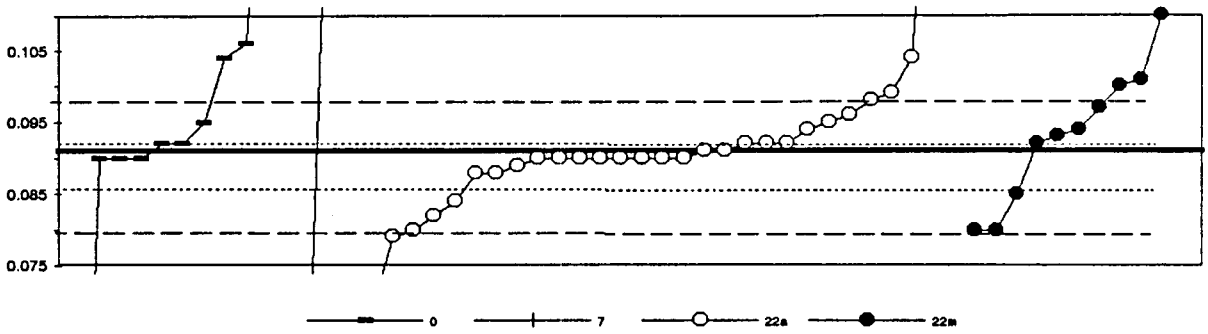
0. Other		22m. Color: molybdate	
7. IC			
22a. Color: ascorbic, phosphomolybdate			
N =	5	3	23
Minimum =	0.050	0.120	0.040
Maximum =	0.110	2.000	0.200
Median =			0.090
St Dev =			0.010

95% confidence MPV =	0.092	+/-	0.004
F-pseudosigma =	0.010		
N =	31		
Hu =	0.100		
Hl =	0.087		

Lab	Rating	Z-value	0	7	22 code
1	4	0.50			0.097 a
3	4	0.20			0.094 a
7	0	190.80		2.000	
16	0	-2.90	0.063		
20	4	-0.20			0.090 m
29	0	5.80		0.150	
42	4	0.50	0.097		
45	4	-0.40			0.088 a
48	3	-0.60			0.086 a
52	4	0.00			0.092 a
58	4	-0.20			0.090 a
63	4	-0.20			0.090 a
75	3	0.80			0.100 a
77	0	2.80		0.120	
78	0	-4.20	0.050		
88	0	10.80			0.200 a
90	1	-1.60			0.076 a
92	4	0.20			0.094 m
105	3	-0.70			0.085 a
119	4	-0.20			0.090 a
127	4	0.50			0.097 a
129	3	-1.00			0.082 a
133	3	-0.60			0.086 a
140	3	0.80			0.100 a
141	3	0.80			0.100 m
145	1	1.80			0.110 m
167	0	-2.30			0.089 a
179	4	0.10			0.093 a
182	0	-5.20			0.040 a
190	4	-0.10	0.091		
194	1	1.80	0.110		

Table 13.-- *Statistical summary of reported data for standard reference water sample N-32 (nonpreserved nutrient)--Continued*

PO4 as P (orthophosphate) **mg/L**



0. Other		22m. Color: molybdate	
7. IC		22p. Color: persulfate	
22a. Color: ascorbic, phosphomolybdate			
N =	6	1	41
Minimum =	0.080	0.140	0.018
Maximum =	0.270	0.140	0.170
Median =	0.128		0.091
St Dev =			0.007

95% confidence MPV =	0.091	+/-	0.002
F-pseudosigma =	0.006		
N =	48		
Hu =	0.097		
Hl =	0.089		

Lab	Rating	Z-value	0	7	22 code
1	3	0.83			0.096 a
5	4	0.17			0.092 a
6	1	1.67			0.101 m
9	2	1.33			0.099 a
10	4	0.17			0.092 m
12	1	-1.83			0.080 m
13	3	-1.00			0.085 m
15	4	0.50			0.094 m
19	4	-0.50			0.088 a
21	4	0.33			0.093 m
23	1	-1.83			0.080 m
25	0	-12.17			0.018
29	0	8.17		0.140	
38	4	-0.17			0.090 a
39	3	0.67			0.095
42	4	0.17			0.092 p
45	4	0.50			0.094
51	2	-1.17			0.084 a
52	4	0.00			0.091
55	2	1.17			0.098 a
59	4	-0.17			0.090 a
61	4	-0.33			0.089 a
64	4	0.00			0.091 p
66	4	-0.17			0.090 a
70	0	10.33	0.153		
74	4	-0.17			0.090 a
78	0	29.83	0.270		
83	4	-0.17			0.090 a
87	0	8.17			0.140 a
88	0	13.17			0.170 a
92	4	0.17			0.092 p
97	2	1.50			0.100 m
100	2	-1.83	0.080		
102	2	-1.50			0.082 a
113	3	0.67			0.095 a
119	4	-0.17			0.090 a
127	3	1.00			0.097 a
129	1	-2.00			0.079 a
138	0	2.50	0.106		
143	4	-0.50			0.088 a
145	0	3.17			0.110 m
158	4	-0.17			0.090 a
161	0	-13.50			< 0.01
167	0	-3.67			0.069 a
179	0	2.17			0.104 a

Lab	Rating	Z-value	0	7	22 code
183	4	-0.17			0.090 a
189	4	-0.17			0.090 a
190	4	0.17	0.092		
191	0	-5.17		0.060	
194	0	9.83	0.150		

Table 14-- Statistical summary of reported data for standard reference sample N-33 (nutrients)

Definition of analytical methods, abbreviations, and symbols

Analytical methods

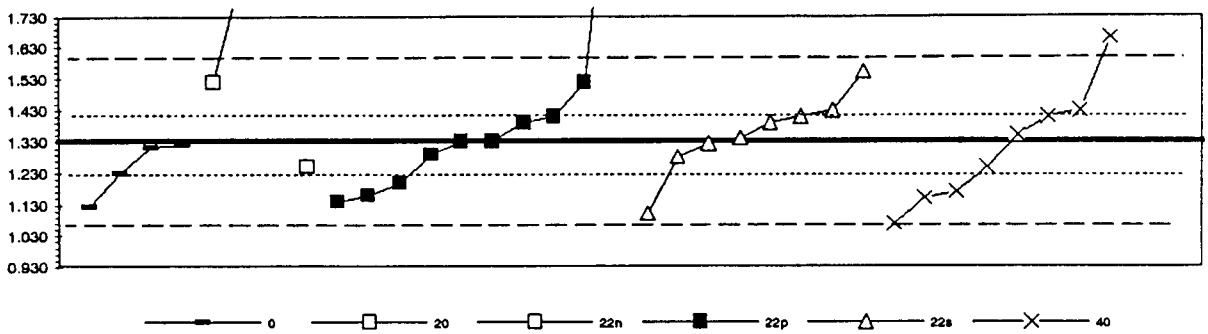
0. Other/Not reported		
7. IC	=	ion chromatography
22. Color:	=	colorimetric [color reagent specified]
40. Ion electrode	=	specific ion electrode

Abbreviations and symbols

N	=	number of samples
St dev	=	traditional standard deviation
MPV	=	95% confidence most probable value
F-pseudosigma	=	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

Table 13.-- *Statistical summary of reported data for standard reference water sample N-33 (preserved nutrient)--Continued*

NH3 as N (Ammonia as nitrogen) mg/L



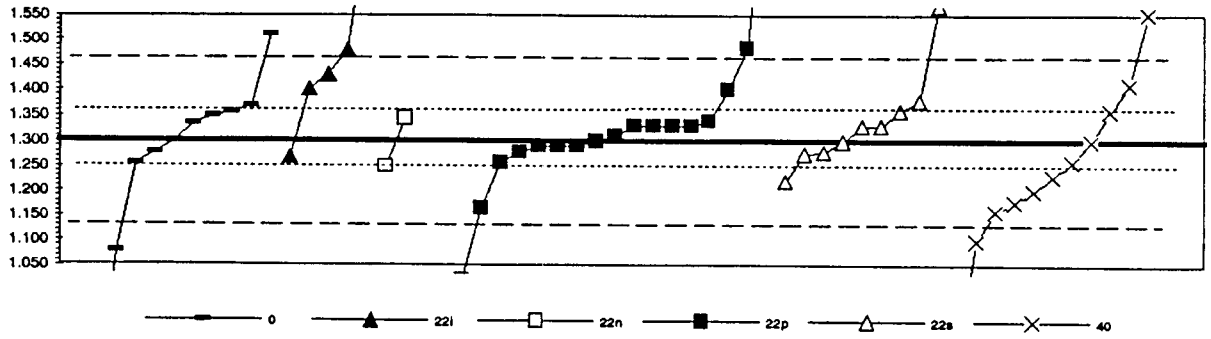
0. Other			22p. Color: phenate	
20. Titrate: ?			22s. Color: salicylate	
22n. Color: nesslerization			40. Ion electrode	
N =	5	2	19	8
Minimum =	1.123	1.520	1.100	1.070
Maximum =	1.320	1.900	2.424	1.660
Median =			1.330	1.300
St Dev =			0.124	0.175

95% confidence MPV =	1.330	+/-	0.045
F-pseudosigma =	0.133		
N =	34		
Hu =	1.410		
Hl =	1.230		

Lab	Rating	Z-value	0	20	22 code	40
1	4	-0.05			1.323 s	
2	1	1.65			1.550 s	
3	2	-1.28			1.160 p	
7	3	0.60			1.410 s	
16	1	-1.56	1.123			
20	2	1.43			1.520 i	
41	0	2.48				1.660
45	2	-1.35				1.150
48	2	-1.43			1.140 p	
52	4	-0.30			1.290 p	
58	3	0.60				1.410
60	2	1.43		1.520		
63	4	0.45			1.390 s	
65	3	0.75				1.430
68	3	-0.75	1.230			
75	3	0.75			1.430 s	
76	4	0.00			1.330 p	
79	4	-0.38			1.280 s	
88	4	0.08			1.340 s	
90	4	0.45			1.390 p	
105	3	0.60			1.410 p	
119	4	0.15				1.350
127	4	-0.08	1.320			
129	3	-0.60			1.250 n	
133	1	-1.95				1.070
140	4	0.00			1.330 p	
141	3	-0.98			1.200 p	
145	1	-1.73			1.100 s	
167	2	-1.20	1.123			1.170
179	0	8.23			2.424 p	
182	0	4.29		1.900		
189	3	-0.60				1.250
190	4	-0.14	1.312			

Table 13.-- *Statistical summary of reported data for standard reference water sample N-33 (nonpreserved nutrient)--Continued*

NH3 as N (Ammonia as nitrogen) **mg/L**



0. Other			22p. Color: phenate	
22i. Color: indophenol			22s. Color: salicylate	
22n. Color: nesslerization			40. Ion electrode	
N =	11		35	13
Minimum =	0.547		0.620	0.846
Maximum =	1.510		1.877	2.500
Median =			1.330	1.260
St Dev =			0.066	0.169

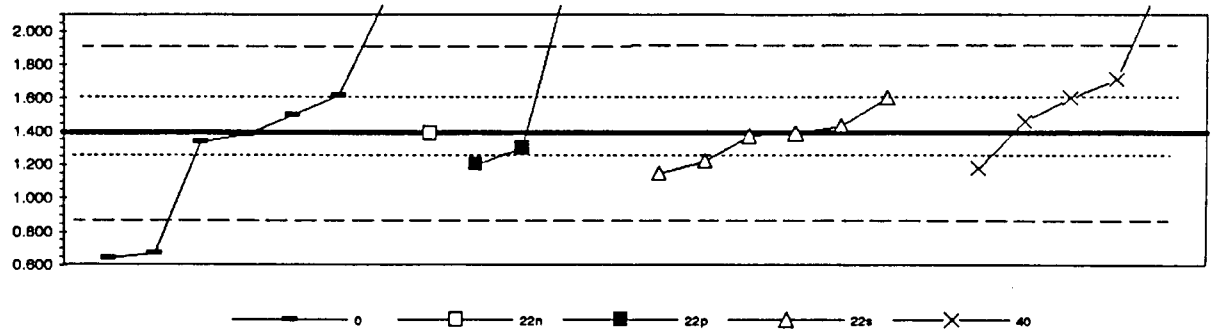
95% confidence MPV =	1.300	+/-	0.021
F-pseudosigma =	0.082		
N =	59		
Hu =	1.365		
HI =	1.254		

Lab	Rating	Z-value	0	22 code	40
1	4	-0.29		1.276 s	
2	0	3.24		1.566 s	
5	4	0.00		1.300 s	
6	0	4.83			1.680
8	0	-6.34	0.780		
9	4	-0.24		1.280 p	
10	3	0.73			1.360
12	2	1.22		1.400 p	
13	4	-0.37		1.270 i	
15	2	-1.22			1.200
18	4	0.37		1.330 p	
19	4	0.37		1.330 p	
23	4	0.37		1.330 p	
25	4	0.00			1.300
34	4	0.12		1.310 p	
38	3	0.71	1.358		
39	0	-2.68	1.080		
42	0	-9.18	0.547		
45	3	-0.85			1.230
46	1	-1.62		1.167 p	
52	3	0.61	1.350		
55	4	0.37		1.330 s	
57	0	-2.44			1.100
58	1	-1.71			1.160
59	4	0.00		1.300 p	
60	0	2.56	1.510		
61	0	-8.29		0.620 p	
64	0	2.20		1.480 i	
65	0	3.05			1.550
66	4	-0.12		1.290 p	
68	0	14.63			2.500
70	3	-0.51	1.258		
74	4	-0.24	1.280		
83	0	5.61		1.760 i	
87	4	-0.12		1.290 p	
88	3	0.98		1.380 s	
92	4	0.00	1.300		
93	4	0.37		1.330 p	
97	1	1.59		1.430 i	
100	4	0.37		1.330 s	
101	0	-3.41		1.020 p	
108	2	1.34			1.410
113	0	7.04		1.877 p	
119	4	-0.49			1.260
123	4	-0.24		1.280 s	

Lab	Rating	Z-value	0	21	22	code	40
127	3	0.73			1.360	s	
128	4	-0.49			1.260	p	
129	3	0.54			1.344	n	
138	3	0.85	1.370				
143	4	0.49			1.340	p	
145	3	-0.98			1.220	s	
158	4	-0.12			1.290	p	
161	0	-5.54					0.848
167	2	-1.46					1.180
177	3	-0.81			1.250	n	
179	0	2.24			1.484	p	
184	2	1.22			1.400	i	
188	0	-5.67			0.835	a	
190	4	0.44	1.336				

Table 13.-- *Statistical summary of reported data for standard reference water sample N-33 (preserved nutrient)--Continued*

NH3 + OrgN as N (Ammonia + Organic nitrogen) mg/L



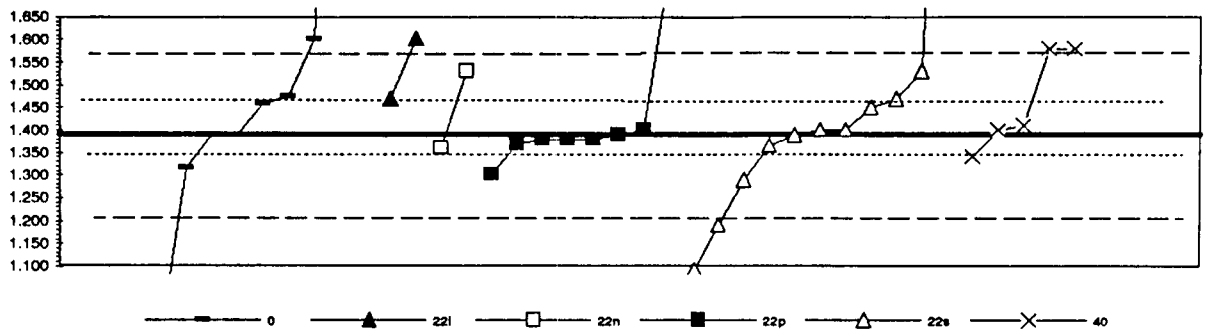
0. Other		22s. Color: salicylate	
22n. Color: nesslerization		40. Ion electrode	
22p. Color: phenate			
N =	7	11	5
Minimum =	0.640	1.150	1.180
Maximum =	2.180	2.360	2.330
Median =		1.390	
St Dev =		0.344	

95% confidence MPV =	1.392	+/-	0.105
F-pseudosigma =	0.258		
N =	23		
Hu =	1.608		
Hl =	1.260		

Lab	Rating	Z-value	0	22 code	40
1	4	-0.05		1.378 s	
3	0	3.60		2.320 p	
16	4	0.41	1.497		
29	0	-2.91	0.640		
41	0	3.64			2.330
45	2	1.23			1.710
48	4	0.15		1.430 s	
52	4	-0.01		1.390 s	
60	4	-0.20	1.340		
63	NR			< 2 s	
68	3	-0.67		1.220 s	
78	0	-0.28	0.671		
90	4	-0.36		1.300 p	
105	0	3.05	2.180		
119	4	0.28			1.460
127	4	-0.05	1.380		
129	4	0.00		1.392 n	
133	3	-0.82			1.180
140	3	0.81		1.600 s	
141	3	-0.74		1.200 p	
145	3	-0.94		1.150 s	
179	0	3.75		2.360 p	
189	3	0.81			1.600
190	3	0.87	1.616		

Table 13.-- *Statistical summary of reported data for standard reference water sample N-33 (nonpreserved nutrient)--Continued*

NH3 + OrgN as N (Ammonia + Organic nitrogen) **mg/L**



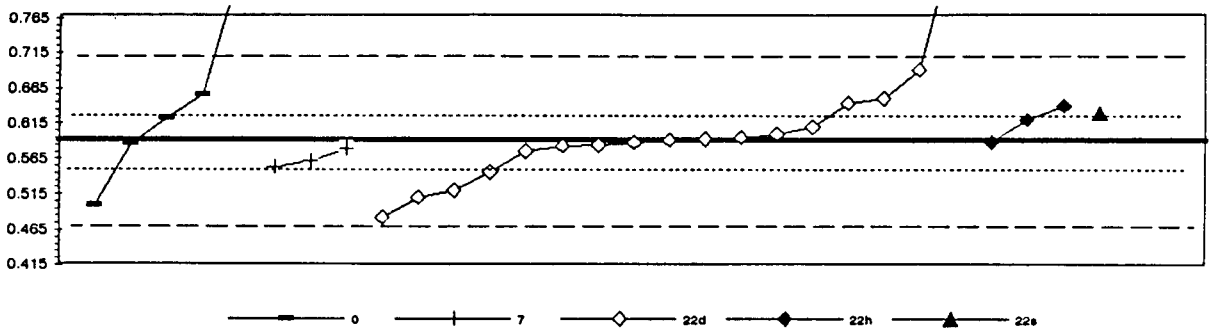
0. Other		22p. Color: phenate	
22l. Color: indophenol		22s. Color: salicylate	
22n. Color: nesslerization		40. Ion electrode	
N =	12	23	4
Minimum =	0.470	1.090	1.340
Maximum =	2.570	2.720	1.580
Median =	1.388	1.390	
St Dev =	0.098	0.112	

95% confidence MPV =	1.390	+/-	0.029
F-pseudosigma =	0.091		
N =	39		
Hu =	1.473		
Hl =	1.350		

Lab	Rating	Z-value	0	22 code	40
1	4	-0.26		1.368 s	
5	0	-2.20		1.190 s	
8	3	0.77	1.460		
10	4	0.00		1.390 s	
12	3	-0.99		1.300 p	
13	3	0.88		1.470 l	
15	3	-0.55			1.340
18	4	0.00		1.390 p	
23	3	0.88		1.470 s	
25	0	12.97	2.570		
34	4	0.11		1.400 p	
38	4	-0.33		1.360 n	
39	0	-10.11	0.470		
42	0	-7.07	0.747		
45	0	2.09			1.580
46	4	-0.11		1.380 p	
52	4	-0.22		1.370 p	
55	3	0.66		1.450 s	
57	0	2.31	1.600		
59	4	0.11		1.400 s	
60	0	-4.84	0.950		
61	0	12.53	2.530		
68	4	-0.11		1.380 p	
69	0	-8.79	0.590		
70	3	-0.81	1.316		
74	4	0.00	1.390		
87	2	-1.10		1.290 s	
101	4	-0.11		1.380 p	
113	1	1.56		1.532 s	
119	4	0.22			1.410
123	0	14.62		2.720 s	
127	4	0.11		1.400 s	
129	1	1.56		1.532 n	
138	4	0.00	1.390		
145	0	-3.30		1.090 s	
158	4	0.11			1.400
179	0	4.07		1.760 p	
184	0	2.31		1.600 l	
190	3	0.93	1.475		

Table 13.-- *Statistical summary of reported data for standard reference water sample N-33 (preserved nutrient)--Continued*

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



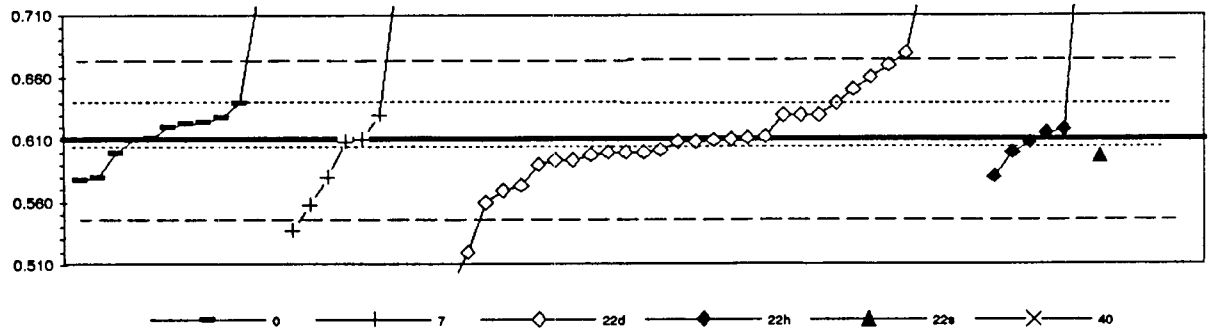
0. Other			22h. Color: hydrazine
7. IC			22s. Color sulfanilamide
22d. Color: diazotization			
N =	3	3	23
Minimum =	0.500	0.554	0.482
Maximum =	0.834	0.580	0.890
Median =			0.593
St Dev =			0.050

95% confidence MPV =	0.582	+/-	0.021
F-pseudosigma =	0.058		
N =	29		
Hu =	0.630		
Hl =	0.550		

Lab	Rating	Z-value	0	7	22	code
1	4	0.00			0.592	d
3	4	-0.14			0.584	d
7	4	0.31			0.610	d
16	3	0.86			0.643	d
20	3	0.64			0.630	s
41	1	1.66			0.690	d
42	3	-0.64		0.554		
43	4	0.14			0.600	d
45	3	-0.78			0.548	d
48	4	0.47			0.620	h
52	4	-0.17			0.582	d
63	4	-0.03			0.590	h
75	4	0.05			0.595	d
76	4	-0.20		0.580		
78	0	4.10	0.834			
88	0	5.05			0.890	d
90	2	-1.22			0.520	d
92	2	1.07	0.655			
105	4	-0.27			0.576	d
118	3	0.98			0.650	d
127	3	0.51	0.622			
129	3	-0.51		0.562		
140	4	-0.07			0.588	d
141	3	0.81			0.640	h
145	2	-1.39			0.510	d
167	4	0.02			0.593	d
179	1	-1.86			0.482	d
182	1	-1.56	0.500			
190	4	-0.08	0.587			

Table 13.-- *Statistical summary of reported data for standard reference water sample N-33 (nonpreserved nutrient)--Continued*

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



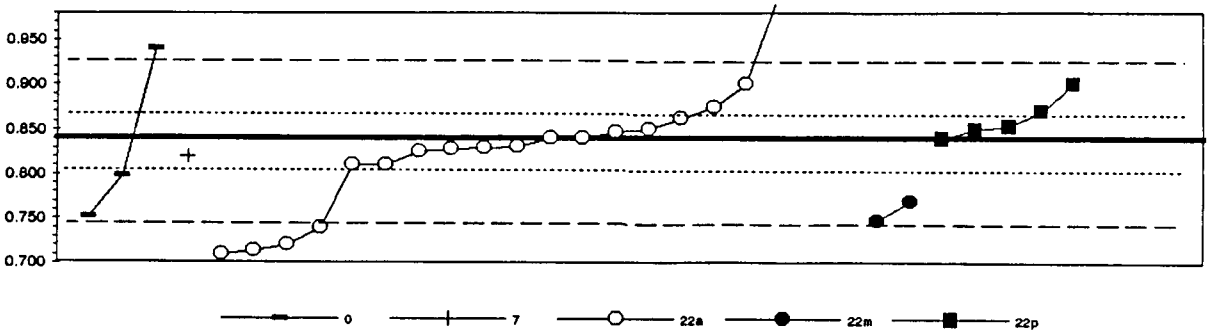
0. Other			22h. Color: hydrazine		
7. IC			22s. Color: sulfanilamide		
22d. Color: diazotization			40. Ion electrode		
N =	12	8	39	1	
Minimum =	0.578	0.537	0.120	0.794	
Maximum =	1.370	0.746	1.370		
Median =	0.622		0.611		
St Dev =	0.038		0.042		

95% confidence MPV =	0.610	+/-	0.008
F-pseudosigma =	0.033		
N =	60		
Hu =	0.640		
HI =	0.596		

Lab	Rating	Z-value	0	7	22 code	40
1	4	-0.06			0.608 d	
5	4	-0.09			0.607 h	
6	0	5.86			0.801 n	
9	4	0.40	0.623			
10	3	0.61			0.630 d	
12	0	14.41			1.080 d	
13	4	0.06			0.612 d	
15	0	-2.24		0.537		
18	4	0.03			0.611 d	
19	4	0.31	0.620			
23	4	-0.31			0.600 d	
25	3	0.61			0.630 d	
29	4	0.00		0.610		
34	4	-0.31			0.600 p	
38	4	-0.40			0.597 s	
39	0	8.89	0.900			
42	0	4.17		0.746		
45	4	-0.49			0.594 d	
46	4	-0.03			0.609 d	
52	4	-0.25			0.602 d	
53	0	3.37	0.720			
55	4	-0.31			0.600 d	
57	2	1.23			0.650 d	
59	3	0.92			0.640 d	
61	4	0.00			0.610 d	
64	0	-15.02			0.120 d	
66	4	0.25			0.618 h	
68	3	-0.92	0.580			
70	3	-0.98	0.578			
74	3	0.92	0.640			
78	0	4.02			0.741 d	
83	0	4.29			0.750 d	
87	4	-0.31			0.600 d	
88	0	23.30			1.370 d	
92	4	0.43	0.624			
93	4	-0.06		0.608		
97	1	1.84			0.670 d	
100	1	-1.53			0.560 d	
101	0	-2.76			0.520 d	
108	4	-0.31	0.600			
109	4	-0.49			0.594 d	
113	2	-1.13			0.573 d	
119	1	1.53			0.660 d	
123	3	-0.92			0.580 h	
127	4	-0.06			0.608 d	
128	4	0.15			0.615 h	
129	1	-1.59		0.558		
133	0	2.15			0.680 d	
138	4	0.03	0.611			
143	2	-1.26			0.569 d	
145	3	-0.61			0.590 d	
158	3	0.61			0.630 d	
167	4	-0.37			0.598 d	
177	0	5.64				0.794
179	0	-3.62			0.492 d	
184	4	0.00	0.610			
189	3	-0.92		0.580		
190	3	0.55	0.628			
191	3	0.61		0.630		
193	0	3.99		0.740		

Table 13.-- *Statistical summary of reported data for standard reference water sample N-33 (preserved nutrient)--Continued*

total P as P (Phosphorus) mg/L



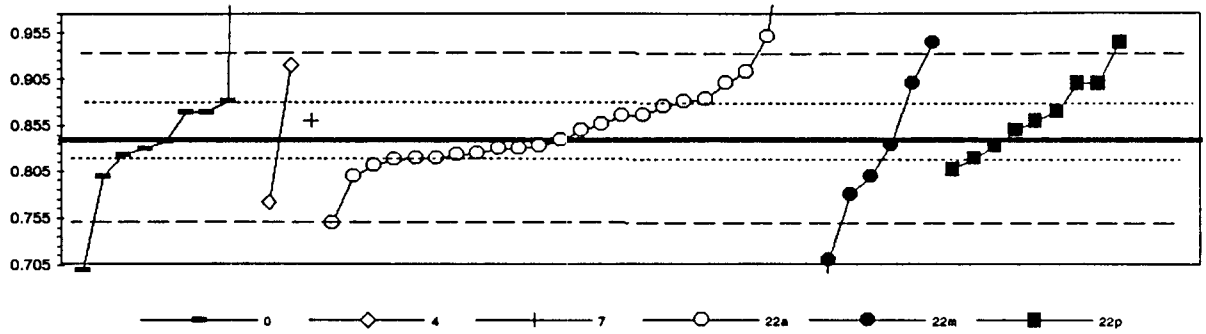
0. Other		22p. Color: persulfate	
7. IC			
22a. Color: ascorbic, phosphomolydate			
N =	3	1	27
Minimum =	0.752	0.820	0.710
Maximum =	0.940		8.170
Median =			0.840
St Dev =			0.060

95% confidence MPV =	0.840	+/- 0.017
F-pseudosigma =	0.047	
N =	31	
Hu =	0.867	
HI =	0.804	

Lab	Rating	Z-value	0	7	22 code
1	4	0.00			0.840 a
3	3	0.74			0.875 a
7	0	155.96			8.170 a
16	4	0.30			0.854 p
20	4	0.21			0.850 p
29	4	-0.43		0.820	
42	1	-1.98			0.747 m
45	4	0.15			0.847 a
48	4	0.00			0.840 a
52	4	-0.30			0.826 a
58	0	-2.77			0.710 a
60	3	-0.84			0.810 a
63	2	1.28			0.900 a
68	4	-0.26			0.828 a
75	0	3.40			1.000 a
78	1	-1.87	0.752		
90	0	-2.70			0.713 a
92	2	1.28			0.900 p
105	4	-0.21			0.830 a
119	4	0.21			0.850 a
127	4	0.49			0.863 a
129	4	-0.19			0.831 a
133	4	0.00			0.840 a
140	0	-2.55			0.720 a
141	0	-2.13			0.740 a
145	2	-1.49			0.770 m
167	3	-0.62			0.811 a
179	3	0.64			0.870 p
182	0	9.57			1.290 a
189	0	2.13	0.940		
190	3	-0.89	0.798		

Table 13.-- *Statistical summary of reported data for standard reference water sample N-33 (nonpreserved nutrient)--Continued*

total P as P (Phosphorus) mg/L



0. Other	22a. Color: ascorbic, phosphomolybdate				
4. ICP	22m. Color: molybdate				
7. IC	22p. Color: persulfate				
N =	9	2	1	38	
Minimum =	0.700	0.772	0.860	0.540	
Maximum =	2.440	0.920	0.860	1.100	
Median =				0.837	
St Dev =				0.051	

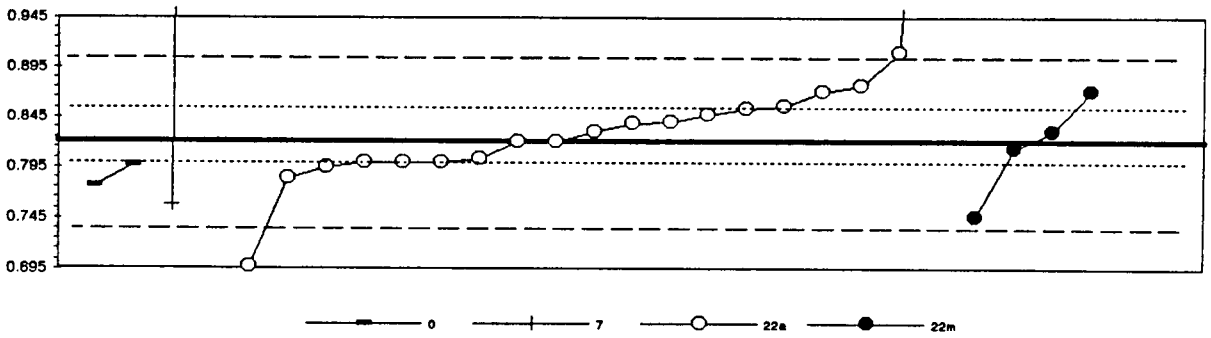
95% confidence MPV =	0.839	+/-	0.012
F-pseudosigma =	0.045		
N =	50		
Hu =	0.881		
Ht =	0.820		

Lab	Rating	Z-value	0	4	7	22	code
1	4	-0.11				0.834	m
5	4	-0.16				0.832	p
6	0	2.31				0.943	m
8	1	1.80		0.920			
10	4	0.24				0.850	p
12	2	1.36				0.900	p
13	0	2.31				0.943	p
15	2	1.36				0.900	m
18	4	-0.42				0.820	a
19	4	-0.42				0.820	a
23	4	0.24				0.850	a
25	2	-1.49		0.772			
34	3	-0.69				0.808	p
38	3	0.96				0.882	a
39	3	0.91				0.880	a
45	4	0.40				0.857	a
46	4	-0.31				0.825	a
52	4	-0.47				0.818	a
55	0	2.47				0.950	a
57	3	-0.87				0.800	a
58	0	-2.87				0.710	m
59	2	1.36				0.900	a
60	4	-0.20	0.830				
61	3	0.69	0.870				
64	3	-0.87				0.800	m
66	4	-0.13				0.833	a
70	4	-0.33	0.824				
74	3	0.67	0.869				
78	4	-0.02	0.838				
87	1	1.62				0.912	a
92	2	1.36				0.900	p
100	0	35.58	2.440				
101	3	0.60				0.866	a
108	0	5.80				1.100	a
113	3	0.80				0.875	a
118	4	-0.20				0.830	a
123	0	-6.64				0.540	m
127	3	0.58				0.865	a
128	4	0.00				0.839	a
129	3	-0.60				0.812	a
138	3	-0.87	0.800				
143	4	-0.20				0.830	a
145	2	-1.31				0.780	m
158	4	-0.42				0.820	p
161	0	-3.09	0.700				

Lab	Rating	Z-value	0	4	7	22	code
167	4	-0.33				0.824	a
179	3	0.69				0.870	p
184	1	-1.98				0.750	m
190	3	0.93	0.881				
191	4	0.47			0.860		

Table 13.-- *Statistical summary of reported data for standard reference water sample N-33 (preserved nutrient)--Continued*

PO4 as P (orthophosphate) **mg/L**



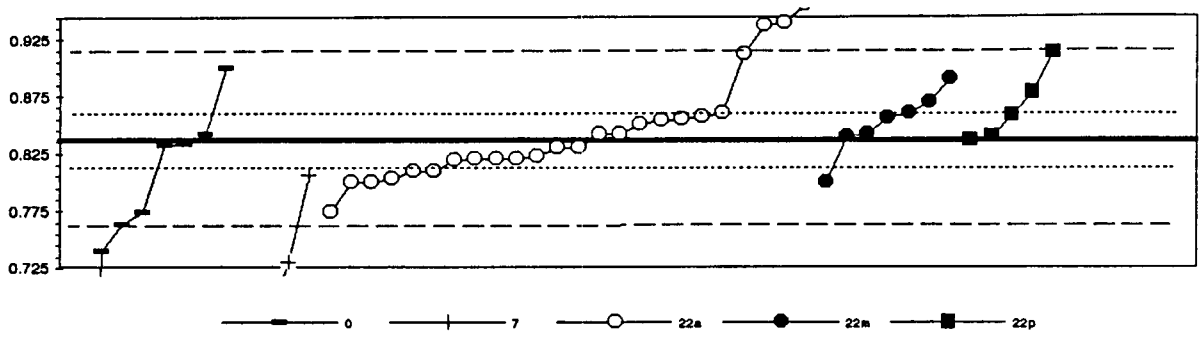
0. Other			22m. Color: molybdate	
7. IC				
22a. Color: ascorbic, phosphomolybdate				
N =	2	2	23	
Minimum =	0.776	0.758	0.697	
Maximum =		17.6	1.290	
Median =			0.825	
St Dev =			0.045	

95% confidence MPV =	0.820	+/-	0.016
F-pseudosigma =	0.042		
N =	27		
Hu =	0.855		
Hl =	0.799		

Lab	Rating	Z-value	0	7	22	code
1	4	0.45			0.839	a
2	2	1.36			0.877	a
3	3	0.86			0.856	a
7	0	399.52		17.6		
16	3	-0.55	0.797			
20	4	0.24			0.830	m
42	1	-1.76			0.746	m
45	3	0.64			0.847	a
48	3	-0.60			0.795	a
52	4	-0.48			0.800	a
63	2	1.19			0.870	a
75	4	-0.48			0.800	a
88	4	0.48			0.840	a
90	0	-2.93			0.697	a
92	4	-0.17			0.813	m
105	4	0.00			0.820	a
119	4	0.00			0.820	a
127	3	0.79			0.853	a
129	2	-1.48		0.758		
133	4	-0.48			0.800	a
140	4	0.24			0.830	a
141	0	2.14			0.910	a
145	2	1.19			0.870	m
167	4	-0.40			0.803	a
179	3	-0.86			0.784	a
182	0	11.19			1.290	a
190	2	-1.05	0.776			

Table 13.-- *Statistical summary of reported data for standard reference water sample N-33 (nonpreserved nutrient)--Continued*

PO4 as P (orthophosphate) **mg/L**



0. Other		22m. Color: molybdate	
7. IC		22p. Color: persulfate	
22a. Color: ascorbic, phosphomolybdate			
N =	8	3	36
Minimum =	0.278	0.680	0.774
Maximum =	0.900	0.806	0.956
Median =			0.842
St Dev =			0.028

95% confidence MPV =	0.836	+/-	0.011
F-pseudosigma =	0.037		
N =	47		
Hu =	0.858		
HI =	0.808		

Lab	Rating	Z-value	0	7	22	code
1	4	0.49			0.854	a
2	2	1.14			0.878	a
5	0	2.73			0.937	a
6	4	0.16			0.842	m
9	3	0.59			0.858	p
10	4	0.11			0.840	m
12	4	0.11			0.840	p
13	0	2.08			0.913	p
15	3	0.54			0.856	m
19	4	-0.43			0.820	a
23	3	-0.70			0.810	a
25	0	-15.08	0.278			
29	0	-4.22		0.680		
38	4	-0.35			0.823	a
45	3	0.57			0.857	a
52	3	-0.70			0.810	a
55	0	2.81			0.940	a
57	3	-0.97			0.800	a
59	4	-0.16			0.830	a
61	4	0.16			0.842	a
64	3	-0.97			0.800	m
66	3	-0.89			0.803	a
70	1	-1.68	0.774			
74	4	-0.11	0.832			
78	1	-1.95	0.764			
83	4	0.38			0.850	a
87	0	2.05			0.912	a
88	3	0.92			0.870	m
92	4	0.00			0.836	p
97	3	0.65			0.860	m
100	1	1.73	0.900			
101	3	-0.97			0.800	a
108	0	-2.59	0.740			
113	4	0.16			0.842	a
119	4	-0.43			0.820	a
127	3	0.51			0.855	a
129	3	-0.81		0.806		
138	4	0.16	0.842			
143	4	-0.16			0.830	a
145	2	1.46			0.890	m
158	4	-0.43			0.820	a
161	0	-22.32	< 0.01			
167	4	-0.46			0.819	a
179	1	-1.68			0.774	a
183	0	3.24			0.956	a

Lab	Rating	Z-value	0	7	22	code
189	3	0.65			0.860	
190	4	-0.08	0.833			
191	0	-2.86		0.730		

Table 15-- *Statistical summary of reported data for standard reference sample P-18 (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 coupled plasma
6. MS/ICP	=	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. Turbid	=	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
Hl	=	lower hinge value
mg/L	=	milligrams per liter
m S/cm		
Lab	=	laboratory code number
NR	=	not rated, less than value reported
<	=	less than

Table 15.-- *Statistical summary of reported data for standard reference water sample P-18 (low ionic strength)--Continued*

Acid (Acidity as CaCO3) mg/L

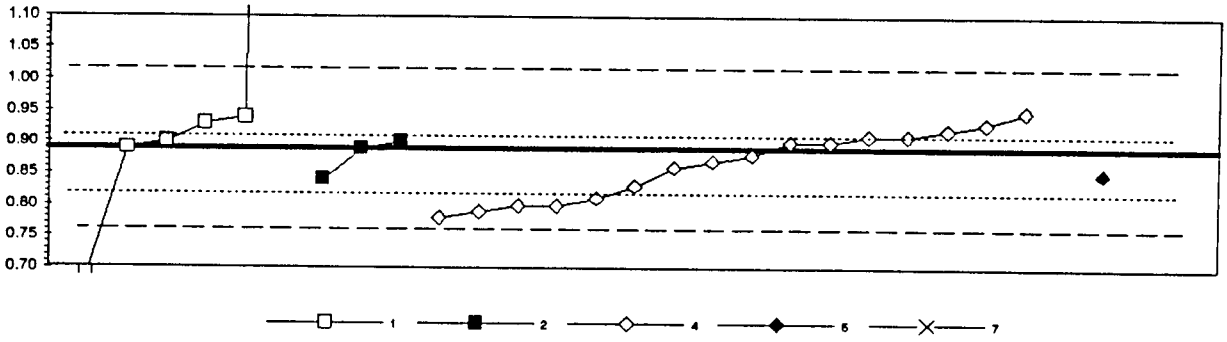
	21. Titrate: electro	40. Ion electrode	
N =	5	1	
Minimum =	0.04	4	INSUFFICIENT DATA
Maximum =	3	4	
Median =			NOT RATED
St Dev =			

Lab	Rating	Z-value	21	40
1			0.04	
3			< 10	
15			1.80	
38			0.76	
52			< 2	
74			< 1	
105			2.40	
141				4.00
167			3.00	

95% confidence MPV =	2.10	+/-	1.0
F-pseudosigma =	1.28		
N =	6		
Hu=	3.00		
Hl=	1.28		

Table 15.-- *Statistical summary of reported data for standard reference water sample P-18 (low ionic strength)--Continued*

Ca (Calcium) mg/L



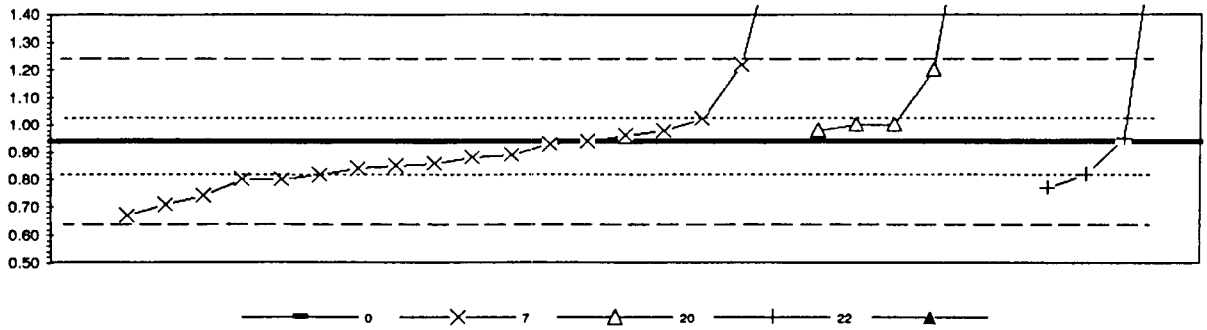
1. AA: direct, air			5. DCP				
2. AA: direct, N2O			7. IC				
4. ICP			22. Colorimetric				
N =	6	3	16	1	1	0	
Minimum =	0.69	0.84	0.78	0.85	0.50		
Maximum =	59.00	0.90	0.95				
Median =			0.88				
St Dev =			0.06				

95% confidence MPV = 0.89 +/- 0.03
F-pseudosigma = 0.07
N = 27
Hu= 0.91
Hl= 0.82

Lab	Rating	Z-value	1	2	4	5	7	22
1	4	0.15			0.90			
2	3	-0.75		0.84				
3	4	-0.45			0.86			
7	3	0.60			0.93			
9	NR							< 1
15	2	-1.34			0.80			
20	NR						< 2	
27	3	-0.60				0.85		
38	4	0.15		0.90				
44	4	0.00		0.89				
46	2	-1.19			0.81			
48	3	0.90			0.95			
52	4	0.30			0.91			
58	4	0.00	0.89					
64	3	-0.90			0.83			
74	2	-1.34			0.80			
78	0	867.31	59.00					
93	4	-0.15			0.88			
95	0	-2.99	0.69					
101	3	0.75	0.94					
105	4	0.15			0.90			
123	4	0.15	0.90					
134	3	0.60	0.93					
141	4	-0.30			0.87			
145	4	0.30			0.91			
167	NR				< 1			
184	2	-1.49			0.79			
188	1	-1.64			0.78			
189	4	0.45			0.92			
190	0	-5.82					0.50	

Table 15.-- *Statistical summary of reported data for standard reference water sample P-18 (low ionic strength)--Continued*

Cl (Chloride) mg/L



0. Other		22. Colorimetric		
7. IC				
20. Titration				
N =	1	18	5	5
Minimum =	2.00	0.67	0.98	0.77
Maximum =		1.75	2.00	7.60
Median =		0.87		
St Dev =		0.13		

95% confidence MPV =	0.94	+/-	0.05
F-pseudosigma =	0.15		
N =	29		
Hu=	1.02		
Hl=	0.82		

Lab	Rating	Z-value	0	7	20	22
1	4	-0.33		0.89		
2	4	0.00		0.94		
3	3	-0.80				0.82
7	3	-0.80		0.82		
9	0	7.07				2.00
15	3	0.53		1.02		
20	0	5.40		1.75		
27	2	-1.33		0.74		
44	4	0.13		0.96		
46	4	0.27		0.98		
48	4	0.40			1.00	
52	4	0.07				0.95
58	0	7.07			2.00	
59	3	-0.93		0.80		
64	0	44.40				7.60
65	4	0.27			0.98	
74	1	-1.53		0.71		
78	4	0.40			1.00	
93	3	-0.53		0.86		
95	1	1.87		1.22		
101	1	1.73			1.20	
102	NR					< 1.2
105	4	-0.40		0.88		
110	3	-0.60		0.85		
134	3	-0.67		0.84		
141	NR					< 1
145	2	-1.13				0.77
167	NR				< 1	
188	1	-1.80		0.67		
189	4	-0.07		0.93		
190	3	-0.93		0.80		
194	0	7.07	2.00			

Table 15.-- *Statistical summary of reported data for standard reference water sample P-18 (low ionic strength)--Continued*

F (Fluoride) **mg/L**

0. Other		40. Ion electrode	
7. IC			
22. Colorimetric			
N =		1	4
Minimum =		0.02	0.01
Maximum =			0.05
Median =			0.03
St Dev =			0.02

Lab	Rating	Z-value	0	7	22	40
1				0.02		
3					< 0.05	
9						0.05
15						< 0.1
46						< 0.05
52						< 0.2
58						0.01
59						< 0.05
74						< 0.02
78						< 0.1
105						< 0.2
134						< 0.1
141						< 0.05
167						0.04
189						< 0.1
190						0.02
194			< 0.2			

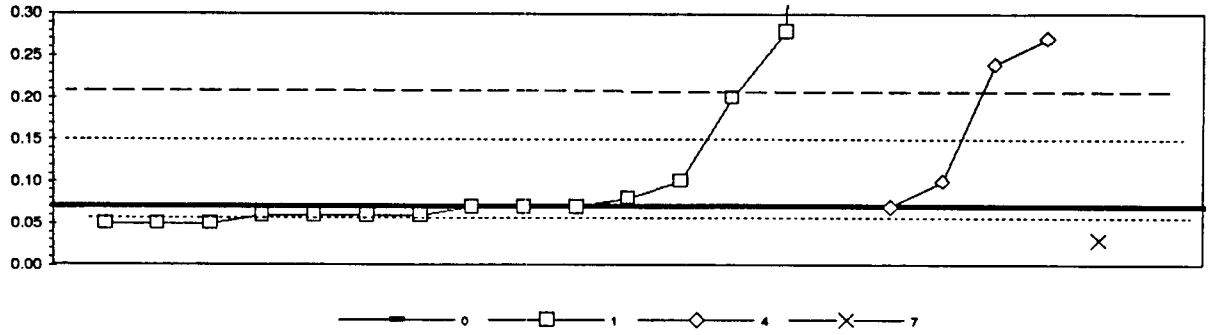
95% confidence MPV =	0.02	+/-	0.01
F-pseudosigma =	0.01		
N =	5		
Hu=	0.04		
Hl=	0.02		

INSUFFICIENT DATA

NOT RATED

Table 15.-- *Statistical summary of reported data for standard reference water sample P-18 (low ionic strength)--Continued*

K (Potassium) mg/L



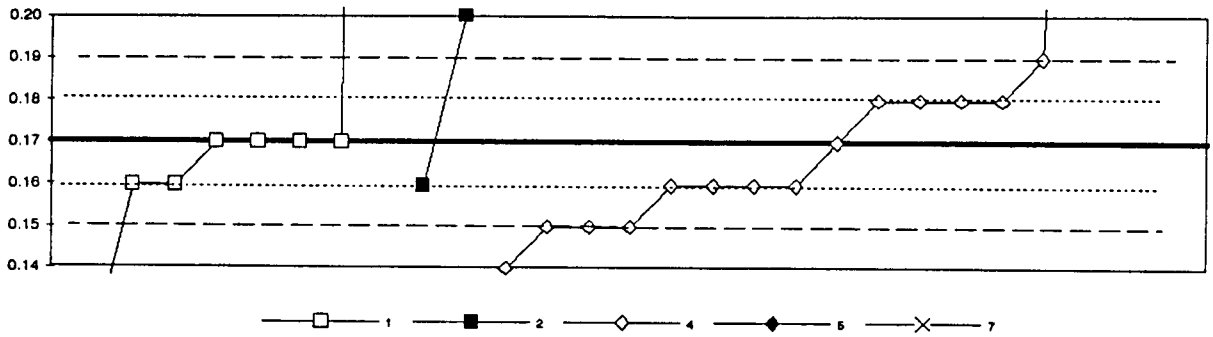
0. Other		7. IC		
1. AA: direct, air				
4. ICP				
N =		15	4	1
Minimum =		0.05	0.07	0.03
Maximum =		2.55	0.27	0.03
Median =		0.07		
St Dev =		0.07		

95% confidence MPV =	0.07	+/-	0.03
F-pseudosigma =	0.07		
N =	29		
Hu=	0.15		
Hl=	0.06		

Lab	Rating	Z-value	0	1	4	7
1	4	0.43		0.10		
2	4	0.00		0.07		
3	4	0.14		0.08		
7	NR				< 1.2	
9	NR			< 1		
15	4	-0.29		0.05		
20	NR					< 2
38	4	-0.29		0.05		
44	4	0.00		0.07		
46	NR				< 0.05	
48	0	2.86			0.27	
52	NR				< 0.2	
64	4	-0.29		0.05		
74	4	-0.14		0.06		
78	0	35.43		2.55		
83	4	-0.14		0.06		
85	0	3.00		0.28		
101	4	-0.14		0.06		
105	4	0.00			0.07	
123	1	1.86		0.20		
134	4	0.00		0.07		
141	4	0.43			0.10	
145	NR					< 0.11
167	NR					< 1
188	4	-0.14		0.06		
189	0	2.43			0.24	
190	3	-0.57				0.03
194	NR		< 0.5			

Table 15.-- *Statistical summary of reported data for standard reference water sample P-18 (low ionic strength)--Continued*

Mg (Magnesium) mg/L



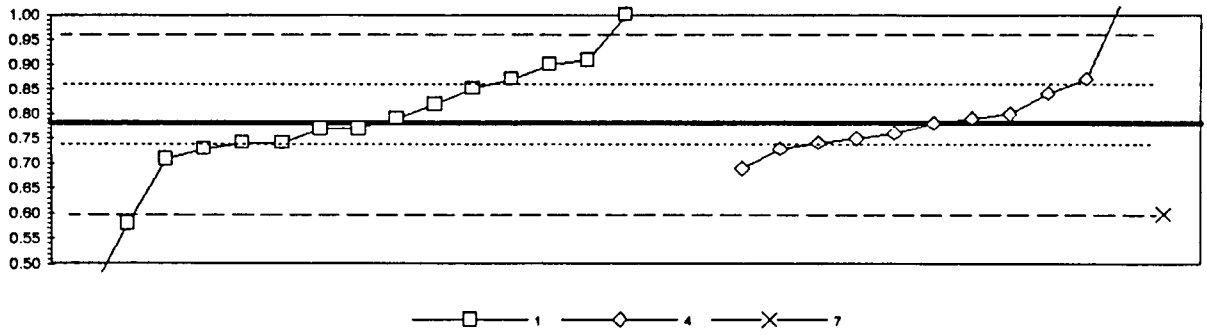
0. Other		4. ICP			
1. AA: direct, air		5. DCP			
2. AA: direct, N2O		7. IC			
N =	8	2	15	1	1
Minimum =	0.12	0.16	0.14	0.22	0.1
Maximum =	16		0.35		
Median =	0.17		0.16		
St Dev =	0.018		0.015		

95% confidence MPV =	0.170	+/-	0.006
F-pseudosigma =	0.015		
N =	27		
Hu=	0.18		
Hl=	0.16		

Lab	Rating	Z-value	1	2	4	5	7
1	4	0.00	0.17				
2	3	-1.00		0.16			
3	3	-1.00			0.16		
7	2	2.00			0.19		
9	0	-7.00	< 0.1				
15	3	-1.00			0.16		
20	NR						< 2
27	0	5.00				0.22	
38	3	-1.00	0.16				
44	0	3.00		0.20			
46	2	-2.00			0.15		
48	0	18.00			0.35		
52	2	-2.00			0.15		
58	4	0.00	0.17				
64	2	-2.00			0.15		
74	0	-3.00			0.14		
78	0	1583	16.00				
93	3	1.00			0.18		
95	0	-5.00	0.12				
101	4	0.00	0.17				
105	4	0.00			0.17		
123	3	-1.00	0.16				
134	4	0.00	0.17				
141	3	1.00			0.18		
145	3	1.00			0.18		
167	NR				< 1		
184	3	1.00			0.18		
188	3	-1.00			0.16		
189	3	-1.00			0.16		
190	0	-7.00					0.10

Table 15.-- *Statistical summary of reported data for standard reference water sample P-18 (low ionic strength)--Continued*

Na (Sodium) mg/L



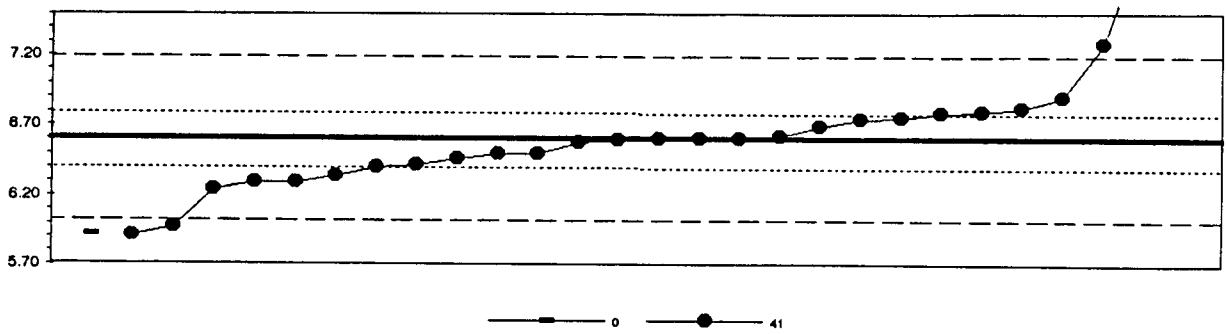
1. AA: direct, air			
4. ICP			
7. IC			
N =	16	11	1
Minimum =	0.44	0.69	0.6
Maximum =	24.5	1.04	
Median =	0.78	0.78	
St Dev =	0.10	0.05	

95% confidence MPV =	0.78	+/-	0.03
F-pseudosigma =	0.09		
N =	27		
Hu=	0.86		
HI=	0.74		

Lab	Rating	Z-value	1	4	7
1	4	0.44	0.82		
2	2	1.44	0.91		
3	4	-0.11	0.77		
7	4	-0.44		0.74	
9	0	2.44	1.00		
15	4	-0.33		0.75	
20	NR				< 2
27	0	-3.78	0.44		
38	3	-0.78	0.71		
44	3	-0.56	0.73		
46	3	-0.56		0.73	
48	0	2.89		1.04	
52	4	0.22		0.80	
58	0	-2.22	0.58		
64	4	-0.44	0.74		
74	4	-0.22		0.78	
78	0	263.56	24.50		
93	4	-0.44	0.74		
95	3	0.78	0.85		
101	4	0.11	0.79		
105	4	0.11		0.79	
123	2	1.33	0.90		
134	3	1.00	0.87		
141	3	1.00		0.87	
145	3	0.67		0.84	
184	4	0.00		0.78	
188	4	-0.11	0.77		
189	3	-1.00		0.69	
190	0	-2.00			0.60

Table 15.-- *Statistical summary of reported data for standard reference water sample P-18 (low ionic strength)--Continued*

pH



0. Other
41. Electrometric

N =	1	28
Minimum =	5.92	5.91
Maximum =		8.2
Median =		6.6
St Dev =		0.29

95% confidence MPV = 6.60 +/- 0.11
F-pseudosigma = 0.29
N = 29
Hu= 6.79
Hl= 6.40

Lab	Rating	Z-value	0	41
1	4	0.31		6.69
2	2	-1.24		6.24
3	4	-0.48		6.46
7	0	5.52		8.20
9	0	2.34		7.28
15	0	-2.38		5.91
20	3	0.76		6.82
38	4	0.00		6.60
46	3	0.66		6.79
48	2	-1.03		6.30
52	4	-0.03		6.59
58	0	5.21		8.11
59	3	-0.90		6.34
64	0	5.00		8.05
74	3	-0.62		6.42
78	3	0.52		6.75
93	4	0.00		6.60
101	0	-2.17		5.97
105	4	-0.34		6.50
110	4	0.48		6.74
123	2	1.03		6.90
134	4	-0.34		6.50
141	3	-0.69		6.40
143	4	0.07		6.62
145	3	0.69		6.80
167	2	-1.03		6.30
188	4	0.00		6.60
190	4	-0.07		6.58
194	0	-2.34	5.92	

Table 15.-- *Statistical summary of reported data for standard reference water sample P-18 (low ionic strength)--Continued*

PO4 as P (Orthophosphate) mg/L

	0. Other	22. Colorimetric
N =	1	8
Minimum =	0.003	0.001
Maximum =		0.040
Median =		0.004
St Dev =		0.003

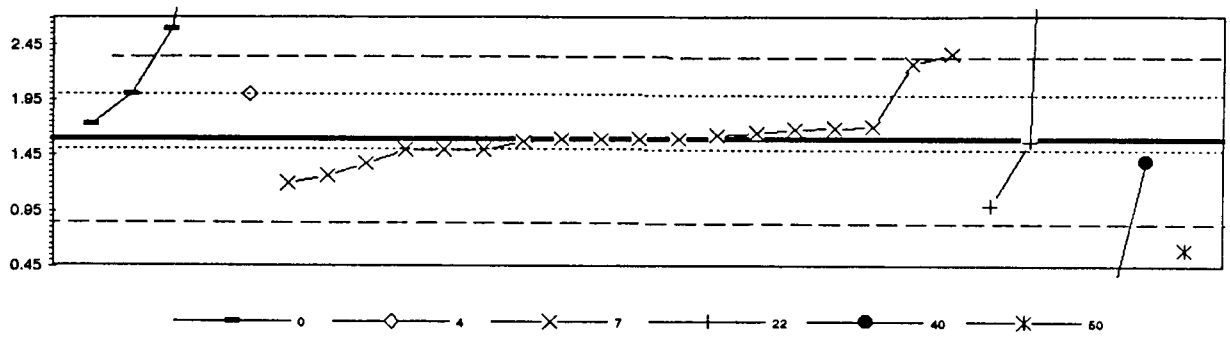
Lab	Rating	Z-value	0	4	7	20	22	code
1							< 0.01	a
3							< 0.005	a
7				< 0.166				
9							0.006	
15							< 0.02	mo
20							0.010	mo
38							0.001	a
46							< 0.002	a
48							< 0.005	
52							0.006	
59					< 0.05			
64							0.001	mo
65						< 0.05		
74			< 0.001					
78							0.040	a
102							0.002	a
105							< 0.002	
134							< 0.01	mo
141							< 0.05	a
143							0.002	a
145							< 0.01	mo
189							< 0.01	
190			0.003					

95% confidence MPV =	0.003	+/-	0.002
F-pseudosigma =	0.003		
N =	9		
Hu=	0.006		
Hl=	0.002		

INSUFFICIENT DATA

NOT RATED

SO4 (Sulfate) mg/L



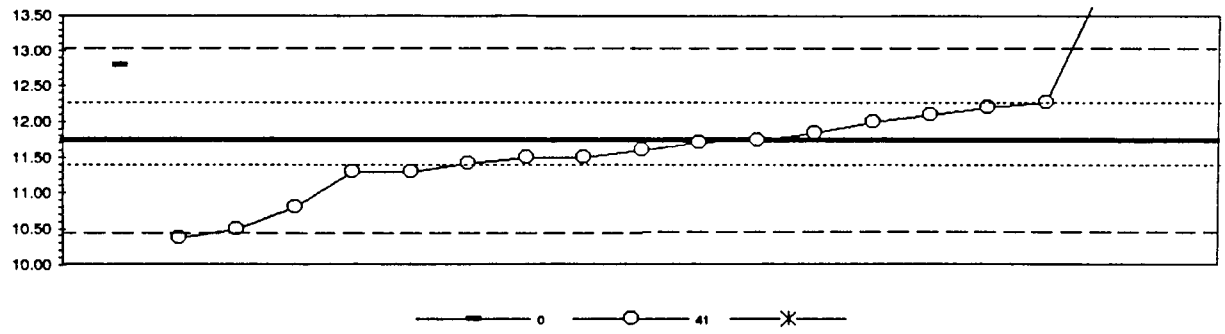
0. Other				22. Colorimetric			
4. ICP				40. Ion Electrode			
7. IC				51. Turbidimetric			
	N =	4	1	18	4	1	1
	Minimum =	1.73	2.00	1.20	1.00	0.00	0.82
	Maximum =	4.40		2.37	29.00		
	Median =			1.60			
	St Dev =			0.29			

95% confidence MPV =	1.60	+/- 0.13
F-pseudosigma =	0.37	
N =	30	
Hu=	2.00	
Hl=	1.50	

Lab	Rating	Z-value	0	4	7	22	40	51
1	4	0.08			1.63			
2	4	0.35	1.73					
3	0	25.14				10.90		
7	3	-0.62			1.37			
9	1	-1.62				1.00		
15	4	0.24			1.69			
20	1	1.84			2.28			
27	2	-1.08			1.20			
44	4	0.14			1.65			
46	4	0.00			1.60			
48	2	1.08	2.00					
52	NR						< 10	
58	0	-2.11						0.82
59	4	-0.27			1.50			
64	4	-0.27			1.50			
65	NR		< 10					
74	4	-0.08			1.57			
78	0	2.70	2.60					
82	0	7.57	4.40					
93	4	0.22			1.68			
95	0	2.08			2.37			
101	0	-2.70					0.60	
102	NR					< 3.5		
105	4	-0.27			1.50			
110	4	-0.03			1.59			
134	4	0.00			1.60			
141	2	1.08		2.00				
145	4	-0.08				1.57		
167	0	74.05				29.00		
184	3	-0.54				1.40		
188	3	-0.92			1.26			
189	4	0.27			1.70			
190	4	0.00			1.60			
194	NR		< 10					

Table 15.-- *Statistical summary of reported data for standard reference water sample P-18 (low ionic strength)--Continued*

Specific Conductance **μ S/cm**



0. Other
41. Electometric

N =	1	20
Minimum =	12.8	10.38
Maximum =		17.0
Median =		11.72
St Dev =		0.81

95% confidence MPV = 11.74 +/- 0.27
F-pseudosigma = 0.64
N = 21
Hu= 12.27
Hl= 11.41

Lab	Rating	Z-value	0	41
1	4	0.00		11.74
3	4	-0.06		11.70
7	3	-0.69		11.30
9	4	-0.38		11.50
15	4	-0.22		11.60
38	2	-1.47		10.80
46	3	0.72		12.20
48	0	-2.13		10.38
52	3	-0.69		11.30
59	4	0.41		12.00
64	3	0.83		12.27
74	3	0.56		12.10
78	0	4.31		14.50
93	3	-0.52		11.41
101	4	-0.38		11.50
102	0			< 10
105	0	3.53		14.00
134	4	0.18		11.84
141	0	8.22		17.00
145	NR			< 100
167	1	-1.94		10.50
190	0	3.53		14.00
194	1	1.66	12.80	

Table 16-- *Statistical summary of reported data for standard reference sample Hg-13 (Mercury)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

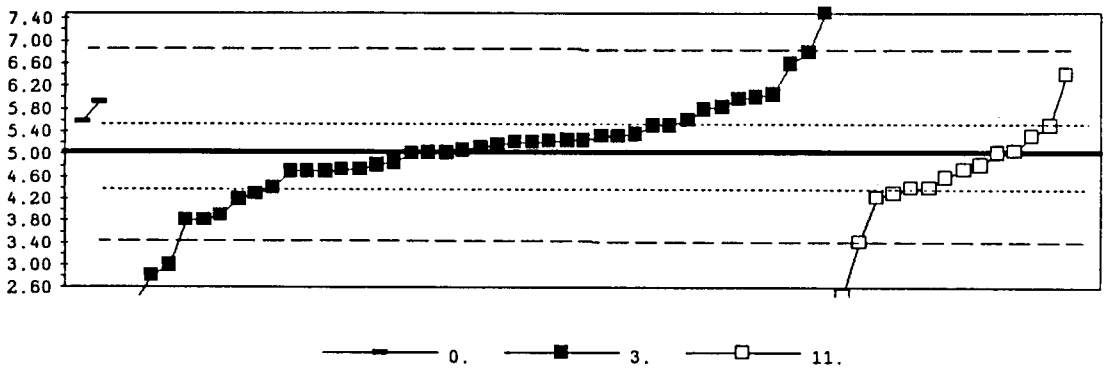
0. Other/Not reported
1. AA: cold vapor = atomic absorption: cold vapor

Abbreviations and symbols

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

Table 16.-- *Laboratory performance ratings for standard reference water sample Hg-13 (mercury)*

Hg-13 (mercury) **μ g/L**



0. Other
3. AA: cold vapor
11. AA: SnCl2

		0.	3.	11.
N=		2	42	14
Minimum =		5.58	2.10	2.45
Maximum =		5.93	7.50	6.39
Median =			5.10	4.66
St Dev =			0.914	0.933

95% confidence MPV = 5.035 +/- 0.210
F-pseudosigma = 0.815
N = 58
Hu = 5.500
Hl = 4.400

Lab	Rating	Z-value	0.	3.	11.
1	3	0.98		5.83	
3	3	0.69		5.60	
7	0	-3.17			2.45
12	2	1.18		6.00	
13	4	-0.23		4.85	
15	4	-0.39		4.72	
16	4	0.10		5.12	
24	3	-0.78			4.40
26	0	-2.74		2.80	
29	1	-1.99			3.41
32	2	1.10	5.93		
34	4	0.39		5.35	
39	3	0.94		5.80	
42	0	2.17		6.80	
45	4	-0.26			4.82
46	4	-0.26		4.82	
48	4	0.33		5.30	
50	4	0.33		5.30	
52	4	0.06		5.08	
55	1	-1.52		3.80	
58	3	-0.78			4.40
59	0	3.02		7.50	
61	4	0.23		5.22	
63	1	1.92		6.60	
65	3	-1.00			4.22
66	3	-0.78		4.40	
68	2	-1.39		3.90	
69	4	0.17		5.17	
70	4	-0.41		4.70	
74	4	-0.01		5.03	
75	4	0.02			5.05
78	4	0.25		5.24	
79	1	-1.52		3.80	
87	4	0.20		5.20	
92	4	-0.41		4.70	
97	4	-0.01			5.03
100	4	-0.39			4.72
105	2	1.25		6.05	
108	3	0.58		5.51	
113	3	0.57			5.50
117	0	-2.50		3.00	
119	4	-0.04		5.00	
126	0	-3.60		2.10	
127	2	1.15		5.97	
128	0	-3.36		2.30	

Lab	Rating	Z-value	0.	3.	11.
133	2	-1.02		4.20	
134	4	0.33			5.30
138	4	0.26		5.25	
141	3	-0.90			4.30
143	1	1.66			6.39
146	4	-0.39		4.72	
161	3	-0.53			4.60
167	3	0.57		5.50	
179	4	-0.41		4.70	
182	4	0.20		5.20	
184	4	-0.02		5.02	
189	3	-0.93		4.28	
194	3	0.67	5.58		

Table 17.-- *Most probable values for constituents and properties in standard reference samples distributed in October 1991*

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

T-117 (trace constituents)

Analyte	MPV		F-pseudosigma	Analyte	MPV		F-pseudosigma
Ag	1.40	µg/L	0.64	Li	20.00	µg/L	2.48
Al	79.0	µg/L	19.4	Mg	10.05	mg/L	0.44
As	6.90	µg/L	1.4	Mn	220.0	µg/L	14.9
B	151.0	µg/L	20.8	Mo	11.80	µg/L	2.00
Ba	98.5	µg/L	6.3	Na	20.00	mg/L	1.26
Be	4.80	µg/L	0.40	Ni	10.00	µg/L	2.45
Ca	20.90	mg/L	1.20	Pb	5.00	µg/L	1.33
Cd	2.20	µg/L	0.40	Sb	5.50	µg/L	0.96
Co	4.40	µg/L	0.74	Se	6.00	µg/L	1.46
Cr	10.35	µg/L	1.59	SiO2	11.85	mg/L	0.64
Cu	6.00	µg/L	1.76	Sr	265.0	µg/L	11.1
Fe	474.0	µg/L	18.2	V	4.70	µg/L	1.80
K	2.110	mg/L	0.190	Zn	176.0	µg/L	9.3

M-120 (major constituents)

Analyte	MPV		F-pseudosigma	Analyte	MPV		F-pseudosigma
Alkalinity	110.0	mg/L	3.7	Na	25.00	mg/L	1.41
B	46.0	µg/L	20.8	total P	0.011	mg/L	0.034
Ca	62.0	mg/L	3.7	pH	8.25		0.19
Cl	7.60	mg/L	0.67	SiO2	9.810	mg/L	0.445
DSRD	358.0	mg/L	12.2	SO4	155.0	mg/L	5.2
F	0.625	mg/L	0.059	Sp Cond	536.0	µS/cm	24.5
K	3.90	mg/L	0.22	Sr	717.0	µg/L	31.9
Mg	17.50	mg/L	0.89	V	3.80	µg/L	2.15

N-32 (preserved nutrient)

Analyte	MPV		F-pseudosigma
NH3 as N	0.057	mg/L	0.042
NH3+OrgN as N	0.210	mg/L	0.170
NO3+NO2 as N	0.135	mg/L	0.042
total P as P	0.098	mg/L	0.015
PO4 as P	0.092	mg/L	0.010

N-32 (nonpreserved nutrient)

Analyte	MPV		F-pseudosigma
NH3 as N	0.040	mg/L	0.021
NH3+OrgN as N	0.151	mg/L	0.041
NO3+NO2 as N	0.148	mg/L	0.024
total P as P	0.096	mg/L	0.011
PO4 as P	0.091	mg/L	0.010

N-33 (preserved nutrient)

Analyte	MPV		F-pseudosigma
NH3 as N	1.330	mg/L	0.133
NH3+OrgN as N	1.392	mg/L	0.258
NO3+NO2 as N	0.592	mg/L	0.059
total P as P	0.840	mg/L	0.047
PO4 as P	0.820	mg/L	0.042

N-33 (nonpreserved nutrient)

Analyte	MPV		F-pseudosigma
NH3 as N	1.300	mg/L	0.082
NH3+OrgN as N	1.390	mg/L	0.091
NO3+NO2 as N	0.610	mg/L	0.033
total P as P	0.839	mg/L	0.045
PO4 as P	0.836	mg/L	0.037

P-18 (low ionic strength)

Analyte	MPV		F-pseudosigma	Analyte	MPV		F-pseudosigma
Acidity	INSUFF. DATA			Na	0.78	mg/L	0.09
Ca	0.89	mg/L	0.67	pH	6.60		0.29
Cl	0.94	mg/L	0.15	PO4 as P	INSUFF. DATA		
F	INSUFF. DATA			SO4	1.60	mg/L	0.37
K	0.07	mg/L	0.07	Sp Cond	11.74	µS/cm	0.64
Mg	0.170	mg/L	0.015				

Hg-13 (mercury)

Analyte	MPV		F-pseudosigma
Hg	5.035	µg/L	0.815