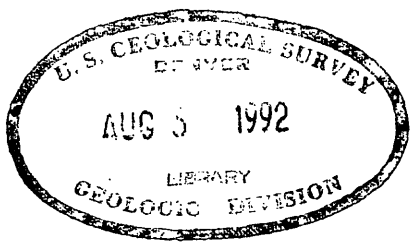
REPORT ON THE U.S. GEOLOGICAL SURVEY'S EVALUATION PROGRAM FOR STANDARD REFERENCE SAMPLES DISTRIBUTED IN APRIL 1992 T-119 (TRACE CONSTITUENTS), M-122 (MAJOR CONSTITUENTS), N-34 (NUTRIENTS), N-35 (NUTRIENTS), and Hg-14 (MERCURY)

by H. Keith Long and Jerry W. Farrar

U.S. GEOLOGICAL SURVEY

Open-File Report 92-164



Golden, Colorado

1992

DEPARTMENT OF THE INTERIOR

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TAKE PRIDE IN AMERICA

IN REPLY REFER TO:

August 3, 1992

TO: Regional Water Quality Specialists, WRD, thru Regional Hydrologists

District and Sub-District Water Quality Specialists, WRD, thru District Chiefs

FROM: D. E. Erdmann, WRD, Branch of Quality Assurance, Box 25046, MS 401, DFC, Denver, CO

SUBJECT: QUALITY ASSURANCE--Report of the U.S. Geological Survey's Analytical Evaluation Program--Standard Reference Water Samples: T-119 (trace constituents), M-122 (major constituents), N-34 (nutrients), N-35 (nutrients), and Hg-14 (mercury).

A copy of the Open-File Report 92-164 is attached for your information. The test samples requested were sent to 159 laboratories during the week of April 13, 1992. Copies of the report have been sent only to those 120 laboratories that submitted data by June 12, 1992. It is suggested that report users review the Statistics by Methods tables to identify some of the better methods currently available. A tabulation of the most probable value and the rating for each parameter in this series of samples is also included in this report, pages 11-31. Refer to page 7 (Determinations) for the respective parameter units.

The National Water Quality Laboratory, Arvada, Colorado, and the Water Quality Services Unit, Ocala, Florida, are lab code numbers 1 and 134, respectively. The names and confidential lab code numbers of the other reporting laboratories in your respective Region or District are included with this memorandum. Laboratories are rated on a scale of 0-4 for each determination for which they submitted data. An explanation of how the ratings are determined is given in the report. Please refer to the report to determine "problem" parameters. District or project personnel should also verify that the laboratories are performing all appropriate determinations. Some of these laboratories may be providing less than acceptable quality water data for WRD use on similar water sample types. If your Region or District is using data from laboratories with overall ratings less than 2.4, prompt attention should be given to contacting the laboratory personnel and resolving the problems. The performance of the

laboratory should be monitored by increasing the percertage of QA samples submitted and reviewing the analytical results from these samples. Recommended QA laboratory procedures are detailed in the Chapter A6, Book 5 the Quality Assurance TWRI. If you need a copy, let me know.

A considerable variety of SRS are also available upon request and at no cost, for use in checking or improving laboratory capabilities, or for just routine QA needs. If suitable types or quantities of reference samples are unavailable, commercial sources should be considered. Participation in the SRS program is mandatory for all cooperator and contract labs providing water quality data for Survey use. Please let me know if you have any special needs or have comments or questions regarding the enclosed report (303-236-1489).

Dave Erdmann

D. E. Erdmann

Enclosures

cc: w/encl:
Chief Hydrologist
Asst. Chief Hydrologist for Res. and External Coord.
Asst. Chief Hydrologist for PC&TS
Chief, Office of Water Quality
Chief, Branch of Quality Assurance

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By H. Keith Long and Jerry W. Farrar

ABSTRACT

This report presents the results of the U.S. Geological Survey's analytical evaluation program for five standard reference samples--T-119 (trace constituents), M-122 (major constituents), N-34 (nutrients), N-35 (nutrients), and Hg-14 (mercury)--that were distributed in April 1992 to 159 laboratories registered in the U.S. Geological Survey sponsored interlaboratory testing program. Analytical data that were received from 120 of the laboratories were evaluated with respect to: overall laboratory performance and relative laboratory performance for each analyte in the five 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 five standard reference samples. The most probable value for each analyte was determined using nonparametric statistics.

INTRODUCTION

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

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

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

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

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

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

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

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

Purpose and Scope

This report summarizes the analytical results submitted by 120 of the 159 laboratories (table 1) that requested and were shipped SRS for the April 1992 evaluation. Not all SRS are requested, nor necessarily analyzed by all the laboratories; nor do all laboratories enrolled in the program participate in each evaluation. Analytical results for the following, which were mailed the week of April 20, 1992, are presented in this report:

T-119	Trace constituents
M-122	Major constituents
N-34	Nutrients--low level concentrations (analytes < 0.5 milligrams per Liter)
N-35	Nutrients--high level concentrations (analytes > 0.5 milligrams per Liter)
Hg-14	Mercury

The USGS requested that analytical results be returned by June 15, 1992, for evaluation and preparation of this report. The time was extended; however, analytical data received from laboratories after July 24, 1992 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. The analytical data are presented in ways that allow participants to evaluate data distribution, scatter, outliers, central tendency, bias, skewness, and method relationships.

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

State	City	Participating Laboratory
Alabama	Tuscaloosa	Geological Survey of Alabama
Alaska	Fairbanks	Alaska Department of Natural Resources
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
	La Verne	Metropolitan Water District of Southern California
	Lakeside	Helix Water District
	Martinez	Central Contra Costa Sanitary District
	Riverside	University of California - Riverside
	Sacramento	Anlab
	Sacramento	US Bureau of Reclamation
	Sacramento	USGS
	San Diego	San Diego Water Utilities Department
	Santa Fe Springs	West Coast Analytical Service, Inc.
	Three Rivers	Southern Research Center
	West Sacramento	California Department of Water Resources
Colorado	Alamosa	US Bureau of Reclamation
	Arvada	USGS National Water Quality Laboratory.
	Aurora	Core Laboratories, Inc.
	Denver	US Bureau of Reclamation
	Denver	Denver Water Department
	Denver	Metro Wastewater Reclamation
	Englewood	Public Service Company of Colorado
	Fort Collins	City of Fort Collins - Water Quality
	Fort Collins	US Forest Service
	Golden	EG & G, Rock Flats Plant
	Golden	Huffman Laboratories
	Loveland	Northern Colorado Water Conservation
	Northglenn	Northglenn Water Treatment Plant
	Pueblo	Pueblo Board of Water Works
	Westminster	City of Westminster
Florida	Brooksville	Southwest Florida Water Management District
	Ocala	USGS
	Ormand	Environmental Laboratory
	Palatka	St. John's River Management District
	Tallahassee	City of Tallahassee
	Tallahassee	Florida Department of Environmental Regulations

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

State	City	Participating Laboratory
Florida	Tampa	Hillsborough County Environmental Protection Commission
	Tifton	Agriculture Research Services
	Tifton	US Department of Agriculture, SE Watershed Laboratory
	West Palm Beach	South Florida Water Management District
Georgia	Albany	Water, Gas and Lights Water Laboratory
	Athens	Soil Testing and Plant Analysis Laboratory
	Atlanta	Georgia Department of Natural Resources
	Decatur	Dekalb County Water Quality Laboratory
Hawaii	Honolulu	University of Hawaii - Manoa, Department of Oceanography
Idaho	Boise	US Bureau of Reclamation
Illinois	Champaign	Illinois Environmental Protection Agency
	Champaign	Hazardous Waste Research Center
	Chicago	Illinois Environmental Protection Agency
Indiana	Indianapolis	Indianapolis Department of Public Works
Iowa	Des Moines	University Hygienic Laboratory, Des Moines Branch
Kansas	Lawrence	Kansas Geological Survey
	Topeka	Kansas Department of Health and Environment
Kentucky	Frankfort	Division of Environmental Services
	Lexington	Kentucky Geological Survey
	Louisville	Metropolitan Sewer District
Maine	Orono	Dep't of Plant and Soil Science, University of Maine
	Orono	Sawyer Environmental Center, University of Maine
Maryland	Baltimore	Martel Laboratory Services, Inc.
Massachusetts	Wellesley Hills	Massachusetts Department of Public Works
Michigan	Ann Arbor	University of 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
Missouri	Columbia	University of Missouri, School of Natural Resources
	Jefferson City	Missouri Department of Health
Montana	Butte	Montana Bureau of Mines and Geology
	Helena	Montana Department of Health and Environmental Sciences
New Jersey	Trenton	New Jersey Department of Health
Nevada	Las Vegas	Clark County Sanitation District
	Reno	Desert Research Institute
	Reno	Nevada State Health Laboratory
	Sparks	Reno-Sparks Wastewater Treatment Facility
	Sutcliffe	Pyramid Lake Fisheries
New Mexico	Gallup	BIA - Navajo Area Office, Natural Resources Laboratory
New York	Albany	New York State Department of Health
	Alfred	Ascot Environmental Laboratory
	Brockport	State University of New York - Brockport
	Buffalo	Erie County Laboratory
	Hempstead	Nassau County Department of Health
	Milbrook	Institute of Ecosystem Studies
	New York City	New York City Health Department
	North Babylon	EcoTest Laboratories, Inc.
	Oakdale	Suffolk County Water Authority
	Syracuse	Onondaga County Department of Drainage and Sanitation
	Valhalla	Department of Environmental Protection
	Wantaugh	Cedar Creek Projects Laboratory

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

State	City	Participating Laboratory
North Carolina	Brown Summit	Lake Townsend Water Filtration Plant
	Charlotte	Mecklenburg County - Department of Environmental Protection
	Durham	Department of Water Resources
	Greensboro	City of Greensboro
North Dakota	Bismarck	North Dakota State Water Commission
Ohio	Cincinnati	US EPA
	Medina	Medina County Sanitary Engineer
Oklahoma	Norman	Oklahoma Geological Survey
	Oklahoma City	Oklahoma State Department of Health
Oregon	Corvallis	US Department of Agriculture
	Tigard	Unified Sewerage Agency
Pennsylvania	Harrisburg	Pennsylvania Department of Environmental Resources
	Somerset	Geochemical Testing
Puetro Rico	San Juan	Department of Natural Resources
South Dakota	Brookings	SDSU - Department of Civil Engineering
	Brookings	SDSU - Water Quality Laboratory
	Vermillion	South Dakota Geological Survey
Tennessee	Chattanooga	Tennessee Valley Authority
Texas	Tyler	Standard Laboratories
Vermont	Waterbury	Vermont Agency of Natural Resources
Virginia	Manassas	Occoquan Watershed Monitoring Lab
	Richmond	Consolidated Laboratory Services
West Virginia	Morgantown	University of West Virginia
Wisconsin	Green Bay	Green Bay Metro Sewerage District
	Madison	State Laboratory of Hygiene
	Milwaukee	Milwaukee Metro Sewerage District
Wyoming	Laramie	Wyoming Department of Agriculture

Preparation of Standard Reference Samples

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

Trace constituent sample T-119 was prepared using water collected from Coal Creek north of Golden, Colo. The water was pumped through 5- and 0.45-µm filters, in series, into a 1300-L polypropylene drum. The water was continuously circulated and passed through a 0.1-µm filter and ultraviolet sterilizer for 72 hours. 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 circulated 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 recycled, acid leached, deionized-water rinsed, autoclave sterilized, 500-mL polypropylene bottles. Samples not mailed for this SRS evaluation are stored until requested for use.

Major constituent sample M-122 was prepared using water collected from Coal Creek north of Golden, Colo. The water was pumped through 5- and 0.45-µm filters, in series, into a 1300-L polypropylene drum. The water was continuously circulated and passed through a 0.1-µm filter and ultraviolet sterilizer for 72 hours. The water was not supplemented with reagent-grade chemicals to modify analyte concentrations. The water was circulated 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 recycled, acid leached, deionized-water rinsed, autoclave sterilized, 500-mL polypropylene bottles. Samples not mailed for this SRS evaluation are stored until requested for use.

Nutrient samples N-34 and N-35 were prepared using water collected from the Fall River near Idaho Springs, Colo. These samples were prepared the week prior to the mailing for this SRS evaluation. The water was pumped through 5- and 0.45-µm filters, in series, into a 600-L polypropylene drum and continuously circulated and passed through a 0.1-µm filter for 72 hours. The desired nutrient concentrations were obtained by adding reagent-grade chemicals. The water was circulated an additional 24 hours. A number of nonpreserved samples were bottled from this solution. The remaining water was preserved with mercuric chloride, to a concentration of 50 mg/L, and with sodium chloride, to a concentration of 450 mg/L. The preserved water was continuously circulated for 24 hours after which preserved samples were bottled. Bottles used were new, amber, hydrochloric acid leached, deionized-water rinsed, 250 mL polyethylene bottles. (Nonpreserved nutrient sample use will not be encouraged because USGS protocol calls for field preservation of nutrient samples with mercuric chloride.) Samples not mailed for this SRS evaluation are refrigerated at 4 °C until requested for use.

Sample Hg-14 was prepared using water collected from the Fall River, near Idaho Springs, Colo. The sample was prepared in a 190-L polypropylene drum. The creek water was pumped into this drum through 5- and 0.45-µm filters in series. The water was continuously circulated and passed through a 0.1-µm filter and ultraviolet sterilizer for 72 hours. Nitric acid (5-percent, v/v) and dichromate ion (0.05-percent, w/w) were added to stabilize the sample. The desired mercury concentration was obtained by adding a mercury standard solution. Following an additional 24 hours of circulation, each sample was bottled. Bottles used were new, acid leached, deionized-water rinsed, 125 mL glass bottles with tetrafluoroethylene fluorocarbon resin caps. Samples not mailed for this SRS evaluation are stored until requested for use.

LABORATORY ANALYSES

The participating laboratories were asked to determine analytes which are summarized in table 2. The number of analytes varied from 26 in T-119 (trace constituents) to 1 in Hg-14 (mercury).

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

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

Analyte or property		Units	T-119	M-122	N-34-35	Hg-14
Alk	Alkalinity as $CaCO_3$	mg/L		X		
Ag	Silver	µg/L	X			
Al	Aluminum	µg/L	X			
As	Arsenic	µg/L	X			
B	Boron	µg/L	X	X		
Ba	Barium	µg/L	X			
Be	Beryllium	µg/L	X			
Ca	Calcium	mg/L	X	X		
Cd	Cadmium	µg/L	X			
Cl	Chloride	mg/L		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		
Li	Lithium	µg/L	X			
Mg	Magnesium	mg/L	X	X		
Mn	Manganese	µg/L	X			
Mo	Molybdenum	µg/L	X			
Na	Sodium	mg/L	X	X		
NH_3 as N	Ammonia	mg/L			X	
NH_3+Org N as N	Ammonia + Organic N	mg/L			X	
Ni	Nickel	µg/L	X			
NO_3+NO_2 as N	Nitrate + Nitrite	mg/L			X	
Pb	Lead	µg/L	X			
pH		unit		X		
PO_4 as P	Orthophosphate	mg/L			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		
Sp Cond	Specific conductance	µS/cm		X		
Sr	Strontium	µg/L	X	X		
V	Vanadium	µg/L	X	X		
Zn	Zinc	µg/L	X			

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

Table 3.--*Analytical-method codes*

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

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

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

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

3. Kopp, J.F., and McKee, G.F., 1979, Methods for chemical analysis of water and wastes: Cincinnati, U.S. Environmental Protection Agency, EPA 600/4-79-020, rev. 1983, 460 p.

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

5. Miscellaneous manufacturer's instrument manuals or references.

LABORATORY PERFORMANCE RATINGS

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

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

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

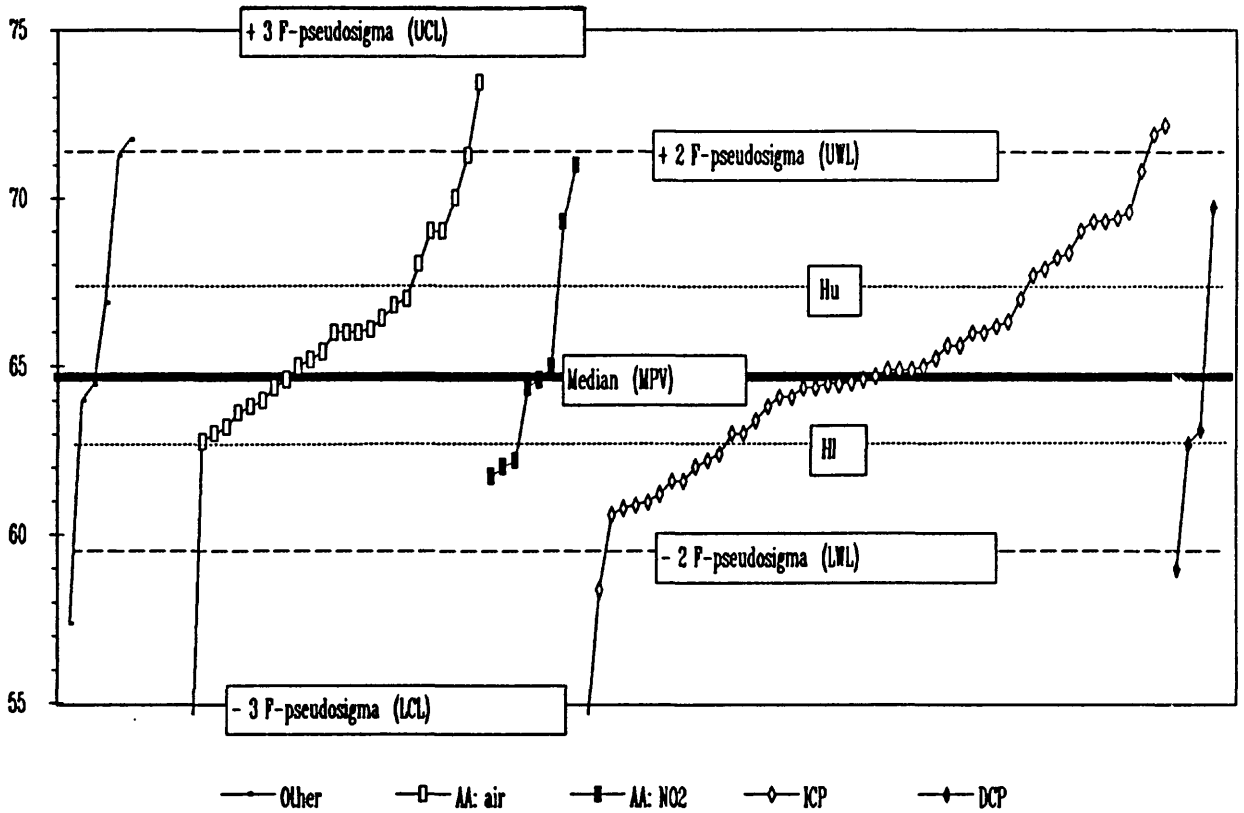
STATISTICAL PRESENTATION OF DATA

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

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

The median value is considered the MPV. Reported values of "less than" are used to establish the median, but are not considered in determining the data range. The median (midpoint) divides the ordered data into halves and is designated the MPV. The hinges include the middle 50-percent of the data and are the mid-values of the upper and lower halves of the data. (The hinges are similar to quartiles, but are not mathematically equivalent.) The range of data between the upper hinge (Hu) and the lower hinge (H'), 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 graphical plot of the reported data is shown in figure 1. The upper and lower boundaries of the graphical plots generally are +3 and -3 F-pseudosigma deviations from the median. (Computer-program scaling constraints do not permit these boundaries to always be graphed at exactly these values.) The graphical plot is a modified control chart with reported values grouped by analytical method in ascending order of value. Lines designate the MPV, Hu, Hl, and the (UWL) and (LWL) at +2 and -2 F-pseudosigma, respectively. "Less than" values are not plotted.



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

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

DISCUSSION

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

REFERENCE

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

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

[Lab, laboratory number; OWR, overall weighted rating for all sample types; OLR, overall laboratory rating for reported values of a sample type; V/63, number of reported values of 63 total possible values from all sample types; V/26, V/16, V/10, V/10, and V/1, number of reported values possible for T-119, M-122, N-34, N-35, and Hg-14, respectively]

Standard Reference Sample			T-119		M-122		N-34		N-35		Hg-14	
Lab	OWR	V/63	OLR	V/26	OLR	V/16	OLR	V/10	OLR	V/10	Rating	V/1
1.	3.1	60	3.5	25	3.2	14	1.9	10	3.0	10	4	1
2.	2.1	12	0.0	1	2.7	3	1.8	4	2.5	4		
3.	2.6	49	2.7	24	2.3	14	2.8	5	2.6	5	4	1
5.1	2.6	26	2.8	5	2.4	10	2.4	5	3.2	5	1	1
5.2	2.8	24	2.9	18	2.7	6						
6.	2.0	21	1.8	10	2.6	7			1.8	4		
7.	2.4	37	2.9	16	2.0	13	1.0	3	2.5	4	4	1
8.	1.7	35	1.7	15	1.8	12	1.3	3	1.8	4	1	1
9.	2.4	34	2.4	12	2.5	12	1.6	5	2.8	5		
10.	3.7	27	3.2	9	3.8	13	4.0	5				
12.	2.5	30	2.6	11	2.2	11	2.5	4	3.0	3	4	1
13.	2.8	39	2.6	16	2.9	12	3.2	5	3.0	5	3	1
15.	2.8	52	2.7	26	2.6	14	3.4	5	3.3	6	4	1
16.	2.3	36	2.4	14	2.4	12	2.0	5	1.5	4	4	1
18.	3.2	43	3.0	20	3.2	13	3.6	5	3.4	5		
19.	3.2	31	3.5	11	3.5	10	1.8	5	3.4	5		
20.	2.8	17					2.9	8	2.8	9		
21.	2.9	8	3.0	1			2.9	7				
22.	4.0	1					4.0	1				
23.	2.6	44	2.1	21	2.8	13	2.8	4	3.6	5	3	1
24.	3.1	38	3.1	24	3.3	13					0	1
25.	2.0	39	2.4	16	1.5	13	1.4	5	2.2	5		
26.	2.2	9			2.2	9						
27.	2.4	25	2.4	15	2.5	10						
29.	2.0	34	1.2	12	2.4	12	1.8	4	3.0	5	4	1
30.	2.6	19	2.8	16	1.3	3						
32.	2.5	48	3.1	26	1.6	13	2.0	4	2.0	4	3	1
35.	4.0	2	4.0	2								
36.	2.2	41	2.1	20	2.6	11	1.6	5	2.5	4	4	1
37.1	2.7	43	3.0	24	2.5	13	4.0	1	2.3	4	0	1
37.2	1.4	8	1.5	4	1.3	4						
38.	3.4	18			3.3	9	3.2	5	3.8	4		
40.	3.1	14			3.1	14						
42.	2.6	33	2.4	12	2.5	12	2.7	3	3.0	5	4	1
43.	3.1	19	3.1	7	3.4	10	1.0	1	2.0	1		
45.	2.8	55	3.3	22	3.2	13	1.4	10	2.3	9	4	1
46.	3.1	43	2.9	19	3.2	13	4.0	5	2.6	5	4	1
48.	2.5	43	1.9	20	2.5	11	3.2	5	3.8	6	3	1
50.	3.4	31	3.5	18	3.2	12					4	1
51.	2.9	31	2.7	15	2.9	11	3.4	5				
52.	2.8	57	3.1	24	2.6	13	3.1	10	2.1	9	3	1
53.	3.7	3					4.0	1	3.5	2		
54.	3.4	15	3.8	4	3.3	11						
55.	2.7	46	2.7	23	2.2	13	3.4	5	3.5	4	3	1
56.	3.0	13			2.7	9	3.8	4				
57.	2.9	34	3.1	17	3.2	12			1.8	5		
59.	3.5	38	3.5	16	3.7	12	3.8	5	3.0	5		
62.	3.0	3			3.0	3						
63.	2.3	47	2.4	26	2.3	14	1.3	3	3.0	3	0	1
64.	3.1	18	3.0	9	3.1	9						
68.	2.7	47	3.0	24	2.5	11	2.2	5	2.0	6	4	1
69.	3.0	27	3.1	13	2.8	11	4.0	1	4.0	1	3	1
70.	2.8	48	2.8	25	2.6	13	2.2	5	3.8	4	4	1
71.	1.3	7			1.3	7						
72.	2.7	43	2.6	21	2.8	12	2.8	5	2.2	5		
73.	3.7	10	3.7	10								
74.	2.8	50	2.8	24	2.6	14	3.8	5	2.7	6	3	1
75.	3.0	26	3.1	14	2.8	9	3.0	1	4.0	1	3	1
76.	3.0	24	2.8	11	3.6	7	4.0	2	2.0	3	2	1
78.	2.4	42	2.8	19	2.3	11	2.3	6	0.8	5	3	1

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

Standard Reference Sample			T-119		M-122		N-34		N-35		Hg-14	
Lab	OWR	V/63	OLR	V/26	OLR	V/16	OLR	V/10	OLR	V/10	Rating	V/1
81	2.6	22	2.6	21							4	1
83	2.5	22	2.6	8	3.4	9	1.0	2	0.0	3		
84	2.0	17	1.3	6	3.2	6	3.0	2	0.0	3		
85	3.1	40	3.2	18	3.2	13	3.4	5	2.3	4		
86	3.2	30	3.4	21	3.0	8					0	1
87	2.4	39	3.1	17	2.6	11	0.2	5	1.4	5	4	1
88	2.2	13					1.7	6	2.6	7		
90	2.2	30	1.1	12	2.4	8	3.4	5	3.2	5		
91	2.4	16	3.0	2	2.4	7	2.0	4	2.7	3		
92	2.3	41	1.6	14	2.1	12	2.6	7	3.4	7	3	1
93	2.3	12			1.6	7	3.5	2	3.0	3		
94	3.6	19			3.8	12	3.5	4	3.3	3		
96	3.4	34	3.4	16	3.1	7	3.4	5	3.6	5	3	1
97	2.6	48	2.1	23	2.8	14	3.6	5	3.0	5	4	1
101	2.5	29	2.5	19	2.6	10						
103	2.8	26	2.7	19	3.3	7						
104	3.3	20	3.0	1	3.0	5	3.7	7	3.1	7		
105	3.0	46	3.3	21	2.7	13	2.4	5	2.8	6	4	1
107	3.5	25	3.4	16	3.6	5	3.8	4				
108	2.5	10			0.0	1	3.0	4	2.8	4	2	1
109	2.8	24	2.7	10	2.7	13					4	1
111	3.3	20	3.3	6	3.1	7	3.0	4	3.7	3		
113	3.2	28	3.1	18			3.8	4	3.0	5	4	1
114	1.5	35	1.7	14	1.5	6	1.3	8	1.1	7		
116	2.9	21	2.8	12	2.9	9						
117	1.3	38	2.0	18	0.9	11	0.0	4	0.4	5		
118	3.0	26	0.0	1	1.6	5	3.8	10	3.1	10		
119	3.0	54	3.1	21	3.2	12	2.9	10	2.5	10	3	1
120	3.1	37	2.9	18	2.4	8	3.4	5	4.0	5	4	1
121	3.3	27	3.1	21	3.8	6						
122	2.3	14	0.7	3	2.7	10					3	1
123	2.2	25	1.3	9	2.2	6	2.4	5	3.4	5		
126	1.5	6	1.8	5							0	1
127	3.6	49	3.8	24	3.6	14	3.6	5	3.2	5	3	1
128	3.1	42	3.2	24	3.3	12			3.4	5	0	1
129	2.2	42	1.3	8	1.8	14	3.3	10	2.5	10		
133	2.6	39	2.3	21	2.6	7	3.1	10			3	1
134	3.4	57	3.5	23	3.2	13	3.0	10	3.6	10	4	1
136	1.9	33	2.0	21	2.0	11					0	1
137	1.3	3							1.3	3		
138	3.2	46	3.5	24	2.8	12	3.2	5	2.8	4	4	1
140	2.5	34	3.1	12	2.3	11	2.4	5	1.7	6		
141	2.7	45	2.9	23	2.9	11	2.8	5	0.8	5	4	1
143	3.2	12			1.7	3	3.8	5	3.5	4		
144	2.9	20	2.8	8	2.9	12						
145	2.8	39	2.1	19			3.6	10	3.3	10		
149	2.0	25	1.7	11	1.8	8	2.7	3	2.7	3		
151	3.3	31	3.2	15	3.6	12	3.0	3			3	1
153	3.1	22	2.9	12	3.3	10						
154	2.7	42	3.0	19	1.9	13	3.2	5	3.2	5		
158	2.4	20	2.8	4	2.5	6	1.6	5	2.8	5		
161	1.1	25	0.0	9	2.0	9	0.7	3	2.7	3	0	1
173	1.9	39	2.1	13	2.7	9	1.0	8	1.5	8	4	1
179	1.6	34	2.0	16	1.9	7	0.5	4	0.8	6	3	1
180	2.5	40	2.3	16	2.8	13	2.8	5	2.8	5	0	1
181	0.9	49	0.6	20	1.0	12	0.9	8	1.5	8	2	1
182	0.9	30	0.7	12	1.4	10	0.0	3	0.0	4	4	1
183	2.6	14			2.1	7	3.0	4	3.0	3		
190	2.9	22			2.2	12	4.0	5	3.4	5		
191	3.3	34	3.1	20	3.7	9	3.0	2	4.0	3		
193	3.2	15	3.1	11	3.5	2	4.0	1	3.0	1		
194	2.5	17	2.0	11	3.4	5					4	1

Table 5. *--Laboratory performance ratings for standard reference water sample T-119*

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

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

	Analyte =	Ag (Silver)		Al (Aluminum)		As (Arsenic)		B (Boron)		Ba (Barium)		Be (Beryllium)	
	MPV =	4.00	µg/L	171	µg/L	4.20	µg/L	28.0	µg/L	44.0	µg/L	13.6	µg/L
	F-pseudosigma =	1.31		30		0.57		8.9		3.0		1.7	

Lab	OLR	V/26	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV
1.	3.5	25	3	4.90	4	170	2	4.95	4	29.7	3	42.4	4	13.5
2.	0.0	1												
3.	2.7	24	4	4.09	3	199	4	4.04	1	42.3	4	44.0	4	14.3
5.1	2.8	5	3	2.80			4	4.20						
5.2	2.9	18	4	4.42	4	179	NR	< 30	4	26.3	4	44.1		
6.	1.8	10	3	3.26										
7.	2.9	16	NR	< 5	3	198	3	3.90			4	43.3	2	11.8
8.	1.7	15			3	154			2	16.9	0	36.3	4	13.3
9.	2.4	12												
10.	3.2	9					3	3.90						
12.	2.6	11	3	5.00	0	10	NR	< 10					NR	< 20
13.	2.6	16	4	3.80	3	200	3	3.80			1	49.4		
15.	2.7	26	4	3.69	4	183	3	3.80	2	37.0	4	44.2	4	13.8
16.	2.4	14	NR	< 7	NR	< 300	NR	< 5	NR	< 200	0	36.7	3	11.9
18.	3.0	20	NR	< 10	3	153	1	5.30	1	14.0	2	41.0	3	12.0
19.	3.5	11									3	42.2		
21.	3.0	1												
23.	2.1	21	4	3.94	4	168	2	3.39			0	36.5	2	15.5
24.	3.1	24	3	2.70	4	162	0	7.00	4	24.0	4	44.5		
25.	2.4	16	NR	< 4	4	176	NR	< 59	4	31.6	4	44.6	4	14.0
27.	2.4	15			2	130	4	4.39	0	53.0	0	66.0		
29.	1.2	12	2	5.73			1	5.10			0	50.0		
30.	2.8	16			4	170	2	5.00			4	44.4	2	15.8
32.	3.1	26	4	4.40	4	167	3	4.70	3	36.0	0	36.1	4	13.4
35.	4.0	2					4	4.41						
36.	2.1	20	1	1.59	3	147	3	4.72			4	44.5	0	114
37.1	3.0	24	3	2.90	4	162	4	4.47	0	79.0	3	42.4	4	14.1
37.2	1.5	4												
42.	2.4	12												
43.	3.1	7												
45.	3.3	22	2	2.44	4	171	4	4.48	0	50.5	4	43.6	4	14.2
46.	2.9	19	3	4.84	3	189	2	3.60	4	27.6	4	44.0	4	13.8
48.	1.9	20	2	2.50	2	210	4	4.20	0	< 10	0	37.4	0	40.0
50.	3.5	18	3	3.00	4	171	4	4.00			2	40.0	4	14.0
51.	2.7	15					0	5.60						
52.	3.1	24	3	3.25	4	166	3	4.56	NR	< 150	3	42.0	3	15.1
54.	3.8	4												
55.	2.7	23	3	4.87	4	159	3	4.50			3	41.9	4	13.1
57.	3.1	17	3	3.30	3	200	3	4.60	NR	< 100	NR	< 50	2	11.0
59.	3.5	16			4	160	NR	< 10			3	42.0		
63.	2.4	26	2	2.50	2	205	2	3.60	4	27.0	3	46.0	0	25.0
64.	3.0	9												
68.	3.0	24	2	5.60	3	200	1	3.30	2	38.0	4	43.0	3	12.0
69.	3.1	13	4	3.90	3	187	3	3.90			0	60.0		
70.	2.8	25	3	2.79	2	138	4	4.29	4	28.0	4	44.0	3	12.0
72.	2.6	21	1	1.95	4	166	2	3.50			1	39.0	2	11.5
73.	3.7	10	4	3.40	4	160	NR	< 50						
74.	2.8	24	3	3.00	3	147	0	6.00	4	27.0	3	42.0	3	12.0
75.	3.1	14					4	3.94			0	28.8		
76.	2.8	11	3	3.15			3	3.89			4	44.7		
78.	2.8	19	4	4.50	3	142	2	5.00			2	47.7	3	14.9
81.	2.6	21	4	3.80	1	226	2	3.60			2	48.0	4	12.9
83.	2.6	8												
84.	1.3	6												
85.	3.2	18	NR	< 5	4	184	2	4.80	4	30.0	4	45.0	4	13.0

Table 5. *--Laboratory performance ratings for standard reference water sample T-119-Continued*

	Analyte =	Ag (Silver)		Al (Aluminum)		As (Arsenic)		B (Boron)		Ba (Barium)		Be (Beryllium)	
	MPV =	4.00	µg/L	171	µg/L	4.20	µg/L	28.0	µg/L	44.0	µg/L	13.6	µg/L
	F-pseudosigma =	1.31		30		0.57		8.9		3.0		1.7	
Lab	OLR	V/26	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV
86	3.4	21			4	167	4	4.01	3	19.1	1	38.5	3	12.0
87	3.1	17	4	4.00			2	4.80			0	54.0		
90	1.1	12	1	6.20			4	4.30			0	63.6		
91	3.0	2												
92	1.6	14												
96	3.4	16	4	4.07	0	16	4	4.44			4	44.0		
97	2.1	23	1	6.03	1	228	1	5.21			0	73.6	4	13.7
101	2.5	19	3	3.10	0	277	0	14			4	44.1		
103	2.7	19	NR	< 5	3	150			4	28.0	4	44.0	4	14.0
104	3.0	1												
105	3.3	21	3	5.15	4	185	3	4.60			3	42.0	4	14.0
107	3.4	16	4	3.78	4	176	4	4.02			4	43.8		
109	2.7	10					1	3.30						
111	3.3	6												
113	3.1	18	4	4.22	3	152	4	4.11			0	82.1		
114	1.7	14	1	2.00	2	205								
116	2.8	12			4	160			3	22.0	3	42.0		
117	2.0	18	4	4.22	2	214	4	4.30			3	41.9		
118	0.0	1												
119	3.1	21	2	2.60	3	150	4	4.00	4	30.0	3	42.0	4	13.7
120	2.9	18	4	4.01	0	490	3	4.52					3	12.7
121	3.1	21	4	4.60					4	30.0	3	46.0		
122	0.7	3			0	255								
123	1.3	9					1	3.10						
126	1.8	5					4	4.00						
127	3.8	24	3	4.69	4	157	3	3.86	4	27.0	3	42.1	4	13.2
128	3.2	24	3	3.30	0	2	3	3.70	3	21.0	4	44.0	4	13.0
129	1.3	8							0	95.0				
133	2.3	21	1	6.40	4	180	0	2.46			3	41.2	4	12.9
134	3.5	23	3	4.70			4	4.10	4	26.0	2	48.0		
136	2.0	21	0	9.90	3	191	4	4.10						
138	3.5	24	4	4.44	4	180	2	3.50			4	44.0	4	13.6
140	3.1	12												
141	2.9	23	4	3.50	4	159	0	11	0	6.8	4	45.3	4	14.4
144	2.8	8	3	2.80			1	3.10					2	11.5
145	2.1	19			2	209	NR	< 21	4	24.0	2	47.7	3	15.1
149	1.7	11	4	4.40	3	141								
151	3.2	15	NR	< 10			4	4.10			0	58.0	3	11.9
153	2.9	12	3	5.30	2	206					4	43.0		
154	3.0	19	2	5.80	4	168	4	4.40	1	13.0	4	43.0	0	155
158	2.8	4												
161	0.0	9	0	55	0	234								
173	2.1	13	4	4.40			3	4.53			0	58.0		
179	2.0	16	1	2.00			2	5.00					1	10.4
180	2.3	16	NR	< 4	3	150	1	5.11	NR	< 6	3	46.9	4	12.9
181	0.6	20	0	7.00	0	99	4	4.20			0	52.0	0	20.0
182	0.7	12					0	3.00						
191	3.1	20	3	3.00	4	175	0	1.20			4	43.0		
193	3.1	11	4	4.40			NR	< 5			3	42.0		
194	2.0	11	2	2.30			NR	< 10	NR	< 100	NR	< 100	3	12.4

Table 5. *--Laboratory performance ratings for standard reference water sample T-119-Continued*

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

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

	Ca (Calcium)		Cd (Cadmium)		Co (Cobalt)		Cr Chromium)		Cu (Copper)		Fe (Iron)		K (Potassium)	
MPV =	11.0	m g/L	2.80	μ g/L	5.10	μ g/L	18.6	μ g/L	2.00	μ g/L	46.0	μ g/L	1.3[illegible]	m g/L
F-pseudosigma =	0.8		0.44		0.96		2.2		1.00		6.8		0.1[illegible]	
Lab	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Ratir[illegible]	RV
1.	2	11.9	3	3.20	4	5.10	4	19.6	4	2.00	3	41.9	3	1.20
2.														
3.	2	11.9	4	2.72	0	10	4	17.6	NR	< 3	4	44.0	4	1.35
5.1			1	2.00										
5.2	3	11.7	0	4.15	0	7.14	2	21.1	NR	< 5	3	51.2	0	1.76
6.	0	9.2	3	3.03					4	2.21	0	64.4		
7.	2	12.1	NR	< 4	NR	< 7	2	15.9	NR	< 4	4	48.7	0	3.71
8.	4	11.2	0	1.70	0	2.80					0	66.0	4	1.27
9.	2	9.9	2	3.30			0	23.8			1	58.0	4	1.30
10.			4	3.00			3	20.0	3	3.00	3	50.0		
12.	2	12.0	2	3.40			NR	< 20	4	2.00	NR	< 50	3	1.20
13.	4	10.7	2	2.23			4	19.2	NR	< 50	4	44.0	4	1.29
15.	4	11.2	0	1.87	4	4.71	4	19.3	3	1.35	3	41.1	3	1.39
16.	4	11.0	NR	< 5	NR	< 10	3	17.0	NR	< 10	0	31.0	0	1.70
18.	4	11.2	0	1.00	3	6.00	4	18.0	NR	< 10	2	39.0	4	1.30
19.	4	11.2	1	2.00			4	17.8			4	43.3	3	1.16
21.											3	41.0		
23.	3	10.3	3	2.48			0	30.0	4	1.68	2	36.8	4	1.33
24.	3	11.7	4	3.00	3	5.80	3	20.4	4	2.00	4	47.1	3	1.41
25.	0	12.7	NR	< 4	NR	< 6	4	18.9	NR	< 3	4	42.6	0	1.71
27.	4	10.7	4	2.64			1	22.6	2	3.27			3	1.42
29.			1	2.10			4	18.5	4	2.00	0	25.0		
30.			3	3.10	4	5.00	3	17.0	4	2.00	0	117		
32.	4	10.9	4	2.63	4	5.10	3	17.3	4	2.10	0	80.0	3	1.20
35.														
36.	0	9.2	2	3.44	1	6.96	0	25.0	3	2.90	4	43.4	4	1.23
37.1	0	13.7	4	2.98	4	4.75	3	16.6	4	2.05	0	25.0	2	1.13
37.2	2	10.1											2	1.13
42.	4	11.0					1	14.5			3	41.0	0	0.90
43.	3	11.5									4	46.0	2	1.10
45.	4	11.0	4	2.60			4	18.6	4	1.70	4	47.2	3	1.22
46.	2	12.0	4	2.77	NR	< 40	2	20.8	4	1.90	4	47.0	4	1.30
48.	4	10.6	4	2.80	NR	< 50	4	19.6	4	2.20	NR	< 30	1	1.56
50.			4	3.00	2	4.00	4	18.0	4	2.00	4	49.0		
51.	3	10.4	0	5.20	4	5.20	4	18.7	4	1.70	4	45.9	4	1.32
52.	4	11.0	4	2.71	4	5.15	4	18.8	4	1.60	3	41.1	4	1.23
54.	4	11.0											4	1.24
55.	4	11.4	0	1.70	2	4.00	3	16.9	2	3.40	4	42.7	2	1.45
57.	4	11.0	4	2.70	NR	< 50	4	18.0	NR	< 20	3	50.0	4	1.30
59.	3	11.7	3	2.50			4	18.0	NR	< 5	4	43.0	4	1.30
63.	3	10.2	0	3.80	4	5.40	3	20.0	4	2.00	4	47.0	4	1.32
64.	4	11.4									3	50.0	2	1.15
68.	4	11.0	4	3.00	3	6.00	0	14.0	NR	< 2	4	46.0	2	1.50
69.	3	10.4	3	3.10			3	16.6					4	1.30
70.	2	12.0	3	2.45	NR	< 20	4	18.9	3	3.00	1	33.0	4	1.25
72.	4	10.6	1	2.00	3	4.50	2	16.1	2	3.30	0	441	4	1.25
73.			4	2.80			4	18.9	3	1.00	4	47.1		
74.	4	10.6	3	3.20	1	3.50	2	16.0	3	1.40	2	38.0	4	1.30
75.	4	10.6	3	2.39			3	17.3	4	2.11			4	1.23
76.			4	2.93			4	18.9			4	45.2		
78.	0	14.1	1	3.50			4	17.8	0	4.90	3	50.0	1	1.55
81.	4	11.0	4	3.00	4	4.80	3	17.0	4	2.00	0	72.0	3	1.42
83.	4	11.2									0	20.0	4	1.34
84.	0	7.9							NR	< 1	0	70.0		
85.	4	11.2	NR	< 5	NR	< 10	2	21.0	NR	< 5	4	48.0	4	1.25

Table 5. *--Laboratory performance ratings for standard reference water sample T-119-Continued*

	Ca (Calcium)		Cd (Cadmium)		Co (Cobalt)		Cr Chromium)		Cu (Copper)		Fe (Iron)		K (Potassium)	
MPV =	11.0	m g/L	2.80	μ g/L	5.10	μ g/L	18.6	μ g/L	2.00	μ g/L	46.0	μ g/L	1.30	m g/L
F-pseudosigma =	0.8		0.44		0.96		2.2		1.00		6.8		0.14	
Lab	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV
86	4	11.1	3	2.51	4	4.92	3	16.8	4	2.48	3	39.5	4	1.28
87	4	11.0	1	2.00			4	19.0	NR	< 5	3	50.0	4	1.30
90			0	4.40			0	25.0			4	48.0		
91											4	48.7		
92	4	10.9	4	2.70	3	6.00	0	10.0	2	3.40	0	31.5	0	2.30
96	3	10.3	3	3.12			4	18.6	4	1.61	4	43.0	4	1.30
97	1	9.7	1	1.96	3	4.38	3	20.4	4	1.71	3	49.7	0	1.00
101	4	11.1	4	2.80			3	20.1	0	4.90	4	45.1	4	1.35
103	3	10.5	0	4.00	3	6.00	3	17.0	NR	< 5	2	36.0	2	1.10
104														
105	4	10.9	4	2.81	NR	< 25	2	21.1	NR	< 10	4	44.0	3	1.38
107	0	15.5	4	2.62			3	17.4	4	1.80	4	47.5	4	1.29
109	4	11.2									4	48.0	2	1.10
111			4	2.65			2	15.6	4	1.52				
113	4	11.3	4	2.77			4	17.6	4	2.01	1	58.7	3	1.38
114	1	9.5	1	2.00			0	28.0	1	4.00	3	52.0	0	5.30
116	2	11.9									2	36.0	0	1.60
117	3	10.3	1	3.51			3	20.6	0	50	3	52.5	0	3.57
118														
119	4	10.9	4	2.80			3	17.0	1	0.00	3	41.0	0	1.00
120	3	10.4	4	2.98			3	16.9	4	1.78	0	30.0	3	1.41
121	4	10.8	0	1.50	4	4.90	0	25.0	3	3.00	4	45.0	4	1.26
122							0	25.5						
123	0	29.4					3	19.9	0	6.60	0	67.6	1	1.04
126											3	40.0		
127	4	11.4	4	2.94	4	5.02	4	18.4	4	1.91	4	42.9	4	1.24
128	3	11.7	4	2.90	2	4.00	4	18.0	NR	< 3	4	46.0	3	1.20
129	0	17.0									0	30.0	2	1.10
133	4	10.6	2	2.30	1	3.30	4	17.5	3	1.10	2	53.6		
134	4	11.0	4	2.80	4	5.30	4	18.9	4	2.00	4	44.0	2	1.50
136	4	11.2	0	5.10	2	4.00	3	17.0	2	3.20	3	51.2	0	1.80
138	2	12.2	3	3.07	4	5.10	4	18.9	4	2.00	4	44.0	4	1.30
140	4	10.7	4	3.00			3	20.0	3	3.00	2	37.5	4	1.26
141	3	11.5	0	3.75	4	5.25	4	18.8	1	3.75	4	45.8	3	1.40
144			3	3.10					4	1.90				
145	1	12.4	NR	< 2	2	6.14	4	18.4	NR	< 3	2	53.4	3	1.22
149			4	3.00			0	13.5			0	110		
151	4	10.7	4	2.76			4	19.2	NR	< 10	3	42.0	4	1.27
153	4	10.9	3	3.10			3	19.9	NR	< 1	4	48.0	3	1.20
154	3	11.5	4	2.80							4	44.0	4	1.25
158			3	3.10			4	18.5	NR	< 25				
161			0	36			0	7.8	0	31	0	104		
173			2	2.15			2	21.0	0	5.00	2	55.0		
179	0	8.6	3	2.50			0	28.0	4	1.60	NR	< 100	4	1.30
180	3	11.7	1	3.60	4	5.00	4	18.1	NR	< 2	0	32.4	0	2.55
181	0	17.0	0	11			0	6.0	0	5.00	0	72.0	0	0.36
182	1	9.6	0	20	0	20					0	100	0	0.50
191	3	11.6	4	2.90	4	5.40	4	18.8	3	1.30	2	54.0	3	1.40
193	4	11.1	3	2.40	NR	< 5	2	16.0	NR	< 10	3	42.0	4	1.28
194	2	12.1	4	2.80			4	18.5	NR	< 10	NR	< 100	0	1.72

Table 5. *--Laboratory performance ratings for standard reference water sample T-119-Continued*

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

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

	Li (Lithium)		Mg (Magnesium)		Mn (Manganese)		Mo (Molybdenum)		Na (Sodium)		Ni (Nickel)		Pl (Lead)	
MPV =	60.5	µg/L	3.10	mg/L	35.0	µg/L	11.9	µg/L	20.3	mg/L	21.8	µg/L	6.70	µg/L
F-pseudosigma =	4.2		0.16		2.9		2.4		1.0		2.2		1.21	

Lab	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV
1.	4	59.3	3	2.99	3	33.5	4	11.3	4	20.0	4	21.7	4	6.50
2.														
3.	2	66.0	1	3.36	4	35.7	4	13.0	1	22.0	0	30.0	0	3.67
5.1													3	7.50
5.2	3	63.2	3	3.22	3	37.4	3	13.2	4	20.3	4	20.7	NR	< 30
6.			3	3.02	1	40.2					3	23.5	0	3.44
7.			3	3.18	4	34.0	NR	< 12	3	21.3	NR	< 19	3	7.50
8.	0	40.4	1	2.80	3	33.5			2	19.2				
9.			4	3.10	2	38.6			4	20.2	4	22.0	1	4.40
10.					2	31.0							3	6.00
12.			4	3.10	1	30.0	NR	< 30	4	20.0	NR	< 20	NR	< 10
13.			2	3.27	0	42.2			3	21.0	NR	< 50	3	5.66
15.	0	73.8	3	3.19	2	38.7	4	11.5	0	23.2	2	19.1	2	8.49
16.	NR	< 200	4	3.10	4	34.0	NR	< 30	4	20.0	2	25.0	3	6.00
18.			3	3.02	4	35.0			4	20.0	3	23.0	4	6.50
19.			3	2.98	4	34.8			4	19.8	4	22.0	NR	< 35
21.														
23.			0	2.68	1	40.5			1	18.5	2	19.1	2	4.96
24.	3	64.0	3	3.19	4	35.3	4	12.1	2	21.4	4	21.8	3	5.70
25.	4	61.9	1	3.38	3	37.4			1	22.0	0	29.5	NR	< 40
27.			3	2.98	2	32.0			3	19.8			4	6.40
29.					0	23.0					0	15.0	0	1.90
30.			3	3.20	4	34.9					4	22.4	4	6.60
32.	2	55.2	1	3.40	4	33.9	4	11	1	22.2	4	21.2	3	5.80
35.														
36.			1	3.36	0	27.0			4	20.1	4	20.7	0	14
37.1			3	3.00	3	33.5	4	12	4	20.4	4	21.0	4	6.41
37.2			2	2.92					0	17.0				
42.	2	55.0	4	3.10	2	38.0	3	10	1	21.8				
43.			3	3.20	3	37.0			3	20.9				
45.			3	3.22	3	32.1	3	13.6	4	20.1	3	19.6	3	5.52
46.			1	3.36	3	37.5	NR	< 140	2	21.3	0	15.0	4	7.10
48.			1	2.80	0	20.0	NR	< 100	0	25.8	4	22.2	3	7.80
50.	4	60.0			3	33.0	3	10.0			3	23.0	3	6.00
51.			3	3.00	3	37.0			3	20.8	3	19.9	0	2.70
52.			3	2.96	4	34.4	3	9.8	3	19.7	3	20.5	1	8.63
54.			3	3.00					4	19.9				
55.	0	74.0	4	3.10	4	33.8			3	21.0	2	18.9	1	4.80
57.			2	3.30	3	37.0	NR	< 100	4	20.0	NR	< 100	4	6.70
59.	—		3	3.00	4	34.0			4	20.1	3	20.0	4	7.00
63.	4	61.0	1	3.41	0	41.0	1	16.0	4	20.5	3	23.0	3	7.80
64.	0	72.0	4	3.15	3	37.0			4	20.2				
68.	4	61.0	3	3.20	4	34.0	3	10	4	20.0	4	21.0	4	6.70
69.			3	3.00					3	19.8	3	23.0	4	6.70
70.	2	56.0	4	3.14	3	33.0	4	12	4	20.7	3	20.0	0	1.73
72.			3	3.00	3	33.5			3	19.5	2	19.1	3	6.00
73.											4	22.6	NR	< 25
74.			0	2.70	1	30.0	3	10	3	19.8	4	22.0	4	7.00
75.			2	2.92			3	13.4	4	20.3	3	20.1	3	5.88
76.					3	37.0			2	21.3			0	11
78.			3	3.00	4	35.0			4	20.3	4	22.5	4	6.40
81.			1	3.41	2	38.0	3	10	0	22.4	0	17.1	3	6.00
83.			4	3.08	1	30.0			4	20.8			4	6.53
84.			0	2.66	1	30.0			4	20.7			3	7.50
85.	4	62.0	3	2.99	4	35.3	NR	< 20	4	20.5	4	21.0	2	8.00

Table 5. *--Laboratory performance ratings for standard reference water sample T-119-Continued*

	Li (Lithium)		Mg (Magnesium)		Mn (Manganese)		Mo (Molybdenum)		Na (Sodium)		Ni (Nickel)		Pb (Lead)	
MPV =	60.5	µg/L	3.10	mg/L	35.0	µg/L	11.9	µg/L	20.3	mg/L	21.8	µg/L	6.70	µg/L
T-pseudosigma =	4.2		0.16		2.9		2.4		1.0		2.2		1.21	
Lab	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV
86			3	3.20	3	32.7	4	12	4	20.0	3	20.6	4	7.22
87			3	2.98	2	32.0			2	19.0	4	21.0	4	7.00
90					0	47.0			0	26.8	0	28.5	0	9.12
91					2	38.2								
92			0	2.50	1	29.7			0	23.2	2	19.3	2	8.00
96			2	2.88	4	36.0			3	21.2			4	7.05
97			3	2.98	4	36.0	2	14.7	4	20.2	0	27.0	4	6.84
101			3	3.00	3	36.6			4	20.0	2	24.8	0	12
103	0	45.0	0	3.50	4	36.0	4	11	3	21.0	2	19.0	NR	< 5
104														
105	4	59.0	4	3.10	4	35.0	NR	< 40	2	21.7	3	23.0	4	7.20
107			4	3.05	4	34.7			4	20.1			0	3.66
109	3	57.7	3	3.00	4	33.9	2	15.2	4	19.9			0	2.61
111											4	21.5	2	8.20
113			3	3.01	4	33.6			4	20.5	2	19.5	3	5.86
114			3	3.00	4	35.0			0	13.6	4	22.0	0	1.00
116			3	3.19	2	39.0			4	20.6				
117			1	2.85	3	37.7			3	19.6	0	< 0.01	4	7.00
118														
119			4	3.10	4	35.0			3	19.6	2	19.0	3	5.90
120			4	3.05	0	24.0			3	20.8	4	20.7	4	6.16
121	3	56.5	4	3.10	4	36.0	4	11	4	20.0	0	28.0	4	7.00
122					2	38.2								
123			0	7.48					4	19.8				
126					0	42.0			2	21.4				
127			3	3.18	4	34.8			4	20.5	3	20.6	4	6.24
128	4	61.0	3	3.18	3	37.0	2	9.00	3	20.9	2	25.0	4	6.40
129			4	3.05	0	26.0			2	19.0				
133			0	2.79	4	34.6	0	4.80	3	19.4	4	21.9	0	2.80
134	3	58.0	3	3.20	4	36.0	4	11.0	4	20.3	3	19.6	4	7.10
136			0	3.90	1	40.2	4	12.2	3	19.8	3	23.4	4	6.80
138			2	3.30	4	36.0	4	11.7	2	21.5	4	22.5	3	7.50
140			4	3.15	3	33.0			3	20.9	3	23.0	3	7.50
141			3	3.00	3	37.7	4	13	4	20.3	4	22.5	2	8.40
144											4	20.9		
145	4	62.3	1	3.37	1	39.7	2	14	0	22.5	0	27.8	NR	< 25
149					0	48.0	0	17.0			4	22.0	0	2.00
151			2	2.90	2	32.0			4	20.0	4	22.2	4	7.25
153			0	2.50	4	35.3			4	20.1			1	8.70
154			3	3.20	4	35.0			3	20.8	4	21.0	3	5.80
158													4	6.10
161											0	73.0	0	76
173					3	33.3			1	18.7			4	7.00
179			3	3.00	4	36.0			0	22.7	2	19.0	4	7.00
180			2	3.31	3	36.9			1	22.0	3	20.0	NR	< 12
181			1	2.86	0	60.0			0	36.2	1	18.0	0	15
182	4	60.0	2	3.30	1	40.0			0	14.3	0	90.0		
191			4	3.16	2	38.0			4	20.4	4	22.5		
193			3	2.97					2	19.2	3	23.0	NR	< 10
194			2	3.30	NR	< 50			3	21.2	NR	< 100	NR	< 10

Table 5. *--Laboratory performance ratings for standard reference water sample T-119-Continued*

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

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

	Sb (Antimony)		Se (Selenium)		SiO2 (Silica)		Sr (Strontium)		V (Vanadium)		Zn (Zinc)	
MPV =	8.60	µg/L	9.80	µg/L	9.00	mg/L	73.0	µg/L	3.8	µg/L	24.8	µg/L
F-pseudosigma =	1.46		1.33		0.50		5.4		0.9		4.7	

Lab	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV
1.	3	9.96	4	9.6	4	9.00	4	75.0	NR	< 6	4	24.7
2.					0	7.85						
3.	4	8.60	4	10.2	0	10.1	4	73.8	NR	< 4	3	21.8
5.1			3	11.0								
5.2	NR	< 20	NR	< 40	4	9.08			NR	< 4	4	23.3
6.											1	15.9
7.	NR	< 25	3	9.0	4	8.99	3	76.9	NR	< 11	4	24.7
8.					0	7.71	3	68.9				
9.					4	9.00					1	17.0
10.			4	9.6							4	25.0
12.	NR	< 100	4	10.0							2	20.0
13.			0	14.6	2	8.45					3	20.5
15.	0	5.03	3	10.8	2	9.53	3	69.6	3	4.7	4	23.2
16.	NR	< 60	4	9.5			2	65.0	NR	< 10	0	13.6
18.	3	7.60	4	9.2			4	71.0	NR	< 10	4	26.0
19.											4	22.5
21.												
23.	3	9.84	1	12.2	4	9.10	2	78.8			1	32.7
24.			3	10.8	3	9.35	4	73.9	0	8.3	3	28.5
25.	NR	< 37	NR	< 67	0	7.08	2	78.9	NR	< 3	4	25.5
27.					4	9.15					0	69.0
29.			2	11.7							0	10.0
30.			0	13.9					4	4.0	0	36.1
32.	4	8.50	4	10.0	3	9.30	2	66.2	4	3.4	4	23.0
35.			4	9.7								
36.	3	7.50	0	15.8							4	25.2
37.1	4	8.72	0	13.1	3	8.65			4	3.8	3	29.3
37.2												
42.					2	9.70	3	78.0			4	23.0
43.					4	9.10						
45.	4	8.89	0	7.0	4	9.08					4	23.5
46.			2	11.2							3	22.0
48.	3	7.60	2	11.6					0	40.0	0	40.0
50.			4	10.0					4	4.0	4	23.0
51.					3	9.30					2	19.1
52.	3	7.80	1	7.2	0	7.84	4	72.0	2	2.8	4	22.6
54.												
55.	4	9.00	4	9.5	2	9.61	0	59.3			3	28.3
57.	0	18.0	1	12.0	4	9.10			NR	< 100	4	25.0
59.	2	7.00			3	8.70	4	72.0			4	24.0
63.	0	3.40	3	11.0	2	9.54	0	88.0	2	5.1	4	26.0
64.					3	8.62					4	25.0
68.	2	7.10	4	9.8			2	67.0	4	4.0	3	22.0
69.			4	10.3								
70.	0	14.5	0	6.7	3	8.64	4	75.0	3	3.2	4	26.0
72.	4	8.40	4	9.2	4	8.80					3	28.3
73.			4	9.2					2	2.5	4	24.6
74.	4	9.00	4	9.5			2	66.0	3	3.0	4	25.0
75.			4	9.3							3	28.6
76.			1	12.4							3	21.0
78.	4	8.60	3	9.0							4	24.0
81.	NR	< 19	3	8.9			3	77.0	NR	< 6	4	25.0
83.											0	10.0
84.												
85.	NR	< 50	0	5.7			4	71.0	NR	< 20	0	14.9

Table 5. *--Laboratory performance ratings for standard reference water sample T-119-Continued*

	Sb (Antimony)		Se (Selenium)		SiO2 (Silica)		Sr (Strontium)		V (Vanadium)		Zn (Zinc)	
MPV =	8.60	µg/L	9.80	µg/L	9.00	mg/L	73.0	µg/L	3.8	µg/L	24.8	µg/L
F-pseudosigma =	1.46		1.33		0.50		5.4		0.9		4.7	
Lab	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV
86			4	10.3					4	3.7	2	31.4
87	3	9.40	4	9.7	4	9.00					4	24.0
90			4	9.6							0	48.0
91												
92					3	8.51					2	19.0
96			3	10.8							4	27.0
97	NR	< 7.76	3	10.5	4	9.25	2	78.6	0	8.0	0	42.9
101			0	35.6	3	9.28			4	3.8	2	30.3
103					4	9.00	4	75.0	NR	< 5	2	20.0
104					3	8.61						
105	2	10.4	4	9.7	2	8.43	4	71.0	NR	< 20	3	28.0
107			3	9.0							4	24.8
109												
111											4	26.7
113			2	8.4	4	8.94	NR	< 200			2	29.6
114											4	23.0
116					3	9.30	4	73.0			4	24.0
117	0	13.0	0	21.2							2	20.0
118					0	1.88						
119	4	8.60	4	9.5	4	9.00					2	18.0
120	4	9.26	4	10.2							3	20.8
121					4	8.90	4	73.0	0	6.0	4	25.0
122												
123											3	29.3
126			0	14.5								
127	4	8.99	4	10.1	3	9.28	4	75.0	4	3.8	4	24.0
128	4	7.90	4	9.8	3	9.31			3	3.0	4	26.0
129					2	8.40						
133	0	53.2	1	7.6					4	3.5	4	27.6
134			3	10.6	4	9.02	3	69.0	3	4.5	4	26.0
136	1	6.00	1	12.0			0	91.8	4	3.4	0	38.0
138	4	8.70	3	8.6	3	9.26	4	73.0	3	3.2	4	25.0
140											1	32.0
141	4	8.00	0	6.0					4	3.8	3	29.5
144	2	6.48	3	10.6								
145					1	9.84	3	76.7	0	5.7	4	26.7
149			3	8.8							1	17.0
151			4	9.6	2	8.50						
153												
154			4	9.2	2	9.60	0	7.5			4	25.0
158											0	11.0
161											0	68.0
173			3	8.8	1	8.14					2	30.0
179	0	5.00	4	10.0							0	9.0
180	NR	< 13	NR	< 31					4	4.1	0	4.9
181	2	10.3	2	8.2			0	86.0			1	17.5
182					0	4.70						
191			0	16.4	4	9.00	3	70.0	4	4.0	2	31.1
193			3	9.0							NR	< 40
194	1	10.9	1	12.0							0	73.0

Table 6. *--Laboratory performance ratings for standard reference water sample M-122 (major constituents)*

[MPV, most probable value; ug/L, micrograms per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/14, number of reported values of 14 possible values; RV, reported value; <, less than]

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

	Analyte =	Alkalinity		B (Boron)		Ca (Calcium)		Cl (Chloride)		DSRD		F (Fluoride)	
	MPV =	38.0	m g/L	15	µ g/L	19.3	m g/L	56.0	m g/L	170	m g/L	0.2	m g/L
	F-pseudosigma =	1.4		14		1.0		1.6		10		0.0	
Lab	OLR	V/14	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV
1.	3.2	14	3	38.8	4	14	2	20.4	1	58.6	4	170	4	0.24
2.	2.7	3												
3.	2.3	14	1	40.2	4	21	1	21.2	2	57.7	4	166	2	0.20
5.1	2.4	10	4	37.8			2	20.7	3	54.7	2	155		
5.2	2.7	6			4	12	2	20.3						
6.	2.6	7	3	39.4			0	10.9			4	165	4	0.24
7.	2.0	13	0	45.4			1	20.9	3	57.5	4	175	3	0.21
8.	1.8	12	3	36.8			4	19.0	4	56.0	0	228		
9.	2.5	12	0	32.9			0	9.9	4	56.0	4	173	4	0.22
10.	3.8	13	4	38.7	4	20	4	19.4	4	56.1	3	162	4	0.22
12.	2.2	11	0	41.0			3	20.0	3	57.0	4	172	0	0.30
13.	2.9	12	3	37.0			4	18.9	0	59.8	0	148	4	0.22
15.	2.6	14	4	38.0	3	22	4	19.7	3	55.1	4	169	2	0.26
16.	2.4	12	3	36.6	NR	< 200	3	20.0	3	57.2	4	171	4	0.24
18.	3.2	13	4	38.0	NR	< 10	3	20.0	3	55.0	4	171	3	0.21
19.	3.5	10	4	38.6			4	19.3	3	55.0	4	171		
23.	2.8	13	4	38.2			4	19.2	0	52.1	3	162	4	0.23
24.	3.3	13	4	37.7	0	49	4	19.7	4	55.3			4	0.23
25.	1.5	13	2	40.0	NR	< 14	0	22.1	2	54.3	4	169	3	0.21
26.	2.2	9	0	26.4			4	19.6	1	58.9				
27.	2.5	10	2	36.3	0	48	3	18.5	2	58.0			4	0.24
29.	2.4	12	3	37.0	2	30	3	20.0	0	65.7	3	178	4	0.22
30.	1.3	3							1	58.4			0	0.12
32.	1.6	13	3	39.0			4	18.9	0	51.2	4	175	0	0.16
36.	2.6	11	4	37.5			0	16.8	3	57.1	0	196	3	0.22
37.1	2.5	13	1	40.7	0	78	0	23.3	4	55.9	4	165	4	0.22
37.2	1.3	4					3	20.0						
38.	3.3	9	3	39.3			3	18.5			4	174		
40.	3.1	14	4	38.0	3	5	4	19.3	2	58.1	1	152	2	0.20
42.	2.5	12	4	38.2			4	19.2	4	55.8			0	0.41
43.	3.4	10	3	39.0			2	20.3	4	56.0	4	168		
45.	3.2	13	4	38.5	4	11	4	19.2	4	56.0	0	147	4	0.24
46.	3.2	13	4	38.4	4	12	0	15.6	4	56.4	4	166	4	0.22
48.	2.5	11	4	38.0	4	10	0	10.6	0	60.0	4	170		
50.	3.2	12	3	39.0	NR	< 100	4	19.0	4	56.0	3	179	2	0.20
51.	2.9	11	4	38.0			4	19.2	0	52.5	3	178		
52.	2.6	13	2	40.0	NR	< 150	4	19.2	4	56.0	0	198	3	0.21
54.	3.3	11	3	37.0			4	19.4	4	55.9	2	158	4	0.22
55.	2.2	13	4	38.0			4	19.7	1	59.0	3	160	0	0.32
56.	2.7	9	1	35.3			2	17.9	0	52.9				
57.	3.2	12	2	40.0	NR	< 100	4	19.0	3	57.0	4	170	0	0.30
59.	3.7	12					4	19.2	3	57.2	4	171	4	0.22
62.	3.0	3	3	37.3										
63.	2.3	14	0	35.0	4	11	3	20.1	3	57.0	3	164	4	0.24
64.	3.1	9					3	19.8	4	56.2				
68.	2.5	11	0	34.2	0	110	4	19.0	4	56.7				
69.	2.8	11	0	34.3			2	18.1	4	55.9	4	175	4	0.22
70.	2.6	13	1	35.5	4	12	2	20.6	3	57.0	3	162		
71.	1.3	7	0	42.0			0	21.9	0	5.0	3	160	3	0.25
72.	2.8	12	4	38.0			3	18.6	0	159	2	185	1	0.19
74.	2.6	14	3	36.6	4	15	3	18.8	1	58.8	3	176	4	0.23
75.	2.8	9	4	37.4			3	18.8	4	55.6	0	146		
76.	3.6	7	3	36.9					4	56.6	4	169	4	0.24
78.	2.3	11	3	37.0			0	21.5	3	55.0	4	175	3	0.25
83.	3.4	9	3	37.2			4	19.7	4	55.7				

Table 6. --*Laboratory performance ratings for standard reference water sample M-122 (major constituents)--Continued*

	Analyte =	Alkalinity		B (Boron)		Ca (Calcium)		Cl (Chloride)		DSRD		F (Fluoride)	
	MPV =	38.0	m g/L	15	μ g/L	19.3	m g/L	56.0	m g/L	170	m g/L	0.23	m g/L
	F-pseudosigma =	1.4		14		1.0		1.6		10		0.03	
Lab	OLR	V/16	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV
84	3.2	6	4	38.0					4	56.1				
85	3.2	13	3	38.8	NR	< 20	4	19.6	3	55.0	0	149	4	0.22
86	3.0	8					4	19.5	0	59.6				
87	2.6	11	4	38.0			0	22.0	4	55.5	3	162		
90	2.4	7	4	37.3			3	18.8	0	62.5			0	0.29
91	2.7	6	3	37.0					3	56.9			2	0.26
92	1.9	11	2	36.3			2	18.2	2	57.8	4	170		
93	1.6	7					4	19.3	4	56.4				
94	3.7	11	4	38.0			4	19.2	2	54.0	3	162	4	0.23
96	3.1	7	4	38.5					4	56.2	0	228	4	0.23
97	2.9	13	4	38.2			2	18.1	3	57.2	3	176	4	0.23
101	2.6	10					4	19.7	0	59.2	0	128		
103	3.3	7			4	15	2	18.0						
104	2.8	4	1	35.7										
105	2.7	13	4	38.6			4	19.3	0	52.0	3	161	2	0.20
107	3.6	5	2	36.4					4	56.3			4	0.23
108														
109	2.7	13	0	44.0	4	12	4	19.0	3	57.1	4	172	3	0.21
111	3.1	7	4	37.8					3	55.0			0	0.38
114	1.0	5					0	16.8						
116	2.9	9	1	35.7	4	12	1	21.1	4	55.5				
117	0.9	11	0	56.6			0	10.0	2	57.7	0	124	0	0.65
118	1.6	5	0	42.5							1	187		
119	3.2	12	2	40.0	NR	0	4	19.4	3	57.0	1	154	4	0.23
120	2.4	8	2	36.0			0	17.2	2	54.0				
121	3.8	6					4	19.4						
122	2.7	10	3	39.0			2	18.3	4	55.9	4	167	0	0.36
123	2.2	6					0	21.3						
127	3.6	14	4	38.7	4	12	4	19.2	3	55.2	4	170	3	0.22
128	3.3	12	2	36.3	4	9	4	19.7	3	55.0			0	0.16
129	1.9	13	2	36.0	0	115	4	19.2	3	55.0	4	174	0	0.30
133	2.0	5	3	37.0			2	18.3						
134	3.2	13	3	39.4			3	20.0	4	56.0	3	180	3	0.25
136	2.0	11	4	38.5			2	20.6	1	53.2			0	0.30
138	2.8	12	4	37.4			0	21.3	3	57.0	4	170	2	0.20
140	2.1	10					4	19.0	3	57.0	2	182	2	0.26
141	2.9	11	3	37.0	4	21	2	20.5	3	54.7	4	165	4	0.24
143	1.7	3	1	35.5					2	53.8				
145	3.0	11	3	39.0	3	23	3	20.2	2	58.0				
149	1.8	8			0	116	1	17.6	2	58.3	2	158	4	0.23
151	3.6	12	4	38.0			4	19.3	3	55.1	3	176	3	0.21
153	3.3	10	4	38.3			1	21.1	4	56.0			4	0.23
154	1.8	12	1	40.4			2	20.3	0	52.8			2	0.20
158	2.5	6	2	36.0					4	56.1	4	167		
161	1.8	8	2	40.0	0	100	4	19.3					1	0.18
173	2.7	9	4	37.5					2	54.0	0	306	2	0.26
179	1.9	7					0	15.6	0	64.0				
180	2.6	11	3	38.8	2	0	3	20.1	4	56.2			4	0.24
181	1.1	11	2	36.0			0	151	0	46.5	2	181	0	< 0.02
182	1.4	10	0	30.0			0	17.2	4	55.6			0	0.33
183	2.1	7	0	35.0			1	21.0	4	56.0			4	0.23
190	2.0	11	4	38.0			0	16.0	2	58.0	1	187	4	0.23
191	3.7	9	4	37.5			3	20.2	4	56.0				
193	3.5	2							3	55.1				
194	3.4	5	3	37.0					4	55.8			3	0.25

Table 6. *--Laboratory performance ratings for standard reference water sample M-122 (major constituents) -- Continued*

[MPV, most probable value; ug/L, micrograms per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/14, number of reported values of 14 possible values; RV, reported value; <, less than]

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

Analyte =	K (Potassium)		Mg (Magnesium)		Na (Sodium)		total Phosphorus as P		pH		SiO2 (Silica)	
MPV =	1.19	m g/L	5.34	m g/L	25.5	m g/L		m g/L	7.76		10.19	m g/L
F-pseudosigma =	0.13		0.28		1.0		insufficient data		0.26		0.48	

Lab	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV
1.	2	1.03	4	5.30	4	25.4	< 0.01		2	8.14	4	10.30
2.									4	7.83	0	8.85
3.	3	1.29	1	5.78	0	27.4	< 0.01		2	7.48	0	11.60
5.1	0	2.41	4	5.38	2	26.5			0	6.44		
5.2	0	1.61	4	5.38	3	26.3					3	10.50
6.			0	4.37			< 0.05		3	7.97		
7.	0	2.30	3	5.50	4	25.7			0	7.20	3	10.50
8.	0	0.86	0	4.77	1	23.6			4	7.66	0	9.00
9.	4	1.20	4	5.40	4	25.3	0.006		0	7.15	4	10.10
10.	3	1.30	4	5.30	4	25.1			4	7.80	4	10.00
12.	3	1.10	3	5.60	4	25.0	< 0.02		3	8.00		
13.	3	1.11	3	5.49	3	26.3	< 0.02		4	7.89	4	10.10
15.	3	1.28	4	5.45	0	29.4	< 0.02		3	7.59	0	11.30
16.	0	1.50	3	5.50	1	27.0			3	7.56		
18.	2	1.00	4	5.30	4	25.4	0.001		4	7.77	0	12.00
19.	4	1.22	2	5.05	3	24.6	< 0.05		4	7.76		
23.	4	1.18	1	4.83	0	22.3	0.010		4	7.89	3	10.50
24.	4	1.18	4	5.32	4	25.9			4	7.70	2	10.70
25.	0	1.69	1	5.86	0	27.4	< 0.052		1	7.26	0	8.42
26.	4	1.17	4	5.37	1	23.7			3	8.00		
27.	4	1.24	3	5.16	3	24.9					4	10.38
29.	3	1.30	0	6.70	4	25.0			4	7.86		
30.												
32.	2	1.00	0	6.08	0	29.9	< 0.1		2	7.48	0	11.40
36.	2	1.02	2	5.73	3	26.3	< 0.025		4	7.79		
37.1	2	1.04	4	5.25	2	26.5			0	6.80	4	9.99
37.2	2	1.03	0	4.59	0	22.7						
38.	4	1.14	3	5.10	2	24.1	0.012		3	8.00	4	9.99
40.	4	1.17	2	4.95	3	24.9			4	7.88	2	10.88
42.	0	0.70	4	5.40	2	26.5	0.005		4	7.85	1	11.10
43.	3	1.10	3	5.50	4	25.5			3	7.60	4	10.30
45.	4	1.13	3	5.55	3	24.9	0.216		4	7.89	3	10.60
46.	3	1.11	4	5.23	3	24.6	< 0.02		3	7.97	3	9.94
48.	3	1.30	3	5.19	0	30.4	< 0.01		4	7.70		
50.	3	1.10	3	5.50	4	25.0			1	7.30	3	9.80
51.	4	1.23	3	5.10	4	25.1	0.001		3	7.55	1	11.10
52.	4	1.13	3	5.17	4	25.0	< 0.01		0	7.18	2	9.68
54.	4	1.13	4	5.20	4	25.5			2	7.48		
55.	2	1.35	4	5.33	3	26.0			3	7.60	3	10.46
56.	4	1.15	4	5.44	4	25.0			4	7.88		
57.	4	1.20	3	5.60	4	25.0	< 0.02		3	7.50	4	10.00
59.	4	1.20	4	5.30	4	25.5			3	7.55	3	9.80
62.									3	7.98		
63.	4	1.21	4	5.39	3	26.0	0.130		0	7.20	2	10.89
64.	2	1.05	2	5.65	4	25.4	0.005		3	7.93	3	9.84
68.	4	1.20	3	5.60	3	26.0	0.024		0	7.20	2	9.68
69.	4	1.20	4	5.20	3	24.8			4	7.63		
70.	4	1.13	4	5.38	2	26.9	0.100		2	7.42	3	9.92
71.									3	7.96		
72.	4	1.22	3	5.12	4	25.2	< 0.02		4	7.77	4	10.30
74.	4	1.20	0	4.70	2	24.4	< 0.002		1	7.35	3	9.84
75.	3	1.12	3	5.09	4	25.5			0	7.20		
76.									2	7.37		
78.	4	1.20	2	5.70	3	26.0	0.014		3	7.52		
83.	4	1.21	4	5.39	4	25.6			4	7.69	3	9.90

Table 6. --*Laboratory performance ratings for standard reference water sample M-122 (major constituents)*
--*Continued*

Analyte =	K (Potassium)		Mg (Magnesium)		Na (Sodium)		total Phosphorus as P	pH		SiO2 (Silica)	
MPV =	1.19	m g/L	5.34	m g/L	25.5	m g/L	m g/L	7.76		10.19	
F-pseudosigma =	0.13		0.28		1.0		insufficient data	0.26		0.48	m g/L
Lab	Rating	RV	Rating	RV	Rating	RV	Rating RV	Rating	RV	Rating	RV
84								3	8.00	4	10.30
85	4	1.15	4	5.33	3	24.9	< 0.005	2	8.03	4	10.00
86	3	1.08	3	5.58	4	25.5		4	7.71		
87	4	1.19	3	5.12	1	24.0	< 0.01	2	7.38	4	10.40
90					2	24.2	0.059	4	7.80		
91							0.060	4	7.86		
92	0	1.84	0	4.70	0	28.7	0.010	4	7.75	3	9.90
93	1	1.43	0	6.40	1	27.1					
94	4	1.15	4	5.26	4	25.5	0.001	4	7.82		
96								4	7.78		
97	4	1.20	2	4.95	2	24.4	< 0.03	3	7.97	4	10.30
101	3	1.10	4	5.40	4	25.5		0	6.40	3	10.50
103	3	1.10	4	5.30	3	26.0	< 0.05			3	9.80
104							0.001	4	7.85	3	9.76
105	3	1.28	4	5.41	2	26.7		1	7.25	3	9.74
107								4	7.64		
108							0.080				
109	2	1.00	2	5.00	4	25.0		0	6.41	2	9.68
111							< 0.001	4	7.64	4	10.40
114	0	5.00	2	5.00	0	15.2	0.027	3	7.60		
116			3	5.52	3	26.0				2	10.70
117	0	3.46	0	2.67	4	25.1		4	7.64		
118							< 0.01	4	7.70	3	9.78
119	3	1.10	4	5.30	4	25.6	0.000	2	8.09	4	10.00
120	1	1.40	4	5.30	4	25.5	< 0.01	4	7.70		
121	4	1.19	4	5.45	4	25.5				4	9.95
122	4	1.22	3	5.10	2	26.9		3	7.90		
123	1	0.97	2	5.66	3	26.1	< 0.1	4	7.80		
127	4	1.16	4	5.40	4	25.5	< 0.03	4	7.88	3	10.60
128	4	1.20	4	5.35	4	25.7	< 0.05	3	7.90	3	10.49
129	0	10.00	1	4.80	1	24.0	2.460	4	7.65	2	9.55
133			1	4.80	0	23.3	0.001	4	7.80		
134	3	1.30	4	5.30	3	26.0	< 0.02	3	7.54	4	10.28
136	0	1.70	4	5.30	3	24.7		4	7.80		
138	4	1.15	2	5.70	2	26.7	< 0.02	4	7.85	3	10.50
140	4	1.18	3	5.50	1	27.0	0.020	2	7.45		
141			4	5.48	4	25.8	< 0.05	3	7.90		
143							< 0.002	2	8.07		
145	3	1.12	4	5.48	3	26.0	< 0.02	3	7.96	3	10.56
149					1	24.0				4	10.40
151	4	1.16	4	5.30	4	25.2		4	7.86	3	9.90
153	4	1.20	1	4.80	4	25.6		3	7.91		
154	4	1.17	3	5.50	3	26.2	0.001	2	8.06	1	11.03
158								1	7.28		
161			0	3.84			0.012	2	8.15	2	9.57
173					3	24.7	< 0.05	2	7.40	4	10.10
179	1	1.39	3	5.60	1	27.0	< 0.18	4	7.70		
180	0	1.89	2	5.70	0	27.6	0.018	4	7.76		
181	0	0.47	0	4.47	0	77.6	0.030	3	7.59		
182	0	0.50	3	5.50	0	18.8		4	7.84	0	3.20
183			0	9.20				4	7.78		
190	0	0.90	0	4.50	0	21.0	0.002	3	7.60	4	10.28
191	3	1.26	4	5.42	4	25.5		4	7.86	4	10.30
193											
194								3	7.93		

Table 6. *--Laboratory performance ratings for standard reference water sample M-122 (major constituents)--Continued*

[MPV, most probable value; ug/L, micrograms per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reported values V/14, number of reported values of 14 possible values; RV, reported value; <, less than]

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

	SO4 (Sulfate)		Sp Cond		Sr (Strontium)		V (Vanadium)	
Analyte =								
MPV =	9.60	mg/L	285	µS/cm	123	µg/L		µg/L
F-pseudosigma =	0.74		13		4		insufficient data	

Lab	Rating	RV	Rating	RV	Rating	RV	Rating	RV
1.	4	9.90	4	290	3	126		< 1
2.	4	9.80						
3.	4	9.74	4	284	4	125		< 4
5.1	3	10.10	4	282				
5.2								< 4
6.			4	284				
7.	2	8.49	0	232	3	127		< 11
8.	4	9.80	1	260	0	112		
9.	0	12.30	2	270				
10.	4	9.50	4	289				
12.	1	11.00	0	222				
13.	3	9.21	4	288				
15.	3	8.91	3	292	0	112		0.28
16.	1	10.85	4	283	0	111		< 10
18.	3	10.00	3	273	4	122		< 10
19.	3	8.95	4	291				
23.	3	10.30	4	289	2	128		
24.	1	8.30	4	280	4	121		
25.	4	9.80	3	293	0	132		< 3
26.	0	13.00	3	295				
27.	0	8.08						
29.	3	9.00	0	317				
30.	3	9.21						
32.	3	9.16	3	297	0	107		0.40
36.	4	9.86	4	280				
37.1	3	9.07	4	285				
37.2								
38.			4	285				
40.	4	9.61	4	280	4	122		
42.	4	9.50	3	294	0	134		
43.	NR	< 10	4	289				
45.	0	11.90	4	287				
46.	1	8.40	4	285				
48.	3	10.00	3	295				30.00
50.	4	9.40	4	291				
51.	4	9.97	2	271				
52.	2	10.40	2	268	4	123		< 2
54.	1	11.00	4	282				
55.	1	11.00	1	260	0	112		
56.	4	9.60	1	262				
57.	3	10.00	4	280				< 100
59.	4	9.60	3	297	4	123		
62.			3	274				
63.	0	7.40	2	270	0	148		0.60
64.	4	9.60	3	296				
68.			4	291	3	120		2.00
69.	0	11.40	2	300				
70.	1	8.34	1	260	4	124		< 50
71.			0	250				
72.	1	8.40	4	282				
74.	4	9.90	4	287	0	109		< 2
75.			4	288				
76.	4	9.68	4	286				
78.	0	7.00	0	3				
83.	1	8.30						

Table 6. *--Laboratory performance ratings for standard reference water sample M-122 (major constituents) -- Continued*

Analyte =	SO4 (Sulfate)		Sp Cond		Sr (Strontium)		V (Vanadium)	
MPV =	9.60	mg/L	285	µS/cm	123	µg/L	µg/L	
F-pseudosigma =	0.74		13		4		insufficient data	
Lab	Rating	RV	Rating	RV	Rating	RV	Rating	RV
84	0	11.25	4	282				
85	3	9.17	3	278	4	121		< 20
86	4	9.70	2	298				
87	3	9.10	1	265				
90			4	285				
91	1	8.47	3	276				
92	3	9.20	1	306				
93	0	11.97	1	266				
94	4	9.41	4	280				
96	3	10.10	3	295				
97	3	10.10	4	289	0	133		6.76
101	4	9.50	4	282				
103					4	125		< 5
104			3	294				
105	2	8.80	4	282	3	126		< 16
107			4	288				
108								
109	4	9.46	3	293				
111	4	9.60	3	275				
114								
116	4	9.70			4	124		
117	0	19.70	0	581				
118			0	250				
119	3	10.00	4	280				
120	2	8.50						
121					3	120		
122			2	270				
123			3	276				
127	4	9.54	4	286	2	128		< 1
128	4	9.54	4	279				< 3
129	4	9.40	0	241				
133								1.27
134	2	10.50	4	291	3	120		< 1
136	1	8.40	3	275	0	159		< 3
138	2	8.52			4	124		< 3
140	0	7.46	0	313				
141	0	14.20	1	304				
143								
145			2	298	4	121		4.66
149	0	11.70						
151	4	9.73	3	293				
153	4	9.90	4	290				
154	0	11.40	0	333	3	126		
158	1	10.90	3	277				
161			3	275				
173	4	9.25	3	295				
179			4	279				
180	3	9.10	4	284				0.00
181	3	10.10	2	299				
182			3	297				
183			2	300				
190			4	285				
191					3	119		
193			4	285				
194			4	280				

Table 7. *--Laboratory performance ratings for standard reference water sample N-34 (preserved nutrients)--Continued*

[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 6 possible values; RV, reported value; <, less than]

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

	Analyte =	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 =	0.177	mg/L	0.370	mg/L	0.210	mg/L	0.210	mg/L	0.203	mg/L
	F-pseudosigma =	0.047		0.226		0.033		0.022		0.014	
Lab	OLR	V/5	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV
1	3.2	5	4	0.186	3	0.209	4	0.203	2	0.19	3	0.195
2	2.0	2	4	0.178							0	0.234
3	2.8	4	3	0.212	1	0.029			3	0.23	4	0.201
7	1.0	3	3	0.210			0	2.000	0	0.27		
20	3.5	4	4	0.174			4	0.210	2	0.24	4	0.210
21	2.0	2			4	0.326	0	0.113				
29	2.0	2					4	0.210			0	0.150
32	0.0	1							0	0.10		
36	3.0	1									3	0.212
42	4.0	2							4	0.22	4	0.202
43	1.0	1					1	0.260				
45	2.2	5	4	0.159	2	0.606	4	0.218	1	0.25	0	0.270
48	3.2	5	4	0.200	4	0.440	2	0.250	3	0.19	3	0.194
52	3.4	5	4	0.176	2	0.138	4	0.198	4	0.21	3	0.217
56	3.7	3			3	0.250			4	0.21	4	0.210
68	3.0	3	4	0.160	3	0.560			2	0.24		
70	2.7	3	1	0.095	3	0.180	4	0.205				
74	3.8	5	4	0.156	3	0.190	4	0.205	4	0.22	4	0.204
75	3.0	1					3	0.183				
78	2.7	3					0	0.131	4	0.21	4	0.208
88	2.3	3	4	0.176			3	0.192			0	0.281
90	3.4	5	4	0.177	4	0.469	4	0.218	2	0.23	3	0.217
92	3.0	3					4	0.226	2	0.18	3	0.190
93	3.5	2	4	0.160			3	0.190				
104	3.7	3	3	0.130					4	0.21	4	0.203
105	2.4	5	1	0.250	0	0.990	3	0.236	4	0.21	4	0.203
108	3.0	4	4	0.180			3	0.190	2	0.24	3	0.190
114	0.8	4	3	0.150	0	1.810	0	0.010	0	0.26		
117	0.0	4	0	0.030	0	1.410	NR	< 0.1	0	0.16	0	0.160
118	3.8	5	4	0.160	3	0.510	4	0.220	4	0.21	4	0.210
119	3.2	5	2	0.240	4	0.400	3	0.230	4	0.22	3	0.190
120	3.5	2	3	0.145	4	0.272						
129	3.4	5	2	0.128	4	0.319	3	0.236	4	0.21	4	0.198
133	2.6	5	1	0.250	4	0.450	0	0.280	4	0.21	4	0.200
134	3.6	5	4	0.170	4	0.310	4	0.210	3	0.19	3	0.190
140	2.4	5	2	0.230	3	0.490	3	0.191	4	0.20	0	0.100
141	2.8	5	4	0.197	3	0.197	2	0.255	4	0.21	1	0.230
145	3.8	5	3	0.140	4	0.340	4	0.200	4	0.21	4	0.200
173	1.0	4	0	0.930			0	0.590	0	0.40	4	0.210
179	1.0	2	0	0.400							2	0.185
181	1.0	4	0	2.300	0	0.840			2	0.24	2	0.220
182	0.0	3	0	0.566			0	0.482	0	0.14		

Table 7. *--Laboratory performance ratings for standard reference water sample N-34 (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 =			0.160 mg/L		0.300 mg/L		0.220 mg/L		0.205 mg/L		0.200 mg/L	
F-pseudosigma =			0.021		0.070		0.025		0.016		0.015	
Lab	OLR	V/5	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV
1	0.6	5	0	0.094	1	0.174	0	0.09	2	0.186	0	0.166
2	1.5	2	3	0.179							0	0.253
3	3.0	1					3	0.24				
5	2.4	5	4	0.166	1	0.181	3	0.24	2	0.226	2	0.183
8	1.3	3	NR	< 1	NR	< 1	4	0.21	0	0.350	0	0.150
9	1.6	5	0	0.250	0	0.490	3	0.24	2	0.223	3	0.214
10	4.0	5	4	0.160	4	0.290	4	0.23	4	0.206	4	0.200
12	2.5	4	NR	< 0.1	4	0.300	4	0.23	0	0.030	2	0.180
13	3.2	5	4	0.165	3	0.353	3	0.24	3	0.219	3	0.210
15	3.4	5	3	0.147	4	0.276	3	0.20	3	0.192	4	0.201
16	2.0	5	0	0.112	2	0.196	4	0.23	4	0.205	0	0.167
18	3.6	5	4	0.150	4	0.320	2	0.19	4	0.201	4	0.202
19	1.8	5	4	0.170	0	0.490	4	0.21	1	0.178	0	0.170
20	2.3	4	2	0.184			1	0.18	3	0.220	3	0.210
21	3.2	5	4	0.157	4	0.270	0	0.17	4	0.208	4	0.205
22	4.0	1							4	0.205		
23	2.8	4	1	0.120	NR	< 0.5	3	0.23	4	0.210	3	0.190
25	1.4	5	3	0.140	0	0.150	0	0.31	4	0.201	0	0.159
29	1.5	2					0	0.28			3	0.190
32	2.7	3	0	0.081			4	0.23			4	0.204
36	1.3	4	0	0.265	0	0.596	2	0.26	3	0.219		
37	2.0	2	4	0.154			NR	< 0.16			NR	< 0.552
38	3.2	5	4	0.165	3	0.240	4	0.23	1	0.235	4	0.199
42	0.0	1					0	0.47				
45	0.6	5	1	0.193	0	0.547	2	0.25	0	0.264	0	0.272
46	4.0	5	4	0.152	4	0.290	4	0.22	4	0.204	4	0.203
51	3.4	5	4	0.160	3	0.370	3	0.24	4	0.199	3	0.188
52	2.8	5	4	0.167	0	0.159	4	0.22	4	0.200	2	0.220
53	4.0	1					4	0.23				
55	3.4	5	4	0.160	2	0.220	4	0.21	4	0.210	3	0.210
56	4.0	1					4	0.22				
59	3.8	5	4	0.170	4	0.300	4	0.22	4	0.200	3	0.190
63	1.3	3	NR	< 0.6	NR	< 0.6	1	0.26	0	0.350	3	0.210
68	1.0	2	0	0.220			2	0.19				
69	4.0	1					4	0.21				
70	1.5	2							0	0.450	3	0.190
72	2.8	5	0	0.080	3	0.240	4	0.23	3	0.190	4	0.200
76	4.0	2	4	0.150			4	0.21				
78	2.0	3					0	0.15	3	0.192	3	0.210
83	1.0	2	2	0.130							0	0.730
84	3.0	2	3	0.175			3	0.23				
85	3.4	5	4	0.160	4	0.300	2	0.19	3	0.193	4	0.199
87	0.2	5	0	0.210	0	1.000	1	0.27	0	0.245	0	0.144
88	1.0	3	3	0.177			0	0.11			0	0.322
91	2.0	4	2	0.190	4	0.300	2	0.19	0	0.240		
92	2.3	4	2	0.190			3	0.24	1	0.180	3	0.190
94	3.5	4	3	0.177	4	0.317	3	0.20	4	0.199		
96	3.4	5	3	0.175	3	0.359	4	0.23	3	0.215	4	0.198
97	3.6	5	4	0.160	3	0.260	4	0.23	4	0.200	3	0.210
104	3.8	4			4	0.311	3	0.23	4	0.205	4	0.203
107	3.8	4	4	0.160			4	0.21	4	0.205	3	0.208
111	3.0	4	4	0.160			2	0.25	2	0.185	4	0.206
113	3.8	4	3	0.142	NR	< 0.5	4	0.22	4	0.199	4	0.198
114	1.8	4	3	0.140	4	0.320	0	0.04	0	0.320		
118	3.8	5	4	0.150	3	0.240	4	0.22	4	0.210	4	0.200
119	2.6	5	1	0.200	1	0.420	4	0.23	4	0.200	3	0.190
120	3.3	3					4	0.21	3	0.190	3	0.190
123	2.4	5	4	0.150	0	0.460	4	0.22	0	0.070	4	0.200
127	3.6	5	4	0.165	3	0.350	3	0.21	4	0.207	4	0.205
129	3.2	5	2	0.133	3	0.354	3	0.24	4	0.202	4	0.196
133	3.6	5	4	0.150	4	0.300	2	0.25	4	0.210	4	0.200
134	2.4	5	4	0.150	3	0.350	4	0.22	1	0.180	0	0.170
138	3.2	5	2	0.184	4	0.310	3	0.20	4	0.200	3	0.210
143	3.8	5	4	0.160	4	0.300	4	0.22	3	0.196	4	0.196
145	3.4	5	4	0.160	4	0.320	2	0.19	4	0.200	3	0.210
149	2.7	3	3	0.140			1	0.17	4	0.205		
151	3.0	3	3	0.178			2	0.19			4	0.200
154	3.2	5	3	0.149	4	0.320	2	0.19	3	0.195	4	0.196
158	1.6	5	2	0.190	2	0.208	2	0.19	0	0.153	2	0.180
161	0.7	3	0	0.108					0	0.294	2	0.179
173	1.0	4	0	0.930			0	0.65	0	0.270	4	0.200
179	0.0	2	0	0.452							0	0.268
180	2.8	5	4	0.154	0	0.576	4	0.21	2	0.223	4	0.200
181	0.8	4	0	0.700	0	0.560			0	0.244	3	0.214
183	3.0	4	2	0.137	2	0.224			4	0.206	4	0.205
190	4.0	5	4	0.155	4	0.285	4	0.23	4	0.201	4	0.198
191	3.0	2					3	0.20			3	0.190
193	4.0	1					4	0.21				

Table 8. *--Laboratory performance ratings for standard reference water sample N-35 (preserved nutrients)--Continued*

[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 possible values; RV, reported value; <, less than]

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

	Analyte =	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 =	0.880 mg/L		1.035 mg/L		1.00 mg/L		0.889 mg/L		0.880 mg/L	
	F-pseudosigma =	0.082		0.204		0.08		0.047		0.043	
Lab	OLR	V/5	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV
1	3.4	5	4	0.868	4	0.938	4	0.97	4	0.886	1	0.956
2	3.0	2	4	0.891							2	0.835
3	2.5	4	3	0.818	3	1.160			0	1.030	4	0.888
7	2.5	4	3	0.940			4	1.04	3	0.930	0	1.880
15	4.0	1							4	0.885		
20	3.0	5	4	0.914	4	1.009	0	0.78	3	0.920	4	0.880
29	2.0	2					4	1.02			0	0.750
32	1.0	1							1	0.800		
36	3.0	1									3	0.903
42	3.3	3					3	1.07	4	0.872	3	0.908
43	2.0	1					2	1.11				
45	2.4	5	4	0.844	4	1.050	3	1.06	1	0.966	0	1.000
48	3.8	5	4	0.850	3	1.160	4	0.98	4	0.870	4	0.859
52	2.6	5	2	0.982	3	0.832	4	0.98	3	0.924	1	0.956
68	3.7	3	4	0.880	4	1.020			3	0.918		
70	3.7	3	4	0.877	3	0.870	4	1.02				
74	2.8	5	4	0.866	3	0.921	4	1.02	2	0.952	1	0.949
75	4.0	1					4	0.99				
78	1.0	3					0	0.76	0	0.691	3	0.914
88	3.3	3	3	0.830			4	1.04			3	0.916
90	3.2	5	4	0.918	2	0.768	3	0.92	3	0.913	4	0.896
92	4.0	3					4	1.04	4	0.871	4	0.867
93	2.5	2	3	0.820			2	0.89				
104	3.0	3	1	0.732					4	0.892	4	0.876
105	2.6	5	2	0.980	0	1.880	3	1.06	4	0.900	4	0.870
108	2.8	4	4	0.880			3	0.93	1	0.980	3	0.850
114	0.7	3	0	0.670			0	0.09	2	0.820		
118	3.2	5	4	0.840	2	1.320	4	1.00	4	0.910	2	0.830
119	2.8	5	4	0.840	2	1.250	1	1.15	3	0.920	4	0.860
120	4.0	2	4	0.862	4	1.095						
129	1.8	5	2	0.764	4	0.958	3	0.93	0	0.719	0	0.685
134	4.0	5	4	0.880	4	0.960	4	1.00	4	0.880	4	0.880
140	1.6	5	2	0.970	0	1.610	3	0.96	3	0.860	0	0.770
141	0.8	5	2	0.779	2	0.779	0	0.83	0	0.720	0	0.760
145	3.4	5	1	0.740	4	1.080	4	0.98	4	0.870	4	0.890
173	1.0	4	0	1.620			0	2.12	0	1.070	4	0.900
179	1.7	3	0	1.536					3	0.850	2	0.824
181	1.0	4	0	1.320	0	1.680			0	1.050	4	0.863
182	0.0	3	0	1.400			0	2.35	0	0.640		

Table 8. *--Laboratory performance ratings for standard reference water sample N-35 (nonpreserved nutrients)--Continued*

			Analyte =	NH3 (Ammonia)		NH3+Org. N (Ammonia+Organic N)		NO3+NO2 (Nitrate+nitrite)		total P (Phosphorus)		PO4 (Orthophospha*e)	
			MPV =	0.870 mg/L		1.03 mg/L		1.03 mg/L		0.890 mg/L		0.880 mg/L	
			F-pseudosigma =	0.070		0.12		0.05		0.041		0.037	
Lab	OLR	V/5		Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV
1	2.6	5		3	0.818	3	0.96	4	1.01	0	0.979	3	0.912
2	2.0	2		3	0.924							1	0.946
3	3.0	1						3	0.99				
5	3.2	5		4	0.875	3	0.92	4	1.06	4	0.893	1	0.807
6	1.8	4		1	0.991			0	0.22	3	0.855	3	0.851
8	1.8	4		NR	< 1	3	1.10	4	1.04	0	1.000	0	0.760
9	2.8	5		3	0.928	4	1.08	1	1.11	3	0.911	3	0.906
12	3.0	3		3	0.800	2	1.20	4	1.04				
13	3.0	5		4	0.835	2	0.90	3	1.06	3	0.920	3	0.915
15	3.2	5		4	0.844	3	1.11	1	0.94	4	0.869	4	0.869
16	1.5	4		1	0.747	1	0.84	4	1.05			0	0.795
18	3.4	5		4	0.900	3	0.96	3	0.98	3	0.861	4	0.888
19	3.4	5		4	0.850	3	1.13	3	0.99	4	0.887	3	0.843
20	2.5	4		4	0.850			0	0.84	3	0.864	3	0.900
23	3.6	5		4	0.895	4	0.97	2	1.09	4	0.900	4	0.890
25	2.2	5		1	0.990	4	1.00	0	1.40	4	0.870	2	0.920
29	3.7	3						3	1.06	4	0.885	4	0.880
32	2.3	3		0	0.665			4	1.02			3	0.917
36	2.3	3		3	0.924	0	1.79	4	1.02				
37	2.3	4		1	0.990			4	1.02	3	0.916	1	0.818
38	3.8	4		4	0.885	3	0.95	4	1.04			4	0.870
42	2.5	2						4	1.05	1	0.961		
45	2.3	4		4	0.901	4	0.99	1	1.11			0	1.020
46	2.6	5		4	0.851	4	1.02	1	1.12	0	1.000	4	0.884
48	4.0	1								4	0.894		
52	1.5	4		1	0.999	1	0.83	4	1.02			0	0.956
53	3.5	2						4	1.03	3	0.913		
55	3.5	4		4	0.860	3	1.14	4	1.02			3	0.900
57	1.8	5		4	0.850	0	1.60	2	1.10	3	0.860	0	0.800
59	3.0	5		4	0.870	4	1.00	3	1.06	1	0.820	3	0.850
63	3.0	3		NR	< 0.6	NR	< 0.6	3	1.07	4	0.900	2	0.830
68	0.3	3		0	1.100			1	0.93	0	1.300		
69	4.0	1						4	1.02				
70	4.0	1										4	0.880
72	2.2	5		0	0.070	4	1.03	3	1.06	0	1.400	4	0.890
74	2.0	1								2	0.830		
76	2.0	3		4	0.850			1	0.94			1	0.950
78	0.5	2						0	0.63			1	0.938
83	0.0	3		0	0.730					0	0.804	0	0.750
84	0.0	3		0	4.080			0	1.37			0	0.990
85	2.3	4		3	0.817	2	1.20	0	0.89			4	0.880
87	1.4	5		2	0.790	1	1.26	0	1.24	4	0.870	0	0.800
88	2.0	4		2	0.974			2	1.10	0	0.990	4	0.870
91	2.7	3		3	0.910	4	1.04	1	0.95				
92	3.0	4		2	0.950			3	1.06	3	0.920	4	0.872
93	4.0	1								4	0.875		
94	3.3	3		4	0.877	3	0.95	3	0.99				
96	3.6	5		4	0.850	4	1.01	3	1.07	3	0.857	4	0.875
97	3.0	5		4	0.880	3	0.94	1	1.11	3	0.865	4	0.880
104	3.3	4				4	1.02	1	1.11	4	0.880	4	0.884
105	4.0	1								4	0.892		
111	3.7	3		4	0.860			4	1.05			3	0.860
113	3.0	5		4	0.878	1	0.81	4	1.02	2	0.840	4	0.887
114	1.5	4		0	0.700	2	0.91	0	0.15	4	0.879		
117	0.4	5		1	1.000	0	4.48	0	0.61	1	0.960	0	1.070
118	3.0	5		3	0.830	4	1.06	4	1.03	2	0.940	2	0.830
119	2.2	5		3	0.820	1	1.21	1	1.12	2	0.950	4	0.880
120	4.0	3						4	1.02	4	0.910	4	0.870
123	3.4	5		4	0.840	3	1.09	3	1.07	4	0.890	3	0.910
127	3.2	5		4	0.880	4	1.03	4	1.03	0	0.660	4	0.874
128	3.4	5		4	0.890	2	0.90	4	1.05	4	0.896	3	0.900
129	3.2	5		2	0.770	3	0.96	3	1.00	4	0.900	4	0.867
134	3.2	5		3	0.830	3	1.10	3	1.00	4	0.896	3	0.860
137	1.3	3						0	0.73	4	0.890	0	1.011
138	2.8	4		3	0.940	4	1.00	2	0.97			2	0.840
140	2.0	1								2	0.830		
143	3.5	4		4	0.880	3	1.10	4	1.04			3	0.858
145	3.2	5		4	0.880	4	1.05	4	1.02	2	0.845	2	0.920
149	2.7	3		3	0.820			1	0.95	4	0.870		
154	3.2	5		4	0.839	4	0.99	3	0.99	3	0.860	2	0.840
158	2.8	5		3	0.830	2	0.89	4	1.01	3	0.856	2	0.840
161	2.7	3		1	0.977					3	0.915	4	0.867
173	2.0	4		0	1.490			0	2.40	4	0.874	4	0.890
179	0.0	3		0	1.469					0	1.010	0	1.287
180	2.8	5		3	0.831	0	1.36	4	1.04	3	0.850	4	0.890
181	2.0	4		0	1.100	0	1.68			4	0.895	4	0.880
182	0.0	1								0	0.977		
183	3.0	3		1	0.759	4	1.03					4	0.880
190	3.4	5		3	0.820	3	1.11	4	1.03	3	0.850	4	0.873
191	4.0	3						4	1.02	4	0.884	4	0.890
193	3.0	1						3	1.00				

Table 9. --*Laboratory performance ratings for standard reference water sample Hg-14 (mercury)*

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

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

Analyte = Hg (Mercury)
MPV = 0.70
F-pseudosigma = 0.29

Lab	Rating	RV
1	4	0.64
3	4	0.65
5	1	1.20
7	4	0.70
8	1	1.20
12	4	0.80
13	3	0.50
15	4	0.66
16	4	0.60
23	3	0.53
24	0	2.70
29	4	0.71
32	3	0.52
36	4	0.79
37	0	1.38
42	4	0.65
45	4	0.78
46	4	0.58
48	3	0.55
50	4	0.60
52	3	0.53
55	3	0.47
63	0	2.00
68	4	0.70
69	3	0.52
70	4	0.56
74	3	0.93
75	3	0.45
76	2	1.06
78	3	0.96
81	4	0.70
86	0	1.47
87	4	0.75
92	3	0.53
96	3	0.90
97	4	0.75
105	4	0.61
108	2	1.13
109	4	0.68
113	4	0.60
119	3	0.90
120	4	0.66
122	3	0.48
126	0	1.40
127	3	0.96
128	0	2.10
133	3	0.50
134	4	0.62
136	0	3.10
138	4	0.56
141	4	0.84
151	3	0.53
161	0	4.73
173	4	0.69
179	3	0.55
180	0	2.46
181	2	1.04
182	4	0.70
194	4	0.59

Table 10. --*Statistical summary of reported data for standard reference sample T-119 (trace constituents)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

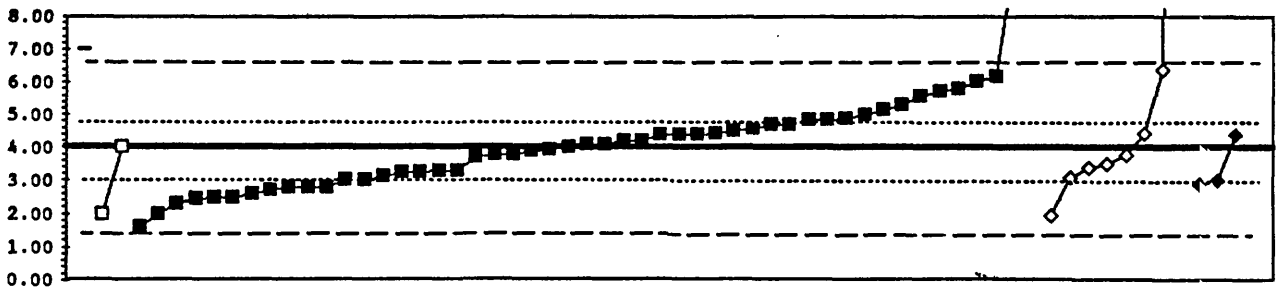
0. Other/Not reported
1. AA: direct, air = atomic absorption: direct,air
2. AA: direct, N2O = atomic absorption: direct,nitrous oxide
3. AA: graphite furnace = atomic absorption: graphite furnace
4. ICP = inductively coupled plasma
5. DCP = direct coupled plasma
6. ICP/MS = inductively coupled plasma/mass spectrometry
10. AA: extraction = atomic absorption: extraction [chelating agent(s) specified]
11. AA: hydride = atomic absorption: hydride [reducing agent specified]
22. Color: = colorimetric [color reagent specified]

Abbreviations and symbols

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

Table 10. *--Statistical summary of reported data for standard reference water sample T-119 (trace constituents)--Continued*

Ag (Silver) μg/L

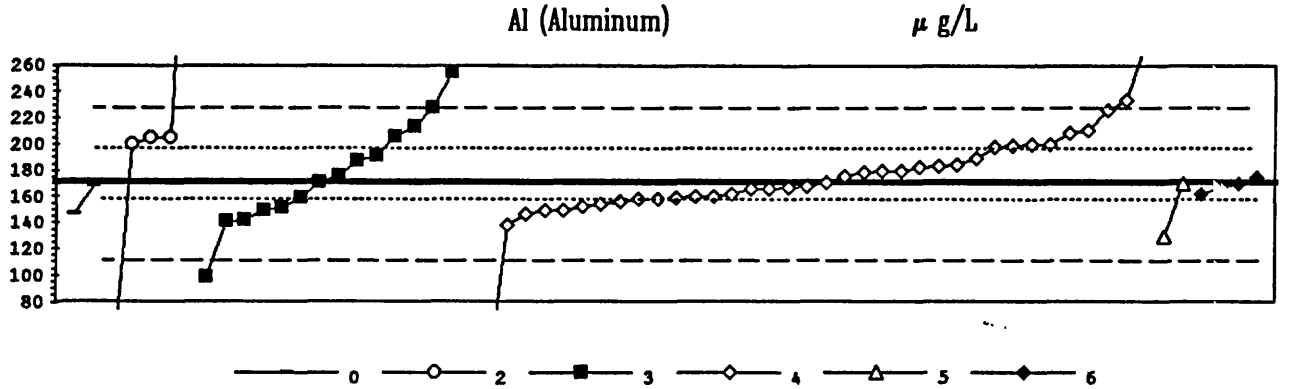


0. Other		3. AA: graphite furnace					
1. AA: direct air		4. ICP					
2. AA: direct N2O		6. ICP/MS					
	N =	1	2	0	49	8	3
	Minimum =	7.00	2.00		1.59	1.95	2.90
	Maximum =	7.00	4.00		9.90	55.00	4.40
	Median =				4.07		
	St dev =				1.13		

MPV =	4.00	+/- 0.22
F-pseudosigma =	1.31	
N =	63	
Hu =	4.77	
Hl =	3.00	

Lab	Rating	Z-value	0	1	2	3	4	6
1.	3	0.69				4.90		
3.	4	0.07				4.09		
5.1	3	-0.91				2.80		
5.2	4	0.32					4.42	
6.	3	-0.56				3.26		
7.	NR						< 5	
12.	3	0.76				5.00		
13.	4	-0.15				3.80		
15.	4	-0.24				3.69		
16.	NR						< 7	
18.	NR						< 10	
23.	4	-0.05				3.94		
24.	3	-0.99				2.70		
25.	NR						< 4	
29.	2	1.32				5.73		
32.	4	0.30						4.40
36.	1	-1.84				1.59		
37.1	3	-0.84						2.90
45.	2	-1.19				2.44		
46.	3	0.64				4.84		
48.	2	-1.14				2.50		
50.	3	-0.76				3.00		
52.	3	-0.57				3.25		
55.	3	0.66				4.87		
57.	3	-0.53				3.30		
63.	2	-1.14				2.50		
68.	2	1.22				5.60		
69.	4	-0.08				3.90		
70.	3	-0.92				2.79		
72.	1	-1.56					1.95	
73.	4	-0.46					3.40	
74.	3	-0.76				3.00		
76.	3	-0.65				3.15		
78.	4	0.38				4.50		
81.	4	-0.15					3.80	
85.	NR			< 5				
87.	4	0.00		4.00				
90.	1	1.68				6.20		
96.	4	0.05				4.07		
97.	1	1.55				6.03		
101.	3	-0.69					3.10	
103.	NR						< 5	
105.	3	0.88				5.15		
107.	4	-0.17				3.78		
113.	4	0.17				4.22		
114.	1	-1.52		2.00				
117.	4	0.17				4.22		
119.	2	-1.07				2.60		
120.	4	0.01				4.01		
121.	4	0.46				4.60		
127	3	0.53				4.69		
128	3	-0.53				3.30		
133	1	1.83					6.40	
134	3	0.53				4.70		
136	0	4.50				9.90		
136	0	4.50				9.90		
138	4	0.34				4.44		
141	4	-0.38					3.50	
144	3	-0.91				2.80		
149	4	0.30				4.40		
151	NR			< 10				
153	3	0.99				5.30		
154	2	1.37				5.80		
161	0	38.87					55.00	
173	4	0.30				4.40		
179	1	-1.52				2.00		
180	NR						< 4	
181	0	2.29	7.00					
191	3	-0.76						3.00
193	4	0.30				4.40		
194	2	-1.30				2.30		

Table 10. *--Statistical summary of reported data for standard reference water sample T-119 (trace constituents)--Continued*



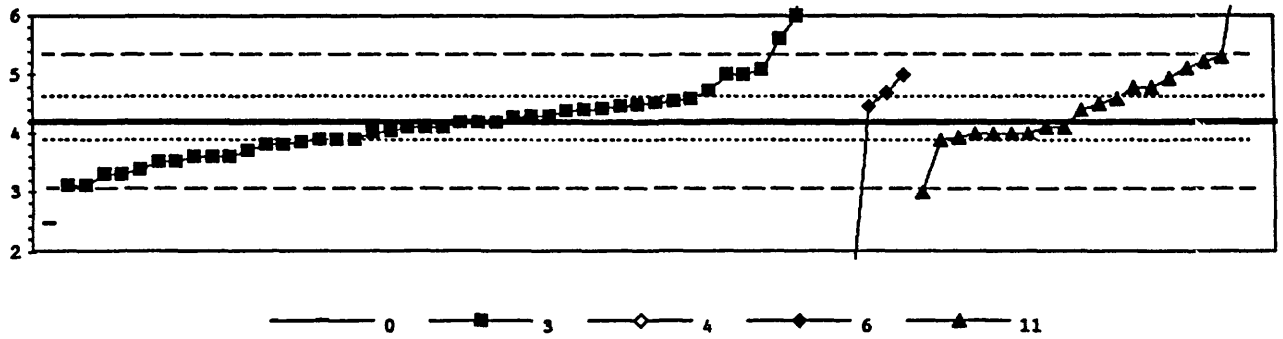
0. Other		3. AA: graphite furnace					
1. AA: direct air		4. ICP					
2. AA: direct N2O		6. ICP/MS					
	N =	2	5	14	36	2	4
	Minimum =	147	16	99	2	130	162
	Maximum =	168	490	255	277	170	175
	Median =			182	170		
	St Dev =			41	23		

MPV =	171 +/- 5
F-pseudosigma =	30
N =	63
Hu =	198
Hl =	158

Lab	Rating	Z-value	0	2	3	4	5	6
1.	4	-0.03					170	
3.	3	0.93				199		
5.2	4	0.27				179		
7.	3	0.89				198		
8.	3	-0.55				154		
12.	0	-5.38				10		
13.	3	0.97		200				
15.	4	0.40				183		
16.	NR					< 300		
18.	3	-0.60				153		
23.	4	-0.10	168					
24.	4	-0.30				162		
25.	4	0.17				176		
27.	2	-1.37					130	
30.	4	-0.03						170
32.	4	-0.13						167
36.	3	-0.80	147					
37.1	4	-0.30						162
45.	4	0.00				171		
46.	3	0.60				189		
48.	2	1.30				210		
50.	4	0.00			171			
52.	4	-0.17				166		
55.	4	-0.40				159		
57.	3	0.97				200		
59.	4	-0.37				160		
63.	2	1.14		205				
68.	3	0.97				200		
69.	3	0.53			187			
70.	2	-1.10				138		
72.	4	-0.17				166		
73.	4	-0.38				160		
74.	3	-0.80				147		
78.	3	-0.97			142			
81.	1	1.84				226		
85.	4	0.43				184		
86.	4	-0.13				167		
96.	0	-5.19		16				
97.	1	1.90			228			
101.	0	3.54				277		
103.	3	-0.70				150		
105.	4	0.47				185		
107.	4	0.17			176			
113.	3	-0.65			152			
114.	2	1.14		205				
116.	4	-0.37				160		
117.	2	1.43			214			
119.	3	-0.70			150			
120.	0	10.65		490				
122.	0	2.80			255			
127.	4	-0.47				157		
128.	0	-5.64				2		
133.	4	0.30				180		
136.	3	0.67			191			
138.	4	0.30				180		
141.	4	-0.40				159		
145.	2	1.26				209		
149.	3	-1.00			141			
153.	2	1.17			206			
154.	4	-0.10				168		
161.	0	2.10				234		
180.	3	-0.70				150		
181.	0	-2.40			99			
191.	4	0.13						175

Table 10. *--Statistical summary of reported data for standard reference water sample T-119 (trace constituents)--Continued*

As (Arsenic) μ g/L



0. Other			4. ICP					
2. AA: direct N2O			6. ICP/MS					
3. AA: graphite furnace			11. AA: hydride					
	N =	1	0	43	1	4	19	
	Minimum =	2.46		3.10	13.90	1.20	3.00	
	Maximum =			11.00		5.00	7.00	
	Median =			4.11			4.41	
	St Dev =			0.56			0.59	

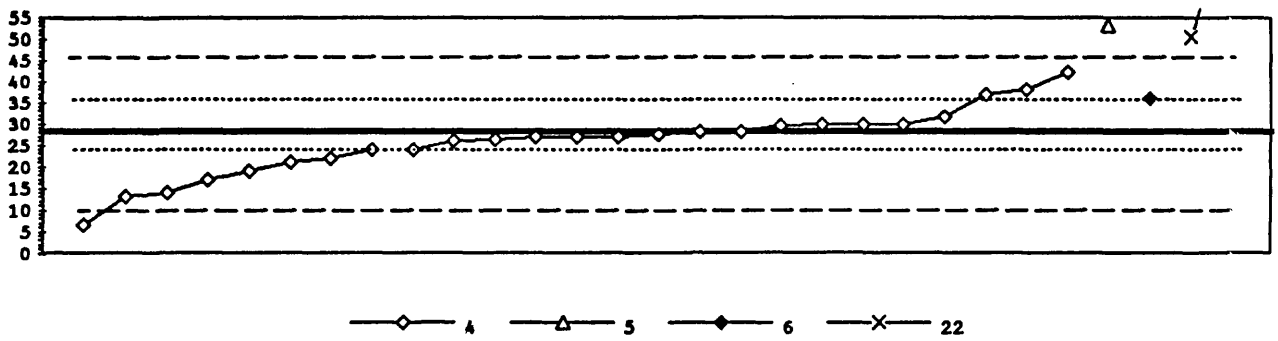
	MPV =	4.20	+/-	0.09				
	F-pseudosigma =	0.57						
	N =	68						
	Hu =	4.65						
	Hl =	3.88						

Lab	Rating	Z-value	0	2	3	4	6	11
1.	2	1.31						4.95
3.	4	-0.28			4.04			
5.1	4	0.00			4.20			
5.2	NR					< 30		
7.	3	-0.52			3.90			
10.	3	-0.52						3.90
12.	NR				< 10			
13.	3	-0.70			3.80			
15.	3	-0.70			3.80			
16.	NR				< 5			
18.	1	1.91						5.30
23.	2	-1.41			3.39			
24.	0	4.87						7.00
25.	NR					< 59		
27.	4	0.33			4.39			
29.	1	1.57			5.10			
30.	2	1.39					5.00	
32.	3	0.87					4.70	
35.	4	0.37						4.41
36.	3	0.91			4.72			
37.1	4	0.47					4.47	
45.	4	0.49			4.48			
46.	2	-1.04			3.60			
48.	4	0.00			4.20			
50.	4	-0.35						4.00
51.	0	2.44			5.60			
52.	3	0.63			4.56			
55.	3	0.52			4.50			
57.	3	0.70						4.60
59.	NR					< 10		
63.	2	-1.04			3.60			
68.	1	-1.57			3.30			
69.	3	-0.52			3.90			
70.	4	0.16			4.29			
72.	2	-1.22			3.50			
73.	NR					< 50		
74.	0	3.13			6.00			
75.	4	-0.45						3.94
76.	3	-0.54			3.89			
78.	2	1.39			5.00			
81.	2	-1.04			3.60			
85.	2	1.04						4.80
86.	4	-0.33						4.01
87.	2	1.04						4.80
90.	4	0.17			4.30			
96.	4	0.42			4.44			
97.	1	1.76						5.21
101.	0	16.88				13.90		
105.	3	0.70			4.60			
107.	4	-0.31			4.02			

Lab	Rating	Z-value	0	2	3	4	6	11
109	1	-1.57			3.30			
113	4	-0.16			4.11			
117	4	0.17			4.30			
119	4	-0.35						4.00
120	3	0.56						4.52
123	1	-1.91			3.10			
126	4	-0.35						4.00
127	3	-0.59			3.86			
128	3	-0.87			3.70			
133	0	-3.03	2.46					
134	4	-0.17						4.10
136	4	-0.17			4.10			
136	4	-0.17			4.10			
138	2	-1.22			3.50			
141	0	11.84			11.00			
144	1	-1.91			3.10			
145	NR					< 21		
151	4	-0.17						4.10
154	4	0.35			4.40			
173	3	0.57			4.53			
179	2	1.39			5.00			
180	1	1.58						5.11
181	4	0.00			4.20			
182	0	-2.09						3.00
191	0	-5.22					1.20	
193	NR				< 5			
194	NR				< 10			

Table 10. *--Statistical summary of reported data for standard reference water sample T-119 (trace constituents)--Continued*

B (Boron) µg/L

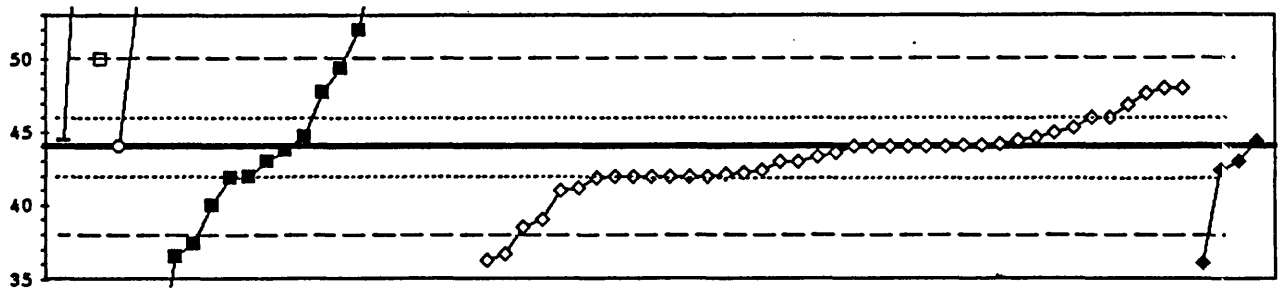


0. Other			5. DCP					MPV =	28.0 +/- 2.2
3. AA: graphite furnace			6. ICP/MS					F-pseudosigma =	8.9
4. ICP			22. Colorimetric					N =	30
		N =	0	0	25	1	1	3	Hu = 36.0
		Minimum =			6.8	53.0	36.0	50.5	Hl = 24.0
		Maximum =			42.3			95.0	
		Median =			27.0				
		St Dev =			7.8				

Lab	Rating	Z-value	0	3	4	5	6	22	
1.	4	0.19			29.7				
3.	1	1.61			42.3				
5.2	4	-0.19			26.3				
8.	2	-1.25			16.9				
15.	2	1.01			37.0				
16.	NR				< 200				
18.	1	-1.57			14.0				
24.	4	-0.45			24.0				
25.	4	0.40			31.6				
27.	0	2.81				53.0			
32.	3	0.90					36.0		
37.1	0	5.73						79.0	curcumin
45.	0	2.53						50.5	azomethine
46.	4	-0.04			27.6				
48.	NR				< 10				
52.	NR				< 150				
57.	NR				< 100				
63.	4	-0.11			27.0				
68.	2	1.12			38.0				
70.	4	0.00			28.0				
74.	4	-0.11			27.0				
85.	4	0.22			30.0				
86.	3	-1.00			19.1				
103.	4	0.00			28.0				
116.	3	-0.67			22.0				
119.	4	0.22			30.0				
121.	4	0.22			30.0				
127.	4	-0.11			27.0				
128.	3	-0.79			21.0				
129.	0	7.53						95.0	azomethine
134.	4	-0.22			26.0				
141.	0	-2.39			6.8				
145.	4	-0.45			24.0				
154.	1	-1.69			13.0				
180.	0				< 6				
194.	NR				< 100				

Table 10. *--Statistical summary of reported data for standard reference water sample T-119 (trace constituents)--Continued*

Ba (Barium) μg/L



0. Other
1. AA: direct air
2. AA: direct N2O
3. AA: graphite furnace
4. ICP
6. ICP/MS

	2	1	2	18	38	4
N =						
Minimum =	44.5	50.0	44.0	28.8	36.7	36.1
Maximum =	66.0	50.0	54.0	82.1	48.0	44.4
Median =				46.2	43.8	
St Dev =				4.8	2.4	

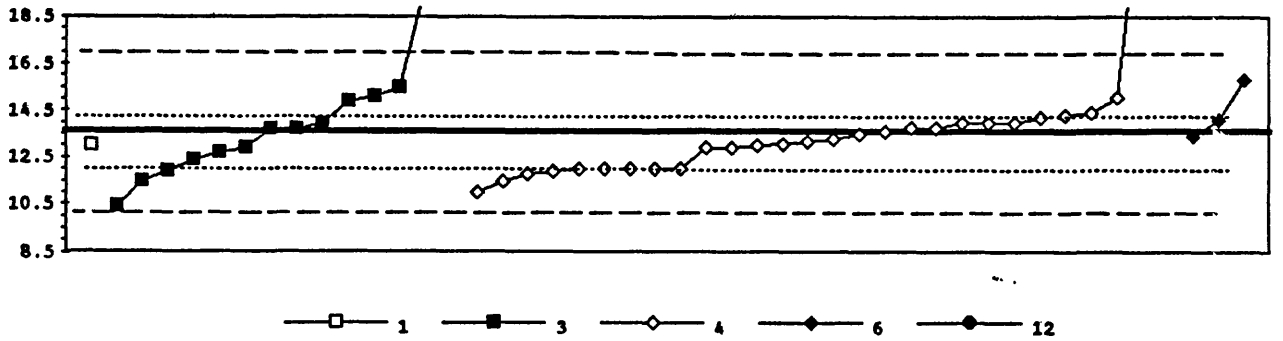
MPV = 44.0 +/- 0.5
F-pseudosigma = 3.0
N = 66
Hu = 46.0
Hl = 42.0

Lab	Rating	Z-value	0	1	2	3	4	6
1.	3	-0.54					42.4	
3.	4	0.00					44.0	
5.2	4	0.03					44.1	
7.	4	-0.24					43.3	
8.	0	-2.60					36.3	
13.	1	1.82				49.4		
15.	4	0.07					44.2	
16.	0	-2.46					36.7	
18.	2	-1.01					41.0	
19.	3	-0.61					42.2	
23.	0	-2.53				36.5		
24.	4	0.17					44.5	
25.	4	0.20					44.6	
27.	0	7.42	66.0					
29.	0	2.02		50.0				
30.	4	0.13						44.4
32.	0	-2.66						36.1
36.	4	0.17	44.5					
37.1	3	-0.54						42.4
45.	4	-0.13					43.6	
46.	4	0.00					44.0	
48.	0	-2.23				37.4		
50.	2	-1.35				40.0		
52.	3	-0.67					42.0	
55.	3	-0.71					41.9	
57.	NR						< 50	
59.	3	-0.67					42.0	
63.	3	0.67					46.0	
68.	4	-0.34					43.0	
69.	0	5.40				60.0		
70.	4	0.00					44.0	
72.	1	-1.69					39.0	
74.	3	-0.67					42.0	
75.	0	-5.13				28.8		
76.	4	0.24				44.7		
78.	2	1.25				47.7		
81.	2	1.35					48.0	
85.	4	0.34					45.0	
86.	1	-1.85					38.5	
87.	0	3.37			54.0			
90.	0	6.61				63.6		
96.	4	0.00			44.0			
97.	0	9.98				73.6		
101.	4	0.03					44.1	
103.	4	0.00					44.0	
105.	3	-0.67					42.0	
107.	4	-0.07				43.8		
113.	0	12.85				82.1		
116.	3	-0.67					42.0	
117.	3	-0.71				41.9		

Lab	Rating	Z-value	0	1	2	3	4	6
119	3	-0.67					42.0	
121	3	0.67					46.0	
127	3	-0.64					42.1	
128	4	0.00					44.0	
133	3	-0.94					41.2	
134	2	1.35					48.0	
138	4	0.00					44.0	
141	4	0.44					45.3	
145	2	1.24					47.7	
151	0	4.72				58.0		
153	4	-0.34				43.0		
154	4	-0.34					43.0	
173	0	4.72				58.0		
180	3	0.98					46.9	
181	0	2.70				52.0		
191	4	-0.34						43.0
193	3	-0.67				42.0		
194	NR						< 100	

Table 10. *--Statistical summary of reported data for standard reference water sample T-119 (trace constituents)--Continued*

Be (Beryllium) μ g/L



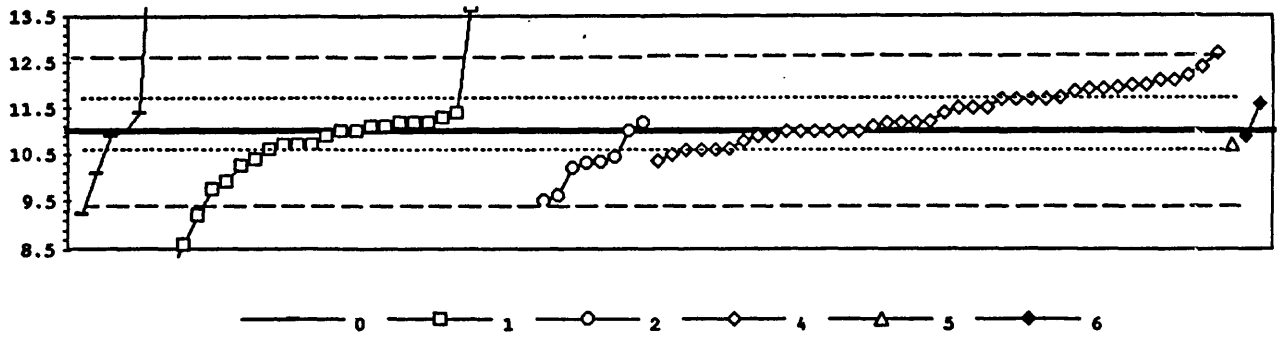
0. Other			4. ICP				
1. AA: direct air			6. ICP/MS				
3. AA: graphite furnace			12. Flame emission				
	N =	0	1	14	27	3	1
	Minimum =		13.0	10.4	11.0	13.4	114.0
	Maximum =			155.0	40.0	15.8	
	Median =			13.5	13.2		
	St Dev =			1.3	1.1		

MPV =	13.6 +/- 0.3
F-pseudosigma =	1.7
N =	46
Hu =	14.3
Hl =	12.0

Lab	Rating	Z-value	0	1	3	4	6	12
1.	4	-0.02				13.5		
3.	4	0.43				14.3		
7.	2	-1.03				11.8		
8.	4	-0.15				13.3		
12.	NR					< 20		
15.	4	0.14				13.8		
16.	3	-0.97				11.9		
18.	3	-0.91				12.0		
23.	2	1.14			15.5			
25.	4	0.26				14.0		
30.	2	1.31					15.8	
32.	4	-0.09					13.4	
36.	0	58.91						114.0
37.1	4	0.32					14.1	
45.	4	0.38				14.2		
46.	4	0.13				13.8		
48.	0	15.51				40.0		
50.	4	0.26			14.0			
52.	3	0.90			15.1			
55.	4	-0.27				13.1		
57.	2	-1.50				11.0		
63.	0	6.71				25.0		
68.	3	-0.91				12.0		
70.	3	-0.91				12.0		
72.	2	-1.21				11.5		
74.	3	-0.91				12.0		
78.	3	0.79			14.9			
81.	4	-0.39			12.9			
85.	4	-0.33		13.0				
86.	3	-0.91				12.0		
97.	4	0.08			13.7			
103.	4	0.26				14.0		
105.	4	0.26				14.0		
119.	4	0.08			13.7			
120.	3	-0.52			12.7			
127.	4	-0.21				13.2		
128.	4	-0.33				13.0		
133.	4	-0.39				12.9		
138.	4	0.02				13.6		
141.	4	0.49				14.4		
144.	2	-1.21			11.5			
145.	3	0.89				15.1		
151.	3	-0.97			11.9			
154.	0	82.96			155.0			
179.	1	-1.85			10.4			
180.	4	-0.39				12.9		
181.	0	3.78			20.0			
194.	3	-0.68			12.4			

Table 10. *--Statistical summary of reported data for standard reference water sample T-119 (trace constituents)--Continued*

Ca (Calcium) m g/L



0. Other		4. ICP					
1. AA: direct air		5. DCP					
2. AA: direct N2O		6. ICP/MS					
	N =	6	26	8	40	1	2
	Minimum =	9.2	7.9	9.5	10.4	10.7	10.9
	Maximum =	17.0	29.4	11.2	12.7	10.7	11.6
	Median =		11.0		11.3		
	St Dev =		1.0		0.6		

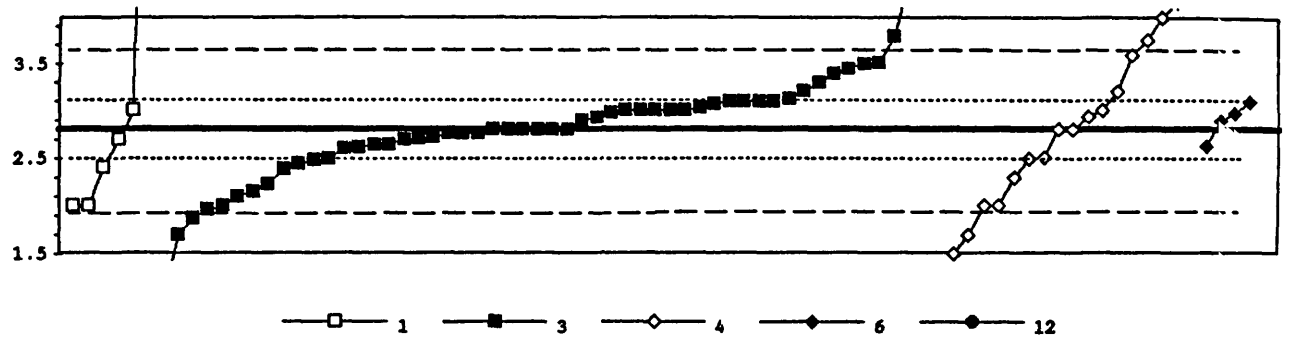
MPV = 11.0 +/- 0.1
F-pseudosigma = 0.8
N = 83
Hu = 11.7
Hl = 10.6

Lab	Rating	Z-value	0	1	2	4	5	6
1.	2	1.07				11.9		
3.	2	1.12				11.9		
5.2	3	0.87				11.7		
6.	0	-2.25		9.2				
7.	2	1.39				12.1		
8.	4	0.26				11.2		
9.	2	-1.37		9.9				
12.	2	1.25				12.0		
13.	4	-0.37		10.7				
15.	4	0.25				11.2		
16.	4	0.00				11.0		
18.	4	0.25				11.2		
19.	4	0.25				11.2		
23.	3	-0.87			10.3			
24.	3	0.87				11.7		
25.	0	2.12				12.7		
27.	4	-0.35					10.7	
32.	4	-0.12						10.9
36.	0	-2.20	9.2					
37.1	0	3.37		13.7				
37.2	2	-1.12	10.1					
42.	4	0.00				11.0		
43.	3	0.62				11.5		
45.	4	0.00		11.0				
46.	2	1.19				12.0		
48.	4	-0.50				10.6		
51.	3	-0.81				10.4		
52.	4	0.00				11.0		
54.	4	0.00	11.0					
55.	4	0.49				11.4		
57.	4	0.00				11.0		
59.	3	0.87				11.7		
63.	3	-1.00			10.2			
64.	4	0.50	11.4					
68.	4	0.00				11.0		
69.	3	-0.75		10.4				
70.	2	1.25				12.0		
72.	4	-0.50				10.6		
74.	4	-0.50				10.6		
75.	4	-0.50		10.6				
78.	0	3.87		14.1				
81.	4	0.00				11.0		
83.	4	0.25		11.2				
84.	0	-3.92		7.9				
85.	4	0.25		11.2				
86.	4	0.12				11.1		
87.	4	0.00			11.0			
92.	4	-0.12		10.9				
96.	3	-0.82			10.3			
97.	1	-1.57		9.7				

Lab	Rating	Z-value	0	1	2	4	5	6
101	4	0.12		11.1				
103	3	-0.62				10.5		
105	4	-0.12				10.9		
107	0	5.62		15.5				
109	4	0.25		11.2				
113	4	0.37		11.3				
114	1	-1.87			9.5			
116	2	1.12				11.9		
117	3	-0.94		10.3				
119	4	-0.12				10.9		
120	3	-0.70			10.4			
121	4	-0.25				10.8		
123	0	23.00		29.4				
127	4	0.50		11.4				
128	3	0.90				11.7		
129	0	7.49		17.0				
133	4	-0.45				10.6		
134	4	0.00		11.0				
136	4	0.25			11.2			
138	2	1.50				12.2		
140	4	-0.37		10.7				
141	3	0.62				11.5		
145	1	1.75				12.4		
151	4	-0.37		10.7				
153	4	-0.12	10.9					
154	3	0.62				11.5		
179	0	-3.00		8.6				
180	3	0.87				11.7		
181	0	7.49	17.0					
182	1	-1.75			9.6			
191	3	0.75						11.6
193	4	0.12		11.1				
194	2	1.37				12.1		

Table 10. --*Statistical summary of reported data for standard reference water sample T-119 (trace constituents)--Continued*

Cd (Cadmium) μ g/L



0. Other			4. ICP				
1. AA: direct air			6. ICP/MS				
3. AA: graphite furnace			12. Flame emission				
	N =	0	6	53	17	4	1
	Minimum =		2.00	1.00	1.50	2.63	11.00
	Maximum =		20.00	5.20	36.00	3.10	11.00
	Median =			2.80	2.80		
	St Dev =			0.78	0.72		

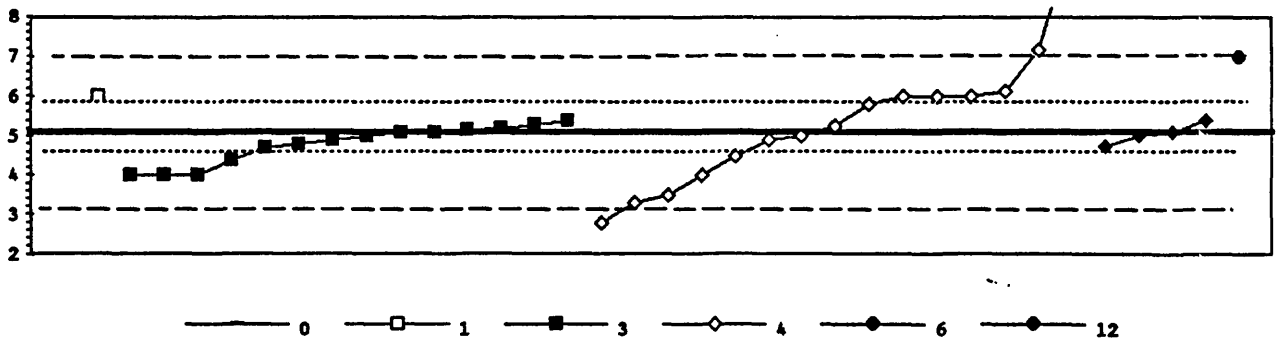
MPV = 2.80 +/- 0.07
F-pseudosigma = 0.44
N = 81
Hu = 3.10
Hl = 2.50

Lab	Rating	Z-value	0	1	3	4	6	12
1.	3	0.90			3.20			
3.	4	-0.18			2.72			
5.1	1	-1.80			2.00			
5.2	0	3.04				4.15		
6.	3	0.52			3.03			
7.	NR					< 4		
8.	0	-2.47				1.70		
9.	2	1.12			3.30			
10.	4	0.45			3.00			
12.	2	1.35			3.40			
13.	2	-1.28			2.23			
15.	0	-2.09			1.87			
16.	NR					< 5		
18.	0	-4.05			1.00			
19.	1	-1.80				2.00		
23.	3	-0.72			2.48			
24.	4	0.45			3.00			
25.	NR					< 4		
27.	4	-0.36			2.64			
29.	1	-1.57			2.10			
30.	3	0.67					3.10	
32.	4	-0.38					2.63	
36.	2	1.44			3.44			
37.1	4	0.40					2.98	
45.	4	-0.45			2.60			
46.	4	-0.07			2.77			
48.	4	0.00			2.80			
50.	4	0.45			3.00			
51.	0	5.40			5.20			
52.	4	-0.20			2.71			
55.	0	-2.47			1.70			
57.	4	-0.22			2.70			
59.	3	-0.67				2.50		
63.	0	2.25			3.80			
68.	4	0.45				3.00		
69.	3	0.67			3.10			
70.	3	-0.79			2.45			
72.	1	-1.80				2.00		
73.	4	0.00				2.80		
74.	3	0.90				3.20		
75.	3	-0.92			2.39			
76.	4	0.29			2.93			
78.	1	1.57			3.50			
81.	4	0.45			3.00			
85.	NR					< 5		
86.	3	-0.65				2.51		
87.	1	-1.80		2.00				
90.	0	3.60			4.40			
92.	4	-0.22		2.70				
96.	3	0.72			3.12			

Lab	Rating	Z-value	0	1	3	4	6	12
97	1	-1.89			1.96			
101	4	0.00				2.80		
103	0	2.70				4.00		
105	4	0.02			2.81			
107	4	-0.40			2.62			
111	4	-0.34			2.65			
113	4	-0.07			2.77			
114	1	-1.80		2.00				
117	1	1.60			3.51			
119	4	0.00			2.80			
120	4	0.40			2.98			
121	0	-2.92				1.50		
127	4	0.31				2.94		
128	4	0.22			2.90			
133	2	-1.12				2.30		
134	4	0.00			2.80			
136	0	5.17			5.10			
138	3	0.61			3.07			
140	4	0.45		3.00				
141	0	2.14				3.75		
144	3	0.67			3.10			
145	NR					< 2		
149	4	0.45			3.00			
151	4	-0.09			2.76			
153	3	0.67			3.10			
154	4	0.00			2.80			
158	3	0.67			3.10			
161	0	74.64				36.00		
173	2	-1.46			2.15			
179	3	-0.67			2.50			
180	1	1.80				3.60		
181	0	18.44						11.00
182	0	38.67		20.00				
191	4	0.22					2.90	
193	3	-0.90		2.40				
194	4	0.00			2.80			

Table 10. *--Statistical summary of reported data for standard reference water sample T-119 (trace constituents)--Continued*

Co (Cobalt) μ g/L



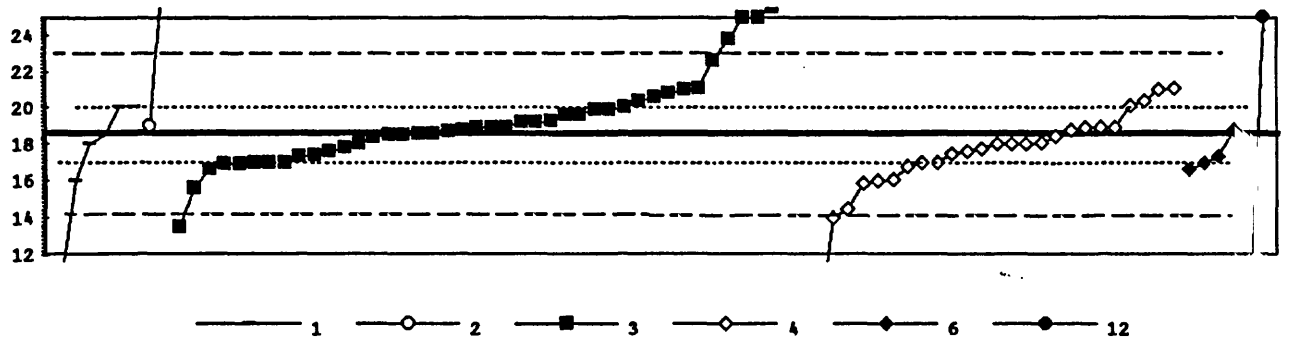
0. Other				4. ICP				
1. AA: direct air				6. ICP/MS				
3. AA: graphite furnace				12. Flame emission				
	N =	1	1	14	15	4	1	
	Minimum =	20.00	6.00	4.00	2.80	4.75	6.96	
	Maximum =	20.00	6.00	5.40	10.00	5.40	6.96	
	Median =			4.96	5.25			
	St Dev =			0.50	1.27			

MPV =	5.10	+/-	0.22					
F-pseudosigma =	0.96							
N =	36							
Hu =	5.90							
Hl =	4.61							

Lab	Rating	Z-value	0	1	3	4	6	12
1	4	0.00			5.10			
3	0	5.10				10.00		
5	0	2.13				7.14		
7	NR					< 7		
8	0	-2.40				2.80		
15	4	-0.41			4.71			
16	NR					< 10		
18	3	0.94				6.00		
24	3	0.73				5.80		
25	NR					< 6		
30	4	-0.10					5.00	
32	4	0.00					5.10	
36	1	1.94						6.96
37	4	-0.36					4.75	
46	NR					< 40		
48	NR					< 50		
50	2	-1.15			4.00			
51	4	0.10			5.20			
52	4	0.05			5.15			
55	2	-1.15			4.00			
57	NR					< 50		
63	4	0.31			5.40			
68	3	0.94				6.00		
70	NR					< 20		
72	3	-0.63				4.50		
74	1	-1.67				3.50		
81	4	-0.31			4.80			
85	NR					< 10		
86	4	-0.19				4.92		
92	3	0.94		6.00				
97	3	-0.75			4.38			
103	3	0.94				6.00		
105	NR					< 25		
121	4	-0.21			4.90			
127	4	-0.08			5.02			
128	2	-1.15				4.00		
133	1	-1.88				3.30		
134	4	0.21			5.30			
136	2	-1.15			4.00			
138	4	0.00			5.10			
141	4	0.16				5.25		
145	2	1.08				6.14		
180	4	-0.10				5.00		
182	0	15.52	20.00					
191	4	0.31					5.40	
193	NR			< 5				

Table 10. *--Statistical summary of reported data for standard reference water sample T-119 (trace constituents)--Continued*

Cr (Chromium) µg/L



1. AA: direct air			4. ICP				
2. AA: direct N2O			6. ICP/MS				
3. AA: graphite furnace			12. Flame emission				
	N =	6	2	43	25	4	2
	Minimum =	10.0	19.0	13.5	7.8	16.6	6.0
	Maximum =	20.0	28.0	30.0	21.1	18.8	25.0
	Median =			18.9	18.0		
	St Dev =			3.0	1.2		

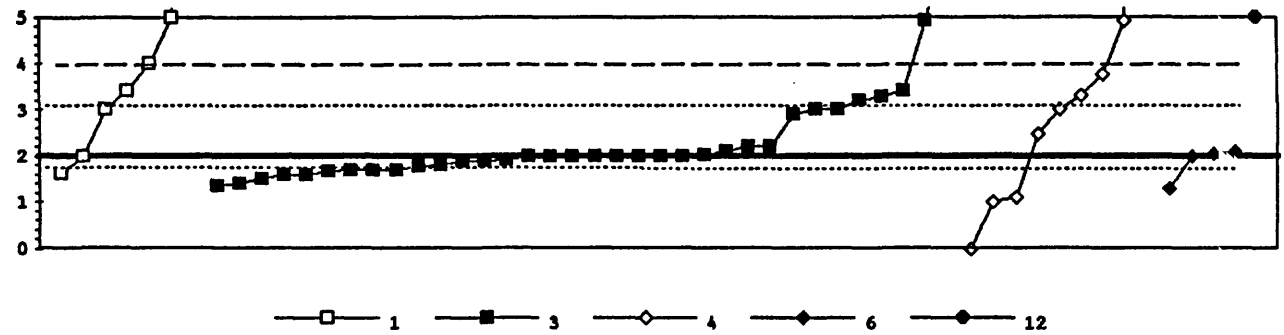
MPV = 18.6 +/- 0.3
F-pseudosigma = 2.2
N = 82
Hu = 20.0
Hl = 17.0

Lab	Rating	Z-value	1	2	3	4	6	12
1.	4	0.47			19.6			
3.	4	-0.43				17.6		
5.	2	1.15				21.1		
7.	2	-1.19				15.9		
9.	0	2.36			23.8			
10.	3	0.65			20.0			
12.	NR					< 20		
13.	4	0.29			19.2			
15.	4	0.34			19.3			
16.	3	-0.70				17.0		
18.	4	-0.25				18.0		
19.	4	-0.36				17.8		
23.	0	5.15			30.0			
24.	3	0.83				20.4		
25.	4	0.16				18.9		
27.	1	1.82			22.6			
29.	4	-0.02			18.5			
30.	3	-0.70					17.0	
32.	3	-0.56					17.3	
36.	0	2.90						25.0
37.	3	-0.88					16.6	
42.	1	-1.82				14.5		
45.	4	0.02			18.6			
46.	2	1.01			20.8			
48.	4	0.47			19.6			
50.	4	-0.25			18.0			
51.	4	0.07			18.7			
52.	4	0.11			18.8			
55.	3	-0.74			16.9			
57.	4	-0.25	18.0					
59.	4	-0.25				18.0		
63.	3	0.65	20.0					
68.	0	-2.05				14.0		
69.	3	-0.88			16.6			
70.	4	0.16			18.9			
72.	2	-1.10				16.1		
73.	4	0.16				18.9		
74.	2	-1.15				16.0		
75.	3	-0.56			17.3			
76.	4	0.16			18.9			
78.	4	-0.34			17.8			
81.	3	-0.70			17.0			
85.	2	1.10				21.0		
86.	3	-0.79				16.8		
87.	4	0.20		19.0				
90.	0	2.90			25.0			
92.	0	-3.84	10.0					
96.	4	0.02			18.6			
97.	3	0.83			20.4			
101.	3	0.70				20.1		

Lab	Rating	Z-value	1	2	3	4	6	12
103	3	-0.70				17.0		
105	2	1.15			21.1			
107	3	-0.52			17.4			
111	2	-1.33			15.6			
113	4	-0.43			17.6			
114	0	4.25		28.0				
117	3	0.92			20.6			
119	3	-0.70			17.0			
120	3	-0.75			16.9			
121	0	2.90			25.0			
122	0	3.13			25.5			
123	3	0.61			19.9			
127	4	-0.07			18.4			
128	4	-0.25				18.0		
133	4	-0.47				17.5		
134	4	0.16				18.9		
136	3	-0.70			17.0			
138	4	0.16			18.9			
140	3	0.65	20.0					
141	4	0.11				18.8		
145	4	-0.06				18.4		
149	0	-2.27			13.5			
151	4	0.29			19.2			
153	3	0.61			19.9			
158	4	-0.02	18.5					
161	0	-4.83				7.8		
173	2	1.10			21.0			
179	0	4.25			28.0			
180	4	-0.20				18.1		
181	0	-5.64						6.0
191	4	0.11					18.8	
193	2	-1.15	16.0					
194	4	-0.02			18.5			

Table 10. *--Statistical summary of reported data for standard reference water sample T-119 (trace constituents)--Continued*

Cu (Copper) μ g/L



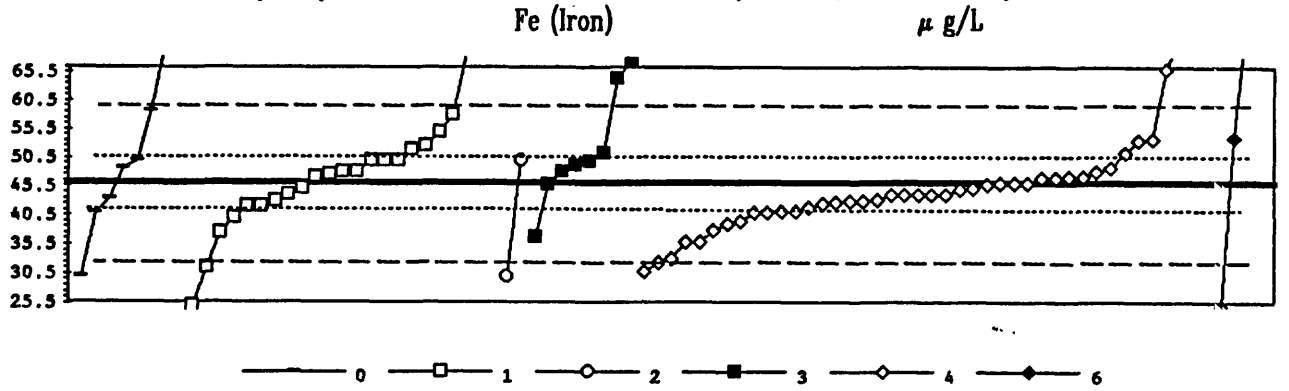
0. Other			4. ICP				
1. AA: direct air			6. ICP/MS				
3. AA: graphite furnace			12. Flame emission				
	N =	0	7	34	9	4	1
	Minimum =		1.61	1.35	0.00	1.30	5.00
	Maximum =		49.80	6.60	31.00	2.10	
	Median =			2.00	3.00		
	St Dev =			0.60	1.71		

MPV = 2.00 +/- 0.18
F-pseudosigma = 1.00
N = 55
Hu = 3.10
Hl = 1.75

Lab	Rating	Z-value	0	1	3	4	6	12
1	4	0.00			2.00			
3	NR					< 3		
5	NR					< 5		
6	4	0.21			2.21			
7	NR					< 4		
10	3	1.00			3.00			
12	4	0.00			2.00			
13	NR				< 50			
15	3	-0.65			1.35			
16	NR					< 10		
18	NR					< 10		
23	4	-0.32			1.68			
24	4	0.00			2.00			
25	NR					< 3		
27	2	1.26			3.27			
29	4	0.00		2.00				
30	4	0.00					2.00	
32	4	0.10					2.10	
36	3	0.90			2.90			
37	4	0.05					2.05	
45	4	-0.30			1.70			
46	4	-0.10			1.90			
48	4	0.20			2.20			
50	4	0.00			2.00			
51	4	-0.30			1.70			
52	4	-0.40			1.60			
55	2	1.39			3.40			
57	NR			< 20				
59	NR					< 5		
63	4	0.00			2.00			
68	NR					< 2		
70	3	1.00				3.00		
72	2	1.29				3.30		
73	3	-1.00				1.00		
74	3	-0.60			1.40			
75	4	0.11			2.11			
78	0	2.89			4.90			
81	4	0.00			2.00			
84	NR				< 1			
85	NR			< 5				
86	4	0.48				2.48		
87	NR			< 5				
92	2	1.39		3.40				
96	4	-0.39		1.61				
97	4	-0.29			1.71			
101	0	2.89				4.90		
103	NR					< 5		
105	NR					< 10		
107	4	-0.20			1.80			
111	4	-0.48			1.52			

Lab	Rating	Z-value	0	1	3	4	6	12
113	4	0.01			2.01			
114	1	1.99		4.00				
117	0	47.59		49.80				
119	1	-1.99				0.00		
120	4	-0.22			1.78			
121	3	1.00			3.00			
123	0	4.58			6.60			
127	4	-0.09			1.91			
128	NR					< 3		
133	3	-0.90				1.10		
134	4	0.00			2.00			
136	2	1.19			3.20			
138	4	0.00			2.00			
140	3	1.00		3.00				
141	1	1.74				3.75		
144	4	-0.10			1.90			
145	NR					< 3		
151	NR			< 10				
153	NR				< 1			
158	NR			< 25				
161	0	28.87				31.00		
173	0	2.99		5.00				
179	4	-0.40			1.60			
180	NR					< 2		
181	0	2.99						5.00
191	3	-0.70					1.30	
193	NR			< 10				
194	NR				< 10			

Table 10. *--Statistical summary of reported data for standard reference water sample T-119 (trace constituents)--Continued*



0. Other
1. AA: direct air
2. AA: direct N2O
3. AA: graphite furnace
4. ICP
6. ICP/MS

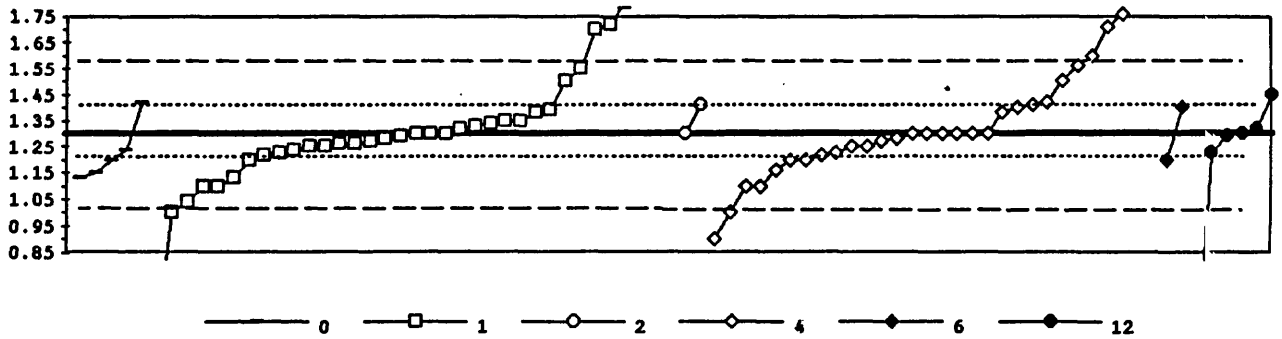
	0	1	2	3	4	6
N =	7	24	2	8	42	4
Minimum =	30.0	20.0	30.0	36.8	31.0	25.0
Maximum =	72.0	110.0	50.0	67.6	441.0	117.0
Median =		47.8			44.0	
St Dev =		7.8			6.3	

MPV = 46.0 +/- 1.0
F-pseudosigma = 6.8
N = 87
Hu = 50.6
Hl = 41.5

Lab	Rating	Z-value	0	1	2	3	4	6
1	3	-0.61					41.9	
3	4	-0.30					44.0	
5	3	0.77					51.2	
6	0	2.72				64.4		
7	4	0.40					48.7	
8	0	2.96					66.0	
9	1	1.78		58.0				
10	3	0.59		50.0				
12	NR						< 50	
13	4	-0.30		44.0				
15	3	-0.73					41.1	
16	0	-2.22					31.0	
18	2	-1.04					39.0	
19	4	-0.41					43.3	
21	3	-0.74	41.0					
23	2	-1.36				36.8		
24	4	0.16					47.1	
25	4	-0.50					42.6	
29	0	-3.11		25.0				
30	0	10.51						117.0
32	0	5.03						80.0
36	4	-0.39	43.4					
37	0	-3.11						25.0
42	3	-0.74					41.0	
43	4	0.00					46.0	
45	4	0.18		47.2				
46	4	0.15					47.0	
48	NR					< 30		
50	4	0.44				49.0		
51	4	-0.01				45.9		
52	3	-0.73					41.1	
55	4	-0.49					42.7	
57	3	0.59		50.0				
59	4	-0.44					43.0	
63	4	0.15					47.0	
64	3	0.59	50.0					
68	4	0.00					46.0	
70	1	-1.93					33.0	
72	0	58.49					441.0	
73	4	0.16					47.1	
74	2	-1.18					38.0	
76	4	-0.12		45.2				
78	3	0.59		50.0				
81	0	3.85					72.0	
83	0	-3.85		20.0				
84	0	3.55		70.0				
85	4	0.30					48.0	
86	3	-0.96					39.5	
87	3	0.59			50.0			
90	4	0.30		48.0				
91	4	0.40	48.7					
92	0	-2.15		31.5				
96	4	-0.44		43.0				
97	3	0.55				49.7		
101	4	-0.13					45.1	
103	2	-1.48					36.0	
105	4	-0.30					44.0	
107	4	0.22		47.5				
109	4	0.30		48.0				
113	1	1.88	58.7					
114	3	0.89		52.0				
116	2	-1.48					36.0	
117	3	0.96		52.5				
119	3	-0.74					41.0	
120	0	-2.37			30.0			
121	4	-0.15					45.0	
123	0	3.20				67.6		
126	3	-0.89		40.0				
127	4	-0.46					42.9	
128	4	0.00					46.0	
129	0	-2.37	30.0					
133	2	1.13					53.6	
134	4	-0.30					44.0	
136	3	0.77				51.2		
138	4	-0.30					44.0	
140	2	-1.26		37.5				
141	4	-0.03					45.8	
145	2	1.09					53.4	
149	0	9.48		110.0				
151	3	-0.59		42.0				
153	4	0.30				48.0		
154	4	-0.30					44.0	
161	0	8.59					104.0	
173	2	1.33		55.0				
179	NR			< 100				
180	0	-2.01					32.4	
181	0	3.85	72.0					
182	0	8.00		100.0				
191	2	1.18						54.0
193	3	-0.59		42.0				
194	NR						< 100	

Table 10. *--Statistical summary of reported data for standard reference water sample T-119 (trace constituents)--Continued*

K (Potassium) m g/L



0. Other		4. ICP					
1. AA: direct air		6. ICP/MS					
2. AA: direct N2O		12. Flame emission					
	N =	5	35	2	30	2	6
	Minimum =	1.13	0.50	1.30	0.90	1.20	0.36
	Maximum =	1.42	5.30	1.41	3.71	1.40	1.45
	Median =		1.30		1.30		
	St Dev =		0.18		0.19		

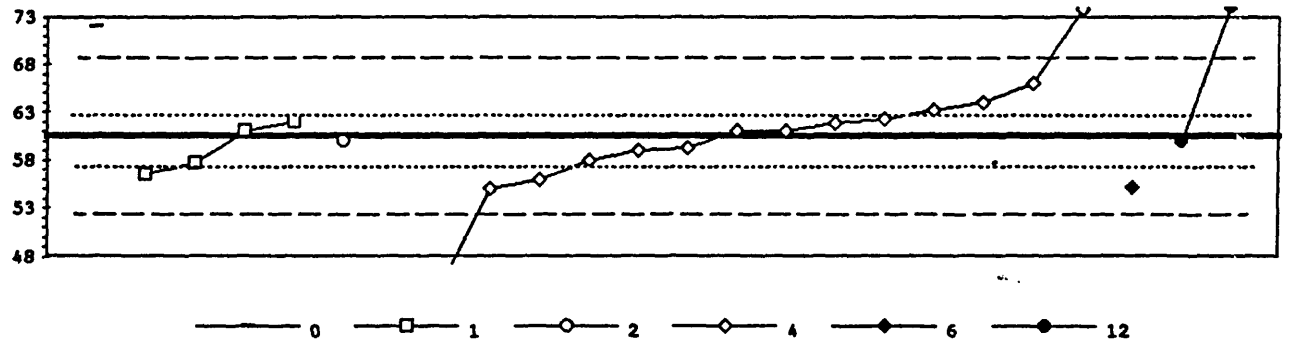
MPV = 1.30 +/- 0.02
F-pseudosigma = 0.14
N = 80
Hu = 1.41
Hl = 1.22

Lab	Rating	Z-value	0	1	2	4	6	12
1.	3	-0.71		1.20				
3.	4	0.36		1.35				
5.	0	3.27				1.76		
7.	0	17.11				3.71		
8.	4	-0.21				1.27		
9.	4	0.00		1.30				
12.	3	-0.71				1.20		
13.	4	-0.07		1.29				
15.	3	0.64		1.39				
16.	0	2.84		1.70				
18.	4	0.00				1.30		
19.	3	-0.99				1.16		
23.	4	0.21		1.33				
24.	3	0.78				1.41		
25.	0	2.91				1.71		
27.	3	0.85	1.42					
32.	3	-0.71					1.20	
36.	4	-0.50						1.23
37.1	2	-1.21		1.13				
37.2	2	-1.21	1.13					
42.	0	-2.84				0.90		
43.	2	-1.42				1.10		
45.	3	-0.57		1.22				
46.	4	0.00				1.30		
48.	1	1.85				1.56		
51.	4	0.14						1.32
52.	4	-0.50				1.23		
54.	4	-0.43	1.24					
55.	2	1.07						1.45
57.	4	0.00				1.30		
59.	4	0.00				1.30		
63.	4	0.14		1.32				
64.	2	-1.07	1.15					
68.	2	1.42				1.50		
69.	4	0.00						1.30
70.	4	-0.35		1.25				
72.	4	-0.35				1.25		
74.	4	0.00				1.30		
75.	4	-0.50		1.23				
78.	1	1.78		1.55				
81.	3	0.85				1.42		
83.	4	0.28		1.34				
85.	4	-0.35		1.25				
86.	4	-0.14				1.28		
87.	4	0.00		1.30				
92.	0	7.10		2.30				
96.	4	0.00			1.30			
97.	0	-2.13		1.00				
101.	4	0.36		1.35				
103.	2	-1.42				1.10		

Lab	Rating	Z-value	0	1	2	4	6	12
105	3	0.57				1.38		
107	4	-0.07						1.29
109	2	-1.42		1.10				
113	3	0.57		1.38				
114	0	28.40		5.30				
116	0	2.13				1.60		
117	0	16.12		3.57				
119	0	-2.13				1.00		
120	3	0.78			1.41			
121	4	-0.28		1.26				
123	1	-1.85		1.04				
127	4	-0.43		1.24				
128	3	-0.71				1.20		
129	2	-1.42		1.10				
134	2	1.42		1.50				
136	0	3.55		1.80				
138	4	0.00				1.30		
140	4	-0.28		1.26				
141	3	0.71				1.40		
145	3	-0.57				1.22		
151	4	-0.21		1.27				
153	3	-0.71	1.20					
154	4	-0.35				1.25		
179	4	0.00		1.30				
180	0	8.88				2.55		
181	0	-6.70						0.36
182	0	-5.68		0.50				
191	3	0.71					1.40	
193	4	-0.14		1.28				
194	0	2.98		1.72				

Table 10. *--Statistical summary of reported data for standard reference water sample T-119 (trace constituents)--Continued*

Li (Lithium) µg/L

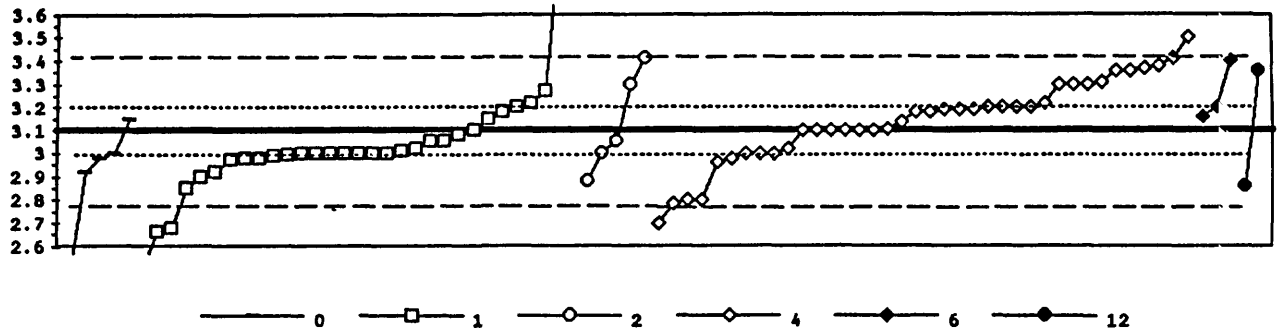


0. Other			4. ICP					
1. AA: direct air			6. ICP/MS					
2. AA: direct N2O			12. Flame emission					
		N =	1	4	1	15	1	2
		Minimum =	72.0	56.5	60.0	40.4	55.2	60.0
		Maximum =	72.0	62.0	60.0	73.8	55.2	74.0
		Median =				61.0		
		St Dev =				10.3		
Lab	Rating	Z-value	0	1	2	4	6	12
1	4	-0.29				59.3		
3	2	1.32				66.0		
5	3	0.65				63.2		
8	0	-4.82				40.4		
15	0	3.19				73.8		
16	NR					< 200		
24	3	0.84				64.0		
25	4	0.34				61.9		
32	2	-1.27					55.2	
42	2	-1.32				55.0		
50	4	-0.12						60.0
55	0	3.23						74.0
63	4	0.12		61.0				
64	0	2.76	72.0					
68	4	0.12				61.0		
70	2	-1.08				56.0		
85	4	0.36		62.0				
103	0	-3.71				45.0		
105	4	-0.36				59.0		
109	3	-0.67		57.7				
121	3	-0.96		56.5				
128	4	0.12				61.0		
134	3	-0.60				58.0		
145	4	0.42				62.3		
182	4	-0.12			60.0			

MPV =	60.5	+/- 1.1
F-pseudosigma =	4.2	
N =	24	
Hu =	62.7	
Hl =	57.1	

Table 10. *--Statistical summary of reported data for standard reference water sample T-119 (trace constituents)--Continued*

Mg (Magnesium) m g/L



0. Other
1. AA: direct air
2. AA: direct N2O
4. ICP
6. ICP/MS
12. Flame emission

	5	31	5	38	3	2
N =	5	31	5	38	3	2
Minimum =	2.50	2.50	2.88	2.70	3.16	2.86
Maximum =	3.15	7.48	3.41	3.50	3.40	3.36
Median =		3.00		3.17		
St Dev =		0.14		0.18		

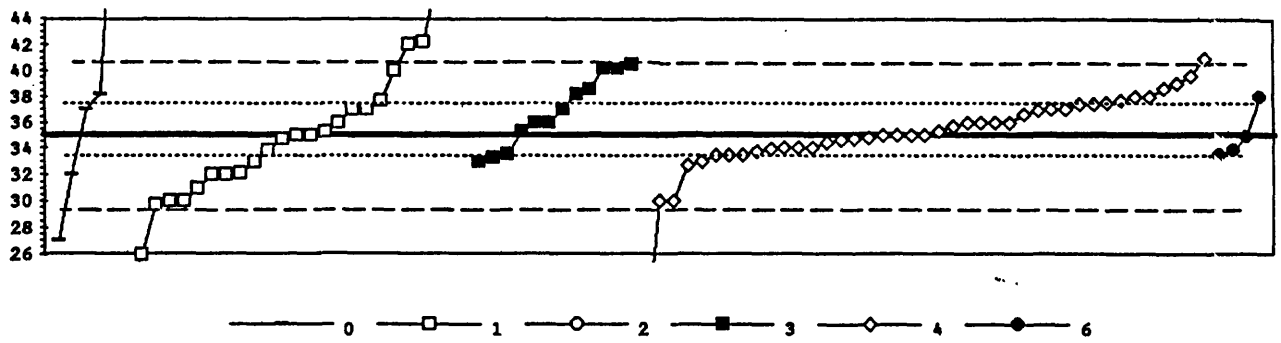
MPV = 3.10 +/- 0.02
F-pseudosigma = 0.16
N = 84
Hu = 3.20
Hl = 2.99

Lab	Rating	Z-value	0	1	2	4	6	12
1.	3	-0.70		2.99				
3.	1	1.67				3.36		
5.	3	0.77				3.22		
6.	3	-0.52		3.02				
7.	3	0.52				3.18		
8.	1	-1.93				2.80		
9.	4	0.00		3.10				
12.	4	0.00				3.10		
13.	2	1.09		3.27				
15.	3	0.58				3.19		
16.	4	0.00				3.10		
18.	3	-0.52				3.02		
19.	3	-0.77				2.98		
23.	0	-2.70		2.68				
24.	3	0.58				3.19		
25.	1	1.80				3.38		
27.	3	-0.77	2.98					
30.	3	0.64					3.20	
32.	1	1.93					3.40	
36.	1	1.67						3.36
37.1	3	-0.64		3.00				
37.2	2	-1.16	2.92					
42.	4	0.00				3.10		
43.	3	0.64				3.20		
45.	3	0.77		3.22				
46.	1	1.67				3.36		
48.	1	-1.93				2.80		
51.	3	-0.64		3.00				
52.	3	-0.90				2.96		
54.	3	-0.64	3.00					
55.	4	0.03				3.10		
57.	2	1.29				3.30		
59.	3	-0.64				3.00		
63.	1	2.00			3.41			
64.	4	0.32	3.15					
68.	3	0.64				3.20		
69.	3	-0.64		3.00				
70.	4	0.26				3.14		
72.	3	-0.64				3.00		
74.	0	-2.58				2.70		
75.	2	-1.16		2.92				
78.	3	-0.64		3.00				
81.	1	2.00				3.41		
83.	4	-0.13		3.08				
84.	0	-2.83		2.66				
85.	3	-0.71		2.99				
86.	3	0.64				3.20		
87.	3	-0.77		2.98				
92.	0	-3.86		2.50				
96.	2	-1.42			2.88			

Lab	Rating	Z-value	0	1	2	4	6	12
97	3	-0.77		2.98				
101	3	-0.64		3.00				
103	0	2.58				3.50		
105	4	0.00				3.10		
107	4	-0.32		3.05				
109	3	-0.64		3.00				
113	3	-0.58		3.01				
114	3	-0.64			3.00			
116	3	0.58				3.19		
117	1	-1.61		2.85				
119	4	0.00				3.10		
120	4	-0.32			3.05			
121	4	0.00				3.10		
123	0	28.20		7.48				
127	3	0.52		3.18				
128	3	0.52				3.18		
129	4	-0.32		3.05				
133	0	-2.02				2.79		
134	3	0.64		3.20				
136	0	5.15		3.90				
138	2	1.29				3.30		
140	4	0.32		3.15				
141	3	-0.64				3.00		
145	1	1.74				3.37		
151	2	-1.29		2.90				
153	0	-3.86	2.50					
154	3	0.64				3.20		
179	3	-0.64		3.00				
180	2	1.35				3.31		
181	1	-1.55						2.86
182	2	1.29			3.30			
191	4	0.39					3.16	
193	3	-0.84		2.97				
194	2	1.29				3.30		

Table 10. *--Statistical summary of reported data for standard reference water sample T-119 (trace constituents)--Continued*

Mn (Manganese) μg/L



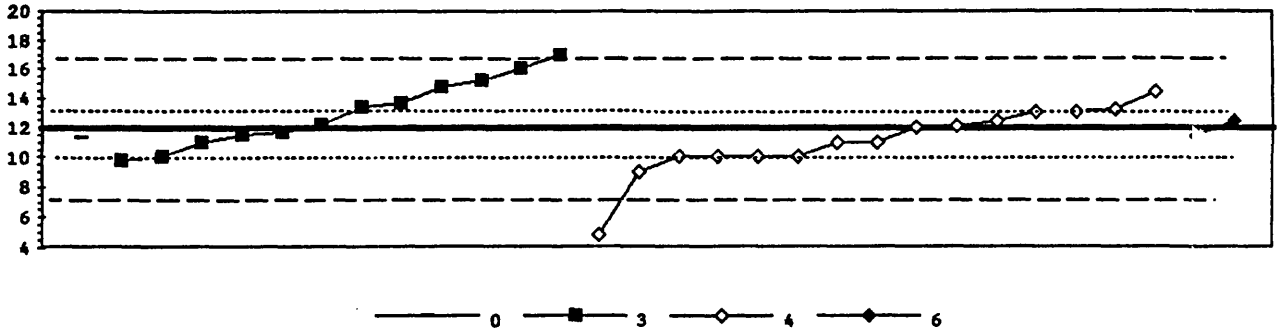
0. Other		3. AA: graphite furnace					
1. AA: direct air		4. ICP					
2. AA: direct N2O		6. ICP/MS					
N =	5	24	1	12	41	4	
Minimum =	27.0	23.0	24.0	33.0	20.0	33.5	
Maximum =	60.0	48.0	24.0	40.5	41.0	38.0	
Median =		34.9		36.5	35.0		
St Dev =		3.7		2.7	2.3		

MPV =	35.0	+/- 0.4
F-pseudosigma =	2.9	
N =	87	
Hu =	37.5	
Hl =	33.5	

Lab	Rating	Z-value	0	1	2	3	4	6
1	3	-0.52					33.5	
3	4	0.24					35.7	
5	3	0.82					37.4	
6	1	1.78				40.2		
7	4	-0.35					34.0	
8	3	-0.51					33.5	
9	2	1.23				38.6		
10	2	-1.37		31.0				
12	1	-1.71					30.0	
13	0	2.46		42.2				
15	2	1.26					38.7	
16	4	-0.34					34.0	
18	4	0.00					35.0	
19	4	-0.09					34.8	
23	1	1.88				40.5		
24	4	0.10					35.3	
25	3	0.82					37.4	
27	2	-1.02	32.0					
29	0	-4.10		23.0				
30	4	-0.03						34.9
32	4	-0.38						33.9
36	0	-2.73	27.0					
37	3	-0.51						33.5
42	2	1.02					38.0	
43	3	0.68					37.0	
45	3	-0.99		32.1				
46	3	0.85					37.5	
48	0	-5.12					20.0	
50	3	-0.68				33.0		
51	3	0.68				37.0		
52	4	-0.20					34.4	
55	4	-0.41					33.8	
57	3	0.68		37.0				
59	4	-0.34					34.0	
63	0	2.05					41.0	
64	3	0.68	37.0					
68	4	-0.34					34.0	
70	3	-0.68					33.0	
72	3	-0.51					33.5	
74	1	-1.71					30.0	
76	3	0.68		37.0				
78	4	0.00		35.0				
81	2	1.02					38.0	
83	1	-1.71		30.0				
84	1	-1.71		30.0				
85	4	0.10		35.3				
86	3	-0.79					32.7	
87	2	-1.02		32.0				
90	0	4.10		47.0				
91	2	1.09	38.2					
92	1	-1.81		29.7				
96	4	0.34				36.0		
97	4	0.34				36.0		
101	3	0.55					36.6	
103	4	0.34					36.0	
105	4	0.00					35.0	
107	4	-0.10		34.7				
109	4	-0.38		33.9				
113	4	-0.48				33.6		
114	4	0.00		35.0				
116	2	1.37					39.0	
117	3	0.91		37.7				
119	4	0.00					35.0	
120	0	-3.76			24.0			
121	4	0.34					36.0	
122	2	1.09				38.2		
126	0	2.39		42.0				
127	4	-0.07					34.8	
128	3	0.68					37.0	
129	0	-3.07		26.0				
133	4	-0.14					34.6	
134	4	0.34					36.0	
136	1	1.78				40.2		
138	4	0.34					36.0	
140	3	-0.68		33.0				
141	3	0.92					37.7	
145	1	1.59					39.7	
149	0	4.44		48.0				
151	2	-1.02		32.0				
153	4	0.10				35.3		
154	4	0.00					35.0	
173	3	-0.60				33.3		
179	4	0.34		36.0				
180	3	0.65					36.9	
181	0	8.54	60.0					
182	1	1.71		40.0				
191	2	1.02						38.0
194	NR						< 50	

Table 10. *--Statistical summary of reported data for standard reference water sample T-119 (trace constituents)--Continued*

Mo (Molybdenum) μg/L



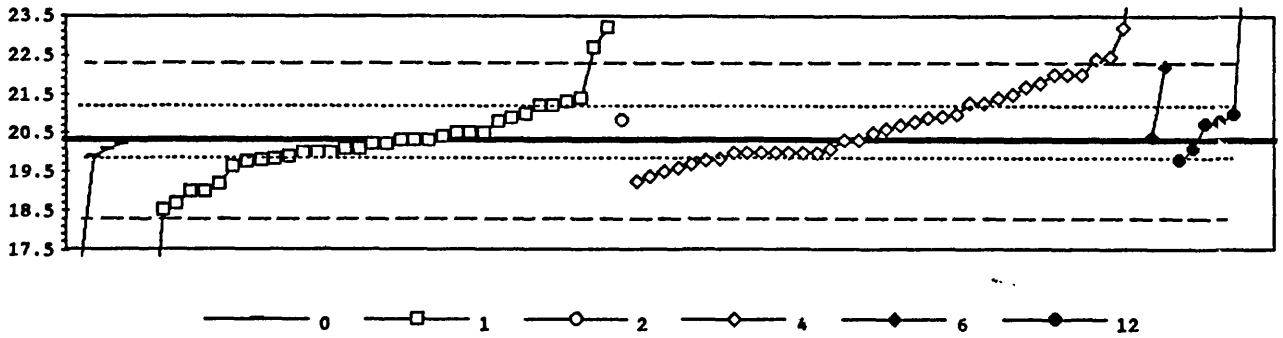
0. Other			3. AA: graphite furnace					
1. AA: direct air			4. ICP					
2. AA: direct N2O			6. ICP/MS					
		N =	1	0	0	12	15	2
		Minimum =	11.3			9.8	4.8	11.4
		Maximum =				17.0	14.4	12.4
		Median =				12.8	11.0	
		St Dev =				2.4	2.3	

Lab	Rating	Z-value	0	1	2	3	4	6
1	4	-0.23	11.3					
3	4	0.48					13.0	
5	3	0.57					13.2	
7	NR						< 12	
12	NR						< 30	
15	4	-0.15				11.5		
16	NR						< 30	
24	4	0.11					12.1	
32	4	-0.19						11.4
37	4	0.23						12.4
42	3	-0.78					10.0	
45	3	0.74				13.6		
46	NR						< 140	
48	NR						< 100	
50	3	-0.78				10.0		
52	3	-0.87				9.8		
57	NR						< 100	
63	1	1.75				16.0		
68	3	-0.78					10.0	
70	4	0.06					12.0	
74	3	-0.78					10.0	
75	3	0.65				13.4		
81	3	-0.78					10.0	
85	NR						< 20	
86	4	0.23					12.4	
97	2	1.20				14.7		
103	4	-0.36					11.0	
105	NR						< 40	
109	2	1.41				15.2		
121	4	-0.36					11.0	
128	2	-1.20					9.0	
133	0	-2.97					4.8	
134	4	-0.37				11.0		
136	4	0.15				12.2		
138	4	-0.06				11.7		
141	4	0.48					13.0	
145	2	1.08					14.4	
149	0	2.17				17.0		

MPV =	11.9	+/-	0.6
F-pseudosigma =	2.4		
N =	30		
Hu =	13.2		
Hl =	10.0		

Table 10. *--Statistical summary of reported data for standard reference water sample T-119 (trace constituents)--Continued*

Na (Sodium) m g/L



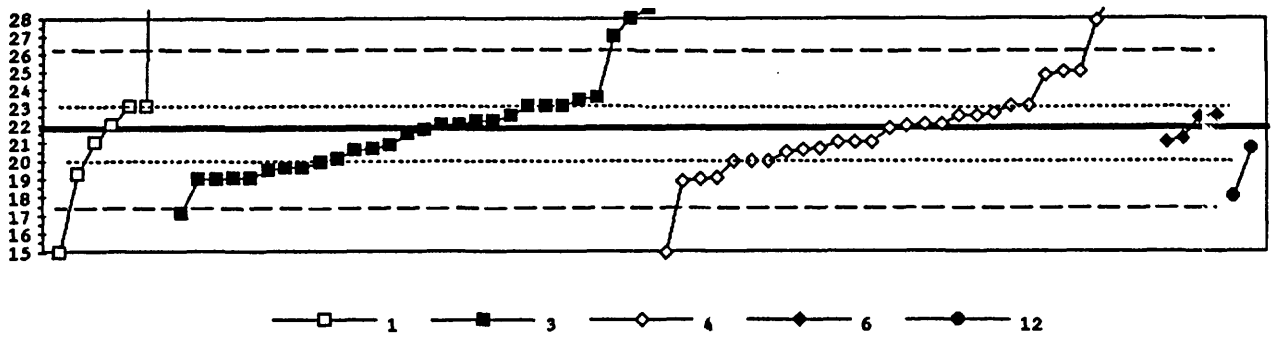
0. Other		4. ICP					
1. AA: direct air		6. ICP/MS					
2. AA: direct N2O		12. Flame emission					
N =	4	42	1	37	2	7	
Minimum =	17.0	12.0	20.8	19.2	20.4	19.8	
Maximum =	20.2	23.2	20.8	25.8	22.2	36.2	
Median =		20.0		20.6			
St Dev =		1.0		1.0			

MPV = 20.3 +/- 0.1
F-pseudosigma = 1.0
N = 86
Hu = 21.2
Hl = 19.9

Lab	Rating	Z-value	0	1	2	4	6	12
1.	4	-0.31		20.0				
3.	1	1.76				22.0		
5.	4	0.00				20.3		
7.	3	1.00				21.3		
8.	2	-1.10				19.2		
9.	4	-0.10		20.2				
12.	4	-0.31				20.0		
13.	3	0.73		21.0				
15.	0	3.01				23.2		
16.	4	-0.31				20.0		
18.	4	-0.31				20.0		
19.	4	-0.49				19.8		
23.	1	-1.87		18.5				
24.	2	1.14				21.4		
25.	1	1.76				22.0		
27.	3	-0.54		19.8				
32.	1	1.97					22.2	
36.	4	-0.21						20.1
37.1	4	0.10		20.4				
37.2	0	-3.42	17.0					
42.	1	1.56				21.8		
43.	3	0.62				20.9		
45.	4	-0.21		20.1				
46.	2	1.02				21.3		
48.	0	5.71				25.8		
51.	3	0.52						20.8
52.	3	-0.62				19.7		
54.	4	-0.42	19.9					
55.	3	0.73						21.0
57.	4	-0.31				20.0		
59.	4	-0.21				20.1		
63.	4	0.21		20.5				
64.	4	-0.10	20.2					
68.	4	-0.31				20.0		
69.	3	-0.52						19.8
70.	4	0.42				20.7		
72.	3	-0.83				19.5		
74.	3	-0.52				19.8		
75.	4	0.00		20.3				
76.	2	1.04		21.3				
78.	4	0.00		20.3				
81.	0	2.18				22.4		
83.	4	0.50		20.8				
84.	4	0.44						20.7
85.	4	0.21		20.5				
86.	4	-0.31				20.0		
87.	2	-1.35		19.0				
90.	0	6.75						26.8
92.	0	3.01		23.2				
96.	3	0.93		21.2				
97	4	-0.10		20.2				
101	4	-0.31		20.0				
103	3	0.73				21.0		
105	2	1.45				21.7		
107	4	-0.21		20.1				
109	4	-0.42		19.9				
113	4	0.21		20.5				
114	0	-6.95		13.6				
116	4	0.31				20.6		
117	3	-0.70		19.6				
119	3	-0.73				19.6		
120	3	0.56			20.8			
121	4	-0.31				20.0		
123	4	-0.50		19.8				
126	2	1.14		21.4				
127	4	0.21				20.5		
128	3	0.65				20.9		
129	2	-1.35		19.0				
133	3	-0.97				19.4		
134	4	0.00		20.3				
136	3	-0.52		19.8				
138	2	1.25				21.5		
140	3	0.62		20.9				
141	4	0.00				20.3		
145	0	2.24				22.5		
151	4	-0.31		20.0				
153	4	-0.21	20.1					
154	3	0.52				20.8		
173	1	-1.68		18.7				
179	0	2.49		22.7				
180	1	1.76				22.0		
181	0	16.50						36.2
182	0	-6.23		14.3				
191	4	0.10					20.4	
193	2	-1.14		19.2				
194	3	0.93		21.2				

Table 10. *--Statistical summary of reported data for standard reference water sample T-119 (trace constituents)--Continued*

Ni (Nickel) μ g/L



0. Other			4. ICP				
1. AA: direct air			6. ICP/MS				
3. AA: graphite furnace			12. Flame emission				
	N =	0	7	28	29	4	2
	Minimum =		15.0	17.1	15.0	21.0	18.0
	Maximum =		90.0	28.5	73.0	22.5	20.7
	Median =			21.6	21.9		
	St Dev =			2.7	2.5		

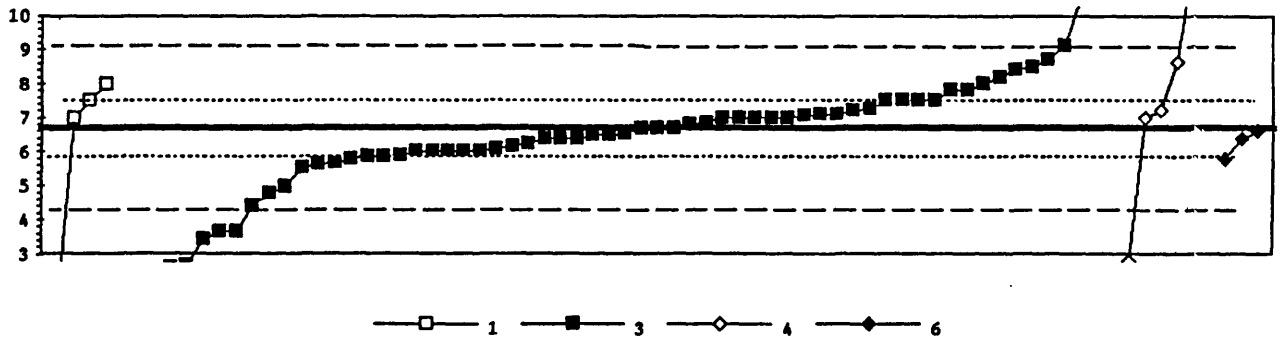
MPV = 21.8 +/- 0.4
F-pseudosigma = 2.2
N = 70
Hu = 23.0
Hl = 20.0

Lab	Rating	Z-value	0	1	3	4	6	12
1	4	-0.02			21.7			
3	0	3.71				30.0		
5	4	-0.47				20.7		
6	3	0.79			23.5			
7	NR					< 19		
9	4	0.11			22.0			
12	NR					< 20		
13	NR			< 50				
15	2	-1.19			19.1			
16	2	1.46				25.0		
18	3	0.56				23.0		
19	4	0.11				22.0		
23	2	-1.19			19.1			
24	4	0.02				21.8		
25	0	3.48				29.5		
29	0	-3.04		15.0				
30	4	0.29					22.4	
32	4	-0.25					21.2	
36	4	-0.47						20.7
37	4	-0.34					21.0	
45	3	-0.97			19.6			
46	0	-3.04				15.0		
48	4	0.20			22.2			
50	3	0.56			23.0			
51	3	-0.83			19.9			
52	3	-0.56				20.5		
55	2	-1.28				18.9		
57	NR			< 100				
59	3	-0.79				20.0		
63	3	0.56			23.0			
68	4	-0.34				21.0		
69	3	0.56			23.0			
70	3	-0.79				20.0		
72	2	-1.19				19.1		
73	4	0.38				22.6		
74	4	0.11				22.0		
75	3	-0.74			20.1			
78	4	0.34			22.5			
81	0	-2.09			17.1			
85	4	-0.34				21.0		
86	3	-0.52				20.6		
87	4	-0.34		21.0				
90	0	3.04			28.5			
92	2	-1.10		19.3				
97	0	2.36			27.0			
101	2	1.37				24.8		
103	2	-1.24				19.0		
105	3	0.56				23.0		
111	4	-0.11			21.5			
113	2	-1.01			19.5			

Lab	Rating	Z-value	0	1	3	4	6	12
114	4	0.11		22.0				
117	0				< 0.01			
119	2	-1.24			19.0			
120	4	-0.48			20.7			
121	0	2.81			28.0			
127	3	-0.52			20.6			
128	2	1.46				25.0		
133	4	0.07				21.9		
134	3	-0.97			19.6			
136	3	0.74			23.4			
138	4	0.34				22.5		
140	3	0.56		23.0				
141	4	0.34				22.5		
144	4	-0.38			20.9			
145	0	2.74				27.8		
149	4	0.11			22.0			
151	4	0.20			22.2			
154	4	-0.34				21.0		
161	0	23.05				73.0		
179	2	-1.24			19.0			
180	3	-0.79				20.0		
181	1	-1.69						18.0
182	0	30.69		90.0				
191	4	0.34					22.5	
193	3	0.56		23.0				
194	NR					< 100		

Table 10. *--Statistical summary of reported data for standard reference water sample T-119 (trace constituents)--Continued*

Pb (Lead) μg/L



0. Other		3. AA: graphite furnace					
1. AA: direct air		4. ICP					
2. AA: direct N2O		6. ICP/MS					
	N =	0	4	0	62	6	3
	Minimum =		1.00		1.73	2.80	5.80
	Maximum =		8.00		15.30	76.00	6.60
	Median =				6.52		
	St Dev =				2.24		

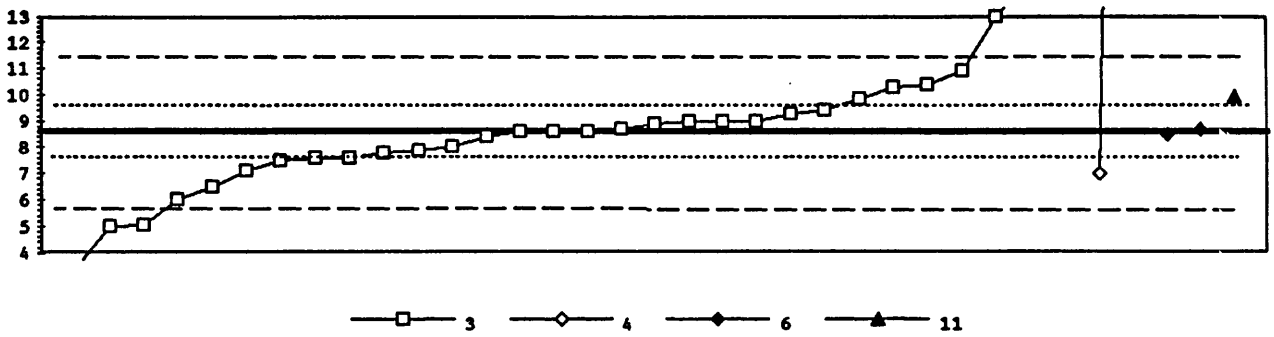
MPV =	6.70	+/- 0.19
F-pseudosigma =	1.21	
N =	75	
Hu =	7.50	
Hl =	5.87	

Lab	Rating	Z-value	0	1	2	3	4	6
1.	4	-0.17				6.50		
3.	0	-2.51				3.67		
5.1	3	0.66				7.50		
5.2	NR						< 30	
6.	0	-2.70				3.44		
7.	3	0.66				7.50		
9.	1	-1.90				4.40		
10.	3	-0.58				6.00		
12.	NR					< 10		
13.	3	-0.86				5.66		
15.	2	1.48				8.49		
16.	3	-0.58				6.00		
18.	4	-0.17				6.50		
19.	NR						< 35	
23.	2	-1.44				4.96		
24.	3	-0.83				5.70		
25.	NR						< 40	
27.	4	-0.25				6.40		
29.	0	-3.97				1.90		
30.	4	-0.08						6.60
32.	3	-0.74						5.80
36.	0	6.37				14.40		
37.	4	-0.24						6.41
45.	3	-0.98				5.52		
46.	4	0.33				7.10		
48.	3	0.91				7.80		
50.	3	-0.58				6.00		
51.	0	-3.31				2.70		
52.	1	1.60					8.63	
55.	1	-1.57				4.80		
57.	4	0.00				6.70		
59.	4	0.25					7.00	
63.	3	0.91				7.80		
68.	4	0.00				6.70		
69.	4	0.00				6.70		
70.	0	-4.11				1.73		
72.	3	-0.58				6.00		
73.	NR						< 25	
74.	4	0.25				7.00		
75.	3	-0.68				5.88		
76.	0	3.14				10.50		
78.	4	-0.25				6.40		
81.	3	-0.58				6.00		
83.	4	-0.14				6.53		
84.	3	0.66				7.50		
85.	2	1.08				8.00		
86.	4	0.43					7.22	
87.	4	0.25		7.00				
90.	0	2.00				9.12		
92.	2	1.08		8.00				

Lab	Rating	Z-value	0	1	2	3	4	6
96	4	0.29				7.05		
97	4	0.12				6.84		
101	0	4.14					11.70	
103	NR						< 5	
105	4	0.41				7.2		
107	0	-2.52				3.6		
109	0	-3.38				2.61		
111	2	1.24				8.2		
113	3	-0.70				5.8		
114	0	-4.72		1.00				
117	4	0.25				7.0		
119	3	-0.66				5.9		
120	4	-0.45				6.16		
121	4	0.25				7.0		
127	4	-0.38				6.24		
128	4	-0.25				6.40		
133	0	-3.23					2.80	
134	4	0.33				7.10		
136	4	0.08				6.8		
138	3	0.66				7.50		
140	3	0.66		7.50				
141	2	1.41				8.40		
145	NR						< 25	
149	0	-3.89				2.0		
151	4	0.46				7.25		
153	1	1.66				8.7		
154	3	-0.74				5.8		
158	4	-0.50				6.10		
161	0	57.35					76.00	
173	4	0.25				7.0		
179	4	0.25				7.0		
180	NR						< 12	
181	0	7.12				15.3		
193	NR			< 10				
194	NR					< 10		

Table 10. *--Statistical summary of reported data for standard reference water sample T-119 (trace constituents)--Continued*

Sb (Antimony) μg/L



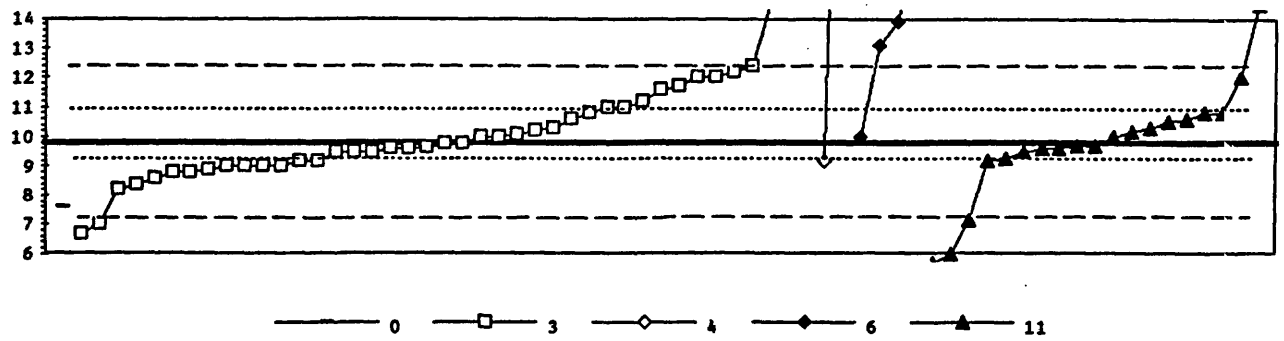
0. Other			4. ICP				
1. AA: direct air			6. ICP/MS				
3. AA: graphite furnace			11. AA: hydride				
N =		0	0	30	2	2	1
Minimum =				3.40	7.00	8.50	9.96
Maximum =				18.00	53.20	8.72	9.96
Median =				8.60			
St Dev =				1.72			

MPV =	8.60	+/-	0.33
F-pseudosigma =	1.46		
N =	35		
Hu =	9.62		
Hl =	7.65		

Lab	Rating	Z-value	0	1	3	4	6	11
1	3	0.93						9.96
3	4	0.00			8.60			
5	NR					< 20		
7	NR					< 25		
12	NR					< 100		
15	0	-2.44			5.03			
16	NR					< 60		
18	3	-0.68			7.60			
23	3	0.85			9.84			
25	NR					< 37		
32	4	-0.07					8.50	
36	3	-0.75			7.50			
37	4	0.08					8.72	
45	4	0.20			8.89			
48	3	-0.68			7.60			
52	3	-0.55			7.80			
55	4	0.27			9.00			
57	0	6.44			18.00			
59	2	-1.10				7.00		
63	0	-3.56			3.40			
68	2	-1.03			7.10			
70	0	4.04			14.50			
72	4	-0.14			8.40			
74	4	0.27			9.00			
78	4	0.00			8.60			
81	NR					< 19		
85	NR					< 50		
87	3	0.55			9.40			
97	NR				< 7.76			
105	2	1.23			10.40			
117	0	3.01			13.00			
119	4	0.00			8.60			
120	4	0.45			9.26			
127	4	0.27			8.99			
128	4	-0.48			7.90			
133	0	30.54				53.20		
136	1	-1.78			6.00			
138	4	0.07			8.70			
141	4	-0.41			8.00			
144	2	-1.45			6.48			
179	0	-2.47			5.00			
180	NR					< 13		
181	2	1.16			10.30			
194	1	1.57			10.90			

Table 10. *--Statistical summary of reported data for standard reference water sample T-119 (trace constituents)--Continued*

Se (Selenium) μ g/L



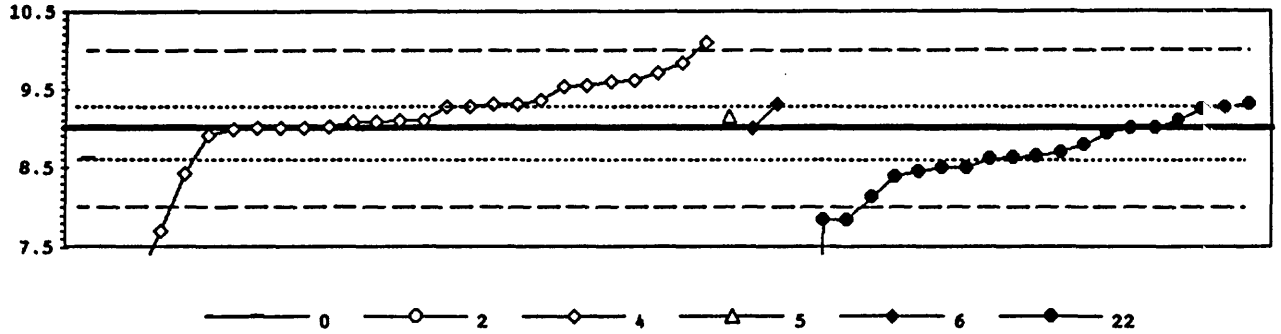
0. Other			4. ICP				
1. AA: direct air			6. ICP/MS				
3. AA: graphite furnace			11. AA: hydride				
	N =	1	0	41	2	4	19
	Minimum =	7.60		6.66	9.20	10.00	5.70
	Maximum =	7.60		21.15	35.60	16.40	14.50
	Median =			9.80			9.72
	St Dev =			1.34			1.64

MPV = 9.80 +/- 0.22
F-pseudosigma = 1.33
N = 67
Hu = 11.00
Hl = 9.20

Lab	Rating	Z-value	0	1	3	4	6	11
1.	4	-0.15			9.6			
3.	4	0.30			10.2			
5.1	3	0.90			11.0			
5.2	NR					< 40		
7.	3	-0.60			9.0			
10.	4	-0.15						9.6
12.	4	0.15			10.0			
13.	0	3.60			14.6			
15.	3	0.75						10.8
16.	4	-0.22			9.5			
18.	4	-0.45						9.2
23.	1	1.80			12.2			
24.	3	0.75						10.8
25.	NR					< 67		
29.	2	1.42			11.7			
30.	0	3.07					13.9	
32.	4	0.15					10.0	
35.	4	-0.06						9.7
36.	0	4.50			15.8			
37.	0	2.47					13.1	
45.	0	-2.10			7.0			
46.	2	1.05			11.2			
48.	2	1.35			11.6			
50.	4	0.15						10.0
52.	1	-1.98						7.2
55.	4	-0.22			9.5			
57.	1	1.65						12.0
63.	3	0.90			11.0			
68.	4	0.00			9.8			
69.	4	0.37			10.3			
70.	0	-2.35			6.7			
72.	4	-0.45			9.2			
73.	4	-0.45				9.2		
74.	4	-0.22			9.5			
75.	4	-0.39						9.3
76.	1	1.95			12.4			
78.	3	-0.60			9.0			
81.	3	-0.67			8.9			
85.	0	-3.07						5.7
86.	4	0.37						10.3
87.	4	-0.07						9.7
90.	4	-0.15			9.6			
96.	3	0.75			10.8			
97.	3	0.52						10.5
101.	0	19.34				35.6		
105.	4	-0.10			9.7			
107.	3	-0.60			9.0			
113.	2	-1.08			8.4			
117.	0	8.51			21.2			
119.	4	-0.22						9.5
120	4	0.27						10.2
126	0	3.52						14.5
127	4	0.22			10.1			
128	4	0.00			9.8			
133	1	-1.65	7.6					
134	3	0.60						10.6
136	1	1.65			12.0			
138	3	-0.90			8.6			
141	0	-2.85						6.0
144	3	0.60			10.6			
149	3	-0.75			8.8			
151	4	-0.15						9.6
154	4	-0.45			9.2			
173	3	-0.75			8.8			
179	4	0.15			10.0			
180	NR					< 31		
181	2	-1.20			8.2			
191	0	4.95					16.4	
193	3	-0.60			9.0			
194	1	1.65			12.0			

Table 10. *--Statistical summary of reported data for standard reference water sample T-119 (trace constituents)--Continued*

SiO2 (Silica) m g/L

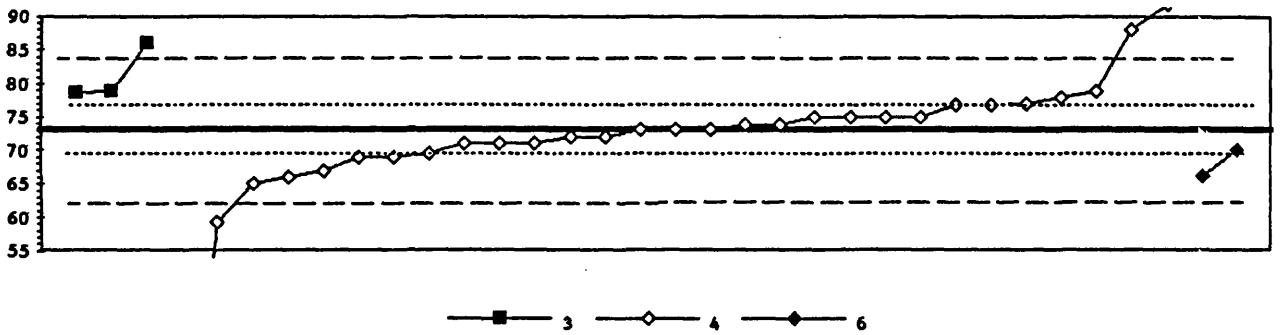


0. Other			5. DCP					
2. AA: direct N2O			6. ICP/MS					
4. ICP			22. Colorimetric					
		N =	1	1	25	1	2	20
		Minimum =	8.62	4.70	7.08	9.15	9.00	1.88
		Maximum =	8.62	4.70	10.10	9.15	9.30	9.30
		Median =			9.10			8.65
		St Dev =			0.48			0.43
Lab	Rating	Z-value	0	2	4	5	6	22
1	4	0.00			9.00			
2	0	-2.32						7.85
3	0	2.21			10.10			
5	4	0.16			9.08			
7	4	-0.02			8.99			
8	0	-2.60			7.71			
9	4	0.00						9.00
13	2	-1.11						8.45
15	2	1.07			9.53			
23	4	0.20						9.10
24	3	0.70			9.35			
25	0	-3.87			7.08			
27	4	0.31				9.15		
32	3	0.60					9.30	
37	3	-0.70						8.65
42	2	1.41			9.70			
43	4	0.20			9.10			
45	4	0.16			9.08			
51	3	0.60						9.30
52	0	-2.34						7.84
55	2	1.22			9.61			
57	4	0.20			9.10			
59	3	-0.60						8.70
63	2	1.09			9.54			
64	3	-0.77	8.62					
70	3	-0.72						8.64
72	4	-0.40						8.80
87	4	0.00						9.00
92	3	-0.99						8.51
97	4	0.50						9.25
101	3	0.56			9.28			
103	4	0.00			9.00			
104	3	-0.79						8.61
105	2	-1.15			8.43			
113	4	-0.12						8.94
116	3	0.60			9.30			
118	0	-14.34						1.88
119	4	0.00			9.00			
121	4	-0.20			8.90			
127	3	0.56			9.28			
128	3	0.62			9.31			
129	2	-1.21						8.40
134	4	0.04			9.02			
138	3	0.52						9.26
145	1	1.69			9.84			
151	2	-1.01						8.50
154	2	1.21			9.60			
173	1	-1.73						8.14
182	0	-8.66		4.70				
191	4	0.00					9.00	

MPV =	9.00	+/- 0.09
F-pseudosigma =	0.50	
N =	50	
Hu =	9.28	
Hl =	8.61	

Table 10. *--Statistical summary of reported data for standard reference water sample T-119 (trace constituents)--Continued*

Sr (Strontium) μg/L



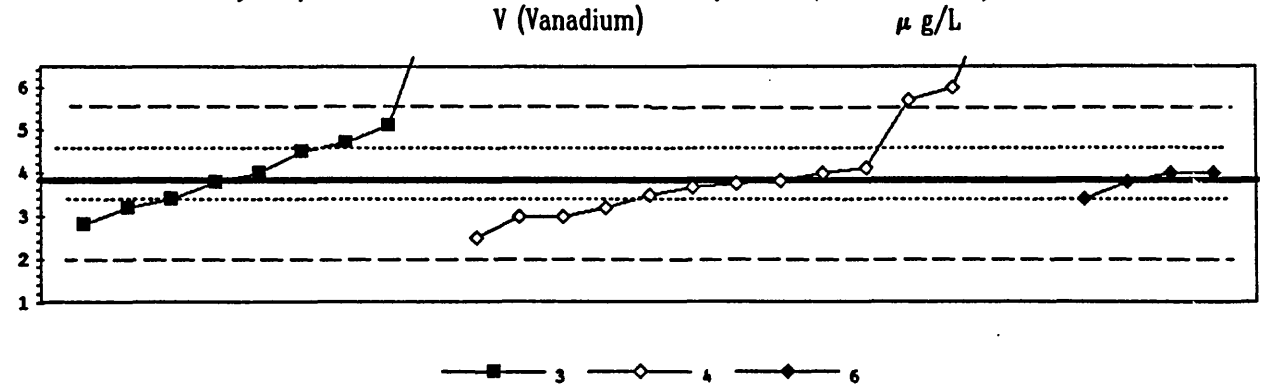
0. Other	3. AA: graphite furnace
1. AA: direct air	4. ICP
2. AA: direct N2O	6. ICP/MS

N =	0	0	0	3	29	2
Minimum =				78.6	7.5	66.2
Maximum =				86.0	91.8	70.0
Median =					73.0	
St Dev =					5.3	

MPV =	73.0 +/- 1.3
F-pseudosigma =	5.4
N =	34
Hu =	76.9
Hl =	69.6

Lab	Rating	Z-value	0	1	2	3	4	6
1	4	0.37					75.0	
3	4	0.15					73.8	
7	3	0.72					76.9	
8	3	-0.76					68.9	
15	3	-0.63					69.6	
16	2	-1.48					65.0	
18	4	-0.37					71.0	
23	2	1.07				78.8		
24	4	0.17					73.9	
25	2	1.09					78.9	
32	2	-1.26						66.2
42	3	0.92					78.0	
52	4	-0.18					72.0	
55	0	-2.53					59.3	
59	4	-0.18					72.0	
63	0	2.77					88.0	
68	2	-1.11					67.0	
70	4	0.37					75.0	
74	2	-1.29					66.0	
81	3	0.74					77.0	
85	4	-0.37					71.0	
97	2	1.03				78.6		
103	4	0.37					75.0	
105	4	-0.37					71.0	
113	NR				< 200			
116	4	0.00					73.0	
121	4	0.00					73.0	
127	4	0.37					75.0	
134	3	-0.74					69.0	
136	0	3.47					91.8	
138	4	0.00					73.0	
145	3	0.69					76.7	
154	0	-12.10					7.5	
181	0	2.40				86.0		
191	3	-0.55						70.0

Table 10. *--Statistical summary of reported data for standard reference water sample T-119 (trace constituents)--Continued*



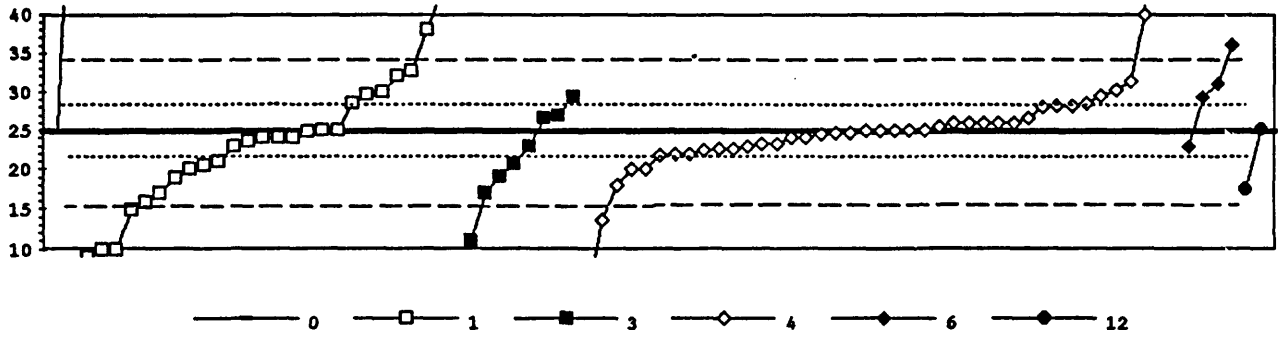
0. Other			3. AA: graphite furnace					
1. AA: direct air			4. ICP					
2. AA: direct N2O			6. ICP/MS					
		N =	0	0	0	9	14	4
		Minimum =				2.8	2.5	3.4
		Maximum =				8.0	40.0	4.0
		Median =				4.0	3.8	3.9
		St Dev =				0.8	1.0	0.3

Lab	Rating	Z-value	0	1	2	3	4	6
1	NR						< 6	
3	NR						< 4	
5	NR						< 4	
7	NR						< 11	
15	3	0.97				4.7		
16	NR						< 10	
18	NR						< 10	
24	0	4.86					8.3	
25	NR						< 3	
30	4	0.22						4.0
32	4	-0.43						3.4
37	4	-0.02						3.8
48	0	39.07					40.0	
50	4	0.22				4.0		
52	2	-1.08				2.8		
57	NR						< 100	
63	2	1.40				5.1		
68	4	0.22					4.0	
70	3	-0.65					3.2	
73	2	-1.40					2.5	
74	3	-0.86					3.0	
81	NR						< 6	
85	NR						< 20	
86	4	-0.16					3.7	
97	0	4.49				8.0		
101	4	0.00					3.8	
103	NR						< 5	
105	NR						< 20	
121	0	2.37					6.0	
127	4	-0.01				3.8		
128	3	-0.86					3.0	
133	4	-0.32					3.5	
134	3	0.76				4.5		
136	4	-0.43				3.4		
138	3	-0.65				3.2		
141	4	-0.05					3.8	
145	0	2.03					5.7	
180	4	0.32					4.1	
191	4	0.22						4.0

MPV =	3.8	+/- 0.2
F-pseudosigma =	0.9	
N =	27	
Hu =	4.6	
Hl =	3.4	

Table 10. *--Statistical summary of reported data for standard reference water sample T-119 (trace constituents)--Continued*

Zn (Zinc) μg/L



0. Other			4. ICP				
1. AA: direct air			6. ICP/MS				
3. AA: graphite furnace			12. Flame emission				
	N =	2	26	8	41	4	2
	Minimum =	25.0	9.0	11.0	4.9	23.0	17.5
	Maximum =	69.0	48.0	29.3	73.0	36.1	25.2
	Median =		24.0		25.0		
	St Dev =		5.8		3.4		

MPV = 24.8 +/- 0.7
F-pseudosigma = 4.7
N = 83
Hu = 28.3
Hl = 21.9

Lab	Rating	Z-value	0	1	3	4	6	12
1	4	-0.02				24.7		
3	3	-0.64				21.8		
5	4	-0.32				23.3		
6	1	-1.89		15.9				
7	4	-0.02				24.7		
9	1	-1.66			17.0			
10	4	0.04		25.0				
12	2	-1.02				20.0		
13	3	-0.91		20.5				
15	4	-0.34				23.2		
16	0	-2.38				13.6		
18	4	0.25				26.0		
19	4	-0.49				22.5		
23	1	1.68		32.7				
24	3	0.79				28.5		
25	4	0.15				25.5		
27	0	9.39	69.0					
29	0	-3.14		10.0				
30	0	2.40					36.1	
32	4	-0.38					23.0	
36	4	0.08						25.2
37	3	0.96					29.3	
42	4	-0.38				23.0		
45	4	-0.28		23.5				
46	3	-0.59				22.0		
48	0	3.23				40.0		
50	4	-0.38			23.0			
51	2	-1.21			19.1			
52	4	-0.47				22.6		
55	3	0.74				28.3		
57	4	0.04		25.0				
59	4	-0.17				24.0		
63	4	0.25				26.0		
64	4	0.04	25.0					
68	3	-0.59				22.0		
70	4	0.25				26.0		
72	3	0.74				28.3		
73	4	-0.04				24.6		
74	4	0.04				25.0		
75	3	0.81		28.6				
76	3	-0.81		21.0				
78	4	-0.17		24.0				
81	4	0.04				25.0		
83	0	-3.14		10.0				
85	0	-2.10		14.9				
86	2	1.40				31.4		
87	4	-0.17		24.0				
90	0	4.93		48.0				
92	2	-1.23		19.0				
96	4	0.47			27.0			
97	0	3.85		42.9				
101	2	1.17				30.3		
103	2	-1.02				20.0		
105	3	0.68				28.0		
107	4	0.00		24.8				
111	4	0.40			26.7			
113	2	1.02		29.6				
114	4	-0.38		23.0				
116	4	-0.17				24.0		
117	2	-1.02		20.0				
119	2	-1.44				18.0		
120	3	-0.86			20.8			
121	4	0.04				25.0		
123	3	0.96			29.3			
127	4	-0.17		24.0				
128	4	0.25				26.0		
133	4	-0.47				22.6		
134	4	0.25				26.0		
136	0	2.80		38.0				
138	4	0.04				25.0		
140	1	1.53		32.0				
141	3	1.00				29.5		
145	4	0.40				26.7		
149	1	-1.66		17.0				
154	4	0.04				25.0		
158	0	-2.93			11.0			
161	0	9.18				68.0		
173	2	1.10		30.0				
179	0	-3.36		9.0				
180	0	-4.23				4.9		
181	1	-1.55						17.5
191	2	1.34					31.1	
193	NR			< 40				
194	0	10.24				73.0		

Table 11.-- *Statistical summary of reported data for standard reference sample M-122 (major constituents)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

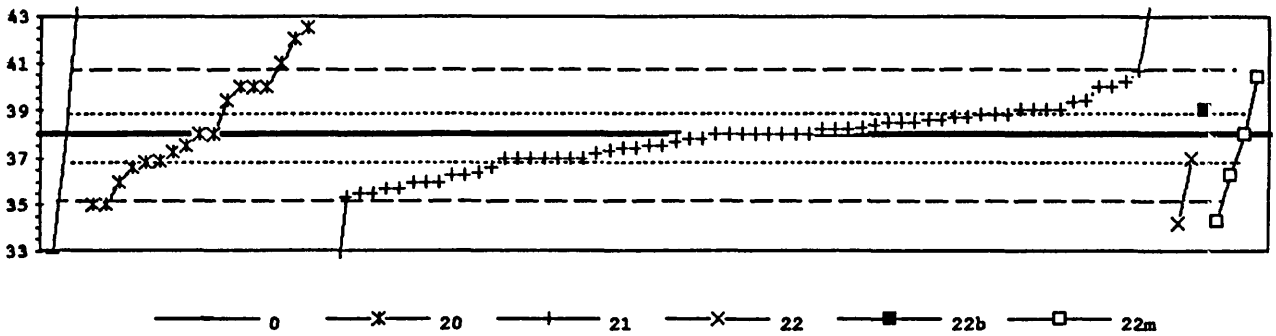
0. Other/Not reported		
1. AA: direct, air	=	atomic absorption: direct,air
2. AA: direct, N2O	=	atomic absorption: direct,nitrous oxide
3. AA: graphite furnace	=	atomic absorption: graphite furnace
4. ICP	=	inductively coupled plasma
5. DCP	=	direct coupled plasma
6. ICP/MS	=	inductively coupled plasma/mass spectrometry
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
µg/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 M-122 (major constituents)--Continued*

Alk (Alkalinity) m g/L



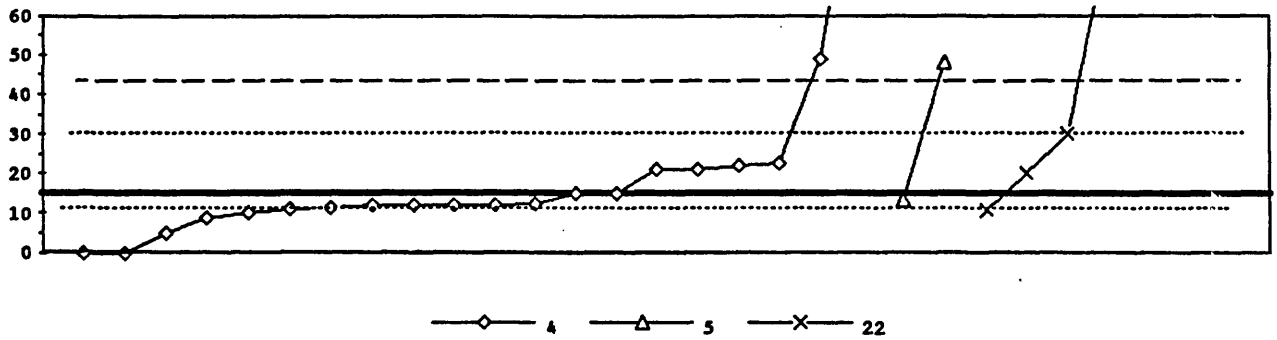
0. Other			22. Colorimetric					
20. Titrate: color			22b. Color: brom cresol green					
21. Titrate: electro			22m. Color: methyl orange					
	N =	3	17	65	2	1	4	
	Minimum =	32.9	35.0	26.4	34.2	39.0	34.3	
	Maximum =	45.4	42.5	56.6	37.0		40.4	
	Median =		38.0	38.0				
	St Dev =		2.1	1.2				

MPV = 38.0 +/- 0.2
F-pseudosigma = 1.4
N = 92
Hu = 38.8
Hl = 36.9

Lab	Rating	Z-value	0	20	21	22	22b	22m
1	3	0.56			38.8			
3	1	1.53			40.2			
5	4	-0.14			37.8			
6	3	0.97		39.4				
7	0	5.15	45.4					
8	3	-0.82		36.8				
9	0	-3.55	32.9					
10	4	0.49			38.7			
12	0	2.09		41.0				
13	3	-0.70			37.0			
15	4	0.00			38.0			
16	3	-0.97		36.6				
18	4	0.00						38.0
19	4	0.40			38.6			
23	4	0.14			38.2			
24	4	-0.21			37.7			
25	2	1.39			40.0			
26	0	-8.07			26.4			
27	2	-1.18			36.3			
29	3	-0.70			37.0			
32	3	0.70			39.0			
36	4	-0.35			37.5			
37	1	1.88			40.7			
38	3	0.92			39.3			
40	4	0.00			38.0			
42	4	0.14			38.2			
43	3	0.70			39.0			
45	4	0.35			38.5			
46	4	0.28			38.4			
48	4	0.00			38.0			
50	3	0.70			39.0			
51	4	0.00			38.0			
52	2	1.39			40.0			
54	3	-0.70			37.0			
55	4	0.00			38.0			
56	1	-1.85			35.3			
57	2	1.39		40.0				
62	3	-0.51		37.3				
63	0	-2.09		35.0				
68	0	-2.64				34.2		
69	0	-2.57						34.3
70	1	-1.74			35.5			
71	0	2.78		42.0				
72	4	0.00			38.0			
74	3	-0.97			36.6			
75	4	-0.42			37.4			
76	3	-0.76		36.9				
78	3	-0.70			37.0			
83	3	-0.56			37.2			
84	4	0.00		38.0				
85	3	0.56			38.8			
87	4	0.00			38.0			
90	4	-0.49			37.3			
91	3	-0.70			37.0			
92	2	-1.18			36.3			
94	4	0.00		38.0				
96	4	0.35			38.5			
97	4	0.14			38.2			
104	1	-1.60			35.7			
105	4	0.42			38.6			
107	2	-1.13			36.4			
109	0	4.17			44.0			
111	4	-0.14			37.8			
116	1	-1.60			35.7			
117	0	12.94			56.6			
118	0	3.13		42.5				
119	2	1.39		40.0				
120	2	-1.39			36.0			
122	3	0.70			39.0			
127	4	0.49			38.7			
128	2	-1.18						36.3
129	2	-1.39		36.0				
133	3	-0.70				37.0		
134	3	0.95			39.4			
136	4	0.35			38.5			
138	4	-0.42			37.4			
141	3	-0.70			37.0			
143	1	-1.74			35.5			
145	3	0.70					39.0	
151	4	0.00			38.0			
153	4	0.21			38.3			
154	1	1.67						40.4
158	2	-1.39			36.0			
161	2	1.39		40.0				
173	4	-0.35			37.5			
180	3	0.56			38.8			
181	2	-1.39			36.0			
182	0	-5.56			30.0			
183	0	-2.09		35.0				
190	4	0.00	38.0					
191	4	-0.35		37.5				
194	3	-0.70			37.0			

Table 11. *--Statistical summary of reported data for standard reference water sample M-122 (major constituents)--Continued*

B (Boron) μ g/L



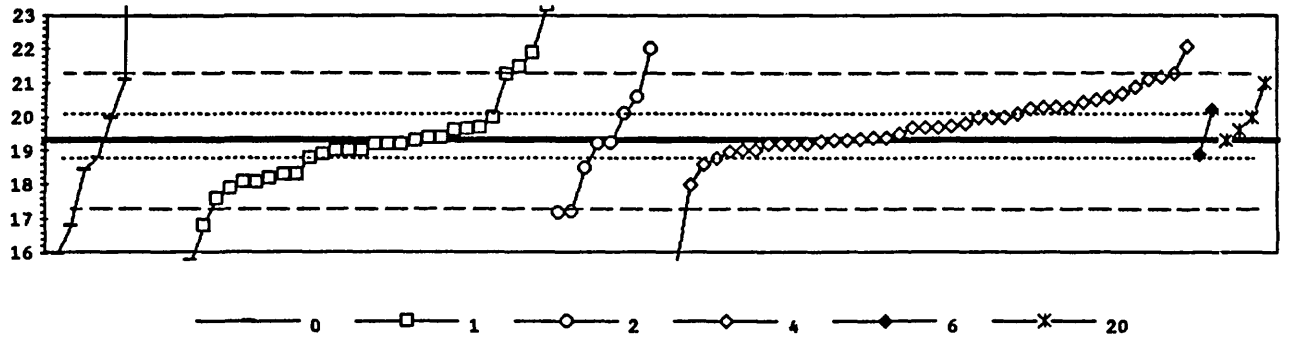
0. Other		5. DCP						
1. AA: direct air		6. ICP/MS						
4. ICP		22. Colorimetric						
	N =	0	0	20	2	0	7	
	Minimum =			0	14		11	
	Maximum =			110	48		116	
	Median =			12				
	St Dev =			11				

MPV =	15	+/-	3
F-pseudosigma =	14		
N =	29		
Hu =	30		
Hl =	12		

Lab	Rating	Z-value	0	1	4	5	6	22
1	4	-0.11				14		
3	4	0.44			21			
5	4	-0.26			12			
10	4	0.36						20
15	3	0.51			22			
16	NR				< 200			
18	NR				< 10			
24	0	2.48			49			
25	NR				< 14			
27	0	2.41				48		
29	2	1.09						30
37	0	4.59						78
40	3	-0.73			5			
45	4	-0.31						11
46	4	-0.20			12			
48	4	-0.36			10			
50	NR							< 100
52	NR				< 150			
57	NR				< 100			
63	4	-0.29			11			
68	0	6.93			110			
70	4	-0.22			12			
74	4	0.00			15			
85	NR				< 20			
103	4	0.00			15			
109	4	-0.22			12			
116	4	-0.22			12			
119	NR	-1.09			0			
127	4	-0.20			12			
128	4	-0.44			9			
129	0	7.29						115
141	4	0.44			21			
145	3	0.57			23			
149	0	7.36						116
161	0	6.20						100
180	2	-1.09			0			

Table 11. *--Statistical summary of reported data for standard reference water sample M-122 (major constituents)--Continued*

Ca (Calcium) m g/L



0. Other		4. ICP						
1. AA: direct air		6. ICP/MS						
2. AA: direct N2O		20. Titrate: Colorimetric						
	N =	7	31	8	41	2	4	
	Minimum =	16.0	9.9	17.2	10.6	18.9	19.3	
	Maximum =	151	23.3	22.0	22.1	20.2	21.0	
	Median =		19.0		19.7			
	St Dev =		1.2		0.8			

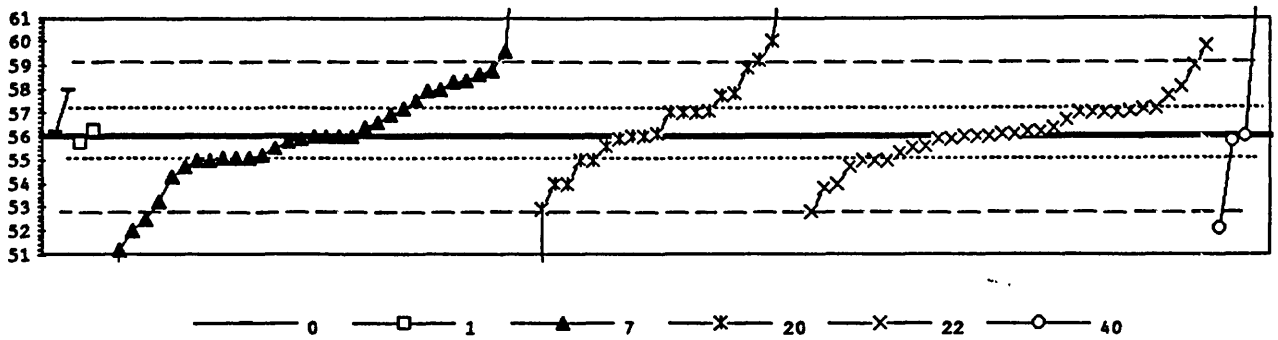
MPV = 19.3 +/- 0.1
F-pseudosigma = 1.0
N = 93
Hu = 20.1
Hl = 18.8

Lab	Rating	Z-value	0	1	2	4	6	20
1.	2	1.17				20.4		
3.	1	1.97				21.2		
5.1	2	1.45				20.7		
5.2	2	1.04				20.3		
6.	0	-8.72		10.9				
7.	1	1.66				20.9		
8.	4	-0.33				19.0		
9.	0	-9.75		9.9				
10.	4	0.10		19.4				
12.	3	0.73				20.0		
13.	4	-0.42		18.9				
15.	4	0.42				19.7		
16.	3	0.73				20.0		
18.	3	0.73				20.0		
19.	4	-0.03				19.3		
23.	4	-0.10			19.2			
24.	4	0.42				19.7		
25.	0	2.91				22.1		
26.	4	0.31						19.6
27.	3	-0.88	18.5					
29.	3	0.73						20.0
32.	4	-0.42					18.9	
36.	0	-2.59	16.8					
37.1	0	4.15		23.3				
37.2	3	0.73	20.0					
38.	3	-0.83			18.5			
40.	4	0.00				19.3		
42.	4	-0.10				19.2		
43.	2	1.04				20.3		
45.	4	-0.10		19.2				
46.	0	-3.85				15.6		
48.	0	-9.03				10.6		
50.	4	-0.31		19.0				
51.	4	-0.08				19.2		
52.	4	-0.10				19.2		
54.	4	0.10		19.4				
55.	4	0.42				19.7		
56.	2	-1.45		17.9				
57.	4	-0.31				19.0		
59.	4	-0.10				19.2		
63.	3	0.83			20.1			
64.	3	0.52				19.8		
68.	4	-0.31				19.0		
69.	2	-1.25		18.1				
70.	2	1.35				20.6		
71.	0	2.70		21.9				
72.	3	-0.73				18.6		
74.	3	-0.52				18.8		
75.	3	-0.52		18.8				
78.	0	2.28		21.5				

Lab	Rating	Z-value	0	1	2	4	6	20
83	4	0.36		19.7				
85	4	0.31		19.6				
86	4	0.21				19.5		
87	0	2.80			22.0			
90	3	-0.52	18.8					
92	2	-1.14		18.2				
93	4	0.04				19.3		
94	4	-0.06			19.2			
97	2	-1.25		18.1				
101	4	0.42		19.7				
103	2	-1.35				18.0		
105	4	0.00				19.3		
109	4	-0.31		19.0				
114	0	-2.59		16.8				
116	1	1.87				21.1		
117	0	-9.65		10.0				
119	4	0.10				19.4		
120	0	-2.16			17.2			
121	4	0.10				19.4		
122	2	-1.04		18.3				
123	0	2.05		21.3				
127	4	-0.10		19.2				
128	4	0.45				19.7		
129	4	-0.10		19.2				
133	2	-1.05		18.3				
134	3	0.73		20.0				
136	2	1.35			20.6			
138	0	2.08				21.3		
140	4	-0.31		19.0				
141	2	1.25				20.5		
145	3	0.98				20.2		
149	1	-1.76		17.6				
151	4	0.00		19.3				
153	1	1.87	21.1					
154	2	1.04				20.3		
161	4	0.00						19.3
179	0	-3.84		15.6				
180	3	0.83				20.1		
181	0	136.66	151					
182	0	-2.18			17.2			
183	1	1.76						21.0
190	0	-3.42	16.0					
191	3	0.93					20.2	

Table 11. --*Statistical summary of reported data for standard reference water sample M-122 (major constituents)--Continued*

Cl (Chloride) m g/L



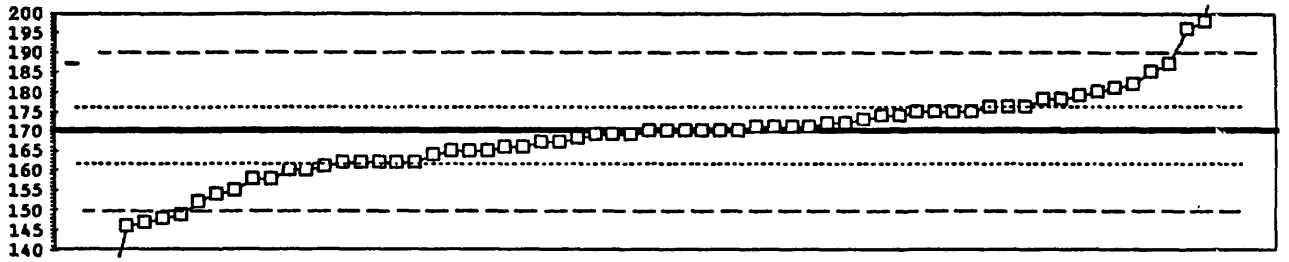
0. Other		20. Titrate : colorimetric					
1. AA: direct air		22. Colorimetric					
7. IC		40. Ion electrode					
	N =	2	2	33	22	32	4
	Minimum =	56.2	55.7	46.5	5.0	52.8	52.1
	Maximum =	58.0	56.3	65.7	159	59.8	62.5
	Median =			56.0	56.6	56.1	
	St Dev =			1.8	1.8	1.4	

MPV = 56.0 +/- 0.2
F-pseudosigma = 1.6
N = 95
Hu = 57.2
Hl = 55.1

Lab	Rating	Z-value	0	1	7	20	22	40
1	1	1.69			58.6			
3	2	1.09					57.7	
5	3	-0.84			54.7			
7	3	0.96			57.5			
8	4	0.00			56.0			
9	4	0.00					56.0	
10	4	0.06				56.1		
12	3	0.64					57.0	
13	0	2.44					59.8	
15	3	-0.58			55.1			
16	3	0.77					57.2	
18	3	-0.64					55.0	
19	3	-0.64				55.0		
23	0	-2.51						52.1
24	4	-0.45					55.3	
25	2	-1.09			54.3			
26	1	1.86				58.9		
27	2	1.25			58.0			
29	0	6.23			65.7			
30	1	1.53			58.4			
32	0	-3.08			51.2			
36	3	0.71					57.1	
37	4	-0.06			55.9			
40	2	1.35					58.1	
42	4	-0.13			55.8			
43	4	0.00						56.0
45	4	0.00				56.0		
46	4	0.26					56.4	
48	0	2.57				60.0		
50	4	0.00					56.0	
51	0	-2.25			52.5			
52	4	0.00					56.0	
54	4	-0.06					55.9	
55	1	1.93					59.0	
56	0	-2.00				52.9		
57	3	0.64				57.0		
59	3	0.77			57.2			
63	3	0.64					57.0	
64	4	0.13	56.2					
68	4	0.45					56.7	
69	4	-0.06					55.9	
70	3	0.64				57.0		
71	0	-32.76				5.0		
72	0	66.17				159		
74	1	1.80			58.8			
75	4	-0.26					55.6	
76	4	0.39			56.6			
78	3	-0.64				55.0		
83	4	-0.18		55.7				
84	4	0.07					56.1	
85	3	-0.64					55.0	
86	0	2.31			59.6			
87	4	-0.32					55.5	
90	0	4.18						62.5
91	3	0.58			56.9			
92	2	1.16				57.8		
93	4	0.25			56.4			
94	2	-1.28					54.0	
96	4	0.13					56.2	
97	3	0.77					57.2	
101	0	2.06				59.2		
105	0	-2.57			52.0			
107	4	0.19		56.3				
109	3	0.71				57.1		
111	3	-0.64			55.0			
116	4	-0.32			55.5			
117	2	1.09				57.7		
119	3	0.64				57.0		
120	2	-1.28				54.0		
122	4	-0.06				55.9		
127	3	-0.51			55.2			
128	3	-0.64					55.0	
129	3	-0.64			55.0			
134	4	0.00			56.0			
136	1	-1.80			53.2			
138	3	0.64					57.0	
140	3	0.64					57.0	
141	3	-0.84					54.7	
143	2	-1.41					53.8	
145	2	1.27			58.0			
149	2	1.48			58.3			
151	3	-0.58			55.1			
153	4	0.00			56.0			
154	0	-2.06					52.8	
158	4	0.06					56.1	
173	2	-1.28				54.0		
179	0	5.14				64.0		
180	4	0.13					56.2	
181	0	-6.10			46.5			
182	4	-0.26				55.6		
183	4	-0.01				56.0		
190	2	1.28	58.0					
191	4	0.00			56.0			
193	3	-0.58			55.1			
194	4	-0.13						55.8

Table 11. *--Statistical summary of reported data for standard reference water sample M-122 (major constituents)--Continued*

DSRD (Dissolved Solids) m g/L



0 50

0. Other
50. Gravimetric

N =	1	66
Minimum =	187	124
Maximum =		306
Median =		170
St Dev =		11

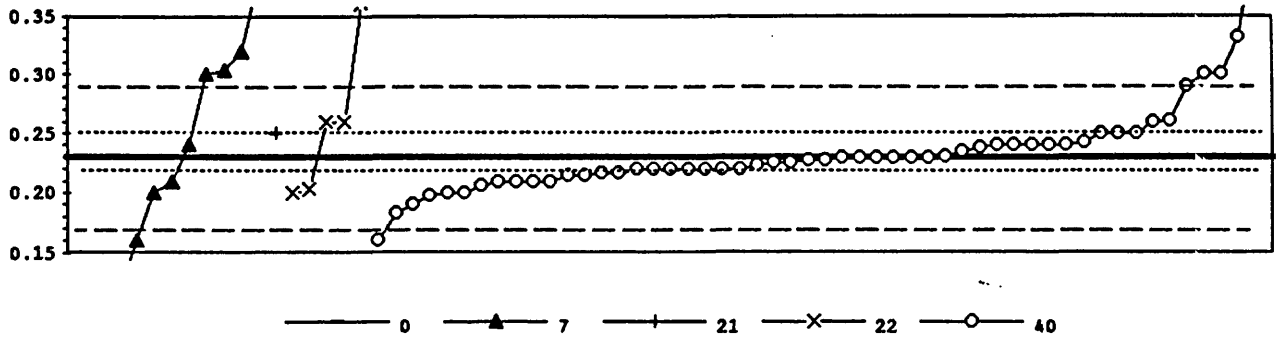
Lab	Rating	Z-value	0	50
1	4	0.00		170
3	4	-0.40		166
5	2	-1.50		155
6	4	-0.50		165
7	4	0.50		175
8	0	5.80		228
9	4	0.30		173
10	3	-0.80		162
12	4	0.20		172
13	0	-2.20		148
15	4	-0.10		169
16	4	0.10		171
18	4	0.10		171
19	4	0.10		171
23	3	-0.80		162
25	4	-0.10		169
29	3	0.80		178
32	4	0.50		175
36	0	2.60		196
37	4	-0.50		165
38	4	0.40		174
40	1	-1.80		152
43	4	-0.20		168
45	0	-2.30		147
46	4	-0.40		166
48	4	0.00		170
50	3	0.90		179
51	3	0.80		178
52	0	2.80		198
54	2	-1.20		158
55	3	-1.00		160
57	4	0.00		170
59	4	0.10		171
63	3	-0.60		164
69	4	0.50		175
70	3	-0.80		162
71	3	-1.00		160
72	2	1.50		185
74	3	0.60		176
75	0	-2.40		146
76	4	-0.10		169
78	4	0.50		175
85	0	-2.10		149
87	3	-0.80		162
92	4	0.00		170
94	3	-0.80		162
96	0	5.80		228
97	3	0.60		176
101	0	-4.20		128
105	3	-0.90		161

MPV =	170	+/- 2
F-pseudosigma =	10	
N =	67	
Hu =	176	
Hl =	162	

Lab	Rating	Z-value	0	50
109	4	0.20		172
117	0	-4.60		124
118	1	1.70		187
119	1	-1.60		154
122	4	-0.30		167
127	4	0.00		170
129	4	0.40		174
134	3	1.00		180
138	4	0.00		170
140	2	1.20		182
141	4	-0.50		165
149	2	-1.20		158
151	3	0.60		176
158	4	-0.30		167
173	0	13.59		306
181	2	1.10		181
190	1	1.70	187	

Table 11. *--Statistical summary of reported data for standard reference water sample M-122 (major constituents)--Continued*

F (Fluoride) m g/L



0. Other		22. Colorimetric					
7. IC		40. Ion electrode					
21. Titrate: electrometric							
	N =	1	9	1	5	53	
	Minimum =	0.23	0.12	0.25	0.20	0.16	
	Maximum =		0.38		0.36	0.65	
	Median =					0.23	
	St Dev =					0.03	

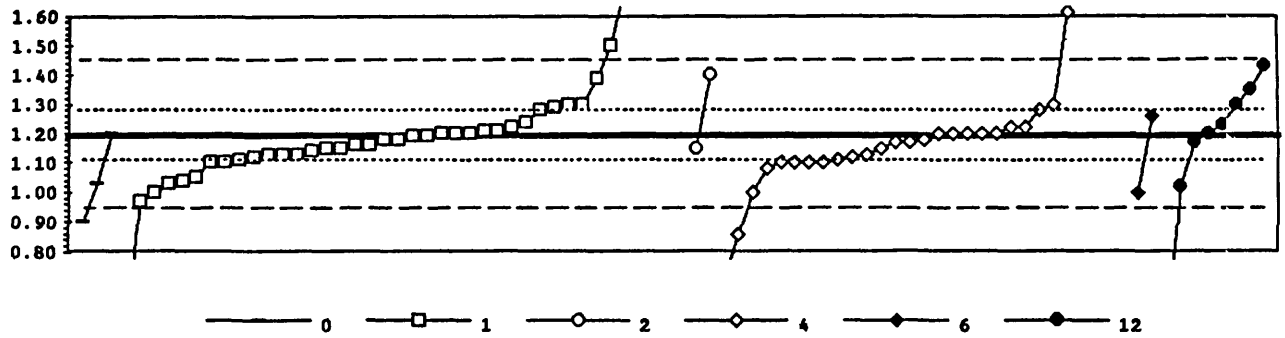
MPV = 0.23 +/- 0.00
F-pseudosigma = 0.03
N = 69
Hu = 0.25
Hl = 0.22

Lab	Rating	Z-value	0	7	21	22	40
1	4	0.39		0.24			
3	2	-1.04				0.20	
6	4	0.39					0.24
7	3	-0.77		0.21			
9	4	-0.39					0.22
10	4	-0.39					0.22
12	0	2.70					0.30
13	4	-0.27					0.22
15	2	1.19					0.26
16	4	0.50					0.24
18	3	-0.77					0.21
23	4	-0.08					0.23
24	4	0.00					0.23
25	3	-0.77					0.21
27	4	0.39					0.24
29	4	-0.39					0.22
30	0	-4.28		0.12			
32	0	-2.70		0.16			
36	3	-0.58					0.22
37	4	-0.50					0.22
40	2	-1.23					0.20
42	0	6.94					0.41
45	4	0.31					0.24
46	4	-0.50					0.22
50	2	-1.16					0.20
52	3	-0.93					0.21
54	4	-0.39					0.22
55	0	3.47		0.32			
57	0	2.70					0.30
59	4	-0.39					0.22
63	4	0.39					0.24
69	4	-0.39					0.22
71	3	0.77					0.25
72	1	-1.54					0.19
74	4	0.04					0.23
76	4	0.19					0.24
78	3	0.77					0.25
85	4	-0.39					0.22
90	0	2.31					0.29
91	2	1.16				0.26	
94	4	0.00					0.23
96	4	-0.19					0.23
97	4	-0.08					0.23
105	2	-1.16		0.20			
107	4	-0.19					0.23
109	3	-0.77					0.21
111	0	5.78		0.38			
117	0	16.19					0.65
119	4	0.00					0.23
122	0	5.01				0.36	

Lab	Rating	Z-value	0	7	21	22	40
127	3	-0.58					0.22
128	0	-2.70					0.16
129	0	2.85		0.30			
134	3	0.77			0.25		
136	0	2.70		0.30			
138	2	-1.16					0.20
140	2	1.16					0.26
141	4	0.39					0.24
149	4	0.00					0.23
151	3	-0.77					0.21
153	4	0.00					0.23
154	2	-1.16				0.2?	
161	1	-1.81					0.18
173	2	1.16				0.2?	
180	4	0.39					0.24
181	NR			< 0.02			
182	0	3.89					0.33
183	4	0.00					0.23
190	4	0.00	0.23				
194	3	0.77					0.25

Table 11. *--Statistical summary of reported data for standard reference water sample M-122 (major constituents)--Continued*

K (Potassium) m g/L



0. Other		4. ICP					
1. AA: direct air		6. ICP/MS					
2. AA: direct N2O		12. Flame emission					
N =	3	40	2	29	2	8	
Minimum =	0.90	0.50	1.15	0.70	1.00	0.47	
Maximum =	1.20	10	1.40	2.41	1.26	1.43	
Median =		1.19		1.18			
St Dev =		0.11		0.09			

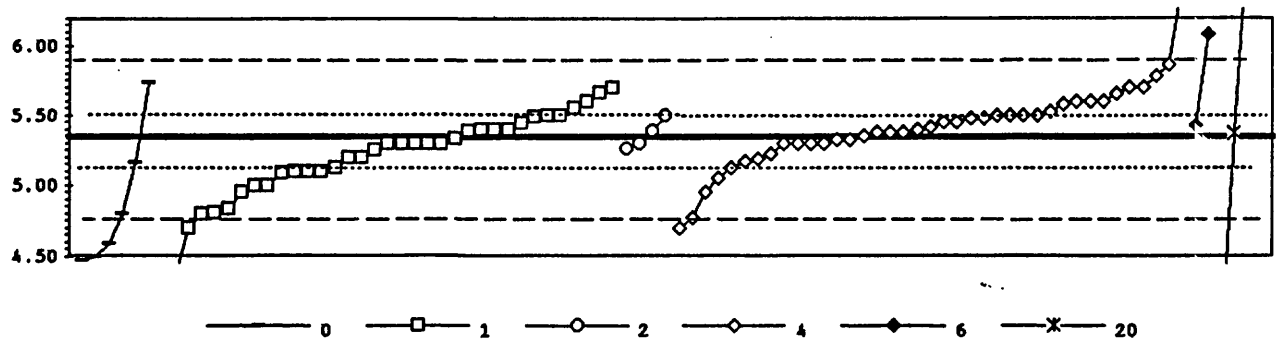
MPV = 1.19 +/- 0.02
F-pseudosigma = 0.13
N = 84
Hu = 1.28
Hl = 1.11

Lab	Rating	Z-value	0	1	2	4	6	12
1.	2	-1.23		1.03				
3.	3	0.83		1.29				
5.1	0	9.72				2.41		
5.2	0	3.37				1.61		
7.	0	8.85				2.30		
8.	0	-2.58				0.86		
9.	4	0.12		1.20				
10.	3	0.91		1.30				
12.	3	-0.67				1.10		
13.	3	-0.60		1.11				
15.	3	0.75		1.28				
16.	0	2.50		1.50				
18.	2	-1.47				1.00		
19.	4	0.28				1.22		
23.	4	-0.04		1.18				
24.	4	-0.04				1.18		
25.	0	4.01				1.69		
26.	4	-0.12						1.17
27.	4	0.44		1.24				
29.	3	0.91						1.30
32.	2	-1.47					1.00	
36.	2	-1.31						1.02
37.1	2	-1.15		1.04				
37.2	2	-1.23	1.03					
38.	4	-0.36		1.14				
40.	4	-0.12				1.17		
42.	0	-3.85				0.70		
43.	3	-0.67				1.10		
45.	4	-0.44		1.13				
46.	3	-0.60				1.11		
48.	3	0.91				1.30		
50.	3	-0.67		1.10				
51.	4	0.36						1.23
52.	4	-0.44				1.13		
54.	4	-0.44		1.13				
55.	2	1.31						1.35
56.	4	-0.28		1.15				
57.	4	0.12				1.20		
59.	4	0.12				1.20		
63.	4	0.20		1.21				
64.	2	-1.07		1.05				
68.	4	0.12				1.20		
69.	4	0.12						1.20
70.	4	-0.44		1.13				
72.	4	0.28				1.22		
74.	4	0.12				1.20		
75.	3	-0.52		1.12				
78.	4	0.12		1.20				
83.	4	0.20		1.21				
85.	4	-0.28		1.15				

Lab	Rating	Z-value	0	1	2	4	6	12
86	3	-0.83				1.08		
87	4	0.04		1.19				
92	0	5.20		1.84				
93	1	1.94						1.43
94	4	-0.28			1.15			
97	4	0.12		1.20				
101	3	-0.67		1.10				
103	3	-0.67				1.10		
105	3	0.75				1.28		
109	2	-1.47		1.00				
114	0	30.27		5.00				
117	0	18.05		3.46				
119	3	-0.67				1.10		
120	1	1.71			1.40			
121	4	0.04		1.19				
122	4	0.28		1.22				
123	1	-1.71		0.97				
127	4	-0.20		1.16				
128	4	0.12				1.20		
129	0	69.95		10				
134	3	0.91		1.30				
136	0	4.09		1.70				
138	4	-0.28				1.15		
140	4	-0.04		1.18				
145	3	-0.52				1.12		
151	4	-0.20		1.16				
153	4	0.12	1.20					
154	4	-0.12				1.17		
179	1	1.63		1.39				
180	0	5.59				1.89		
181	0	-5.68						0.47
182	0	-5.44		0.50				
190	0	-2.26	0.90					
191	3	0.60					1.26	

Table 11. *--Statistical summary of reported data for standard reference water sample M-122 (major constituents)--Continued*

Mg (Magnesium) m g/L



0. Other
1. AA: direct air
2. AA: direct N2O
4. ICP
6. ICP/MS
20. Titrate : colorimetric

	6	35	4	39	2	4
N =	6	35	4	39	2	4
Minimum =	4.47	2.67	5.26	4.70	5.42	3.84
Maximum =	5.73	5.70	5.50	6.40	6.08	9.20
Median =		5.30		5.41		
St Dev =		0.26		0.25		

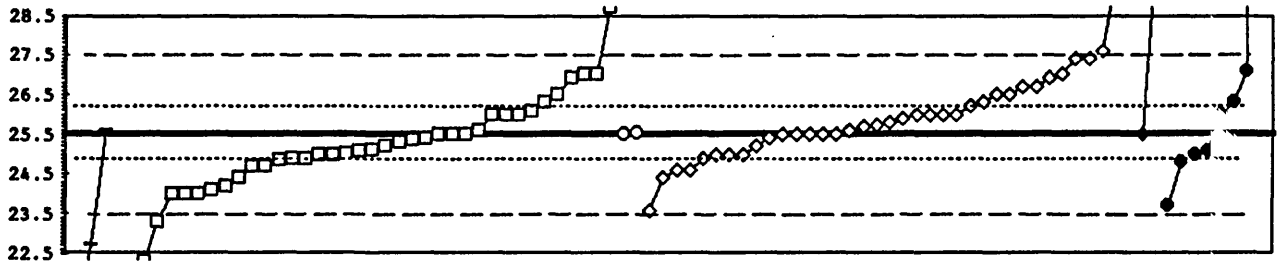
MPV = 5.34 +/- 0.04
F-pseudosigma = 0.28
N = 90
Hu = 5.50
Hl = 5.12

Lab	Rating	Z-value	0	1	2	4	6	20
1.	4	-0.16		5.30				
3.	1	1.56				5.78		
5.1	4	0.14				5.38		
5.2	4	0.14				5.38		
6.	0	-3.44		4.37				
7.	3	0.57				5.50		
8.	0	-2.02				4.77		
9.	4	0.21		5.40				
10.	4	-0.14		5.30				
12.	3	0.92				5.60		
13.	3	0.53		5.49				
15.	4	0.39				5.45		
16.	3	0.57				5.50		
18.	4	-0.14				5.30		
19.	2	-1.03				5.05		
23.	1	-1.81		4.83				
24.	4	-0.07				5.32		
25.	1	1.85				5.86		
26.	4	0.11						5.37
27.	3	-0.64	5.16					
29.	0	4.83						6.70
32.	0	2.63					6.08	
36.	2	1.38	5.73					
37.1	4	-0.32		5.25				
37.2	0	-2.66	4.59					
38.	3	-0.85		5.10				
40.	2	-1.38				4.95		
42.	4	0.21				5.40		
43.	3	0.57				5.50		
45.	3	0.75		5.55				
46.	4	-0.41				5.23		
48.	3	-0.53				5.19		
50.	3	0.57		5.50				
51.	3	-0.85		5.10				
52.	3	-0.60				5.17		
54.	4	-0.50		5.20				
55.	4	-0.05				5.33		
56.	4	0.36		5.44				
57.	3	0.92				5.60		
59.	4	-0.14				5.30		
63.	4	0.18			5.39			
64.	2	1.10				5.65		
68.	3	0.92				5.60		
69.	4	-0.50		5.20				
70.	4	0.14				5.38		
72.	3	-0.78				5.12		
74.	0	-2.27				4.70		
75.	3	-0.89		5.09				
78.	2	1.28		5.70				
83.	4	0.18		5.39				

Lab	Rating	Z-value	0	1	2	4	6	20
85	4	-0.04		5.33				
86	3	0.85				5.58		
87	3	-0.78		5.12				
92	0	-2.27		4.70				
93	0	3.76				6.40		
94	4	-0.28			5.26			
97	2	-1.38		4.95				
101	4	0.21		5.40				
103	4	-0.14				5.30		
105	4	0.25				5.41		
109	2	-1.21		5.00				
114	2	-1.21		5.00				
116	3	0.64				5.52		
117	0	-9.48		2.67				
119	4	-0.14				5.30		
120	4	-0.14			5.30			
121	4	0.39				5.45		
122	3	-0.85		5.10				
123	2	1.14		5.66				
127	4	0.21		5.40				
128	4	0.04				5.35		
129	1	-1.92		4.80				
133	1	-1.91		4.80				
134	4	-0.14		5.30				
136	4	-0.14		5.30				
138	2	1.28				5.70		
140	3	0.57		5.50				
141	4	0.50				5.48		
145	4	0.50				5.48		
151	4	-0.14		5.30				
153	1	-1.92	4.80					
154	3	0.57				5.50		
161	0	-5.33						3.84
179	3	0.92		5.60				
180	2	1.28				5.79		
181	0	-3.09	4.47					
182	3	0.57			5.50			
183	0	13.70						9.20
190	0	-2.98	4.50					
191	4	0.28					5.42	

Table 11. *--Statistical summary of reported data for standard reference water sample M-122 (major constituents)--Continued*

Na (Sodium) m g/L



0. Other		4. ICP					
1. AA: direct air		6. ICP/MS					
2. AA: direct N2O		12. Flame emission					
N =	3	38	2	37	2	8	
Minimum =	21.0	15.2	25.5	23.6	25.5	23.7	
Maximum =	25.6	28.7	25.5	30.4	29.9	77.6	
Median =		25.1		25.8			
St Dev =		0.91		0.90			

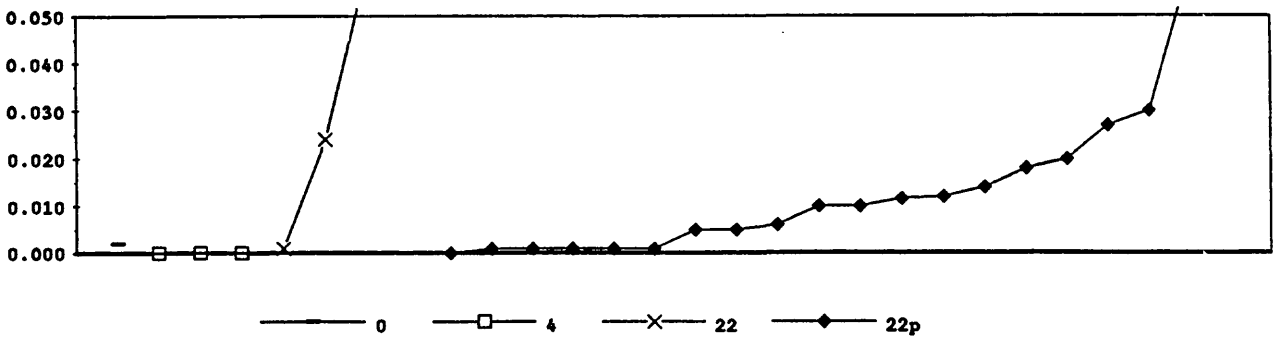
MPV = 25.5 +/- 0.1
F-pseudosigma = 1.0
N = 90
Hu = 26.2
Hl = 24.9

Lab	Rating	Z-value	0	1	2	4	6	12
1.	4	-0.10		25.4				
3.	0	2.00				27.4		
5.1	2	1.07				26.5		
5.2	3	0.86				26.3		
7.	4	0.24				25.7		
8.	1	-1.96				23.6		
9.	4	-0.18		25.3				
10.	4	-0.38		25.1				
12.	4	-0.49				25.0		
13.	3	0.86		26.3				
15.	0	4.08				29.4		
16.	1	1.59				27.0		
18.	4	-0.07				25.4		
19.	3	-0.90				24.6		
23.	0	-3.29		22.3				
24.	4	0.45				25.9		
25.	0	2.00				27.4		
26.	1	-1.84						23.7
27.	3	-0.64		24.9				
29.	4	-0.49						25.0
32.	0	4.60					29.9	
36.	3	0.86						26.3
37.1	2	1.07		26.5				
37.2	0	-2.87	22.7					
38.	2	-1.42		24.1				
40.	3	-0.59				24.9		
42.	2	1.07				26.5		
43.	4	0.03				25.5		
45.	3	-0.59		24.9				
46.	3	-0.88				24.6		
48.	0	5.12				30.4		
50.	4	-0.49		25.0				
51.	4	-0.38						25.1
52.	4	-0.49				25.0		
54.	4	0.03		25.5				
55.	3	0.55						26.0
56.	4	-0.46		25.0				
57.	4	-0.49				25.0		
59.	4	0.03				25.5		
63.	3	0.55		26.0				
64.	4	-0.07		25.4				
68.	3	0.55				26.0		
69.	3	-0.70						24.8
70.	2	1.48				26.9		
72.	4	-0.28				25.2		
74.	2	-1.11				24.4		
75.	4	0.03		25.5				
78.	3	0.55		26.0				
83.	4	0.15		25.6				
85.	3	-0.59		24.9				

Lab	Rating	Z-value	0	1	2	4	6	12
86	4	0.03				25.5		
87	1	-1.53		24.0				
90	2	-1.32		24.2				
92	0	3.35		28.7				
93	1	1.68						27.1
94	4	0.07			25.5			
97	2	-1.11		24.4				
101	4	0.03		25.5				
103	3	0.55				26.0		
105	2	1.28				26.7		
109	4	-0.49		25.0				
114	0	-10.66		15.2				
116	3	0.55				26.0		
117	4	-0.37		25.1				
119	4	0.13				25.6		
120	4	0.03			25.5			
121	4	0.03				25.5		
122	2	1.48		26.9				
123	3	0.64		26.1				
127	4	0.03				25.5		
128	4	0.28				25.7		
129	1	-1.53		24.0				
133	0	-2.26		23.3				
134	3	0.55		26.0				
136	3	-0.80		24.7				
138	2	1.28				26.7		
140	1	1.59		27.0				
141	4	0.34				25.8		
145	3	0.55				26.0		
149	1	-1.53		24.0				
151	4	-0.28		25.2				
153	4	0.13	25.6					
154	3	0.76				26.2		
173	3	-0.80		24.7				
179	1	1.59		27.0				
180	0	2.21				27.6		
181	0	54.09						77.6
182	0	-6.92		18.8				
190	0	-4.64	21.0					
191	4	0.03					25.5	

Table 11. *--Statistical summary of reported data for standard reference water sample M-122 (major constituents)--Continued*

total P (Phosphorus) m g/L



0. Other		22. Colorimetric				
4. ICP		22p. Color: phosphomolybdate				
20. Titrate: colorimetric						
	N =	2	3	0	7	19
	Minimum =	0.002	0.000		0.001	0.000
	Maximum =	0.100	0.000		0.080	2.460
	Median =				0.042	0.011
	St Dev =				0.035	0.022

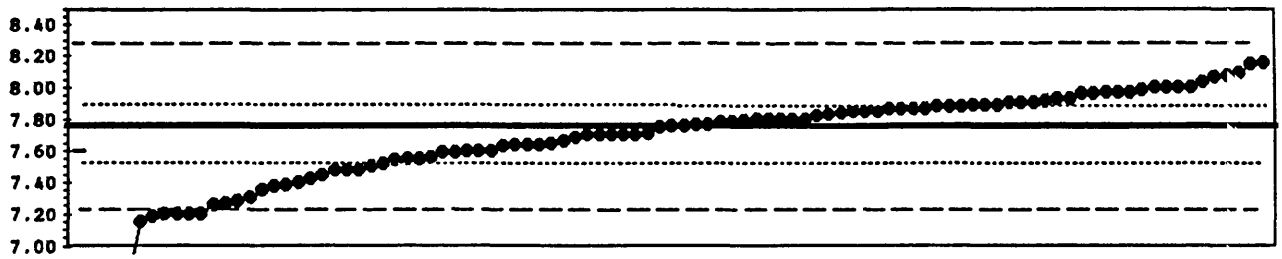
MPV = Insuff. data
F-pseudosigma =
N = 28
Hu =
Hl =

Lab	Rating	Z-value	0	4	20	22	22p
1							< 0.01
3							< 0.01
6							< 0.05
9							0.006
12							< 0.02
13							< 0.02
15							< 0.02
18							0.001
19							< 0.05
23							0.010
25				< 0.052			
32							< 0.1
36							< 0.025
38							0.012
42							0.005
45							0.216
46							< 0.02
48							< 0.01
51							0.001
52							< 0.01
57						< 0.02	
63							0.130
64							0.005
68						0.024	
70			0.100				
72							< 0.02
74							
78							0.014
85						< 0.005	
87							< 0.01
90							0.059
91						0.060	
92							0.010
94							0.001
97						< 0.03	
103				< 0.05			
104							0.001
108						0.080	
111							< 0.001
114							0.027
118							< 0.01
119							0.000
120							< 0.01
123							< 0.1
127							< 0.03
128							< 0.05
129							2.460
133						0.001	
134							< 0.02
138							< 0.02

Lab	Rating	Z-value	0	4	20	22	22p
140						0.02(	
141							< 0.05
143							< 0.002
145							< 0.02
154							0.001
161						0.012	
173							< 0.05
179				< 0.18			
180							0.018
181						0.03(	
190				0.002			

Table 11. --*Statistical summary of reported data for standard reference water sample M-122 (major constituents)--Continued*

pH



0. Other
41. Direct reading

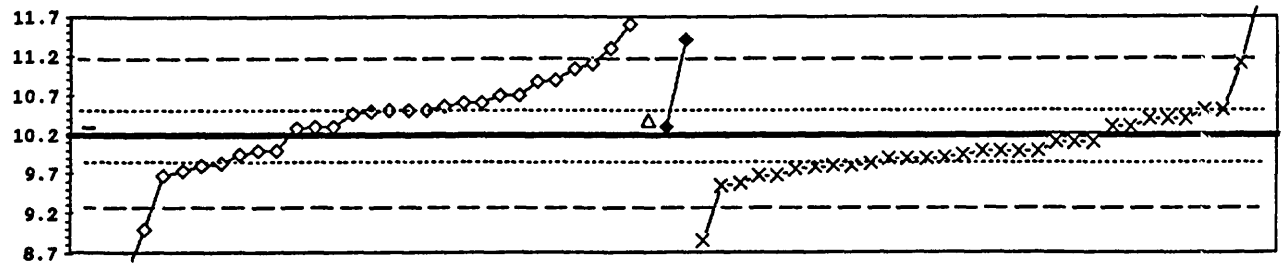
N =	1	98
Minimum =	7.60	6.40
Maximum =		8.15
Median =		7.76
St Dev =		0.25

MPV = 7.76 +/- 0.04
F-pseudosigma = 0.26
N = 99
Hu = 7.89
Hl = 7.53

Lab	Rating	Z-value	0	41
1	2	1.45		8.14
2	4	0.27		7.83
3	2	-1.06		7.48
5	0	-5.02		6.44
6	3	0.80		7.97
7	0	-2.13		7.20
8	4	-0.38		7.66
9	0	-2.32		7.15
10	4	0.15		7.80
12	3	0.91		8.00
13	4	0.49		7.89
15	3	-0.65		7.59
16	3	-0.76		7.56
18	4	0.04		7.77
19	4	0.00		7.76
23	4	0.49		7.89
24	4	-0.23		7.70
25	1	-1.90		7.26
26	3	0.91		8.00
29	4	0.38		7.86
32	2	-1.06		7.48
36	4	0.11		7.79
37	0	-3.65		6.80
38	3	0.91		8.00
40	4	0.46		7.88
42	4	0.34		7.85
43	3	-0.61		7.60
45	4	0.49		7.89
46	3	0.80		7.97
48	4	-0.23		7.70
50	1	-1.75		7.30
51	3	-0.80		7.55
52	0	-2.20		7.18
54	2	-1.06		7.48
55	3	-0.61		7.60
56	4	0.46		7.88
57	3	-0.99		7.50
59	3	-0.80		7.55
62	3	0.84		7.98
63	0	-2.13		7.20
64	3	0.65		7.93
68	0	-2.13		7.20
69	4	-0.49		7.63
70	2	-1.29		7.42
71	3	0.76		7.96
72	4	0.04		7.77
74	1	-1.56		7.35
75	0	-2.13		7.20
76	2	-1.48		7.37
78	3	-0.91		7.52
83	4	-0.27		7.69
84	3	0.91		8.00
85	2	1.03		8.03
86	4	-0.19		7.71
87	2	-1.44		7.38
90	4	0.15		7.80
91	4	0.38		7.86
92	4	-0.04		7.75
94	4	0.23		7.82
96	4	0.08		7.78
97	3	0.80		7.97
101	0	-5.17		6.40
104	4	0.34		7.85
105	1	-1.94		7.25
107	4	-0.46		7.64
109	0	-5.13		6.41
111	4	-0.46		7.64
114	3	-0.61		7.60
117	4	-0.46		7.64
118	4	-0.23		7.70
119	2	1.25		8.09
120	4	-0.23		7.70
122	3	0.53		7.90
123	4	0.15		7.80
127	4	0.46		7.88
128	3	0.53		7.90
129	4	-0.42		7.65
133	4	0.15		7.80
134	3	-0.84		7.54
136	4	0.15		7.80
138	4	0.34		7.85
140	2	-1.18		7.45
141	3	0.53		7.90
143	2	1.18		8.07
145	3	0.76		7.96
151	4	0.38		7.86
153	3	0.57		7.91
154	2	1.14		8.06
158	1	-1.82		7.28
161	2	1.48		8.15
173	2	-1.37		7.40
179	4	-0.23		7.70
180	4	0.00		7.76
181	3	-0.65		7.59
182	4	0.30		7.84
183	4	0.08		7.78
190	3	-0.61	7.60	
191	4	0.38		7.86
194	3	0.65		7.93

Table 11. *--Statistical summary of reported data for standard reference water sample M-122 (major constituents)--Continued*

SiO2 (Silica) m g/L

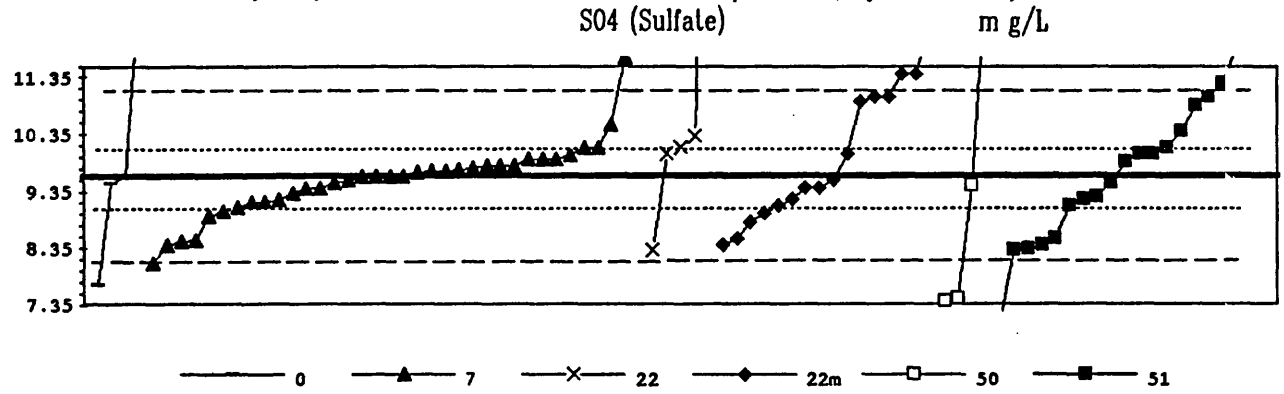


0. Other			5. DCP					
2. AA: direct N2O			6. ICP/MS					
4. ICP			22. Color: molybdate blue					
	N =	1	1	28	1	2	31	
	Minimum =	10.28	3.20	8.42	10.38	10.30	8.85	
	Maximum =			11.60		11.40	12.00	
	Median =			10.50			9.99	
	St Dev =			0.56			0.40	

MPV = 10.19 +/- 0.08
F-pseudosigma = 0.48
N = 64
Hu = 10.50
Hl = 9.85

Lab	Rating	Z-value	0	2	4	5	6	22
1	4	0.23			10.30			
2	0	-2.78						8.85
3	0	2.93			11.60			
5	3	0.64			10.50			
7	3	0.64			10.50			
8	0	-2.47			9.00			
9	4	-0.19						10.10
10	4	-0.39						10.00
13	4	-0.19						10.10
15	0	2.30			11.30			
18	0	3.76						12.00
23	3	0.64						10.50
24	2	1.06			10.70			
25	0	-3.67			8.42			
27	4	0.40				10.38		
32	0	2.51					11.40	
37	4	-0.42						9.99
38	4	-0.42						9.99
40	2	1.43			10.88			
42	1	1.89			11.10			
43	4	0.23			10.30			
45	3	0.85			10.60			
46	3	-0.52						9.94
50	3	-0.81						9.80
51	1	1.89						11.10
52	2	-1.06						9.68
55	3	0.55			10.46			
57	4	-0.39			10.00			
59	3	-0.81						9.80
63	2	1.45			10.89			
64	3	-0.73			9.84			
68	2	-1.06						9.68
70	3	-0.56						9.92
72	4	0.23						10.30
74	3	-0.73						9.84
83	3	-0.60						9.90
85	4	-0.39						10.00
87	4	0.44						10.40
92	3	-0.60						9.90
97	4	0.23						10.30
101	3	0.64			10.50			
103	3	-0.81			9.80			
104	3	-0.89						9.76
105	3	-0.93			9.74			
109	2	-1.06			9.68			
111	4	0.44						10.40
116	2	1.06			10.70			
118	3	-0.85						9.78
119	4	-0.39			10.00			
121	4	-0.50			9.95			
127	3	0.85			10.60			
128	3	0.62			10.49			
129	2	-1.33						9.55
134	4	0.19			10.28			
138	3	0.64						10.50
145	3	0.77			10.56			
149	4	0.44						10.40
151	3	-0.60						9.90
154	1	1.74			11.03			
161	2	-1.28						9.57
173	4	-0.19						10.10
182	0	-14.51		3.20				
190	4	0.19	10.28					
191	4	0.23				10.30		

Table 11. --*Statistical summary of reported data for standard reference water sample M-122 (major constituents)--Continued*



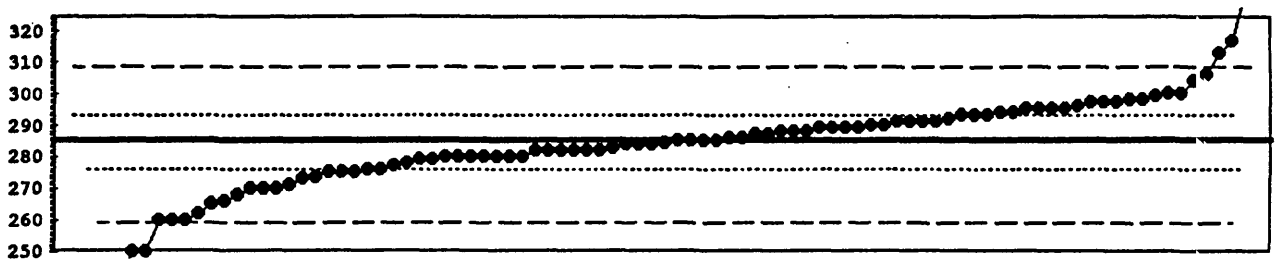
0. Other		22m. Color; methyl thymol blue					
7. IC		50. Gravimetric					
22. Colorimetric		51. Turbidimetric					
N =	4	36	5	16	4	20	
Minimum =	7.71	8.08	8.30	8.40	7.40	7.00	
Maximum =	13.00	11.97	19.70	12.30	13.00	14.20	
Median =		9.61		9.48		9.93	
St Dev =		0.65		0.91		0.96	

MPV = 9.60 +/- 0.11
F-pseudosigma = 0.74
N = 85
Hu = 10.10
Hl = 9.10

Lab	Rating	Z-value	0	7	22	22m	50	51
1	4	0.40		9.90				
2	4	0.27		9.80				
3	4	0.19		9.74				
5	3	0.67		10.10				
7	2	-1.50		8.49				
8	4	0.27		9.80				
9	0	3.64				12.30		
10	4	-0.13						9.50
12	1	1.89				11.00		
13	3	-0.53				9.21		
15	3	-0.93		8.91				
16	1	1.69						10.85
18	3	0.54				10.00		
19	3	-0.88				8.95		
23	3	0.94			10.30			
24	1	-1.75			8.30			
25	4	0.27		9.80				
26	0	4.59					13.00	
27	0	-2.05		8.08				
29	3	-0.81		9.00				
30	3	-0.53		9.21				
32	3	-0.59		9.16				
36	4	0.35						9.86
37	3	-0.71		9.07				
40	4	0.01		9.61				
42	4	-0.13		9.50				
43	NR						< 10	
45	0	3.10						11.90
46	1	-1.62				8.40		
48	3	0.54						10.00
50	4	-0.27				9.40		
51	4	0.50		9.97				
52	2	1.08						10.40
54	1	1.89						11.00
55	1	1.89				11.00		
56	4	0.00	9.60					
57	3	0.54						10.00
59	4	0.00		9.60				
63	0	-2.97					7.40	
64	4	0.00		9.60				
69	0	2.43				11.40		
70	1	-1.70						8.34
72	1	-1.62						8.40
74	4	0.40		9.90				
76	4	0.11		9.68				
78	0	-3.51						7.00
83	1	-1.75						8.30
84	0	2.23						11.25
85	3	-0.58		9.17				
86	4	0.13		9.70				
87	3	-0.67						9.10
91	1	-1.52		8.47				
92	3	-0.54						9.20
93	0	3.20		11.97				
94	4	-0.26				9.41		
96	3	0.67						10.10
97	3	0.67			10.10			
101	4	-0.13	9.50					
105	2	-1.08				8.80		
109	4	-0.19					9.46	
111	4	0.00		9.60				
116	4	0.13		9.70				
117	0	13.62			19.70			
119	3	0.54			10.00			
120	2	-1.48				8.50		
127	4	-0.08		9.54				
128	4	-0.08				9.54		
129	4	-0.27		9.40				
134	2	1.21		10.50				
136	1	-1.62		8.40				
138	2	-1.46						8.52
140	0	-2.89					7.46	
141	0	6.21						14.20
149	0	2.83		11.70				
151	4	0.18		9.73				
153	4	0.40		9.90				
154	0	2.43				11.40		
158	1	1.75				10.90		
173	4	-0.47						9.25
180	3	-0.67				9.10		
181	3	0.67		10.10				
182	0	-2.55	7.71					
183	0	4.53						12.96
190	0	4.59	13.00					
191	4	-0.27		9.40				
193	4	-0.38		9.32				
194	NR					< 10		

Table 11. --*Statistical summary of reported data for standard reference water sample M-122 (major constituents)--Continued*

Sp Cond (Specific Conductance) μ S/cm



0 41

0. Other
41. Direct reading

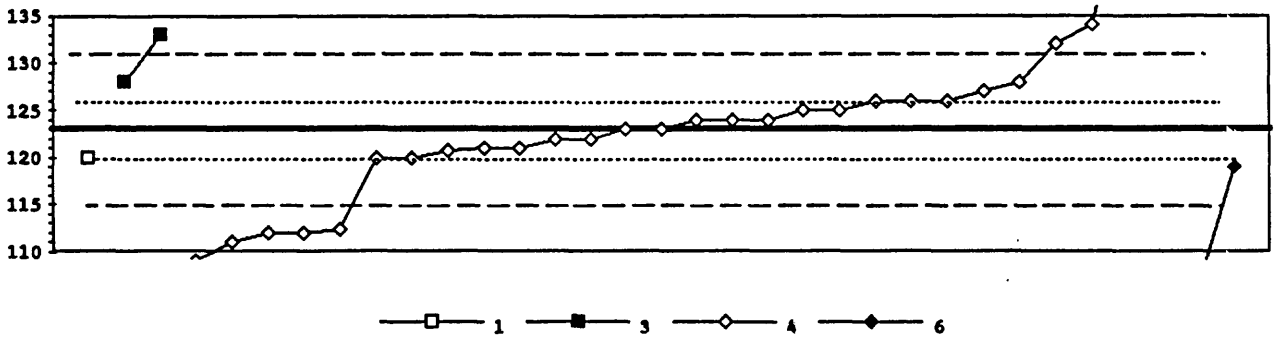
N =	1	92
Minimum =	285	3
Maximum =		581
Median =		285
St Dev =		12

Sp Cond MPV = 285 +/- 2
F-pseudosigma = 13
N = 93
Hu = 293
Hl = 276

Lab	Rating	Z-value	0	41
1	4	0.40		290
3	4	-0.08		284
5	4	-0.24		282
6	4	-0.08		284
7	0	-4.21		232
8	1	-1.98		260
9	2	-1.19		270
10	4	0.32		289
12	0	-5.00		222
13	4	0.24		288
15	3	0.56		292
16	4	-0.19		283
18	3	-0.95		273
19	4	0.48		291
23	4	0.32		289
24	4	-0.40		280
25	3	0.63		293
26	3	0.79		295
29	0	2.54		317
32	3	0.95		297
36	4	-0.40		280
37	4	0.00		285
38	4	-0.04		285
40	4	-0.40		280
42	3	0.71		294
43	4	0.32		289
45	4	0.16		287
46	4	0.00		285
48	3	0.82		295
50	4	0.48		291
51	2	-1.10		271
52	2	-1.35		268
54	4	-0.24		282
55	1	-1.98		260
56	1	-1.83		262
57	4	-0.40		280
59	3	0.95		297
62	3	-0.90		274
63	2	-1.19		270
64	3	0.87		296
68	4	0.48		291
69	2	1.19		300
70	1	-1.98		260
71	0	-2.78		250
72	4	-0.24		282
74	4	0.16		287
75	4	0.24		288
76	4	0.08		286
78	0	-22.39		3
84	4	-0.24		282
85	3	-0.56		278
86	2	1.03		298
87	1	-1.59		265
90	4	0.00		285
91	3	-0.71		276
92	1	1.67		306
93	1	-1.51		266
94	4	-0.40		280
96	3	0.79		295
97	4	0.32		289
101	4	-0.24		282
104	3	0.71		294
105	4	-0.24		282
107	4	0.24		288
109	3	0.63		293
111	3	-0.79		275
117	0	23.49		581
118	0	-2.78		250
119	4	-0.40		280
122	2	-1.19		270
123	3	-0.71		276
127	4	0.08		286
128	4	-0.48		279
129	0	-3.49		241
134	4	0.48		291
136	3	-0.79		275
140	0	2.22		313
141	1	1.51		304
145	2	1.03		298
151	3	0.63		293
153	4	0.40		290
154	0	3.81		333
158	3	-0.63		277
161	3	-0.79		275
173	3	0.79		295
179	4	-0.48		279
180	4	-0.08		284
181	2	1.11		299
182	3	0.95		297
183	2	1.19		300
190	4	0.00	285	
193	4	0.00		285
194	4	-0.40		280

Table 11. *--Statistical summary of reported data for standard reference water sample M-122 (major constituents)--Continued*

Sr (Strontium) μ g/L



0. Other
1. AA: direct air
2. AA: direct N2O
3. AA: graphite furnace
4. ICP
6. ICP/MS

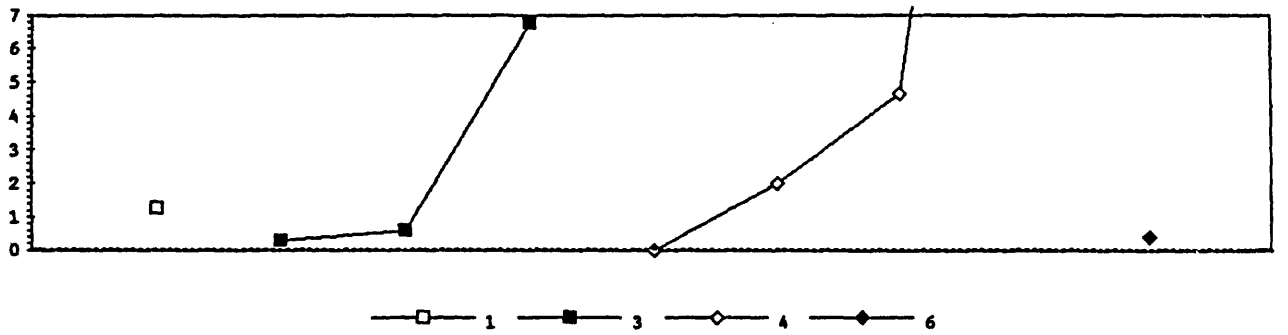
	0	1	0	2	28	2
N =						
Minimum =		120		128	109	107
Maximum =				133	159	119
Median =					124	
St Dev =					6	

MPV = 123 +/- 1
F-pseudosigma = 4
N = 33
Hu = 126
Hl = 120

Lab	Rating	Z-value	0	1	2	3	4	6
1	3	0.67					126	
3	4	0.45					125	
7	3	0.90					127	
8	0	-2.38					112	
15	0	-2.47					112	
16	0	-2.70					111	
18	4	-0.22					122	
23	2	1.12				128		
24	4	-0.45					121	
25	0	2.02					132	
32	0	-3.60						107
40	4	-0.22					122	
42	0	2.47					134	
52	4	0.00					123	
55	0	-2.47					112	
59	4	0.00					123	
63	0	5.62					148	
68	3	-0.67					120	
70	4	0.22					124	
74	0	-3.15					109	
85	4	-0.45					121	
97	0	2.25				133		
103	4	0.45					125	
105	3	0.67					126	
116	4	0.22					124	
121	3	-0.67					120	
127	2	1.12					128	
134	3	-0.67		120				
136	0	8.09					159	
138	4	0.22					124	
145	4	-0.50					121	
154	3	0.67					126	
191	3	-0.90						119

Table 11. *--Statistical summary of reported data for standard reference water sample M-122 (major constituents)--Continued*

V (Vanadium) μg/L



0. Other			4. ICP				
1. AA: direct air			6. ICP/MS				
3. AA: graphite furnace			22. Colorimetric				
	N =	0	1	3	4	1	0
	Minimum =		1.27	0.28	0.00	0.40	
	Maximum =			6.76	30.00		
	Median =						
	St Dev =						

MPV = Insuff. data
P-pseudosigma =
N = 9
Hu =
Hl =

Lab	Rating	Z-value	0	1	3	4	6	22
1								< 1
3						< 4		
5						< 4		
7						< 11		
15					0.28			
16						< 10		
18						< 10		
25						< 3		
32							0.40	
48						30.00		
52					< 2			
57						< 100		
63					0.60			
68						2.00		
70						< 50		
74						< 2		
85						< 20		
97					6.76			
103						< 5		
105						< 16		
127					< 1			
128						< 3		
133				1.27				
134					< 1			
136					< 3			
138					< 3			
145						4.66		
180						0.00		

Table 12.-- *Statistical summary of reported data for standard reference sample N-34 (nutrients)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

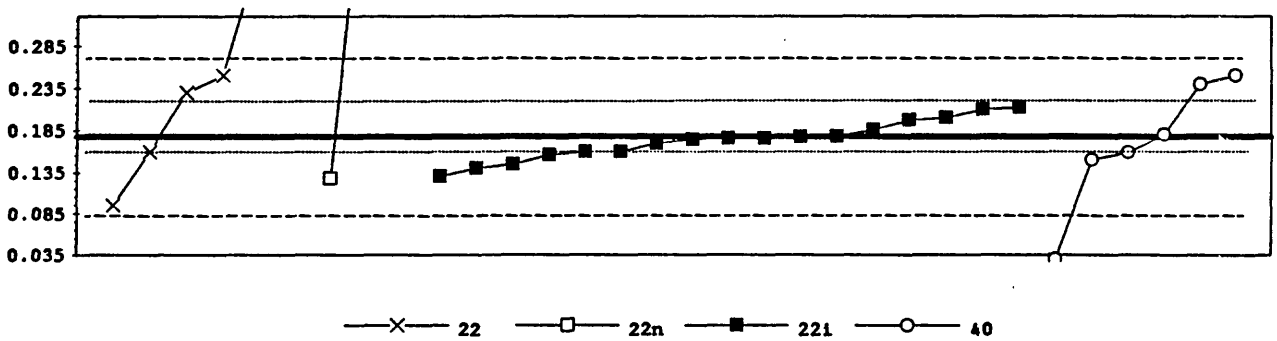
0. Other/Not reported
4. ICP = inductively coupled plasma
7. IC = ion chromatography
22. Color: = colorimetric [color reagent specified]
40. Ion electrode = specific ion electrode

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-34 (preserved nutrients)--Continued*

NH3 as N (Ammonia) m g/L



0. Other	22. Colorimetric: indophenol
22. Colorimetric	40. Ion electrode
22. Colorimetric: nesslerization	

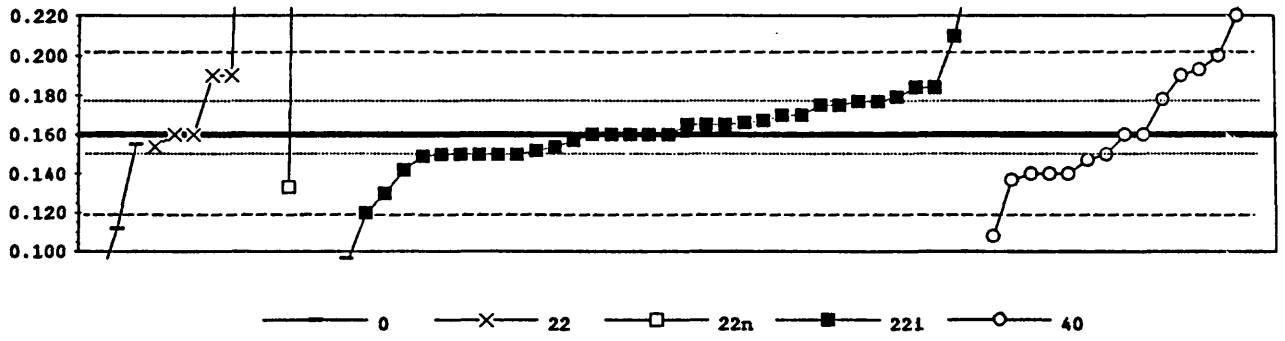
	0	6	3	17	6
N =					
Minimum =		0.095	0.128	0.130	0.030
Maximum =		2.300	0.930	0.212	0.250
Median =				0.176	
St Dev =				0.023	

MPV = 0.177 +/- 0.011
F-pseudosigma = 0.047
N = 32
Hu = 0.221
Hl = 0.158

Lab	Rating	Z-value	0	22	22n	221	40
1	4	0.20				0.186	
2	4	0.03				0.178	
3	3	0.75				0.212	
7	3	0.71				0.210	
20	4	-0.05				0.174	
45	4	-0.37					0.159
48	4	0.50				0.200	
52	4	-0.01				0.176	
68	4	-0.35		0.160			
70	1	-1.73		0.095			
74	4	-0.44				0.156	
88	4	-0.01				0.176	
90	4	0.01				0.177	
93	4	-0.35				0.160	
104	3	-0.99				0.130	
105	1	1.56		0.250			
108	4	0.07					0.180
114	3	-0.56					0.150
117	0	-3.11					0.030
118	4	-0.35				0.160	
119	2	1.35					0.240
120	3	-0.67				0.145	
129	2	-1.03			0.128		
133	1	1.56					0.250
134	4	-0.14				0.170	
140	2	1.14		0.230			
141	4	0.44				0.197	
145	3	-0.78				0.140	
173	0	16.01			0.930		
179	0	4.75		0.400			
181	0	45.11		2.300			
182	0	8.27			0.566		

Table 12. *--Statistical summary of reported data for standard reference water sample N-34 (nonpreserved nutrients)--Continued*

NH3 as N (Ammonia) m g/L



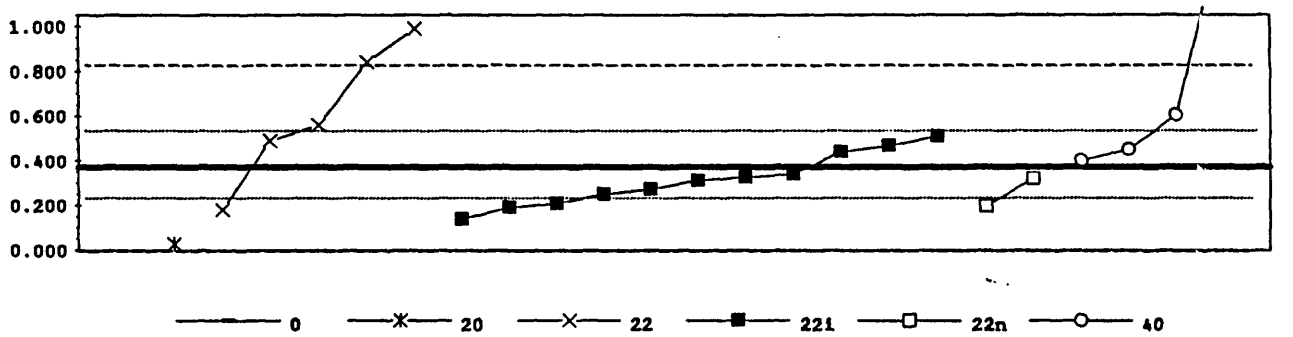
0. Other			22. Colorimetric: indophenol				
22. Colorimetric			40. Ion electrode				
22. Colorimetric: nesslerization							
	N =	3	7	2	44	15
	Minimum =	0.081	0.154	0.133	0.080	0.108
	Maximum =	0.155	0.700	0.930	0.930	0.265
	Median =				0.165	0.160
	St Dev =				0.017	0.031

MPV =	0.160	+/- 0.004
F-pseudosigma =	0.021	
N =	62	
Hu =	0.178	
Hl =	0.150	

Lab	Rating	Z-value	0	22	22n	221	40
1	0	-3.18				0.094	
2	3	0.92				0.179	
5	4	0.29				0.166	
8	NR		< 1				
9	0	4.34				0.250	
10	4	0.00					0.160
12	NR					< 0.1	
13	4	0.24				0.165	
15	3	-0.63					0.147
16	0	-2.31	0.112				
18	4	-0.48				0.150	
19	4	0.48				0.170	
20	2	1.16				0.184	
21	4	-0.14				0.157	
23	1	-1.93				0.120	
25	3	-0.96					0.140
32	0	-3.81	0.081				
36	0	5.06					0.265
37	4	-0.29				0.154	
38	4	0.24				0.165	
45	1	1.59					0.193
46	4	-0.39				0.152	
51	4	0.00					0.160
52	4	0.34				0.167	
55	4	0.00				0.160	
59	4	0.48				0.170	
63	NR		< 0.6				
68	0	2.89					0.220
72	0	-3.85				0.080	
76	4	-0.48				0.150	
83	2	-1.45				0.130	
84	3	0.72				0.175	
85	4	0.00		0.160			
87	0	2.41				0.210	
88	3	0.82				0.177	
91	2	1.45		0.190			
92	2	1.45					0.190
94	3	0.82				0.177	
96	3	0.72				0.175	
97	4	0.00		0.160			
107	4	0.00				0.160	
111	4	0.00				0.160	
113	3	-0.87				0.142	
114	3	-0.96					0.140
118	4	-0.48				0.150	
119	1	1.93					0.200
123	4	-0.48				0.150	
127	4	0.24				0.165	
129	2	-1.30			0.133		
133	4	-0.48					0.150
134	4	-0.48				0.150	
138	2	1.16				0.184	
143	4	0.00				0.160	
145	4	0.00				0.160	
149	3	-0.96					0.140
151	3	0.87					0.178
154	3	-0.53				0.149	
158	2	1.45		0.190			
161	0	-2.51					0.108
173	0	37.10			0.930		
179	0	14.07		0.452			
180	4	-0.29		0.154			
181	0	26.02		0.700			
183	2	-1.11					0.137
190	4	-0.24	0.155				

Table 12. *--Statistical summary of reported data for standard reference water sample N-34 (preserved nutrients)--Continued*

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



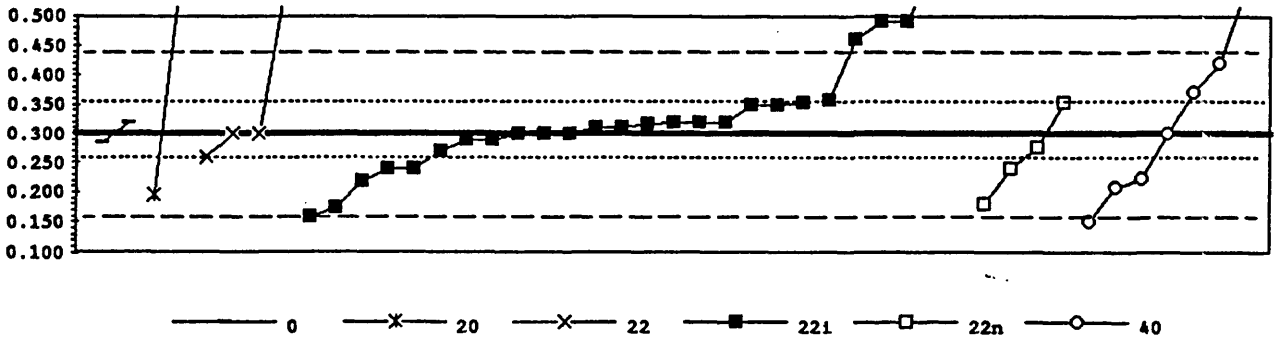
0. Other			22 Colorimetric : indophenol					
20. Titrate : colorim			22. Colorimetric : nesslerization					
22. Colorimetric			40. Ion electrode					
		N =	1	1	4	11	2	4
		Minimum =	1.810	0.029	0.180	0.138	0.197	0.400
		Maximum =			0.990	0.510	0.319	1.410
		Median =				0.310		
		St Dev =				0.119		

Lab	Rating	Z-value	0	20	22	221	22n	40
1	3	-0.71				0.209		
3	1	-1.51		0.029				
21	4	-0.19				0.326		
45	2	1.04						0.606
48	4	0.31				0.440		
52	2	-1.02				0.138		
56	3	-0.53				0.250		
68	3	0.84			0.560			
70	3	-0.84			0.180			
74	3	-0.79				0.190		
90	4	0.44				0.469		
105	0	2.74			0.990			
114	0	6.36	1.810					
117	0	4.59						1.410
118	3	0.62				0.510		
119	4	0.13						0.400
120	4	-0.43				0.272		
129	4	-0.23					0.319	
133	4	0.35						0.450
134	4	-0.26				0.310		
140	3	0.53			0.490			
141	3	-0.76					0.197	
145	4	-0.13				0.340		
181	0	2.08			0.840			

MPV =	0.370	+/- 0.062
F-pseudosigma =	0.226	
N =	24	
Hu =	0.535	
Hl =	0.230	

Table 12. *--Statistical summary of reported data for standard reference water sample N-34 (nonpreserved nutrients)--Continued*

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



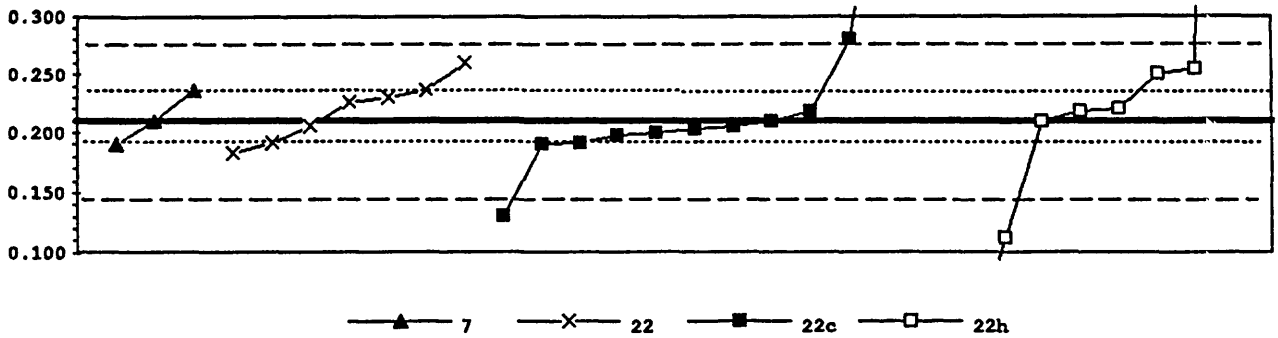
0. Other			22. Colorimetric : indophenol					
20.Titrate: colorimet			22. Colorimetric : nesslerization					
22. Colorimetric			40. Ion electrode					
	N =	2	2	4	26	4	7	
	Minimum =	0.285	0.196	0.260	0.159	0.181	0.150	
	Maximum =	0.320	0.596	0.560	1.000	0.354	0.547	
	Median =				0.314			
	St Dev =				0.083			

MPV = 0.300 +/- 0.014
F-pseudosigma = 0.070
N = 45
Hu = 0.354
Hl = 0.260

Lab	Rating	Z-value	0	20	22	221	22n	40
1	1	-1.81				0.174		
5	1	-1.71					0.181	
8	NR			< 1				
9	0	2.73				0.490		
10	4	-0.14				0.290		
12	4	0.00				0.300		
13	3	0.76				0.353		
15	4	-0.34					0.276	
16	2	-1.49		0.196				
18	4	0.29				0.320		
19	0	2.73				0.490		
21	4	-0.43				0.270		
23	NR					< 0.5		
25	0	-2.15						0.150
36	0	4.25		0.596				
38	3	-0.86					0.240	
45	0	3.54						0.547
46	4	-0.14				0.290		
51	3	1.00						0.370
52	0	-2.02				0.159		
55	2	-1.15				0.220		
59	4	0.00				0.300		
63	NR			< 0.6				
72	3	-0.86				0.240		
85	4	0.00			0.300			
87	0	10.05				1.000		
91	4	0.00			0.300			
94	4	0.24				0.317		
96	3	0.85				0.359		
97	3	-0.57			0.260			
104	4	0.16				0.311		
113	NR					< 0.5		
114	4	0.29	0.320					
118	3	-0.86				0.240		
119	1	1.72						0.420
123	0	2.30				0.460		
127	3	0.72				0.350		
129	3	0.77					0.354	
133	4	0.00						0.300
134	3	0.72				0.350		
138	4	0.14				0.310		
143	4	0.00				0.300		
145	4	0.29				0.320		
154	4	0.29				0.320		
158	2	-1.32						0.208
180	0	3.96				0.576		
181	0	3.73			0.560			
183	2	-1.09						0.224
190	4	-0.22	0.285					

Table 12. *--Statistical summary of reported data for standard reference water sample N-34 (preserved nutrients)--Continued*

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



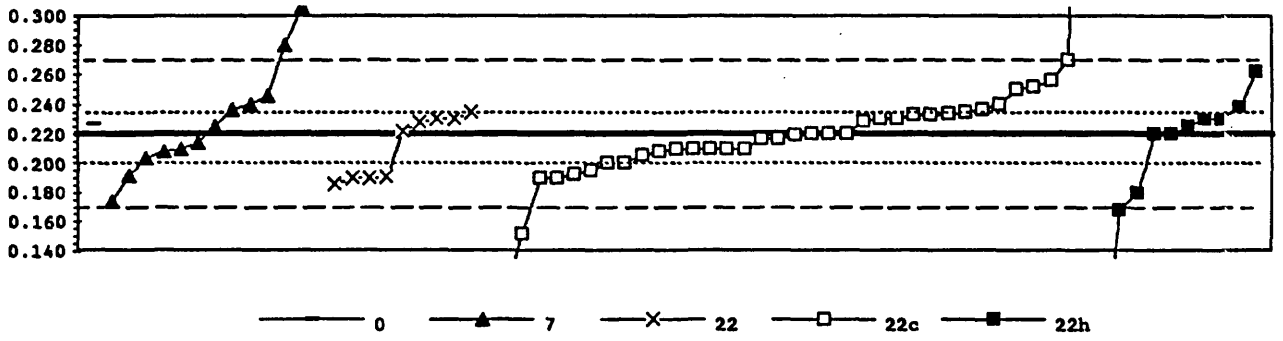
0. Other			22. Colorimetric : Cd diazo				
7. IC			22. Colorimetric : hydrazine				
22. Colorimetric							
		N =	0	3	7	12	8
		Minimum =		0.190	0.183	0.131	0.010
		Maximum =		0.183	0.131	0.010	0.000
		Median =				0.204	
		St Dev =				0.036	

Lab	Rating	Z-value	0	7	22	22c	22h
1	4	-0.21				0.203	
7	0	54.88					2.000
20	4	0.00					0.210
21	0	-2.97					0.113
29	4	0.00	0.210				
43	1	1.53			0.260		
45	4	0.25				0.218	
48	2	1.23					0.250
52	4	-0.37				0.198	
70	4	-0.15			0.205		
74	4	-0.15				0.205	
75	3	-0.83			0.183		
78	0	-2.42				0.131	
88	3	-0.55				0.192	
90	4	0.25					0.218
92	4	0.49			0.226		
93	3	-0.61	0.190				
105	3	0.80			0.236		
108	3	-0.61				0.190	
114	0	-6.13					0.010
117	0					< 0.1	
118	4	0.31					0.220
119	3	0.61			0.230		
129	3	0.80	0.236				
133	0	2.15				0.280	
134	4	0.00				0.210	
140	3	-0.58			0.191		
141	2	1.38					0.255
145	4	-0.31				0.200	
173	0	11.65				0.590	
182	0	8.34				0.482	

MPV =	0.210	+/-	0.008
F-pseudosigma =	0.033		
N =	30		
Hu =	0.236		
Hl =	0.192		

Table 12. *--Statistical summary of reported data for standard reference water sample N-34 (nonpreserved nutrients)--Continued*

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



0. Other
7. IC
22. Colorimetric
22. Colorimetric : Cd diazo
22. Colorimetric : hydrazine diazo

N =	1	13	9	36	10
Minimum =	0.227	0.174	0.186	0.088	0.036
Maximum =		0.474	0.235	0.650	0.262
Median =		0.225		0.218	0.223
St Dev =		0.030		0.023	0.029

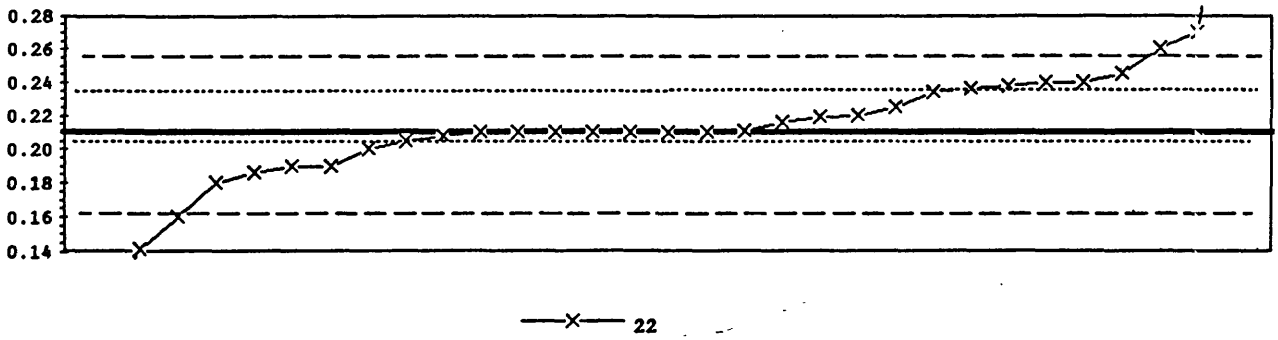
MPV = 0.220 +/- 0.004
F-pseudosigma = 0.025
N = 69
Hu = 0.234
Hl = 0.200

Lab	Rating	Z-value	0	7	22	22c	22h
1	0	-5.24				0.088	
3	3	0.63				0.236	
5	3	0.71					0.238
8	4	-0.40		0.210			
9	3	0.79				0.240	
10	4	0.40				0.230	
12	4	0.40					0.230
13	3	0.60				0.235	
15	3	-0.99				0.195	
16	4	0.32			0.228		
18	2	-1.19				0.190	
19	4	-0.40				0.210	
20	1	-1.59					0.180
21	0	-2.06					0.168
23	3	0.52				0.233	
25	0	3.41		0.306			
29	0	2.38		0.280			
32	4	0.20		0.225			
36	2	1.43				0.256	
37	NR			< 0.156			
38	4	0.36				0.229	
42	0	10.08		0.474			
45	2	1.27				0.252	
46	4	-0.12				0.217	
51	3	0.79		0.240			
52	4	-0.12				0.217	
53	4	0.40				0.230	
55	4	-0.40				0.210	
56	4	0.00				0.220	
59	4	0.00				0.220	
63	1	1.67					0.262
68	2	-1.15			0.191		
69	4	-0.40				0.210	
72	4	0.40					0.230
76	4	-0.24		0.214			
78	0	-2.70				0.152	
84	3	0.52				0.233	
85	2	-1.35			0.186		
87	1	1.98				0.270	
88	0	-4.40				0.109	
91	2	-1.19			0.190		
92	3	0.60			0.235		
94	3	-0.79				0.200	
96	4	0.20					0.225
97	4	0.40			0.230		
104	3	0.56				0.234	
107	4	-0.40				0.210	
111	2	1.03		0.246			
113	4	0.08			0.222		
114	0	-7.30					0.036

Lab	Rating	Z-value	0	7	22	22c	22h
118	4	0.00					0.220
119	4	0.40			0.230		
120	4	-0.40				0.210	
123	4	0.00					0.220
127	3	-0.56				0.206	
129	3	0.63		0.236			
133	2	1.19				0.250	
134	4	0.00				0.220	
138	3	-0.79				0.200	
143	4	-0.04				0.219	
145	2	-1.19				0.190	
149	1	-1.83		0.174			
151	2	-1.11		0.192			
154	2	-1.07				0.193	
158	2	-1.19			0.190		
173	0	17.06				0.650	
180	4	-0.48				0.208	
190	4	0.28	0.227				
191	3	-0.63		0.204			
193	4	-0.48		0.208			

Table 12. *--Statistical summary of reported data for standard reference water sample N-31 (preserved nutrients)--Continued*

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



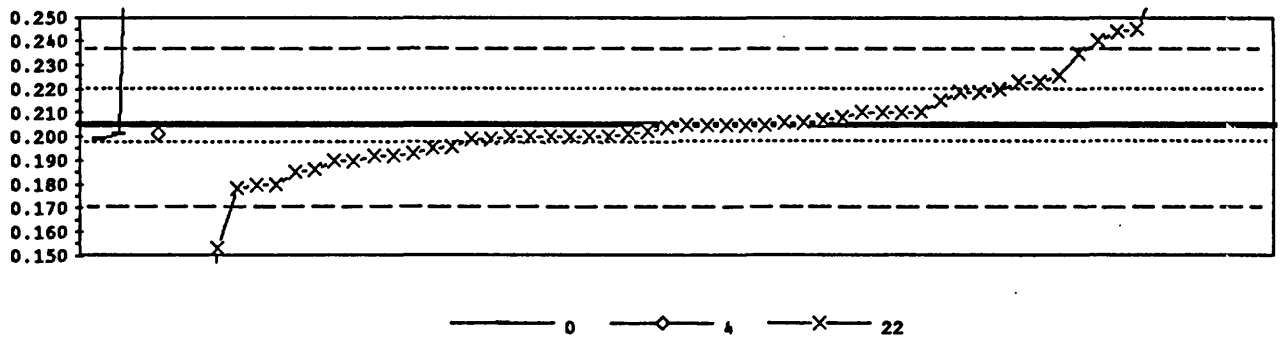
0. Other	
4. ICP	
22. Colorimetric: phosphomolybdate	
N =	0 0 31
Minimum =	0.100
Maximum =	0.400
Median =	0.210
St Dev =	0.027

Lab	Rating	Z-value	0	4	22
1	2	-1.08			0.19
3	3	0.67			0.23
7	0	2.70			0.27
20	2	1.35			0.24
32	0	-4.95			0.10
42	4	0.27			0.22
45	1	1.57			0.25
48	3	-0.90			0.19
52	4	0.04			0.21
56	4	0.00			0.21
68	2	1.26			0.24
74	4	0.40			0.22
78	4	0.00			0.21
90	2	1.08			0.23
92	2	-1.35			0.18
104	4	-0.22			0.21
105	4	0.00			0.21
108	2	1.35			0.24
114	0	2.25			0.26
117	0	-2.25			0.16
118	4	0.00			0.21
119	4	0.45			0.22
129	4	-0.09			0.21
133	4	0.00			0.21
134	3	-0.90			0.19
140	4	-0.45			0.20
141	4	0.00			0.21
145	4	0.00			0.21
173	0	8.54			0.40
181	2	1.17			0.24
182	0	-3.10			0.14

MPV =	0.210	+/- 0.005
F-pseudosigma =	0.022	
N =	31	
Hu =	0.235	
Hl =	0.205	

Table 12. *--Statistical summary of reported data for standard reference water sample N-34 (nonpreserved nutrients)--Continued*

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



0. Other
4. ICP
22. Colorimetric: phosphomolybdate

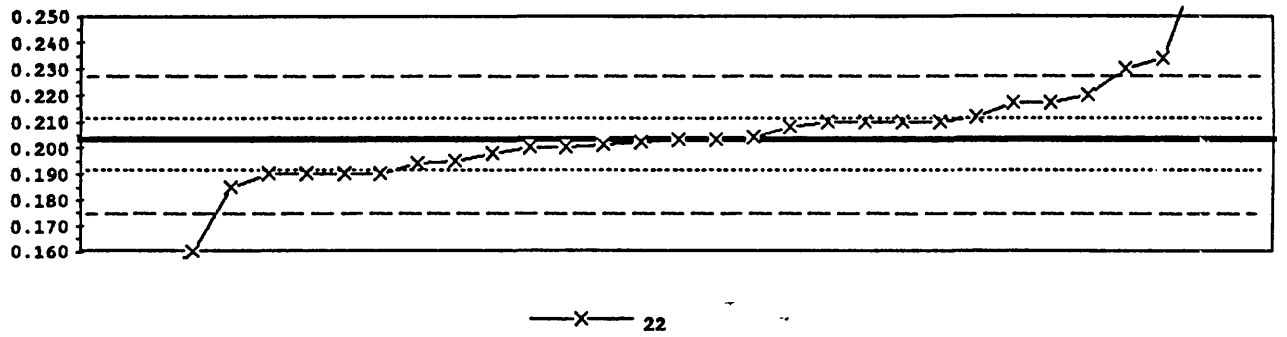
	N =	3	1	56
Minimum =		0.199	0.201	0.030
Maximum =		0.450		0.350
Median =				0.205
St Dev =				0.020

MPV = 0.205 +/- 0.003
F-pseudosigma = 0.016
N = 60
Hu = 0.220
Hl = 0.198

Lab	Rating	Z-value	0	4	22
1	2	-1.17			0.186
5	2	1.29			0.226
8	0	8.89			0.350
9	2	1.10			0.223
10	4	0.06			0.206
12	0	-10.73			0.030
13	3	0.86			0.219
15	3	-0.80			0.192
16	4	0.00			0.205
18	4	-0.25			0.201
19	1	-1.66			0.178
20	3	0.92			0.220
21	4	0.18			0.208
22	4	0.00			0.205
23	4	0.31			0.210
25	4	-0.25		0.201	
36	3	0.86			0.219
38	1	1.84			0.235
45	0	3.62			0.264
46	4	-0.06			0.204
51	4	-0.37			0.199
52	4	-0.31			0.200
55	4	0.31			0.210
59	4	-0.31			0.200
63	0	8.89			0.350
70	0	15.02	0.450		
72	3	-0.92			0.190
78	3	-0.80			0.192
85	3	-0.74			0.193
87	0	2.45			0.245
91	0	2.15			0.240
92	1	-1.53			0.180
94	4	-0.37	0.199		
96	3	0.61			0.215
97	4	-0.31			0.200
104	4	0.00			0.205
107	4	0.00			0.205
111	2	-1.23			0.185
113	4	-0.37			0.199
114	0	7.05			0.320
118	4	0.31			0.210
119	4	-0.31			0.200
120	3	-0.92			0.190
123	0	-8.28			0.070
127	4	0.12			0.207
129	4	-0.18			0.202
133	4	0.31			0.210
134	1	-1.53			0.180
138	4	-0.31			0.200
143	3	-0.55			0.196
145	4	-0.31			0.200
149	4	0.00			0.205
154	3	-0.61			0.195
158	0	-3.19			0.153
161	0	5.46			0.294
173	0	3.99			0.270
180	2	1.10			0.223
181	0	2.39			0.244
183	4	0.06			0.206
190	4	-0.25	0.201		

Table 12. *--Statistical summary of reported data for standard reference water sample N-34 (preserved nutrients)--Continued*

P04 as P (Orthophosphate) m g/L



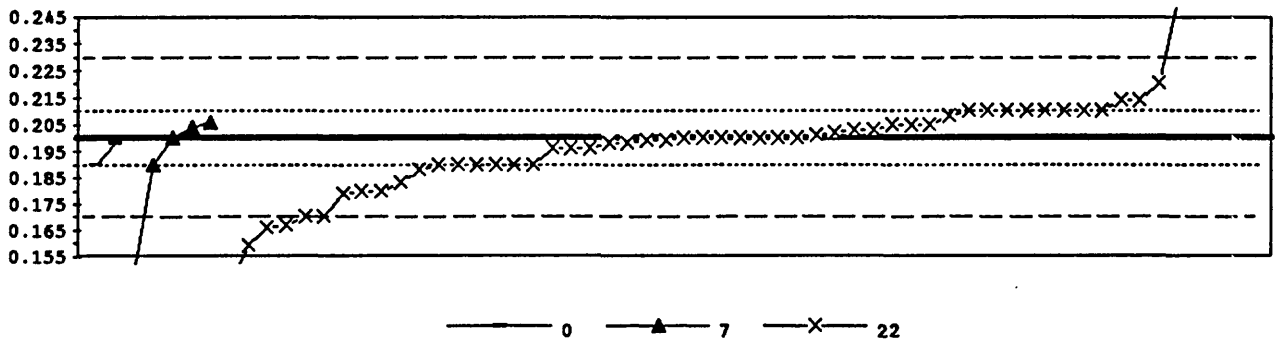
0. Other	
7. IC	
22. Colorimetric: phosphomolybdate	
N =	31
Minimum =	0.100
Maximum =	0.281
Median =	0.203
St Dev =	0.012

Lab	Rating	Z-value	22
1	3	-0.57	0.195
2	0	2.20	0.234
3	4	-0.14	0.201
20	4	0.50	0.210
29	0	-3.76	0.150
36	3	0.64	0.212
42	4	-0.07	0.202
45	0	4.76	0.270
48	3	-0.64	0.194
52	3	0.99	0.217
56	4	0.50	0.210
74	4	0.07	0.204
78	4	0.35	0.208
88	0	5.54	0.281
90	3	0.99	0.217
92	3	-0.92	0.190
104	4	0.00	0.203
105	4	0.00	0.203
108	3	-0.92	0.190
117	0	-3.05	0.160
118	4	0.50	0.210
119	3	-0.92	0.190
129	4	-0.36	0.198
133	4	-0.21	0.200
134	3	-0.92	0.190
140	0	-7.31	0.100
141	1	1.92	0.230
145	4	-0.21	0.200
173	4	0.50	0.210
179	2	-1.28	0.185
181	2	1.21	0.220

MPV =	0.203 +/- 0.003
F-pseudosigma =	0.014
N =	31
Hu =	0.211
Hl =	0.192

Table 12. *--Statistical summary of reported data for standard reference water sample N-34 (nonpreserved nutrients)--Continued*

PO4 as P (Orthophosphate) m g/L



0. Other
7. IC
22. Colorimetric : phosphomolybdate

	N =	2	5	55
Minimum =		0.190	0.150	0.144
Maximum =		0.198	0.206	0.730
Median =				0.200
St Dev =				0.014

MPV = 0.200 +/- 0.003
F-pseudosigma = 0.015
N = 62
Hu = 0.210
Hl = 0.190

Lab	Rating	Z-value	0	7	22
1	0	-2.29			0.166
2	0	3.57			0.253
5	2	-1.15			0.183
8	0	-3.37		0.150	
9	3	0.94			0.214
10	4	0.00			0.200
12	2	-1.35			0.180
13	3	0.67			0.210
15	4	0.07			0.201
16	0	-2.23			0.167
18	4	0.13			0.202
19	0	-2.02			0.170
20	3	0.67			0.210
21	4	0.34			0.205
23	3	-0.67			0.190
25	0	-2.77			0.159
29	3	-0.67			0.190
32	4	0.27		0.204	
37	NR			< 0.552	
38	4	-0.07			0.199
45	0	4.86			0.272
46	4	0.20			0.203
51	3	-0.81			0.188
52	2	1.35			0.220
55	3	0.67			0.210
59	3	-0.67			0.190
63	3	0.67			0.210
70	3	-0.67	0.190		
72	4	0.00			0.200
78	3	0.67			0.210
83	0	35.75			0.730
85	4	-0.07			0.199
87	0	-3.78			0.144
88	0	8.23			0.322
92	3	-0.67			0.190
96	4	-0.13			0.198
97	3	0.67			0.210
104	4	0.20			0.203
107	3	0.54			0.208
111	4	0.40		0.206	
113	4	-0.13			0.198
118	4	0.00			0.200
119	3	-0.67			0.190
120	3	-0.67			0.190
123	4	0.00			0.200
127	4	0.34			0.205
129	4	-0.27			0.196
133	4	0.00			0.200
134	0	-2.02			0.170
138	3	0.67			0.210
143	4	-0.27			0.196
145	3	0.67			0.210
151	4	0.00		0.200	
154	4	-0.27			0.196
158	2	-1.35			0.180
161	2	-1.42			0.179
173	4	0.00			0.200
179	0	4.59			0.268
180	4	0.00			0.200
181	3	0.94			0.214
183	4	0.34			0.205
190	4	-0.13	0.198		
191	3	-0.67		0.190	

Table 13.-- *Statistical summary of reported data for standard reference sample N-35 (nutrients)*

Definition of analytical methods, abbreviations, and symbols

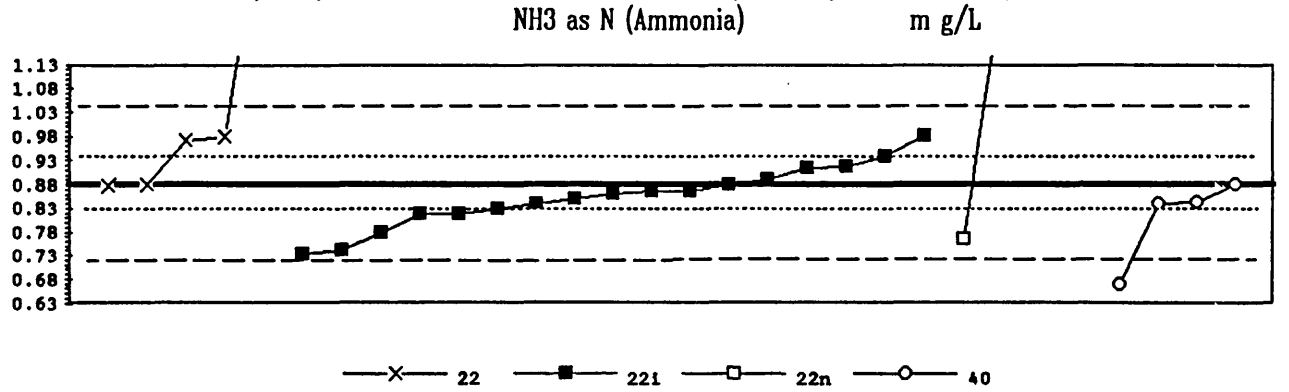
Analytical methods

0. Other/Not reported		
4. ICP	=	inductively coupled plasma
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 atandard 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-35 (preserved nutrients)--Continued*

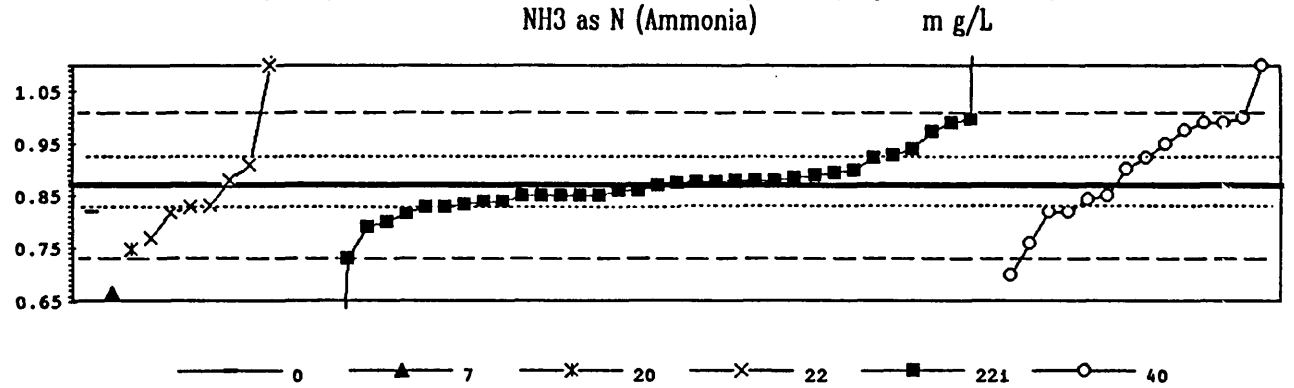


0. Other		22n. Colorimetric: nesslerization				
22. Colorimetric		40. Ion electrode				
22i. Colorimetric: indophenol						
	N =	0	5	17	4	4
	Minimum =		0.877	0.732	0.764	0.670
	Maximum =		1.536	0.982	1.620	0.880
	Median =			0.862		
	St Dev =			0.066		

NH3 MPV = 0.880 +/- 0.020
F-pseudosigma = 0.082
N = 30
Hu = 0.940
Hl = 0.830

Lab	Rating	Z-value	0	22	22i	22n	40
1	4	-0.15			0.87		
2	4	0.13			0.89		
3	3	-0.76			0.82		
7	3	0.74			0.94		
20	4	0.42			0.91		
45	4	-0.44					0.84
48	4	-0.37			0.85		
52	2	1.25			0.98		
68	4	0.00		0.88			
70	4	-0.04		0.88			
74	4	-0.17			0.87		
88	3	-0.61			0.83		
90	4	0.47			0.92		
93	3	-0.74			0.82		
104	1	-1.82			0.73		
105	2	1.23		0.98			
108	4	0.00					0.88
114	0	-2.58					0.67
118	4	-0.49			0.84		
119	4	-0.49					0.84
120	4	-0.22			0.86		
129	2	-1.42				0.76	
134	4	0.00			0.88		
140	2	1.10		0.97			
141	2	-1.24			0.78		
145	1	-1.72			0.74		
173	0	9.08				1.62	
179	0	8.04		1.54			
181	0	5.40				1.32	
182	0	6.38				1.40	

Table 13. *--Statistical summary of reported data for standard reference water sample N-35 (nonpreserved nutrients)--Continued*



0. Other 22. Colorimetric: indophenol
7. IC 40. Ion electrode
20. Titrate: colorimetric

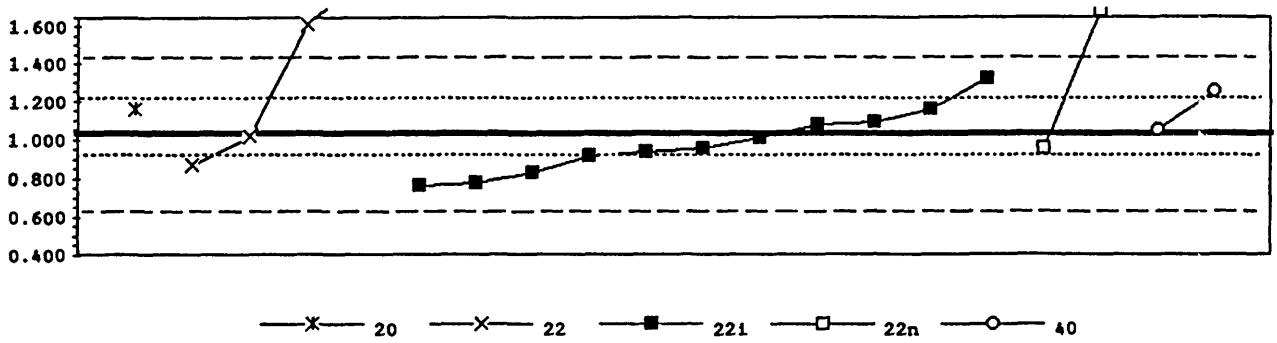
	0	7	20	22	221	40
N =	1	1	1	9	35	14
Minimum =	0.820	0.665	0.747	0.77	0.07	0.700
Maximum =				1.49	4.08	1.100
Median =					0.860	0.900
St Dev =					0.055	0.096

MPV = 0.870 +/- 0.012
F-pseudosigma = 0.070
N = 61
Hu = 0.924
Hl = 0.830

Lab	Rating	Z-value	0	7	20	22	221	40
1	3	-0.75					0.818	
2	3	0.77					0.924	
5	4	0.07					0.875	
6	1	1.74						0.991
8	NR				< 1			
9	3	0.83					0.928	
12	3	-1.00					0.800	
13	4	-0.50					0.835	
15	4	-0.37						0.844
16	1	-1.77			0.747			
18	4	0.43					0.900	
19	4	-0.29					0.850	
20	4	-0.29					0.850	
23	4	0.36					0.895	
25	1	1.72						0.990
32	0	-2.94		0.665				
36	3	0.77						0.924
37	1	1.72					0.990	
38	4	0.22					0.885	
45	4	0.44						0.901
46	4	-0.27					0.851	
52	1	1.85					0.999	
55	4	-0.14					0.860	
57	4	-0.29						0.850
59	4	0.00					0.870	
63	NR				< 0.6			
68	0	3.30						1.100
72	0	-11.48					0.070	
76	4	-0.29					0.850	
83	0	-2.01					0.730	
84	0	46.07					4.080	
85	3	-0.76				0.817		
87	2	-1.15					0.790	
88	2	1.49					0.974	
91	3	0.57				0.910		
92	2	1.15						0.950
94	4	0.10					0.877	
96	4	-0.29					0.850	
97	4	0.14				0.880		
111	4	-0.14					0.860	
113	4	0.11					0.878	
114	0	-2.44						0.700
117	1	1.87						1.000
118	3	-0.57					0.830	
119	3	-0.72						0.820
123	4	-0.43					0.840	
127	4	0.14					0.880	
128	4	0.29					0.890	
129	2	-1.44				0.770		
134	3	-0.57					0.830	
138	3	1.00					0.940	
143	4	0.14					0.880	
145	4	0.14					0.880	
149	3	-0.72						0.820
154	4	-0.44					0.839	
158	3	-0.57				0.830		
161	1	1.54						0.977
173	0	8.90				1.490		
179	0	8.60				1.469		
180	3	-0.56				0.831		
181	0	3.30				1.100		
183	1	-1.59						0.759
190	3	-0.72	0.820					

Table 13. *--Statistical summary of reported data for standard reference water sample N-35 (preserved nutrients)--Continued*

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



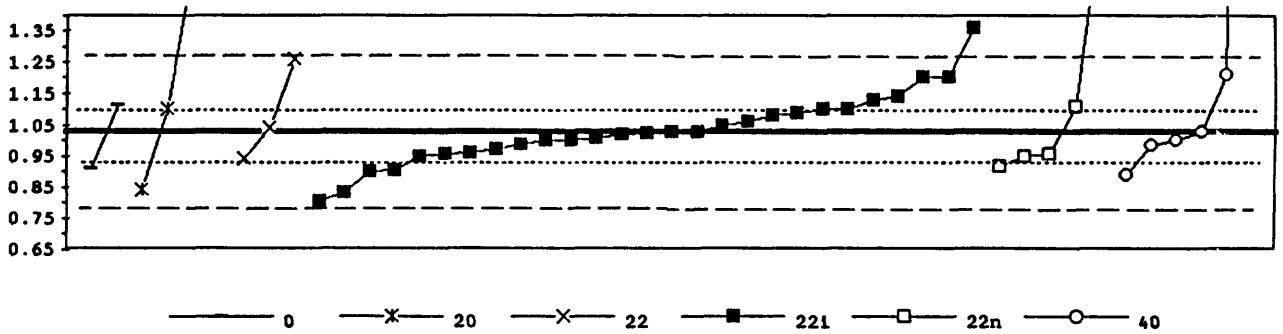
0. Other			22. Colorimetric : indophenol					
20. Titrate : color			22. Colorimetric : nesslerization					
22. Colorimetric			40. Ion electrode					
		N =	0	1	4	11	2	2
		Minimum =		1.160	0.870	0.768	0.958	1.050
		Maximum =			1.880	1.320	1.680	1.250
		Median =				0.960		
		St Dev =				0.169		

Lab	Rating	Z-value	0	20	22	221	22n	40
1	4	-0.47				0.938		
3	3	0.61		1.160				
20	4	-0.13				1.009		
45	4	0.07						1.050
48	3	0.61				1.160		
52	3	-0.99				0.832		
68	4	-0.07			1.020			
70	3	-0.81			0.870			
74	3	-0.56				0.921		
90	2	-1.31				0.768		
105	0	4.14			1.880			
118	2	1.40				1.320		
119	2	1.05						1.250
120	4	0.29				1.095		
129	4	-0.38					0.958	
134	4	-0.37				0.960		
140	0	2.82			1.610			
141	2	-1.25				0.779		
145	4	0.22				1.080		
181	0	3.16					1.680	

MPV =	1.035	+/-	0.062
F-pseudosigma =	0.204		
N =	20		
Hu =	1.205		
Hl =	0.930		

Table 13. *--Statistical summary of reported data for standard reference water sample N-35 (nonpreserved nutrients)--Continued*

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



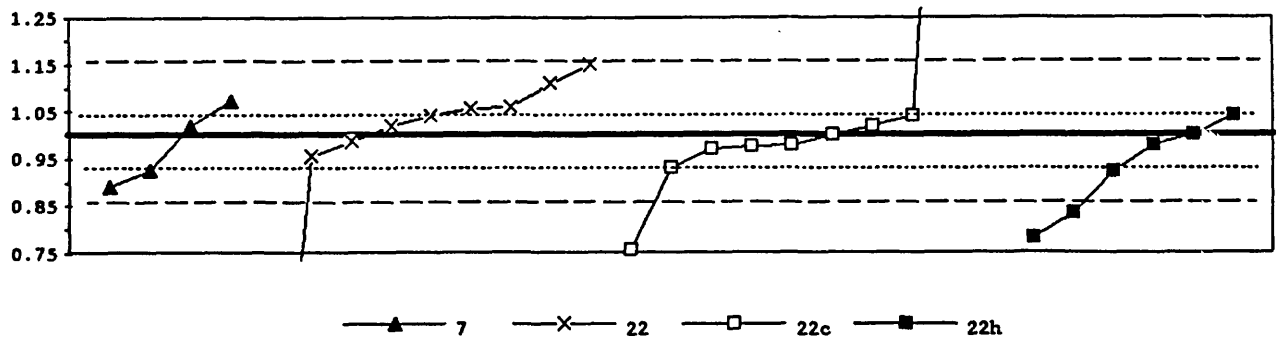
0. Other			221. Colorimetric: indophenol					
20. Titrate: color			22n. Colorimetric: nesslerization					
22. Colorimetric			40. Ion electrode					
		N =	2	4	3	27	5	6
		Minimum =	0.91	0.84	0.94	0.81	0.92	0.89
		Maximum =	1.11	1.79	1.26	1.36	1.68	4.48
		Median =				1.02		
		St Dev =				0.12		

MPV = 1.03 +/- 0.02
F-pseudosigma = 0.12
N = 47
Hu = 1.11
Hl = 0.96

Lab	Rating	Z-value	0	20	22	221	22n	40
1	3	-0.64				0.96		
5	3	-0.98					0.92	
8	3	0.60		1.10				
9	4	0.43				1.08		
12	2	1.46				1.20		
13	2	-1.08				0.90		
15	3	0.69					1.11	
16	1	-1.63		0.84				
18	3	-0.60				0.96		
19	3	0.86				1.13		
23	4	-0.49				0.97		
25	4	-0.26						1.00
36	0	6.53		1.79				
38	3	-0.69					0.95	
45	4	-0.39						0.99
46	4	-0.09				1.02		
52	1	-1.70				0.83		
55	3	0.95				1.14		
57	0	4.90		1.60				
59	4	-0.26				1.00		
63	NR			< 0.6				
72	4	0.00				1.03		
85	2	1.46				1.20		
87	1	1.98			1.26			
91	4	0.09			1.04			
94	3	-0.69				0.95		
96	4	-0.17				1.01		
97	3	-0.77			0.94			
104	4	-0.05				1.02		
113	1	-1.92				0.81		
114	2	-1.03	0.91					
117	0	29.64						4.48
118	4	0.26				1.06		
119	1	1.55						1.21
123	3	0.52				1.09		
127	4	0.00				1.03		
128	2	-1.12				0.90		
129	3	-0.64					0.96	
134	3	0.60				1.10		
138	4	-0.26				1.00		
143	3	0.60				1.10		
145	4	0.17				1.05		
154	4	-0.34				0.99		
158	2	-1.20						0.89
180	0	2.84				1.36		
181	0	5.59					1.68	
183	4	0.00						1.03
190	3	0.72	1.11					

Table 13. *--Statistical summary of reported data for standard reference water sample N-35 (preserved nutrients)--Continued*

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



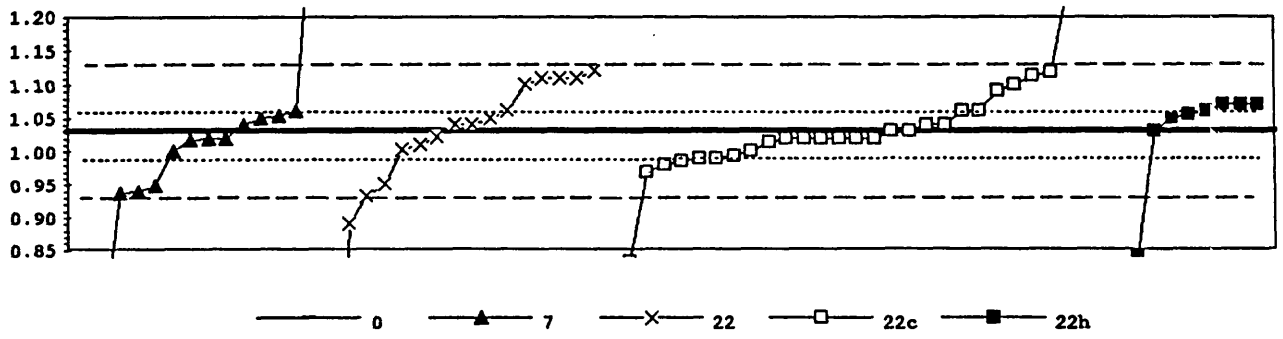
0. Other			22c. Colorimetric: Cd diazo			
7. IC			22h. Colorimetric: hydrazine			
22. Colorimetric						
	N =	0	4	9	10	6
	Minimum =		0.89	0.09	0.76	0.78
	Maximum =		1.07	1.15	2.35	1.04
	Median =				0.99	
	St Dev =				0.09	

MPV = 1.00 +/- 0.02
F-pseudosigma = 0.08
N = 29
Hu = 1.04
Hl = 0.93

Lab	Rating	Z-value	0	7	22	22c	22h
1	4	-0.37				0.97	
7	4	0.49					1.04
20	0	-2.70					0.78
29	4	0.25		1.02			
42	3	0.90		1.07			
43	2	1.35			1.11		
45	3	0.74			1.06		
48	4	-0.25					0.98
52	4	-0.28				0.98	
70	4	0.25			1.02		
74	4	0.25				1.02	
75	4	-0.16			0.99		
78	0	-2.99				0.76	
88	4	0.49				1.04	
90	3	-0.94					0.92
92	4	0.49			1.04		
93	2	-1.35		0.89			
105	3	0.69			1.06		
108	3	-0.86				0.93	
114	0	-11.16			0.09		
118	4	0.00					1.00
119	1	1.84			1.15		
129	3	-0.91		0.93			
134	4	0.00				1.00	
140	3	-0.55			0.96		
141	0	-2.04					0.83
145	4	-0.25				0.98	
173	0	13.74				2.12	
182	0	16.56				2.35	

Table 13. *--Statistical summary of reported data for standard reference water sample N-35 (nonpreserved nutrients)--Continued*

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



0. Other
7. IC
22. Colorimetric
22c. Colorimetric: Cd diazo
22h. Colorimetric: hydrazine

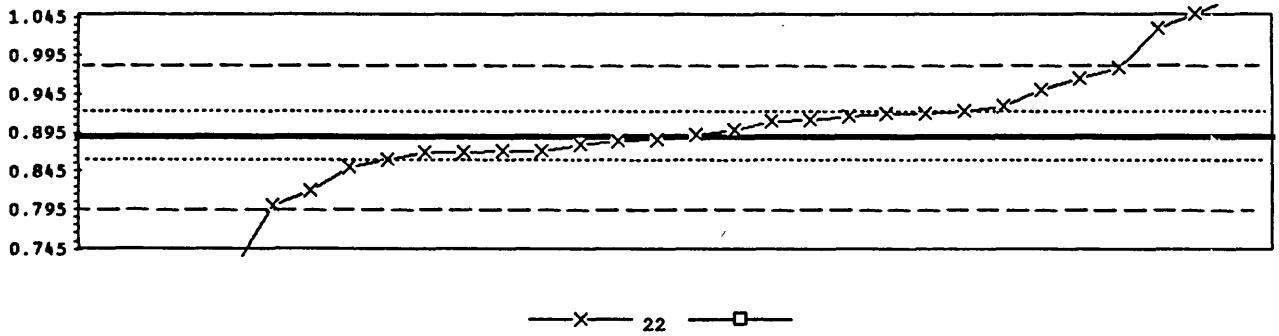
N =	1	13	16	29	9
Minimum =	1.03	0.73	0.22	0.61	0.15
Maximum =		1.40	1.12	2.40	1.07
Median =		1.02	1.04	1.02	
St Dev =		0.05	0.07	0.04	

MPV = 1.03 +/- 0.01
F-pseudosigma = 0.05
N = 68
Hu = 1.06
Hl = 0.99

Lab	Rating	Z-value	0	7	22	22c	22h
1	4	-0.32				1.01	
3	3	-0.71				0.99	
5	4	0.50					1.06
6	0	-15.99			0.22		
8	4	0.20		1.04			
9	1	1.59			1.11		
12	4	0.20			1.04		
13	3	0.60				1.06	
15	1	-1.83		0.94			
16	4	0.40			1.05		
18	3	-0.99				0.98	
19	3	-0.79				0.99	
20	0	-3.77					0.84
23	2	1.19				1.09	
25	0	7.42		1.40			
29	3	0.60		1.06			
32	4	-0.20		1.02			
36	4	-0.20				1.02	
37	4	-0.26		1.02			
38	4	0.22				1.04	
42	4	0.48		1.05			
45	1	1.59			1.11		
46	1	1.75				1.12	
52	4	-0.20				1.02	
53	4	0.00				1.03	
55	4	-0.20				1.02	
57	2	1.39			1.10		
59	3	0.60				1.06	
63	3	0.79					1.07
68	1	-1.96			0.93		
69	4	-0.20				1.02	
72	3	0.60					1.06
76	1	-1.81		0.94			
78	0	-3.91				0.83	
84	0	6.75				1.37	
85	0	-2.78			0.89		
87	0	4.17				1.24	
88	2	1.41				1.10	
91	1	-1.59			0.95		
92	3	0.60			1.06		
94	3	-0.79				0.99	
96	3	0.79					1.07
97	1	1.59			1.11		
104	1	1.65				1.11	
111	4	0.40		1.05			
113	4	-0.18			1.02		
114	0	-17.46					0.15
117	0	-8.33				0.61	
118	4	0.00					1.03
119	1	1.79			1.12		
120	4	-0.20				1.02	
123	3	0.79					1.07
127	4	0.00				1.03	
128	4	0.40					1.05
129	3	-0.56			1.00		
134	3	-0.60				1.00	
137	0	-5.95		0.73			
138	2	-1.19				0.97	
143	4	0.20				1.04	
145	4	-0.20				1.02	
149	1	-1.63		0.95			
154	3	-0.87				0.99	
158	4	-0.40			1.01		
173	0	27.18				2.40	
180	4	0.20			1.04		
190	4	0.02	1.03				
191	4	-0.20		1.02			
193	3	-0.60		1.00			

Table 13. *--Statistical summary of reported data for standard reference water sample N-35 (preserved nutrients)--Continued*

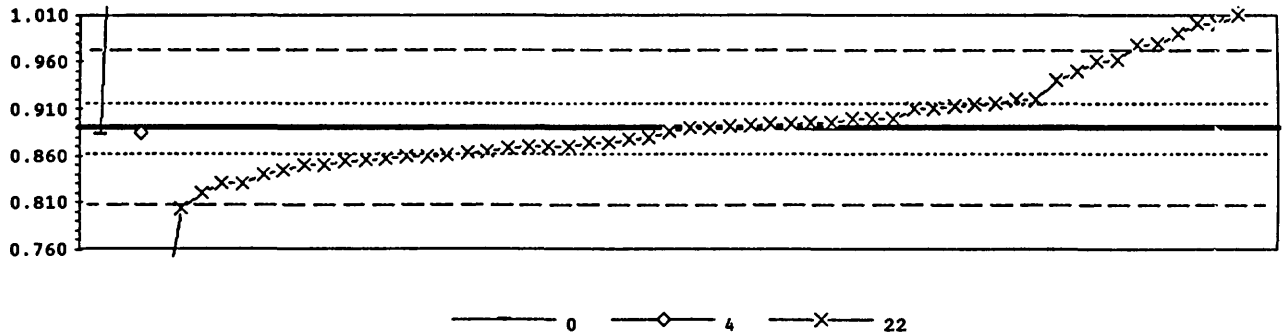
total P as P (total Phosphorus) m g/L



0. Other					
4. ICP					
22. Colorimetric: phosphomolybdate					
		N =	0	0	30
		Minimum =			0.640
		Maximum =			1.070
		Median =			0.889
		St Dev =			0.050
Lab	Rating	Z-value	0	4	22
1	4	-0.06			0.886
3	0	2.97			1.030
7	3	0.86			0.930
15	4	-0.08			0.885
20	3	0.65			0.920
32	1	-1.88			0.800
42	4	-0.36			0.872
45	1	1.62			0.966
48	4	-0.40			0.870
52	3	0.74			0.924
68	3	0.61			0.918
74	2	1.33			0.952
78	0	-4.17			0.691
90	3	0.51			0.913
92	4	-0.38			0.871
104	4	0.06			0.892
105	4	0.23			0.900
108	1	1.92			0.980
114	2	-1.45			0.820
118	4	0.44			0.910
119	3	0.65			0.920
129	0	-3.58			0.719
134	4	-0.19			0.880
140	3	-0.61			0.860
141	0	-3.56			0.720
145	4	-0.40			0.870
173	0	3.82			1.070
179	3	-0.82			0.850
181	0	3.39			1.050
182	0	-5.25			0.640

MPV =	0.889	+/-	0.012
F-pseudosigma =	0.047		
N =	30		
Hu =	0.924		
Hl =	0.860		

Table 13. *--Statistical summary of reported data for standard reference water sample N-35 (nonpreserved nutrients)--Continued*



0. Other
4. ICP
22. Colorimetric: phosphomolybdate

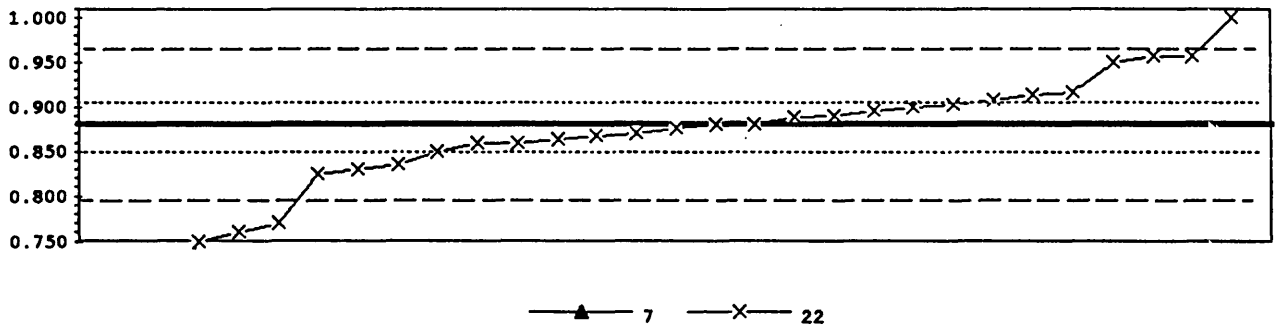
	2	1	55
N =	2	1	55
Minimum =	0.884	0.885	0.660
Maximum =	1.400		1.300
Median =			0.890
St Dev =			0.048

MPV = 0.890 +/- 0.007
F-pseudosigma = 0.041
N = 58
Hu = 0.916
Hl = 0.861

Lab	Rating	Z-value	0	4	22
1	0	2.18			0.979
5	4	0.09			0.893
6	3	-0.84			0.855
8	0	2.69			1.000
9	3	0.52			0.911
13	3	0.74			0.920
15	4	-0.50			0.869
16	3	-0.69			0.861
18	4	-0.06			0.887
19	3	-0.62			0.864
20	4	0.26			0.900
23	4	-0.47			0.870
25	4	-0.11		0.885	
36	3	0.64			0.916
38	1	1.74			0.961
45	0	2.69			1.000
46	4	0.11			0.894
52	3	0.57			0.913
55	3	-0.72			0.860
57	1	-1.69			0.820
59	4	0.26			0.900
63	0	9.98			1.300
70	0	12.41	1.400		
72	2	-1.45			0.830
78	0	-2.08			0.804
85	4	-0.47			0.870
87	0	2.44			0.990
91	3	0.74			0.920
92	4	-0.35			0.875
94	3	-0.79			0.857
96	3	-0.60			0.865
97	4	-0.23			0.880
104	4	0.06			0.892
111	2	-1.20			0.840
113	4	-0.26			0.879
114	1	1.71			0.960
117	2	1.23			0.940
118	2	1.47			0.950
119	4	0.50			0.910
120	4	0.01			0.890
123	0	-5.58			0.660
127	4	0.16			0.896
128	4	0.26			0.900
129	4	0.16			0.896
134	4	0.01			0.890
138	2	-1.45			0.830
143	2	-1.08			0.845
145	4	-0.47			0.870
149	3	-0.72			0.860
154	3	-0.81			0.856
158	3	0.62			0.915
161	4	-0.38			0.874
173	0	2.93			1.010
179	3	-0.96			0.850
180	4	0.13			0.895
181	0	2.13			0.977
183	3	-0.96			0.850
190	4	-0.13	0.884		

Table 13. *--Statistical summary of reported data for standard reference water sample N-35 (preserved nutrients)--Continued*

PO4 as P (Orthophosphate) m g/L



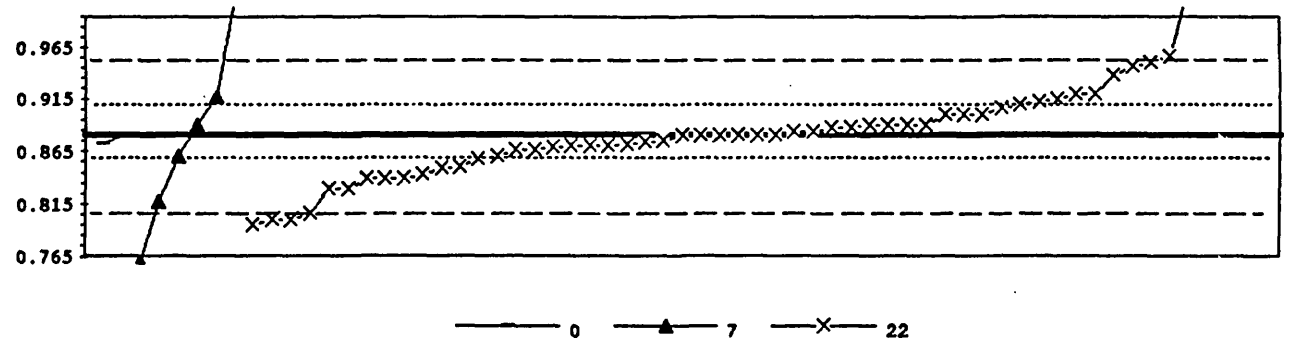
0. Other					
7. IC					
22. Color: phosphomolybdate					
	N =		0	1	28
	Minimum =			1.880	0.685
	Maximum =				1.000
	Median =				0.878
	St Dev =				0.054

MPV = 0.880 +/- 0.011
F-pseudosigma = 0.043
N = 29
Hu = 0.908
Hl = 0.850

Lab	Rating	Z-value	0	7	22
1	1	1.77			0.956
2	2	-1.05			0.835
3	4	0.19			0.888
7	0	23.26		1.880	
20	4	0.00			0.880
29	0	-3.02			0.750
36	3	0.53			0.903
42	3	0.65			0.908
45	0	2.79			1.000
48	4	-0.49			0.859
52	1	1.77			0.956
74	1	1.60			0.949
78	3	0.79			0.914
88	3	0.84			0.916
90	4	0.37			0.896
92	4	-0.30			0.867
104	4	-0.09			0.876
105	4	-0.23			0.870
108	3	-0.70			0.850
118	2	-1.16			0.830
119	4	-0.47			0.860
129	0	-4.54			0.685
134	4	0.00			0.880
140	0	-2.56			0.770
141	0	-2.79			0.760
145	4	0.23			0.890
173	4	0.47			0.900
179	2	-1.30			0.824
181	4	-0.40			0.863

Table 13. --*Statistical summary of reported data for standard reference water sample N-35 (nonpreserved nutrients)*--*Continued*

P04 as P (Orthophosphate) m g/L



0. Other			
7. ICP			
22. Colorimetric: phosphomolybdate			
N =	2	6	55
Minimum =	0.873	0.760	0.795
Maximum =	0.880	1.011	8.990
Median =			0.880
St Dev =			0.037

MPV =	0.880 +/- 0.006
F-pseudosigma =	0.037
N =	63
Hu =	0.910
Hl =	0.860

Lab	Rating	Z-value	0	7	22
1	3	0.86			0.912
2	1	1.78			0.946
5	1	-1.97			0.807
6	3	-0.78			0.851
8	0	-3.24		0.760	
9	3	0.70			0.906
13	3	0.94			0.915
15	4	-0.30			0.869
16	0	-2.29			0.795
18	4	0.22			0.888
19	3	-1.00			0.843
20	3	0.54			0.900
23	4	0.27			0.890
25	2	1.08			0.920
29	4	0.00			0.880
32	3	1.00		0.917	
37	1	-1.67		0.818	
38	4	-0.27			0.870
45	0	3.78			1.020
46	4	0.11			0.884
52	0	2.05			0.956
55	3	0.54			0.900
57	0	-2.16			0.800
59	3	-0.81			0.850
63	2	-1.35			0.830
70	4	0.00	0.880		
72	4	0.27			0.890
76	1	1.89			0.950
78	1	1.56			0.938
83	0	50.45			2.750
84	0	218.81			8.990
85	4	0.00			0.880
87	0	-2.16			0.800
88	4	-0.27			0.870
92	4	-0.22			0.872
96	4	-0.13			0.875
97	4	0.00			0.880
104	4	0.11			0.884
111	3	-0.54		0.860	
113	4	0.19			0.887
117	0	5.13			1.070
118	2	-1.35			0.830
119	4	0.00			0.880
120	4	-0.27			0.870
123	3	0.81			0.910
127	4	-0.16			0.874
128	3	0.54			0.900
129	4	-0.35			0.867
134	3	-0.54			0.860
137	0	3.53		1.011	
138	2	-1.08			0.840
143	3	-0.59			0.858
145	2	1.08			0.920
154	2	-1.08			0.840
158	2	-1.08			0.840
161	4	-0.35			0.867
173	4	0.27			0.890
179	0	10.98			1.287
180	4	0.27			0.890
181	4	0.00			0.880
183	4	0.00			0.880
190	4	-0.19	0.873		
191	4	0.27		0.890	

Table 14-- *Statistical summary of reported data for standard reference sample Hg-14 (Mercury)*

Definition of analytical methods, abbreviations, and symbols

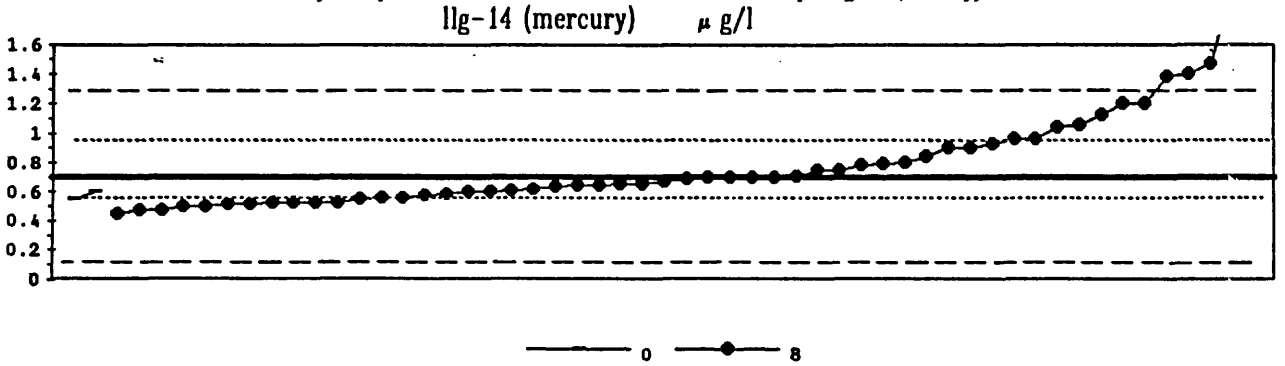
Analytical methods

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
μ /L =	micrograms per liter
Lab =	laboratory code number
NR =	not rated, less than value reported
< =	less than

Table 14. *--Statistical summary of reported data for standard reference water sample Hg-14 (Mercury)*



0. Other
8. AA: Cold vapor

N =	2	57
Minimum =	0.55	0.45
Maximum =	0.60	4.73
Median =		0.70
St Dev =		0.25

MPV = 0.70 +/- 0.05
F-pseudosigma = 0.29
N = 59
Hu = 0.96
Hl = 0.57

Lab	Rating	Z-value	0	8
1	4	-0.21		0.64
3	4	-0.17		0.65
5	1	1.73		1.20
7	4	0.00		0.70
8	1	1.73		1.20
12	4	0.35		0.80
13	3	-0.69		0.50
15	4	-0.14		0.66
16	4	-0.35	0.60	
23	3	-0.59		0.53
24	0	6.90		2.70
29	4	0.03		0.71
32	3	-0.62		0.52
36	4	0.31		0.79
37	0	2.35		1.38
42	4	-0.17		0.65
45	4	0.29		0.78
46	4	-0.41		0.58
48	3	-0.52		0.55
50	4	-0.35		0.60
52	3	-0.60		0.53
55	3	-0.78		0.47
63	0	4.49		2.00
68	4	0.00		0.70
69	3	-0.62		0.52
70	4	-0.48		0.56
74	3	0.80		0.93
75	3	-0.86		0.45
76	2	1.24		1.06
78	3	0.90		0.96
81	4	0.00		0.70
86	0	2.66		1.47
87	4	0.17		0.75
92	3	-0.59		0.53
96	3	0.69		0.90
97	4	0.17		0.75
105	4	-0.31		0.61
108	2	1.48		1.13
109	4	-0.09		0.68
113	4	-0.35		0.60
119	3	0.69		0.90
120	4	-0.14		0.66
122	3	-0.78		0.48
126	0	2.42		1.40
127	3	0.90		0.96
128	0	4.83		2.10
133	3	-0.69		0.50
134	4	-0.28		0.62
136	0	8.28		3.10
138	4	-0.48		0.56
141	4	0.48		0.84
151	3	-0.59		0.53
161	0	13.90		4.73
173	4	-0.03		0.69
179	3	-0.52	0.55	
180	0	6.07		2.46
181	2	1.17		1.04
182	4	0.00		0.70
194	4	-0.38		0.59

Table 15. --*Most probable values for constituents and properties in standard reference samples distributed in April 1992*

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

T-119 (trace constituents)

Analyte	MPV		F-pseudosigma	Analyte	MPV		F-pseudosigma
Ag	4.00	µ g/L	1.31	Li	60.5	µ g/L	4.2
Al	171	µ g/L	30	Mg	3.10	m g/L	0.16
As	4.20	µ g/L	0.57	Mn	35.0	µ g/L	2.9
B	28.0	µ g/L	8.9	Mo	11.9	µ g/L	2.4
Ba	44.0	µ g/L	3.0	Na	20.3	m g/L	1.0
Be	13.6	µ g/L	1.7	Ni	21.8	µ g/L	2.2
Ca	11.0	m g/L	0.8	Pb	6.70	µ g/L	1.21
Cd	2.80	µ g/L	0.44	Sb	8.60	µ g/L	1.46
Co	5.10	µ g/L	0.96	Se	9.80	µ g/L	1.33
Cr	18.6	µ g/L	2.2	SiO2	9.00	m g/L	0.50
Cu	2.00	µ g/L	1.00	Sr	73.0	µ g/L	5.4
Fe	46.0	µ g/L	6.8	V	3.8	µ g/L	0.9
K	1.30	m g/L	0.14	Zn	24.8	µ g/L	4.7

M-122 (major constituents)

Analyte	MPV		F-pseudosigma	Analyte	MPV		F-pseudosigma
Alkalinity	38.0	m g/L	1.4	Na	25.5	m g/L	1.0
B	15	µ g/L	14	total P		insufficient data	
Ca	19.3	m g/L	1.0	pH	7.76		0.26
Cl	56.1	m g/L	1.6	SiO2	10.19	m g/L	0.48
DSRD	170	m g/L	10	SO4	9.60	m g/L	0.74
F	0.23	m g/L	0.03	Sp Cond	285	µ S/cm	13
K	1.19	m g/L	0.13	Sr	123	µ g/L	4
Mg	5.34	m g/L	0.28	V		insufficient data	

N-34 (preserved nutrients)

Analyte	MPV		F-pseudosigma
NH3 as N	0.177	m g/L	0.047
NH3+OrgN as N	0.370	m g/L	0.226
NO3+NO2 as N	0.210	m g/L	0.033
total P as P	0.210	m g/L	0.022
PO4 as P	0.203	m g/L	0.014

N-34 (nonpreserved nutrients)

Analyte	MPV		F-pseudosigma
NH3 as N	0.160	m g/L	0.021
NH3+OrgN as N	0.300	m g/L	0.070
NO3+NO2 as N	0.220	m g/L	0.025
total P as P	0.205	m g/L	0.016
PO4 as P	0.200	m g/L	0.015

N-35 (preserved nutrients)

Analyte	MPV		F-pseudosigma
NH3 as N	0.880	m g/L	0.082
NH3+OrgN as N	1.035	m g/L	0.204
NO3+NO2 as N	1.00	m g/L	0.08
total P as P	0.889	m g/L	0.047
PO4 as P	0.880	m g/L	0.011

N-35 (nonpreserved nutrients)

Analyte	MPV		F-pseudosigma
NH3 as N	0.870	m g/L	0.070
NH3+OrgN as N	1.03	m g/L	0.12
NO3+NO2 as N	1.03	m g/L	0.05
total P as P	0.890	m g/L	0.041
PO4 as P	0.880	m g/L	0.037

Hg-14 (mercury)

Analyte	MPV		F-pseudosigma
Hg	0.70	µ g/L	0.29