REPORT ON THE U.S. GEOLOGICAL SURVEY'S EVALUATION PROGRAM FOR STANDARD REFERENCE SAMPLES DISTRIBUTED IN OCTOBER 1993 T-127 (TRACE CONSTITUENTS), M-128 (MAJOR CONSTITUENTS), N-40 (NUTRIENTS), N-41 (NUTRIENTS), P-21 (LOW IONIC STRENGTH), Hg-17 (MERCURY), AMW-3 (ACID MINE WATER), AND WW-1 (WHOLE WATER)

by H. Keith Long and Jerry W. Farrar

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CONTENTS

FIGURE

TABLES

REPORT ON THE U.S. GEOLOGICAL SURVEY'S EVALUATION PROGRAM FOR STANDARD REFERENCE SAMPLES DISTRIBUTED IN OCTOBER 1993 T-127 (TRACE CONSTITUENTS), M-128 (MAJOR CONSTITUENTS), N-40 (NUTRIENTS), N-41 (NUTRIENTS), P-21 (LOW IONIC STRENGTH), Hg-17 (MERCURY), AMW-3 (ACID MINE WATER), AND WW-1 (WHOLE WATER)

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ABSTRACT

This report presents the results of the U.S. Geological Survey's analytical evaluation program for eight standard reference samples--T-127 (trace constituents), M-128 (major constituents), N-40 (nutrients), N-41 (nutrients), P-21 (low ionic strength), Hg-17 (mercury), AMW-3 (acid mine water), and WW-1 (whole water)--that were distributed in October, 1993 to 158 laboratories registered in the U.S. Geological Survey sponsored interlaboratory testing program. Analytical data that were received from 145 of the laboratories were evaluated with respect to: overall laboratory performance and relative laboratory performance for each analyte in the eight 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 eight 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 eighty-five USGS and non-USGS laboratories are registered in the program, which can currently provide nine 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
9. Whole water (water with suspended sediment)

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 145 of the 158 laboratories (table 1) that requested and were shipped SRS for the October 1993 evaluation. Not all SRS are requested, nor necessarily analyzed by all the laboratories; nor do all laboratories enrolled in the program participate in each evaluation. Analytical results for the following, which were mailed the week of October 18, 1993, are presented in this report:

T-127	Trace constituents
M-128	Major constituents
N-40	Nutrients--low level concentrations (analytes < 0.5 milligrams per Liter)
N-41	Nutrients--high level concentrations (analytes > 0.5 milligrams per Liter)
P-21	Low ionic strength (precipitation)
Hg-17	Mercury
AMW-3	Acid mine water
WW-1	Whole water

The USGS requested that analytical results be returned by December 15, 1993, for evaluation and preparation of this report. Each participating laboratory is requested to perform those determinations routinely made on the respective SRS for USGS investigations and to indicate the analytical method used to determine the concentration of each analyte. When analytical-method information was provided, it has been included in the respective data table. The analytical data are presented in ways that allow participants to evaluate data distribution, scatter, outliers, central tendency, bias, skewness, and method relationships.

Table 1.--*Laboratory participants in the analyses of standard reference samples distributed in October 1993*

State	City	Participating Laboratory
Alabama	Tuscaloosa	Geological Survey of Alabama
Alaska	Fairbanks	Alaska Department of Natural Resources
Arizona	Phoenix	Arizona Department of Health Services
	Phoenix	Nestech Labs, Inc.
	Yuma	Burns and Roe Services Corporation
Arkansas	Arkadelphia	Ouachita Baptist University
	Little Rock	Arkansas Department of Pollution Control and Ecology
California	Castiac	Castaic Chemical Laboratory, Department of Water Resources
	Davis	University of California - Davis
	La Mesa	San Diego Water Utility
	Lakeside	Helix Water District
	Martinez	Central Contra Costa Sanitary District
	Oakland	East Bay Muncipal Utility District
	Sacramento	Anlab
	Sacramento	US Bureau of Reclamation, Water Quality Laboratory
	Sacramento	USGS
	San Diego	USGS
	Santa Barbara	University of California - Santa Barbara
	Sante Fe Springs	West Coast Analytical Services
	West Sacramento	California Department of Water Resources
	West Sacramento	Enseco - Callab
Colorado	Alamosa	US Bureau of Reclamation
	Arvada	USGS National Water Quality Laboratory
	Arvada	Enseco - Rocky Mountain Analytical Laboratory
	Aurora	Core Laboratories, Inc.
	Denver	US Bureau of Reclamation
	Denver	USGS
	Denver	USGS - Hydrologic Research Unit
	Denver	Denver Water Department
	Denver	Metro Wastewater Reclamation
	Fort Collins	City of Fort Collins - Water Quality
	Fort Collins	USDA US Forest Service
	Golden	EG & G Rocky Flats
	Golden	Huffman Laboratories
	Loveland	Northern Colorado Water Conservation
	Northglenn	Northglenn Water Treatment Plant
	Westminster	City of Westminster
Florida	Brooksville	SW Florida Water Management District
	Fort Lauderdale	Spectrum Laboratories, Inc.
	Ocala	USGS, QWSU
	Orlando	Post, Buckley, Schuh, and Jernigan, Inc.
	Ormand Beach	Environmental Laboratory
	Palatka	St. John's River Management District
	Tallahassee	City of Tallahassee

Table 1.--*Laboratory participants in the analyses of standard reference samples distributed in October 1993--Continued*

State	City	Participating Laboratory
Georgia	Atlanta	Georgia Department of Natural Resources
	Atlanta	USGS WRD
	Decatur	Dekalb County Water Quality Laboratory
	Tifton	USDA Agriculture Research Station
Hawaii	Honolulu	University of Hawaii - SOEST Analytical Services Atomic Spectroscopy Laboratory
Idaho	Boise	US Bureau of Reclamation
Illinois	Champaign	Illinois Environmental Protection Agency
	Champaign	Hazardous Waste Research Center
	Chicago	Illinois Environmental Protection Agency
Indiana	Indianapolis	Indianapolis Department of Public Works
Iowa	Davenport	City of Davenport
	Des Moines	University Hygienic Laboratory, Des Moines Branch
Kansas	Lawrence	Kansas Geological Survey
	Topeka	Kansas Department of Health and Environment
Kentucky	Frankfort	Division of Environmental Services
	Lexington	Kentucky Geological Survey
	Louisville	Metropolitan Sewer District
Maine	Orono	Sawyer Environmental Center, University of Maine
Maryland	Baltimore	Martel Laboratory Services, Inc.
	Baltimore	Maryland Department of Health and Mental Hygiene
Massachusetts	Wellesley Hills	Massachusetts Department of Public Works
Michigan	Ann Arbor	University of Michigan - Department of Geological Science
	Ann Arbor	University of Michigan - School of Natural Resources
	Houghton	Michigan Technical University
Minnesota	Minneapolis	Braun Intertec Environmental, Inc.
	Minneapolis	University of Minnesota, Department of Geology and Geophysics
	St. Paul	Metropolitan Waste Control Commission
	St. Paul	University of Minnesota, Research Analytical Laboratory
Missouri	Columbia	University of Missouri, School of Natural Resources
	Jefferson City	Missouri Department of Health
Montana	Butte	Montana Bureau of Mines and Geology
Nevada	Boulder City	US Bureau of Reclamation
	Las Vegas	Clark County Sanitation District
	Las Vegas	University of Nevada - Las Vegas
	Reno	Desert Research Institute
	Reno	Nevada State Health Laboratory
	Sutcliffe	Pyramid Lake Fisheries
New Mexico	Albuquerque	City of Albuquerque
	Gallup	BIA - Navajo Area Office, Natural Resources Laboratory
New York	Albany	New York State Department of Health
	Brockport	State University of New York - Brockport
	Buffalo	Erie County Laboratory
	Grahamsville	New York City Department of Environmental Protection
	Hempstead	Nassau County Department of Health
	Milbrook	Institute of Ecosystem Studies
	North Babylon	EcoTest Laboratories, Inc.
	Oakdale	Suffolk County Water Authority
	Port Washington	New York Test Environmental, Inc.
	Rochester	Monroe County
	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 October 1993--Continued*

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

Preparation of Standard Reference Samples

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

Trace constituent sample T-128 was prepared using water collected from the Fall River near Idaho Springs, Colorado. The water was pumped through 2- and 0.1-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 24 hours. Following this circulation, the water was acidified to pH 1.5 with nitric acid and chlorinated to 5-ppm free chlorine with sodium hypochlorite and supplemented with reagent-grade chemicals to achieve selected analyte concentrations The sample was circulated an additional 24 hours prior to bottling. During bottling the sample was pumped through an ultraviolet sterilizer and a 0.1-µm filter. The 500-mL polypropylene bottles used were acid leached, deionized-water rinsed, and autoclave sterilized. Bottles not mailed for this SRS evaluation are stored until requested for use.

Major constituent sample M-128 was prepared using water collected from the South Platte River near Ft. Lupton, Colorado. The water was pumped through 2- and 0.1-μm filters, in series, into a 1300-L polypropylene drum. The water was chlorinated to 5-ppm free chlorine with sodium hypochlorite, continuously circulated, and passed through a 0.1-μm filter and ultraviolet sterilizer for 72 hours prior to bottling. During bottling the sample was pumped through an ultraviolet sterilizer and a 0.1-μm filter. The 500-mL polypropylene bottles used were acid leached, deionized-water rinsed, and autoclave sterilized. Bottles not mailed for this SRS evaluation are stored until requested for use.

Nutrient samples N-40 and N-41 were prepared using water collected from the Fall River near Idaho Springs, Colo. These samples were prepared the week prior to the mailing for this SRS evaluation. The water was pumped through 2- and 0.1-μm filters, in series, into a 600-L polypropylene drum and continuously circulated and passed through a 0.1-mm filter for 48 hours. The desired nutrient concentrations were obtained by adding reagent-grade chemicals. The sample was circulated an additional 24 hours. A number of nonpreserved samples were bottled from this solution. The remaining sample 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 sample was continuously circulated for 24 hours prior to being bottled. The 250-mL polyethylene bottles used were new, amber, acid leached, and deionized-water rinsed. Bottles not mailed for this SRS evaluation are refrigerated at 4 ^{o}C until requested for use.

Sample P-21 was prepared in a 400-L polypropylene drum using snow collected at Mt. Evans near Summit Lake in Colorado. The collected snow was allowed to melt: and then it was pumped into the drum through 2- and 0.1-μm filters in series. Desired phosphate and fluoride concentrations were obtained by adding reagent-grade chemicals. Prior to bottling the sample was continuously mixed for 48 hours while being circulated through a 0.1-μm filter and an ultraviolet sterlizer. During bottling the sample was pumped through an ultraviolet sterilizer and a 0.1-μm filter. The 500-mL polypropylene bottles used were acid leached, deionized-water rinsed, and autoclave sterilized. Bottles not mailed for this SRS evaluation are stored until requested for use.

Sample Hg-17 was prepared using water collected from the Fall River near Idaho Springs, Colorado. The sample was prepared in a 190-L polypropylene drum. The river water was pumped into this drum through 2- and 0.1-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, the sample was bottled. The 125-mL glass bottles used were new, acid leached, and deionized-water rinsed with tetrafluoroethylene fluorocarbon resin caps. Bottles not mailed for this SRS evaluation are stored until requested for use.

Sample AMW-3 was prepared using water collected from a leach pond at the Argo Mine, near Idaho Springs, Colorado. The sample was prepared in a 120-L polypropylene drum. The pond water was pumped into this drum through 2- and 0.2-μm filters in series. The water was continuously circulated and passed through a 0.2-μm filter and ultraviolet sterilizer for 72 hours and then was bottled. The 125-mL bottles used were acid leached and deionized-water rinsed with tetrafluoroethylene fluorocarbon resin caps. Bottles not mailed for this SRS evaluation are stored until requested for use.

Sample WW-1 was prepared using SRS T-123 and sediment from SRS Sed-4. The sample was prepared by adding 250-mL (250.0 grams at 20 ^{o}C) of T-123 to 300.0 μg of Sed-4. The 250-mL

polypropylene bottles used were acid leached, deionized water rinsed, and autoclaved sterilized. Bottles 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-127 (trace constituents) to 1 in Hg-17 (mercury).

Table 2.--*Analytes determined in standard reference samples distributed in April 1993*

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

Analyte or property		Units	T-127	M-128	N-40.41	P-21	Hg-17	AMW-3	WW-1
Acidity	Acidity as $CaCO_3$	mg/L				X			
Alk	Alkalinity as $CaCO_3$	mg/L		X					
Ag	Silver	µg/L	X					X	X
Al	Aluminum	µg/L	X					X	X
As	Arsenic	µg/L	X					X	X
B	Boron	µg/L	X	X				X	X
Ba	Barium	µg/L	X					X	X
Be	Beryllium	µg/L	X					X	X
Ca	Calcium	mg/L	X	X		X		X	X
Cd	Cadmium	µg/L	X					X	X
Cl	Chloride	mg/L		X		X			
Co	Cobalt	µg/L	X					X	X
Cr	Chromium, total	µg/L	X					X	X
Cu	Copper	µg/L	X					X	X
DSRD	Dissolved solids	mg/L		X					
F	Fluoride	mg/L		X		X			
Fe	Iron	µg/L	X					X	X
Hg	Mercury	µg/L					X		
K	Potassium	mg/L	X	X		X		X	X
Li	Lithium	µg/L	X					X	X
Mg	Magnesium	mg/L	X	X		X		X	X
Mn	Manganese	µg/L	X					X	X
Mo	Molybdenum	µg/L	X					X	X
Na	Sodium	mg/L	X	X		X		X	X
NH_3 as N	Ammonia	mg/L			X				
NH_3+Org N as N	Ammonia + Organic N	mg/L			X				
Ni	Nickel	µg/L	X					X	X
NO_3+NO_2 as N	Nitrate + Nitrite	mg/L			X	X			
Pb	Lead	µg/L	X					X	X
pH		unit		X		X			
PO_4 as P	Orthophosphate	mg/L			X	X			
total P as P	Phosphorus	mg/L		X	X				
Sb	Antimony	µg/L	X					X	X
Se	Selenium	µg/L	X					X	X
SiO_2	Silica	mg/L	X	X				X	X
SO_4	Sulfate	mg/L		X		X			
Sp Cond	Specific conductance	µS/cm		X		X			
Sr	Strontium	µg/L	X	X				X	X
V	Vanadium	µg/L	X	X				X	X
Zn	Zinc	µg/L	X					X	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 12 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 2.39 are considered marginal; those less than 2.0 are considered poor.

STATISTICAL PRESENTATION OF DATA

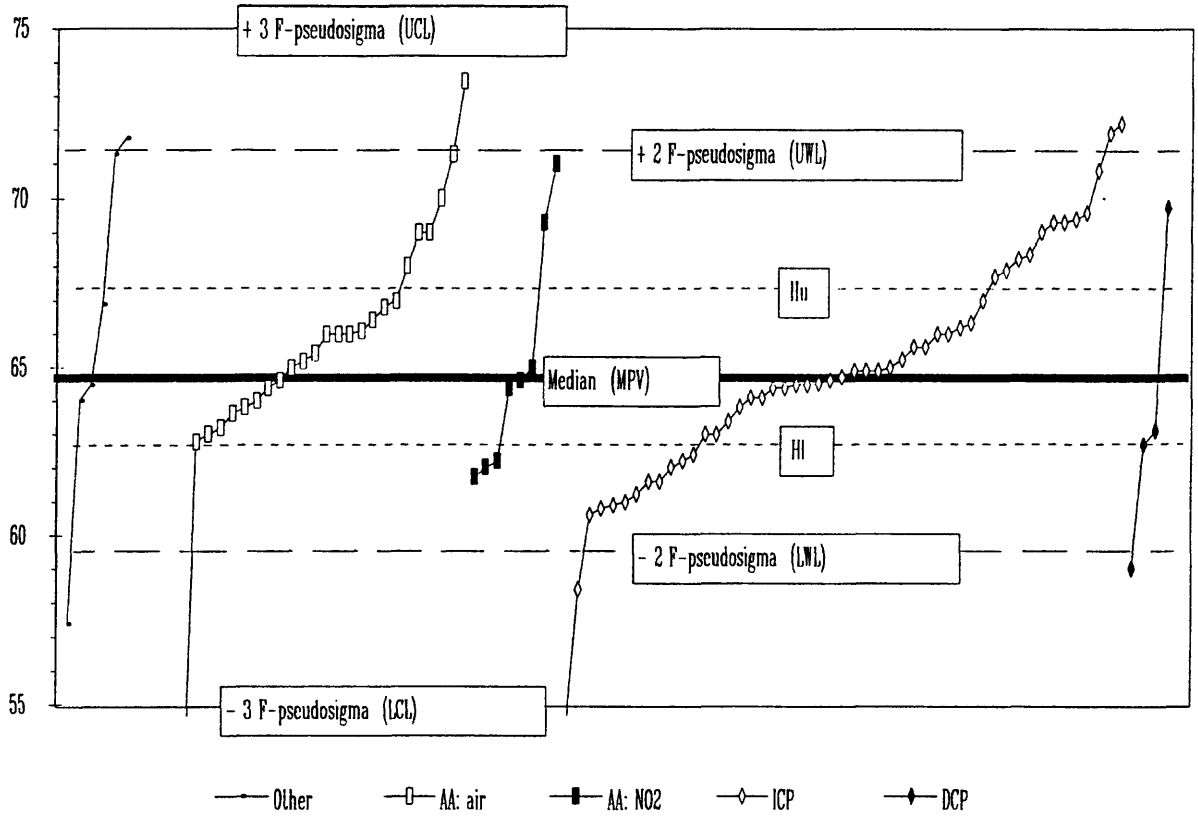
Data in this report have been evaluated using nonparametric statistics as described by Hoaglin and others (1983). This statistical approach is a resistant statistic because the median is not influenced by outliers as is the mean in traditional statistics.

Analytical data for each analyte are presented in tabular and graphical forms in tables 13 through 20. 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 7, the σ for that analytical method is reported in the block of data listed for each analyte.

The median value is considered the MPV. Reported values of "less than" are used to establish the median, but are not considered in determining the data range. The median (midpoint) divides the ordered data into halves and is designated the MPV. The hinges include the middle 50-percent of the data and are the mid-values of the upper and lower halves of the data. (The hinges are similar to quartiles, but are not mathematically equivalent.) The range of data between the upper hinge (Hu) and the lower hinge (Hl), the hinge spread (H-spr), is used to calculate the F-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 box plot/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 13 through 20.

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

DISCUSSION

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

REFERENCE

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

Table 4. *--Overall laboratory performance ratings for standard reference water samples distributed in October 1993*

[Lab, laboratory number; OWR, overall weighted rating for all sample types; OLR, overall laboratory rating for reported values of a sample type; V/124, number of reported values of 99 total possible values from all sample types; V/26, V/16, V/10,V/10,V/11, V/1, V/24, and V/26 are number of reported values possible for T-127, M-128, N-40, N-41, P-21, Hg-17, AMW-3, and WW-1 respectively]

Standard reference sample =			T-127		M-128		N-40		N-41		P-21		Hg-17		AMW-3		WW-1	
Lab	OWR	V/124	OLR	V/26	OLR	V/16	OLR	V/10	OLR	V/10	OLR	V/11	OLR	V/1	OLR	V/24	OLR	V/26
1	3.5	113	3.6	26	3.3	16	3.8	5	4.0	5	3.1	11	4.0	1	3.3	23	3.7	26
2	3.7	3									3.7	3						
3	2.8	107	2.6	24	2.5	15	2.3	4	2.0	5	2.8	11	0.0	1	3.5	23	2.9	24
4	2.3	36	2.4	14	3.3	6									1.7	16		
5	2.2	71	3.7	20	2.4	14	3.5	4	1.8	4	1.8	6					0.6	23
7	3.0	85	3.1	23	2.5	12	3.5	2	3.3	3	2.7	3	3.0	1	2.7	18	3.3	23
8	2.6	89	2.3	23	2.3	15					3.4	7	2.0	1	2.8	21	2.8	22
9	2.6	29	3.1	10	3.0	9	1.8	5	1.8	5								
10	3.8	22			3.8	12	3.6	5	3.8	5								
11	2.7	83	2.2	17	2.8	15	3.2	5	2.1	10			2.0	1	2.8	18	3.4	17
12	3.0	28	2.4	10	3.2	11	4.0	1	3.2	5			4.0	1				
13	2.8	38	2.4	14	3.1	13	2.8	5	3.0	5			4.0	1				
15	2.8	111	3.3	22	2.5	16	2.9	8	2.8	10	2.3	10	3.0	1	2.8	21	2.6	23
16	1.7	38	1.7	19	2.0	13	1.0	2	2.0	3			0.0	1				
18	3.3	90	3.3	22	3.5	15	3.2	5	3.6	5			3.0	1	3.2	20	3.3	22
19	3.6	26	3.5	8	3.8	11	3.3	3	3.3	4								
21	2.9	16	4.0	1	2.8	9	3.0	6										
22	3.5	2					4.0	1	3.0	1								
23	2.7	66	2.5	23	3.5	13	4.0	4	3.5	4	2.3	9					1.8	13
24	2.4	40	2.9	24	1.5	15							2.0	1				
25	2.7	55	2.2	19	2.8	11	2.0	3	2.3	4							3.4	18
26	2.9	13					0.0	1	3.7	3	3.0	9						
27	1.9	10	1.0	6	3.3	4												
29	2.1	33	1.8	12	2.9	12	1.0	4	2.5	4			0.0	1				
30	2.7	25	2.6	18	2.6	5											3.5	2
32	2.9	99	3.3	25	1.5	15	1.0	2	2.7	3	3.0	5	4.0	1	2.9	23	3.6	25
33	2.7	39	2.4	11	2.3	12	4.0	4	2.3	3	3.3	9						
34	4.0	3	4.0	2									4.0	1				
35	2.0	1	2.0	1														
36	2.5	89			2.1	14	2.1	10	2.3	10	2.8	11	3.0	1	2.8	21	2.6	22
37	2.7	17							3.4	5					2.4	12		
38	3.2	27			3.0	10	3.4	5	3.6	5	3.0	7						
39	2.8	42	3.2	22	2.8	12					1.3	7	4.0	1				
40	3.2	14			3.2	14												
42	3.2	65	3.3	25	2.8	13	2.3	4	2.5	4			3.0	1	3.6	18		
43	3.4	19	2.7	6	3.7	11	4.0	1	4.0	1								
44	3.0	6									3.0	6						
45	2.9	53	3.0	22	3.0	14	2.5	8	2.8	8			3.0	1				
46	2.9	62	3.5	17	3.2	14	4.0	4	3.8	5	2.9	9	2.0	1			1.2	12
48	2.1	92	2.4	21	1.8	12	1.6	5	3.4	5	1.3	9	3.0	1	2.1	20	2.1	19
50	3.1	27	2.9	13	3.2	13							4.0	1				
51	2.4	35	2.2	17	2.5	13	2.3	4					4.0	1				
52	3.2	100	3.1	21	3.5	15	2.9	7	3.9	10	3.8	5	4.0	1	2.8	20	3.1	21
53	3.5	4					4.0	2	3.0	2								
54	3.4	15	4.0	4	3.2	11												
55	2.8	43	3.0	22	2.4	12	2.7	3	3.0	5			3.0	1				
56	2.5	13			2.0	9	3.8	4										
57	1.6	36	2.0	17	1.5	14			0.6	5								
58	1.9	80	1.7	19	2.0	11	0.5	2	1.3	4	2.8	6	4.0	1	1.7	19	2.2	19
59	3.2	56	3.3	14			4.0	3	3.8	5			4.0	1	3.1	16	2.8	17
60	2.0	36	2.8	9	2.8	6	1.6	10	1.2	10			3.0	1				
61	2.1	88	2.0	20	2.7	15			0.8	5	1.8	6	1.0	1	2.6	19	1.7	22
62	3.8	4			4.0	2					3.5	2						
63	2.3	107	1.6	22	2.3	15	2.0	10	2.7	10	2.2	6	2.0	1	2.1	20	3.0	23
64	3.5	19			3.5	10					3.6	9						
68	1.8	61	1.9	21	2.6	12	2.8	5	1.5	2			4.0	1			1.0	20
69	3.2	47	2.9	17	3.1	11	3.0	1	4.0	1			4.0	1			3.5	16
70	2.8	41	2.9	18	3.0	15	1.5	2	1.6	5			4.0	1				
72	2.3	29	2.4	20			1.5	4	3.0	5								
73	1.6	8	1.6	8														
75	3.4	39	3.7	19	2.8	11	4.0	4	3.0	4			3.0	1				
76	3.2	22	3.4	12	2.8	8			3.5	2								
78	2.6	65	3.4	22	2.6	14	1.0	10	2.4	10	2.6	9						
79	2.1	17	2.0	11	2.0	3			4.0	2			0.0	1				
80	2.3	12	2.2	6			2.3	3	2.7	3								
81	2.1	21			2.6	12	1.5	4	1.6	5								
83	2.8	28	3.2	14	2.7	9	2.0	2	1.3	3								
84	2.7	27	3.8	4	2.7	7			4.0	2					2.2	14		
85	3.3	59	3.4	17	3.4	15	3.3	4	3.4	5					3.2	18		
86	2.8	30	3.1	17	2.6	12							0.0	1				

Table 4. *--Overall laboratory performance ratings for standard reference water samples distributed in October 1993 --Continued*

Standard reference sample =			T-127		M-128		N-40		N-41		P-21		Hg-17		AMW-3		WW-1	
Lab	OWR	V/124	OLR	V/26	OLR	V/16	OLR	V/10	OLR	V/10	OLR	V/11	OLR	V/1	OLR	V/24	OLR	V/26
87	2.6	34	2.6	13	2.1	11	3.3	4	3.0	5			4.0	1				
88	1.3	12					0.7	6	2.0	6								
89	3.0	97	2.5	18	3.5	13	3.8	9	3.7	9	2.7	11	1.0	1	2.6	18	3.0	18
90	2.6	19	1.5	6	3.3	3	2.8	5	3.2	5								
91	2.9	9	3.5	2			2.7	3	2.8	4								
93	2.2	22			1.7	9	2.5	2	1.0	2	2.9	9						
94	3.5	86	3.8	22	3.5	14	3.5	4	3.8	4					3.3	20	3.5	22
96	3.3	28	3.0	11	3.2	6	3.8	5	4.0	5			0.0	1				
97	2.5	72	2.8	22	2.6	13	3.0	8	2.7	6			3.0	1			1.8	22
102	1.8	59	0.6	19	2.4	10	2.8	4	2.6	5							2.3	21
104	3.0	8	4.0	1	2.3	4	4.0	1	3.5	2								
105	3.4	107	3.4	25	3.2	15	3.0	5	2.8	5	3.8	8	4.0	1	3.1	23	3.7	25
107	3.0	33	2.7	18	3.6	7	3.5	4			3.0	4						
108	2.1	12	2.2	6					2.0	5			2.0	1				
109	2.6	29	2.4	15	2.8	13							1.0	1				
110	1.7	7			0.0	4					4.0	3						
111	2.3	13	2.5	6	0.0	1	3.3	3	1.7	3								
112	2.5	8							0.0	1	2.9	7						
114	2.1	32	1.1	14	2.9	12	4.0	2	2.0	4								
116	3.4	26	3.1	9	3.9	8									3.2	9		
117	1.5	75	0.9	17	2.4	8	2.2	5	1.3	6	1.9	7	1.0	1	1.4	16	1.3	15
118	2.8	36	1.9	11	2.5	4	3.0	10	3.5	10			4.0	1				
119	3.5	95	3.5	21	3.6	14	3.8	8	3.5	10			3.0	1	3.1	20	3.7	21
120	2.9	61	2.3	19	3.0	11	2.6	5	3.6	5			3.0	1			3.2	20
121	3.4	23	3.4	12	3.0	6	3.8	5										
122	2.3	20	0.5	4			2.9	7	2.5	8			3.0	1				
126	1.0	2			0.0	1	2.0	1										
127	3.5	81	3.4	25	3.8	15	2.7	3	4.0	5	3.8	9	3.0	1	3.3	23		
128	2.8	19			2.7	13			3.2	5			3.0	1				
129	2.2	44	0.9	8	1.9	14	3.4	5	3.1	10							2.3	7
131	2.4	32	2.6	19	2.1	13												
133	1.9	27	2.2	14	3.5	2	1.2	5	0.4	5			4.0	1				
134	3.6	67	3.5	24	3.7	16	3.3	9	3.7	10	3.6	8						
136	2.8	27	2.0	4	3.0	8	3.8	5	3.6	5	1.4	5						
138	3.1	54	3.3	23	2.5	13	3.8	5	3.2	5	3.3	7	4.0	1				
140	2.4	57	2.4	13	2.8	12	1.0	5	2.6	5	2.7	9					2.2	13
141	2.8	90	2.1	19	2.4	15	2.7	3	3.2	5	2.4	8	4.0	1	2.7	20	3.9	19
142	3.0	76	2.6	25	3.1	16	2.0	5	2.6	5			3.0	1			3.6	24
144	2.0	17	3.3	9									1.0	1			0.4	7
145	3.0	58	2.6	16	3.1	14	3.5	10	2.9	10	3.0	7	3.0	1				
146	2.4	68	2.3	25	1.4	13	4.0	2	2.0	2			2.0	1			2.8	25
149	1.7	26	1.8	12	1.8	8	0.0	2	1.7	3			3.0	1				
153	1.9	14	2.8	4	1.6	10												
154	2.7	45	2.6	21	3.1	14	3.2	5	1.4	5								
158	2.4	21	2.2	5	3.2	6					1.9	9	3.0	1				
179	1.8	32	2.1	15	2.5	6	2.0	3	0.3	7			2.0	1				
180	2.6	70	2.7	23	2.6	13	3.0	5	3.8	5			3.0	1			2.2	23
182	1.1	47	1.6	18	1.4	13	0.3	3	0.7	3	0.3	9	0.0	1				
183	2.2	30	2.1	11	2.3	7	2.8	4	2.0	4	2.0	4						
185	3.5	11	2.7	3							3.9	8						
190	2.4	32	2.5	15	2.5	6					2.0	7					2.8	4
191	3.2	15			3.1	11	3.5	2	3.5	2								
193	2.8	20	3.0	15	1.3	3	4.0	1	3.0	1								
194	2.8	38	2.7	13	3.0	7							4.0	1	2.8	17		
196	3.1	41	3.3	22	2.1	10	4.0	1	3.5	2	3.8	6						
197	2.3	13			3.0	5	1.0	1	2.3	3	1.8	4						
198	3.2	30	3.4	19			3.6	5	2.0	5			4.0	1				
200	2.5	6			4.0	1	3.0	2	1.7	3								
202	3.1	72	3.3	18	3.0	6	2.3	4	2.8	5	3.0	2	4.0	1	2.9	17	3.2	19
203	2.1	31	2.4	17	1.1	7	3.5	4			1.0	3						
204	2.9	56	2.7	15	2.7	11	3.2	5			2.7	9					3.1	16
205	3.5	2							3.5	2								
208	2.5	4			2.0	3			4.0	1								
210	1.1	74	0.7	20	0.9	14							2.0	1	1.3	19	1.5	20
211	1.9	47	2.0	25	1.5	16			2.6	5			3.0	1				
212	2.9	76	2.8	25	2.9	14	3.0	2	1.8	4	2.0	6		1			3.6	24
213	2.3	23	2.0	10	3.3	4	1.5	4	2.3	4			4.0	1				
214	2.9	8					2.9	8										
215	2.5	6					2.3	3	2.7	3								
216	0.0	4	0.0	4														
217	3.0	21	2.9	14	3.3	7												
218	1.7	10			1.7	10												
219	3.0	6	3.0	2	2.7	3							4.0	1				
220	3.1	31	2.8	7	3.3	7	3.1	8	3.1	8			4.0	1				
221	1.8	29	1.5	19			2.5	4	2.0	5			3.0	1				

Table 5. *--Laboratory performance ratings for standard reference water sample T-127 (trace constituents)*

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

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

			Analyte = Ag (Silver)		Al (Aluminum)		As (Arsenic)		B (Boron)		Ba (Barium)		Be (Beryllium)	
			MPV = 2.71 µ g/L		85.0 µ g/L		4.40 µ g/L		42.8 µ g/L		20.6 µ g/L		14.0 µ g/L	
			F-pseudosigma = 0.489		15.49		0.741		5.93		2.37		1.25	
Lab	OLR	V/26	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	3.6	26	2.73	4	79.4	4	4.40	4	42.7	4	19.7	4	12.8	3
3	2.6	24	2.10	2	100.0	3	5.10	3	47.0	3	21.0	4	15.0	3
4	2.4	14							43.0	4	21.0	4	14.0	4
5	3.7	20	< 4	NR	86.1	4	< 80	NR	42.0	4	19.4	4	13.9	4
7	3.1	23	3.00	3	85.0	4	4.40	4			20.5	4	13.5	4
8	2.3	23	< 5	NR	64.0	2	4.00	3	26.0	0	21.0	4	12.0	1
9	3.1	10												
11	2.2	17			101.0	2			45.0	4	16.0	1	14.0	4
12	2.4	10	2.40	3	< 100	NR	< 10	NR					< 20	NR
13	2.4	14	2.10	2	73.5	3	< 5	NR			38.7	0		
15	3.3	22	< 10	NR	97.7	3	4.04	4	45.9	3	18.8	3	18.6	0
16	1.7	19	< 7	NR	179.0	0	< 5	NR	305.0	0	25.0	1	16.0	1
18	3.3	22	< 3.00	NR	67.0	2	4.03	4	44.0	4	20.0	4	14.0	4
19	3.5	8												
21	4.0	1												
23	2.5	23	3.74	0	96.8	3	4.45	4			23.2	2	12.6	2
24	2.9	24	3.00	3	92.0	4	6.20	0	41.6	4	20.6	4	15.0	3
25	2.2	19	< 6	NR	34.0	0	< 50	NR	< 23	0	18.0	2	14.4	4
27	1.0	6					9.65	0						
29	1.6	12	2.62	4	200.0	0	8.40	0			82.5	0		
30	2.6	18	2.94	4	69.7	3					20.6	4	14.9	3
32	3.3	25	2.50	4	75.6	3	4.60	4	33.0	1	19.7	4	13.3	3
33	2.4	11			94.0	3					21.8	3		
34	4.0	2					4.49	4						
35	2.0	1					3.60	2						
39	3.2	22	2.70	4	85.0	4	3.50	2	48.0	3	21.7	4	14.8	3
42	3.3	25	2.65	4	79.0	4	4.00	3	36.0	2	20.3	4	13.5	4
43	2.7	6												
45	3.0	22	2.67	4	68.5	2	4.00	3	31.8	1	20.4	4	14.5	4
46	3.5	17	2.40	3	77.0	3	4.70	4	42.8	4			15.2	3
48	2.4	21	2.30	3	81.2	4	7.40	0	< 10	0	20.4	4	14.3	4
50	2.9	13	3.00	3	97.0	3					< 50	NR		
51	2.2	17			55.0	1	27.10	0						
52	3.1	21	2.69	4	88.3	4	5.06	3	< 300	NR	28.3	0	14.0	4
54	4.0	4												
55	3.0	22	1.90	1	88.0	4	5.00	3			26.3	0	15.8	2
57	2.0	17	2.20	2	< 200	NR	4.60	4	154.0	0	< 50	NR	13.0	3
58	1.7	19	8.10	0	64.6	2	3.68	3			29.4	0	22.1	0
59	3.3	14			< 100	NR	< 5	NR			20.0	4	14.0	4
60	2.8	9	3.20	3			3.10	1					16.7	0
61	2.0	20	< 5	NR	44.0	0	5.40	2	31.8	1	19.3	3	14.1	4
63	1.6	22	1.90	1	130.0	0	< 5	NR	42.0	4	24.0	2	15.0	3
68	1.9	21	0.30	0	180.0	0			250.0	0	210.0	0	16.0	1
69	2.9	17	2.68	4	110.0	1	4.60	4			38.0	0	13.2	3
70	2.9	18	2.30	3	< 100	NR	4.00	3	< 50	NR	19.8	4	14.0	4
72	2.4	20	2.20	2	82.3	4	4.00	3			20.2	4	14.0	4
73	1.6	8	5.40	0										
75	3.7	19	< 5	NR	85.0	4	4.00	3			20.0	4	14.0	4
76	3.4	12	2.94	4			4.72	4					14.1	4
78	3.4	22	2.60	4	93.6	3	4.82	3			22.0	3	14.9	3
79	2.0	11	2.40	3			8.60	0					11.3	0
80	2.2	6												
83	3.2	14			86.9	4					19.7	4	13.5	4
84	3.8	4												
85	3.4	17	< 5	NR	88.4	4	3.80	3	48.0	3	20.7	4	14.4	4

Table 5. *--Laboratory performance ratings for standard reference water sample T-127 (trace constituents)--Continued*

			Analyte = Ag (Silver)		Al (Aluminum)		As (Arsenic)		B (Boron)		Ba (Barium)		Be (Beryllium)	
			MPV = 2.71 µ g/L		85.0 µ g/L		4.40 µ g/L		42.8 µ g/L		20.6 µ g/L		14.0 µ g/L	
			F-pseudosigma = 0.489		15.49		0.741		5.93		2.37		1.25	
Lab	OLR	V/26	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
86	3.1	17	4.51	0							18.6	3	13.3	3
87	2.6	13	< 2	NR			5.00	3			< 20	NR		
89	2.5	18	2.91	4	82.0	4	3.88	3			77.0	0		
90	1.5	6									31.4	0		
91	3.5	2												
94	3.8	22	< 5	NR	78.0	4	4.32	4	47.0	3	20.0	4	14.0	4
96	3.0	11	2.60	4			4.20	4			31.1	0		
97	2.8	22	3.06	3	82.2	4	4.69	4			23.5	2	13.1	3
102	0.6	19	1.00	0	63.0	2	< 5	NR			15.0	0	9.0	0
104	4.0	1												
105	3.4	25	2.70	4	84.0	4	3.56	2			20.0	4	14.0	4
107	2.7	18	2.60	4	92.0	4	4.60	4			19.9	4		
108	2.2	6												
109	2.4	15					3.40	2	0.0	0			9.0	0
111	2.5	6												
114	1.1	14	< 10	NR	50.0	0							20.0	0
116	3.1	9							44.0	4	7.0	0		
117	0.9	17	3.14	3			21.00	0			45.0	0	16.9	0
118	1.9	11	2.80	4			1.42	0						
119	3.5	21	2.80	4	94.0	3	4.00	3	44.0	4	21.0	4	14.8	3
120	2.3	19	1.90	1	62.0	2	4.40	4			14.0	0	16.7	0
121	3.4	12			101.0	2					20.0	4		
122	0.5	4	4.20	0	142.3	0								
127	3.4	25	2.78	4	59.8	1	3.90	3	41.4	4	19.9	4	14.0	4
129	0.9	8							101.0	0				
131	2.6	19	3.00	3	10.0	0			190.0	0	20.0	4		
133	2.2	14	4.78	0			1.50	0			19.7	4	13.5	4
134	3.5	24	2.70	4	91.0	4	4.60	4	33.0	1	21.0	4		
136	2.0	4												
138	3.3	23	2.99	3	87.6	4	3.95	3			19.8	4	15.6	2
140	2.4	13												
141	2.1	19	< 10	NR	106.0	2	< 50	NR	59.0	0	21.2	4	13.9	4
142	2.6	25	2.00	2	87.1	4	4.45	4	54.5	1	21.7	4	13.6	4
144	3.3	9	2.20	2			4.10	4					13.0	3
145	2.6	16			< 179	NR	< 39	NR	39.0	3	20.7	4	15.7	2
146	2.3	25	4.40	0	72.3	3	5.90	1	41.0	4	19.4	3	13.3	3
149	1.8	12	2.00	2			41.00	0					11.4	0
153	2.6	4	3.10	3										
154	2.6	21	3.10	3	142.0	0	4.20	4	27.2	0	20.0	4	12.8	3
158	2.2	5												
179	2.1	15	< 1	0			5.00	3					13.2	3
180	2.7	23	5.20	0	68.3	2	25.00	0	40.9	4	20.6	4	14.0	4
182	1.6	18	15.00	0	25.0	0	4.00	3	137.6	0			14.0	4
183	2.1	11	3.20	3							17.7	2	16.9	0
185	2.7	3												
190	2.5	15	2.53	4			3.95	3						
193	3.0	15	3.00	3			5.00	3			20.0	4		
194	2.7	13	3.00	3	< 500	NR	< 10	NR	< 100	NR	< 100	NR	14.8	3
196	3.3	22	2.68	4	81.6	4	4.68	4			21.0	4	12.8	3
198	3.4	19	2.71	4	86.9	4	4.51	4			20.7	4	12.7	2
202	3.3	18	2.50	4	63.0	2	4.00	3					14.5	4
203	2.4	17	3.25	2	87.0	4	4.10	4			28.2	0		
204	2.7	15	2.88	4	71.3	3	< 5	NR			23.0	2		
210	0.7	20	2.35	3	210.0	0	< 50	NR	< 100	NR	< 50	NR	26.0	0
211	2.0	25	3.00	3	76.0	3	4.00	3	40.0	4	40.0	0	11.0	0
212	2.8	25	6.60	0	85.0	4	2.30	0	40.0	4	19.9	4	13.0	3
213	2.0	10	< 2	NR			3.30	2					15.5	2
216	0.0	4												
217	2.9	14	2.40	3	< 100	NR	5.60	1	< 100	NR	20.0	4	15.0	3
219	3.0	2					5.00	3						
220	2.6	7					3.40	2						
221	1.5	19	3.41	2	200.0	0	5.00	3			35.5	0		

Table 5. *--Laboratory performance ratings for standard reference water sample T-127 (trace constituents)--Continued*

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

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

Analyte =	Ca (Calcium)		Cd (Cadmium)		Co (Cobalt)		Cr (Chromium)		Cu (Copper)		Fe (Iron)		K (Potasium)	
MPV =	8.80 m g/L		8.34 µ g/L		11.6 µ g/L		11.5 µ g/L		42.0 µ g/L		135 µ g/L		1.07 m g/L	
F-pseudosigma =	0.448		1.227		1.48		1.48		2.97		11.7		0.163	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	8.79	4	8.56	4	11.3	4	10.5	3	42.7	4	131	4	1.19	3
3	9.10	3	9.00	3	14.0	1	10.0	2	50.0	0	120	2	0.84	2
4	8.80	4	4.00	0			10000	0			161	0		
5	8.25	2	8.63	4	11.3	4	11.5	4	43.0	4	134	4	1.18	3
7	8.85	4	9.60	2	11.0	4	11.3	4	41.4	4	135	4	1.25	2
8	8.90	4	10.00	2	11.0	4	9.0	1	42.0	4	105	0	1.10	4
9	8.00	1	8.60	4			10.8	4	43.0	4	133	4	1.00	4
11	9.59	1	8.00	4	13.0	3			45.0	2	189	0	1.00	4
12	10.00	0	8.60	4			< 20	NR	41.0	4	130	4	1.20	3
13	8.40	3	6.50	2			16.1	0	37.5	1	138	4	0.99	4
15	8.63	4	< 10	NR	11.2	4	11.4	4	39.3	3	129	3	1.06	4
16	8.90	4	16.00	0	14.0	1	18.0	0	45.0	2	150	2	1.80	0
18	8.97	4	1.29	0	13.0	3	12.0	4	44.0	3	137	4	0.94	3
19	8.76	4	7.30	3			10.7	3			132	4	1.21	3
21											137	4		
23	12.30	0	10.20	1			0.2	0	37.0	1	141	3	0.98	3
24	8.86	4	8.20	4	12.9	3	10.5	3	45.0	2	132	4	0.98	3
25	9.39	2	10.00	2	13.0	3	12.0	4	43.0	4	40	0	1.86	0
27	8.51	3											1.27	2
29			7.50	3			12.8	3	40.0	3				
30			10.70	1	10.4	3	9.9	2	44.9	3	12	0		
32	8.51	3	8.30	4	11.2	4	11.1	4	44.6	3	174	0	1.06	4
33	9.07	3									126	3	1.22	3
34														
35														
39	9.52	1	8.80	4	11.3	4	12.0	4	45.0	2	142	3	< 1	NR
42	9.10	3	8.05	4	11.1	4	11.4	4	42.4	4	142	3	1.25	2
43	9.00	4									135	4	1.10	4
45	8.43	3	8.47	4			12.0	4	39.7	3	128	3	1.26	2
46	9.10	3	8.15	4			10.6	3	40.4	3	130	4	1.03	4
48	9.30	2	8.00	4	< 50	NR	9.8	2	50.0	0	160	0	1.16	3
50			10.00	2	15.0	0	15.0	0	43.0	4	139	4		
51	8.15	2	12.10	0	12.4	3	12.9	3	44.0	3	170	0	1.16	3
52	8.71	4	7.89	4	10.9	4	11.5	4	43.6	3	127	3	0.97	3
54	8.80	4											1.00	4
55	8.59	4	8.90	4	9.8	2	10.4	3	41.2	4	155	1	1.04	4
57	9.00	4	9.40	3	< 40	NR	11.0	4	50.0	0	180	0	1.44	0
58	7.76	0	10.10	2	11.7	4	12.9	3	41.0	4	123	2	1.25	2
59	8.30	2	8.00	4			11.0	4	45.0	2	137	4	1.10	4
60			8.50	4			12.3	3	43.7	3				
61	8.97	4	12.40	0	10.0	2	6.6	0	46.4	2	140	4	0.09	0
63	9.85	0	6.90	2	20.0	0	11.0	4	39.0	2	157	1	1.40	1
68	9.00	4	5.50	0	13.0	3	12.0	4	50.0	0	140	4	0.79	1
69	8.20	2	7.98	4			12.1	4	42.0	4	135	4	1.20	3
70	9.12	3	6.60	2	< 50	NR	12.5	3	42.4	4	99	0	1.50	0
72	12.80	0	8.10	4	4.6	0	10.7	3	39.4	3	113	1	1.23	3
73			8.10	4					50.0	0	143	3		
75	8.90	4	8.50	4	12.0	4	12.0	4	42.0	4	135	4	1.40	1
76	9.16	3	7.83	4			10.8	4	37.9	2	122	2	1.18	3
78	8.50	3	8.20	4			11.6	4	40.8	4	125	3	1.07	4
79			8.60	4			12.0	4	39.0	2				
80			10.00	2					39.0	2	119	2		
83	8.56	3	8.30	4					41.7	4	134	4	1.42	0
84	8.72	4												
85	8.74	4	5.60	0	13.0	3	< 20	NR	43.2	4	130	4	1.19	3

Table 5. *--Laboratory performance ratings for standard reference water sample T-127 (trace constituents)--Continued*

Analyte =	Ca (Calcium)		Cd (Cadmium)		Co (Cobalt)		Cr (Chromium)		Cu (Copper)		Fe (Iron)		K (Potasium)	
MPV =	8.80 m g/L		8.34 µ g/L		11.6 µ g/L		11.5 µ g/L		42.0 µ g/L		135 µ g/L		1.07 m g/L	
F-pseudosigma =	0.448		1.227		1.48		1.48		2.97		11.7		0.163	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
86	8.88	4	7.80	4	10.6	3	10.2	3	39.6	3	139	4	1.05	4
87	7.50	0	8.00	4			11.8	4	42.0	4	172	0	0.94	3
89	9.23	3	8.97	3	29.0	0	13.7	2	38.0	2	112	1	1.05	4
90							11.0	4			153	1		
91											132	4		
94	8.84	4	8.30	4	11.0	4	11.0	4	42.0	4	130	4	0.99	4
96			7.90	4			12.2	4	40.1	3	142	3		
97	8.28	2	9.18	3	11.2	4	11.6	4	41.0	4	145	3	0.92	3
102	8.10	1	5.00	0	7.0	0	15.0	0	33.0	0	132	4	0.65	0
104														
105	8.60	4	8.34	4	13.0	3	11.5	4	44.0	3	130	4	1.03	4
107	8.30	2	2.06	0			12.8	3	44.0	3	125	3	1.28	2
108			8.10	4			10.0	2	40.0	3				
109	9.18	3									133	4	1.29	2
111			8.40	4			11.4	4	35.7	0				
114	10.00	0	10.00	2			20.0	0	40.0	3	140	4	7.00	0
116	9.45	2												
117	7.64	0	11.50	0			8.0	0	96.5	0	131	4	0.93	3
118			9.84	2			5.7	0	42.4	4				
119	8.64	4	8.70	4			11.9	4	43.0	4	132	4	1.17	3
120	18.12	0	7.70	3			10.7	3	38.5	2	177	0	1.01	4
121	8.80	4	10.00	2	11.0	4			42.0	4	140	4		
122														
127	8.70	4	7.62	3	11.4	4	11.5	4	43.9	3	133	4	0.17	0
129	8.00	1									180	0	1.50	0
131	9.60	1	6.00	1	12.0	4	11.0	4	48.0	1	138	4	1.00	4
133	8.15	2	10.20	1			10.0	2	32.8	0	127	3		
134	8.59	4	9.50	3	12.8	3	12.5	3	42.7	4	128	3	1.00	4
136	8.08	1									145	3		
138	9.38	2	8.26	4	11.8	4	11.0	4	44.6	3	142	3	1.02	4
140	8.60	4	6.00	1			14.0	1	48.0	1	120	2	0.90	2
141	9.32	2	9.60	2	11.0	4	13.0	2	45.7	2	152	2	1.00	4
142	9.44	2	8.20	4			10.0	2	40.0	3	137	4	0.96	3
144			8.20	4			10.5	3	40.8	4				
145	9.40	2	9.70	2	14.3	1	< 14	NR	46.7	1	117	1	1.04	4
146	7.97	1	9.50	3	10.5	3	12.1	4	39.7	3	127	3	< 0.250	0
149	6.30	0							45.0	2	142	3	1.00	4
153							12.8	3	43.2	4	154	1		
154	8.76	4	8.50	4	13.0	3			38.0	2	136	4	0.70	0
158			6.60	2			10.1	3	36.0	1				
179	8.05	1	6.70	2			13.0	2	39.6	3	160	0	1.00	4
180	8.83	4	8.30	4	10.8	3	11.0	4	41.6	4	132	4	1.86	0
182	8.90	4					95.0	0	25.0	0	450	0	0.99	4
183			10.60	1			8.5	1	41.6	4	145	3		
185	8.74	4											1.07	4
190	9.06	3	9.04	3	11.4	4	10.4	3	38.4	2	158	1	1.33	1
193	8.40	3	8.00	4	12.0	4	10.0	2	41.0	4	127	3	1.14	4
194	8.80	4	9.00	3			13.0	2	41.0	4	140	4	1.56	0
196	9.19	3	9.17	3	12.3	3	12.7	3	43.4	4			1.01	4
198	8.96	4	7.76	4			11.0	4	44.0	3	136	4	1.01	4
202	8.60	4	9.60	2			12.0	4	46.0	2	132	4	0.88	2
203	9.86	0	4.90	0			11.9	4	40.5	3	125	3	1.21	3
204	8.92	4	7.13	3			9.7	2	38.7	2	129	3	1.21	3
210	8.20	2	17.00	0	< 50	NR	690.0	0	84.3	0	2800	0	< 1	NR
211	9.30	2	10.00	2	12.0	4	10.0	2	36.0	1	1100	0	1.12	4
212	8.70	4	8.70	4	12.7	3	13.8	1	44.0	3	120	2	1.10	4
213			8.13	4	8.0	0	12.2	4	40.0	3	178	0		
216			21.30	0			19.2	0	51.1	0				
217	8.80	4	7.60	3	10.0	2	10.0	2	39.0	2	140	4	< 5	NR
219														
220			8.03	4					41.0	4	113	1		
221	5.15	0	10.60	1	16.8	0	18.4	0	53.3	0	189	0	1.20	3

Table 5. *–Laboratory performance ratings for standard reference water sample T-127 (trace constituents)–Continued*

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

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

Analyte =	Li (Lithium)		Mg (Magnesium)		Mn (Manganese)		Mo (Molybdenum)		Na (Sodium)		Ni (Nickel)		Pb (Lead)	
MPV =	24.0 µ g/L		2.00 m g/L		5.43 µ g/L		1.25 µ g/L		65.1 m g/L		9.00 µ g/L		3.25 µ g/L	
F-pseudosigma =	2.22		0.107		0.741		5.404		1.26		2.632		0.890	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	24.0	4	2.16	2	4.8	3	0.46	4	71.1	0	9.40	4	3.60	4
3	20.0	1	2.11	2	5.0	3	< 10	NR	66.3	4	< 40	NR	3.00	4
4	23.0	4	2.00	4			31.00	0	61.0	2				
5	24.5	4	1.99	4	5.3	4	< 10	NR	66.6	3	10.89	3	< 30	NR
7	24.0	4	2.06	3	5.5	4	< 9	NR	66.4	4	< 15	NR	7.80	0
8	24.0	4	1.90	3	4.0	1	< 5	NR	68.0	2	9.00	4	< 30	NR
9			2.00	4					65.0	4				
11			2.15	2	9.0	0			69.0	2	13.00	1		
12			2.10	3	< 20	NR			71.0	0	< 20	NR	< 10	NR
13			2.12	2	6.1	3			65.3	4	< 50	NR	< 5	NR
15	23.7	4	2.14	2	5.4	4	< 20	NR	65.9	4	7.57	3	3.21	4
16	< 100	NR	2.10	3	10.0	0	< 20	NR	67.0	3	< 25	NR	2.56	3
18			1.98	4	5.0	3			64.5	4	10.00	4	5.06	1
19			2.01	4	5.0	3			65.6	4				
21														
23			1.96	4	5.8	4	1.02	4	65.9	4	7.59	3	2.28	2
24	19.2	0	2.01	4	5.2	4			66.8	3	16.10	0	3.40	4
25	25.0	4	2.16	2	5.0	3			70.4	1	< 49	NR	< 71	NR
27			1.80	1					19.7	0			8.64	0
29					6.0	3					25.00	0	2.25	2
30	20.7	2	1.78	1	5.4	4	0.56	4			9.41	4	3.12	4
32	23.1	4	2.02	4	5.7	4	< 0.3	NR	64.0	4	9.00	4	3.30	4
33			2.14	2	87.0	0			61.9	2			59.10	0
34														
35														
39	24.0	4	2.12	2	5.6	4	< 5	NR	66.3	4	8.10	4	7.80	0
42	27.0	2	2.10	3	4.6	2			66.8	3	8.60	4	3.30	4
43					2.0	0	< 10	NR			66.60	0		
45			1.90	3	4.5	2	1.55	4	65.5	4	7.94	4	1.53	1
46			2.10	3					67.8	3			3.40	4
48			2.13	2	5.4	4	< 10	NR	69.8	1	11.80	2	3.60	4
50	< 50	NR			6.0	3	< 5	NR			8.00	4	3.00	4
51			2.00	4	10.3	0			62.9	3	7.60	3	3.70	3
52			1.96	4	4.0	1	< 5	NR	63.1	3	10.30	4	3.68	4
54			2.00	4					64.5	4				
55	22.0	3	1.99	4	4.8	3			65.7	4	8.30	4	2.60	3
57			2.00	4	< 20	NR	< 100	NR	61.6	2	< 100	NR	4.50	2
58			1.57	0					50.0	0	8.20	4	4.75	1
59			1.90	3	6.0	3			60.0	1	7.70	4	< 5	NR
60													3.80	3
61			2.05	4	17.0	0	< 10	NR	66.4	4	20.50	0	< 50	NR
63	37.0	0	2.23	0	< 10	NR			72.1	0	9.00	4	3.00	4
68	28.0	1	2.10	3	4.0	1			67.0	3	13.00	1	2.70	3
69	2.0	0							60.0	1	9.00	4	3.40	4
70			2.04	4	< 10	NR	< 50	NR	66.2	4	< 50	NR	2.20	2
72			2.94	0	5.7	4	< 1	NR	87.8	0	9.80	4	20.20	0
73											6.30	2	12.70	0
75	24.0	4	2.00	4	5.0	3	< 10	NR	64.7	4	8.60	4	< 40	NR
76											8.75	4	2.93	4
78			2.00	4	5.6	4	0.50	4	66.8	3	9.60	4	0.90	0
79					6.9	1					8.70	4	3.30	4
80					5.0	3							1.00	0
83			1.95	4	5.5	4			61.4	2			2.80	3
84			2.05	4					64.7	4			2.78	3
85	25.0	4	2.00	4	< 10	NR	< 50	NR	62.6	3	< 10	NR	< 50	NR

Table 5. *--Laboratory performance ratings for standard reference water sample T-127 (trace constituents)--Continued*

Analyte =	Li (Lithium)		Mg (Magnesium)		Mn (Manganese)		Mo (Molybdenum)		Na (Sodium)		Ni (Nickel)		Pb (Lead)	
MPV =	24.0 µ g/L		2.00 m g/L		5.43 µ g/L		1.25 µ g/L		65.1 m g/L		9.00 µ g/L		3.25 µ g/L	
F-pseudosigma =	2.22		0.107		0.741		5.404		1.26		2.632		0.890	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
86			2.09	3	4.8	3			65.7	4	7.23	3	3.22	4
87			1.94	3	5.0	3	< 2	NR	63.5	3	< 10	NR	< 20	NR
89			1.89	2	5.2	4			68.4	2	< 12.5	NR	3.35	4
90											185.00	0	6.90	0
91					5.8	3								
94			1.97	4	5.0	3	< 5	NR	65.1	4	8.60	4	2.97	4
96					5.7	4							2.40	3
97			12.10	0	5.6	4	< 0.96	NR	57.4	0	8.62	4	2.65	3
102			1.90	3	3.0	0			59.0	0	5.00	1	< 5	NR
104														
105	24.0	4	1.91	3	5.0	3	0.79	4	58.8	0	12.00	2	3.30	4
107			1.87	2	7.0	0			62.9	3	6.10	2	3.20	4
108											6.00	2	23.00	0
109	24.0	4	2.00	4	4.5	2	0.70	4	61.8	2			1.30	0
111											9.00	4	3.70	3
114			2.00	4	10.0	0	50.00	0	33.0	0	< 10	NR	10.00	0
116			2.00	4	6.0	3			64.2	4				
117			1.92	3	32.0	0			50.5	0			4.00	3
118					8.5	0					7.91	4	4.05	3
119			2.05	4	5.4	4			64.3	4	9.90	4	2.30	2
120			2.18	1	4.7	3			65.1	4	8.60	4	2.20	2
121			2.00	4					66.0	4	12.00	2		
122													4.37	2
127	24.3	4	1.92	3	4.2	1	< 25	NR	63.8	4	8.95	4	3.42	4
129			3.80	0	10.0	0			65.0	4				
131	25.0	4	2.06	3	6.0	3	< 3	NR	66.0	4	9.00	4	< 5	NR
133			1.86	2							8.42	4	2.10	2
134	24.0	4	1.95	4	5.4	4			64.6	4	9.50	4	3.70	3
136			2.47	0										
138			2.00	4	6.9	1	< 2	NR	63.2	3	8.95	4	3.49	4
140			2.00	4	4.0	1			65.0	4	12.00	2	2.00	2
141			2.12	2	15.6	0	< 10	NR	69.6	1	< 10	NR	< 5	NR
142	28.5	1	2.21	1	4.5	2	1.25	4	69.3	1	9.50	4	2.50	3
144											7.50	3		
145	25.7	3	2.08	3	6.0	3	< 11	NR	68.6	2	< 22	NR	< 84	NR
146			1.76	0	5.9	3	0.60	4	58.4	0	9.40	4	3.30	4
149			2.20	1	6.0	3	2.00	4	71.4	0				
153														
154			1.58	0	5.0	3			65.6	4	9.20	4	3.40	4
158													2.40	3
179			2.09	3	< 10	NR	< 10	NR	68.0	2	6.20	2	< 5	NR
180			2.11	2	5.4	4	3.00	4	66.6	3	8.30	4	14.40	0
182	20.0	1	2.00	4	4.0	1	5.00	3	65.3	4				
183							20.40	0			7.36	3	3.60	4
185														
190			2.22	1	5.1	4			65.2	4	10.90	3	2.10	2
193			1.98	4					60.2	1	< 10	NR	2.00	2
194			1.90	3	< 5	NR			66.9	3	< 100	NR	< 5	NR
196	21.8	3	2.07	3	6.0	3	0.72	4	69.0	2	10.23	4	3.28	4
198			2.04	4	5.6	4			64.8	4	16.00	0	3.00	4
202			2.01	4	6.0	3	< 1	NR	64.7	4	8.30	4	3.10	4
203			2.01	4	7.0	0			65.4	4			2.50	3
204			2.04	4	5.0	3			63.6	3			1.88	1
210	20.0	1	1.90	3	270.0	0	11.00	1	61.0	2	260	0	5.00	1
211			1.97	4	5.0	3	52.00	0	63.5	3	34.00	0	3.00	4
212	24.5	4	1.95	4	6.6	1			64.8	4	13.40	1	2.20	2
213											139.00	0	2.00	2
216											30.30	0		
217	< 50	NR	1.90	3	< 10	NR	< 20	NR	62.0	2	< 40	NR	< 5	NR
219														
220					< 10	NR							2.70	3
221			2.10	3	4.0	1	1.00	4	63.1	3	11.80	2	4.04	3

Table 5. --*Laboratory performance ratings for standard reference water sample T-127 (trace constituents)--Continued*

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

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

Analyte =	Sb (Antimony)		Se (Selenium)		SiO2 (Silica)		Sr (Strontium)		V (Vanadium)		Zn (Zinc)	
MPV =	5.15 µ g/L		7.38 µ g/L		9.63 m g/L		51.1 µ g/L		10.2 µ g/L		32.9 µ g/L	
F-pseudosigma =	1.583		1.386		0.586		2.97		1.28		3.63	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	5.10	4	6.40	3	9.55	4	49.6	4	10.1	4	31.8	4
3	7.00	2	8.80	2	10.30	2	52.0	4	10.0	4	34.0	4
4					9.59	4	51.0	4			24.0	0
5	< 50	NR	< 50	NR	9.76	4	51.1	4	11.4	3	32.7	4
7	5.00	4	< 1	0	10.20	3	51.5	4	18.1	0	35.0	3
8	11.00	0	2.00	0	9.30	3	55.0	2	8.0	1	35.0	3
9							91.0	0			29.0	2
11					10.30	2	51.0	4			37.0	2
12	< 100	NR	4.00	0							30.0	3
13			< 5	NR	9.33	3					31.0	3
15			7.63	4	9.20	3	53.7	3	11.9	2	34.5	4
16	5.90	4	7.00	4			59.0	0	< 10	NR	34.0	4
18	5.30	4	8.20	3			51.0	4	10.0	4	29.0	2
19												
21												
23	4.42	4	5.72	2	9.30	3	56.2	1	10.1	4	31.7	4
24	8.20	1			10.30	2	50.7	4	11.1	3	31.9	4
25	< 51	NR	< 129	NR	10.03	3	54.0	3	11.0	3	27.0	1
27												
29			8.28	3							22.5	0
30	6.79	2	9.04	2							38.7	1
32	4.90	4	8.00	4	9.09	3	51.1	4	11.0	3	51.0	0
33					9.67	4	49.1	3				
34			7.38	4								
35												
39	5.50	4	6.50	3			52.6	3	9.7	4		
42	5.20	4	7.10	4	10.60	1	53.9	3	10.0	4	32.0	4
43					9.90	4						
45	6.01	3	6.51	3	9.43	4					42.2	0
46			7.40	4			51.0	4			33.0	4
48	4.60	4	7.10	4					80.0	0	30.0	3
50			7.00	4			< 100	NR	11.0	3	33.0	4
51					10.02	3			8.8	2	34.0	4
52	< 6	NR	< 5	NR	9.07	3	50.0	4	6.9	0	30.7	3
54												
55	5.10	4	6.50	3	9.59	4					30.5	3
57	7.00	2	1.90	0	9.30	3			< 100	NR	40.0	1
58	13.00	0							8.9	2	31.0	3
59							50.0	4			30.0	3
60	5.50	4	7.70	4								
61	< 50	NR	6.80	4	10.30	2			9.8	4	45.4	0
63	< 5	NR	5.00	1	10.70	1	55.0	2	16.0	0	33.0	4
68							52.0	4	10.0	4	37.0	2
69	4.80	4	8.20	3								
70	4.80	4	5.82	2	9.26	3	51.6	4	< 50	NR	32.4	4
72	4.70	4	9.50	1							30.6	3
73			15.60	0							31.1	4
75	< 50	NR	7.00	4					9.3	3	33.0	4
76	4.18	3										
78	4.20	3	7.10	4	9.50	4			10.3	4	30.6	3
79			11.90	0							47.3	0
80											32.0	4
83					8.84	2					30.7	3
84												
85	< 100	NR	6.50	3			51.9	4	< 20	NR	33.4	4

Table 5. *--Laboratory performance ratings for standard reference water sample T-127 (trace constituents)--Continued*

Analyte =	Sb (Antimony)		Se (Selenium)		SiO2 (Silica)		Sr (Strontium)		V (Vanadium)		Zn (Zinc)	
MPV =	5.15 µ g/L		7.38 µ g/L		9.63 m g/L		51.1 µ g/L		10.2 µ g/L		32.9 µ g/L	
F-pseudosigma =	1.583		1.386		0.586		2.97		1.28		3.63	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
86	10.00	0									32.3	4
87			2.00	0	10.20	3					34.0	4
89			< 2	0	9.48	4					36.0	3
90											33.0	4
91												
94	7.34	2	7.84	4			50.0	4	10.0	4	36.0	3
96			7.90	4							46.0	0
97	4.72	4	7.80	4	9.99	3	59.6	0			24.0	0
102	< 5	NR	< 5	NR	7.60	0	44.0	0	6.0	0	21.0	0
104					9.50	4						
105	5.08	4	6.78	4	9.50	4	51.0	4	12.3	1	36.0	3
107			9.70	1	10.10	3					34.5	4
108											38.0	2
109			8.60	3	8.87	2	50.4	4				
111											44.8	0
114											30.0	3
116					9.39	4	49.0	3			32.0	4
117	10.50	0	33.00	0							25.0	0
118			2.35	0	9.81	4					41.0	0
119	4.90	4	7.00	4	9.79	4					45.0	0
120	5.00	4	9.40	2							34.0	4
121					9.80	4	54.0	3				
122											13.9	0
127	5.44	4	7.90	4	9.66	4	50.3	4	10.2	4	33.7	4
129					10.30	2						
131					18.90	0	51.0	4			28.0	2
133			6.40	3							33.7	4
134	5.90	4	7.50	4	9.69	4	47.0	2	12.0	2	32.0	4
136					9.60	4						
138	3.90	3	6.83	4	9.56	4	49.3	3	11.0	3	34.4	4
140					10.00	3					32.0	4
141	< 20	NR	8.30	3	9.06	3	66.0	0	11.0	3	49.5	0
142	3.50	2	8.50	3	10.81	1	55.8	1	11.5	2	38.3	2
144			7.60	4							31.0	3
145					10.09	3	51.3	4	< 18	NR	36.0	3
146	7.40	2	7.70	4	15.80	0	46.9	2	9.7	4	22.5	0
149											35.0	3
153												
154			10.10	1			6.9	0	9.0	3	32.0	4
158											28.0	2
179	5.00	4	5.70	2							39.0	1
180	23.60	0	22.10	0					10.3	4	34.3	4
182							25.0	0	5.0	0	5.0	0
183											27.8	2
185					0.27	0						
190											41.0	0
193			5.00	1							31.0	3
194	6.00	3	6.00	3			< 100	NR			< 5	0
196	4.91	4	8.34	3			55.0	2	12.2	1		
198	4.06	3	5.25	1							34.5	4
202	6.60	3	8.40	3							31.0	3
203			11.00	0	9.12	3					30.3	3
204			10.80	0							32.4	4
210	10.70	0	15.00	0	3.60	0	60.0	0	< 50	NR	50.0	0
211	5.00	4	7.00	4	8.06	0	70.0	0	6.0	0	60.0	0
212	3.00	2	6.10	3	9.90	4	49.8	4	14.3	0	33.0	4
213											31.0	3
216												
217	< 10	NR	8.10	3					< 10	NR	33.0	4
219			8.60	3								
220			6.60	3							26.0	1
221			4.00	0							30.0	3

Table 6. *--Laboratory performance ratings for standard reference water sample M-128 (major constituents)*

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

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

			Analyte =	Alkalinity		B (Boron)		Ca (Calcium)		Cl (Chloride)		DSRD	
			MPV =	168	m g/L	285	µ g/L	78.9	m g/L	98.2	m g/L	689	m g/L
			F-pseudosigma =	3.4		21.5		3.92		2.56		19.3	
Lab	OLR	V/16		RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	3.3	16		171	3	297	3	83.9	2	93.8	1	684	4
3	2.5	15		172	3	274	3	84.4	2	96.6	3	700	3
4	3.3	6				298	3	75.5	3				
5	2.4	14		202	0	278	4	76.6	3	98.7	4	70	0
7	2.5	12						79.9	4	90.7	0		
8	2.3	15		174	1	270	3	81.7	3	95.0	2	685	4
9	3.0	9		170	4			76.0	3				
10	3.8	12		171	3			79.2	4	97.1	4	692	4
11	2.8	15		174	1	291	4	82.4	3	100.0	3	678	3
12	3.2	11		168	4			84.0	2	98.0	4	718	2
13	3.1	13		169	4			79.5	4	102.0	2	683	4
15	2.5	16		160	0	293	4	76.4	3	85.0	0	665	2
16	2.0	13		223	0	408	0	78.0	4	98.4	4	68	0
18	3.5	15		172	3	285	4	79.3	4	97.0	4	680	4
19	3.8	11		170	4			78.5	4	100.0	3	676	3
23	2.8	9				451	0					692	4
24	3.5	13		168	4	324	1	77.1	4	98.1	4		
25	1.5	15		171	3	264	3	84.8	1	35.6	0	654	1
26	2.8	11		170	4			82.1	3	88.0	0	695	4
27	3.3	4		167	4			76.1	3				
29	2.9	12		169	4	220	0	79.3	4	104.0	0	694	4
30	2.6	5						77.3	4	92.4	0		
32	1.5	15				247	1	78.8	4	92.4	0	604	0
33	2.3	12		170	4			78.7	4	101.5	2		
36	2.1	14		170	4	593	0	67.5	0	96.4	3	699	3
38	3.0	10		168	4			79.8	4			17	0
39	2.8	12				283	4	83.2	2	104.0	0	710	2
40	3.2	14		164	2	262	2	80.4	4	100.0	3	706	3
42	2.8	13		173	2	317	2	80.0	4	98.7	4		
43	3.7	11		170	4			79.5	4	100.0	3	704	3
45	3.0	14		193	0	273	3	78.9	4	99.5	3	702	3
46	3.2	14		167	4	284	4	76.7	3	100.3	3	694	4
48	1.8	12		181	0			85.8	1	97.0	4	700	3
50	3.2	13		169	4	320	1	76.0	3	95.0	2	685	4
51	2.5	13		167	4			76.4	3	108.6	0	678	3
52	3.5	15		166	3	< 300	NR	78.8	4	98.5	4	681	4
54	3.2	11		168	4			77.5	4	48.9	0	670	3
55	2.4	12		175	1			81.5	3	91.8	0	694	4
56	2.0	9		160	0			75.1	3	91.7	0		
57	1.5	14		164	2	390	0	86.0	1	11.0	0	690	4
58	2.0	11		168	4			74.2	2	96.4	3		
60	2.8	6		167	4					102.0	2	699	3
61	2.7	15		172	3	270	3	78.3	4	106.0	0	685	4
62	4.0	2											
63	2.3	15		166	3	297	3	86.9	1	97.0	4	674	3
64	3.5	10						80.0	4	99.3	4		
68	2.6	12		172	3	550	0	78.0	4	86.8	0		
69	3.1	11		168	4			76.2	3	99.0	4	709	2
70	3.0	15		166	3	287	4	80.7	4	98.0	4	682	4
75	2.8	11		170	4			74.0	2	100.0	3	700	3
76	2.8	8		162	1			84.9	1	97.6	4	688	4
78	2.6	14		163	1			83.7	2	98.0	4	665	2
79	2.0	3		130	0								
81	2.6	12		162	1			82.5	3	97.8	4	692	4
83	2.7	9		170	4			75.1	3	98.5	4		
84	2.7	7		162	0			78.8	4	97.4	4		
85	3.4	15		170	4	293	4	76.0	3	98.4	4	687	4
86	2.6	12				268	3	77.8	4	114.0	0		
87	2.1	11		17	0			73.0	2	48.0	0		
89	3.5	13		170	4			79.0	4	99.2	4	729	0
90	3.3	3		168	4			79.0	4			660	2
93	1.7	9						84.5	2	99.9	3		
94	3.5	14		168	4	288	4	77.9	4	97.0	4	705	3
96	3.2	6		171	3					98.8	4		
97	2.6	13		175	1			65.6	0	98.4	4	668	2

Table 6. *–Laboratory performance ratings for standard reference water sample M-128 (major constituents)–Continued*

	Analyte =	Alkalinity			B (Boron)		Ca (Calcium)		Cl (Chloride)		DSRD	
	MPV =	168	m g/L		285	µ g/L	78.9	m g/L	98.2	m g/L	689	m g/L
	F-pseudosigma =	3.4			21.5		3.92		2.56		19.3	
Lab	OLR	V/16	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
102	2.4	10					74.0	2	100.0	3		
104	2.3	4										
105	3.2	15	169	4			75.4	3	98.2	4	868	0
107	3.6	7	165	2					100.0	3		
109	2.8	13	174	1	0	0	78.8	4	99.0	4	716	2
110	0.0	4					0.5	0				
111	0.0	1										
114	2.9	12	168	4			80.0	4	99.1	4	742	0
116	3.9	8			291	4	82.7	3	98.9	4		
117	2.4	8	169	4			83.6	2	101.8	2		
118	2.5	4	175	1								
119	3.6	14	168	4	300	3	77.3	4	96.0	3	674	3
120	3.0	11	165	2			81.5	3	96.5	3	703	3
121	3.0	6			280	4	77.0	4				
126	0.0	1										
127	3.8	15	169	4	297	3	79.3	4	97.5	4	695	4
128	2.7	13	150	0	238	0	79.7	4	100.0	3		
129	1.9	14	168	4	283	4	98.0	0	91.0	0	644	0
131	2.1	13			700	0	73.6	2	98.0	4	655	1
133	3.5	2					81.1	3				
134	3.7	16	170	4	296	3	80.3	4	99.4	4	699	3
136	3.0	8	164	1			77.5	4			704	3
138	2.5	13	172	3			82.9	2	101.0	2	653	1
140	2.8	12					79.0	4	98.9	4	653	1
141	2.4	15	165	2	232	0	81.7	3	96.1	3	694	4
142	3.1	16	170	4	285	4	82.7	3	98.7	4	694	4
145	3.1	14	160	0	278	4	78.9	4	98.8	4		
146	1.4	13	166	3	250	1	62.7	0	106.0	0	673	3
149	1.8	8			402	0	23.0	0	101.0	2		
153	1.6	10	163	1			86.0	1	91.0	0		
154	3.1	14	170	4	264	3	79.4	4	96.5	3		
158	3.2	6	165	2							699	3
179	2.5	6					72.1	1	98.0	4		
180	2.6	13	166	3	285	4	76.0	3	100.0	3		
182	1.4	13			256	2	72.7	1	90.0	0	679	3
183	2.3	7	168	4					97.4	4	700	3
190	2.5	6							98.2	4	0	0
191	3.1	11	169	4			77.6	4	100.4	3		
193	1.3	3							89.2	0		
194	3.0	7	170	4					96.3	3		
196	2.1	10					81.7	3	98.1	4		
197	3.0	5	171	3					99.1	4		
200	4.0	1										
202	3.0	6	172	3					99.0	4	674	3
203	1.1	7	157	0					91.2	0		
204	2.7	11	164	2			78.4	4	99.3	4		
208	2.0	3							104.0	0		
210	0.9	14	166	3	200	0	68.0	0	83.0	0		
211	1.5	16	182	0	40	0	85.0	1	97.5	4	692	4
212	2.9	14	159	0	290	4	81.8	3	97.1	4		
213	3.3	4	166	3					97.5	4		
217	3.3	7			290	4	77.7	4	97.2	4		
218	1.7	10	167	3			80.1	4	119.2	0		
219	2.7	3							97.0	4		
220	3.3	7	169	4			75.0	3	99.4	4		

Table 6. *--Laboratory performance ratings for standard reference water sample M-128 (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 for all reported values; V/16, number of reported values of 16 possible values; RV, reported value; <, less than)

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

Analyte =	F (Fluoride)		K (Potassium)		Mg (Magnesium)		Na (Sodium)		(total Phosphorus) as P	
MPV =	1.18	m g/L	9.44	m g/L	17.4	m g/L	126	m g/L	1.390	m g/L
F-pseudosigma =	0.096		0.675		0.74		5.0		0.067	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	1.14	4	9.43	4	17.1	4	121	3	1.41	4
3	1.22	4	10.50	1	17.8	3	137	0	1.43	3
4					17.0	3	129	3		
5			9.83	3	16.9	3	124	4		
7	1.88	0	10.00	3	17.9	3	129	3	1.41	4
8	1.00	1	9.50	4	16.5	2	129	3	0.08	0
9	1.06	2	9.40	4	16.8	3	124	4	1.40	4
10	1.18	4	9.50	4	17.3	4	125	4		
11	1.10	3	8.88	3	18.4	2	130	3	0.94	0
12			9.70	4	18.3	2	128	4	1.41	4
13	1.14	4	8.51	2	18.5	2	125	4	1.38	4
15	1.10	3	9.84	3	18.5	2	127	4	1.36	4
16	1.19	4	10.70	1	17.0	3	126	4		
18	1.21	4	9.10	4	17.2	4	123	3	1.36	4
19			9.45	4	17.6	4	127	4	1.40	4
23	1.24	3	8.78	3	17.4	4	123	3	1.38	4
24	1.16	4	8.77	3	17.2	4	122	3		
25	1.30	2	10.20	2	18.9	1	134	1	1.57	0
26	0.94	0	9.40	4	17.9	3	127	4		
27			10.30	2	17.1	4				
29	1.35	1	9.51	4	17.1	4	124	4		
30					17.2	4				
32	1.38	0	10.90	0	19.5	0	129	3	1.68	0
33	2.05	0	10.00	3	18.4	2	115	0		
36	1.04	2	8.95	3	16.7	3	122	3	1.28	2
38			9.79	3	17.8	4	117	1	1.37	4
39	1.19	4			18.0	3	127	4		
40	1.20	4	9.28	4	17.8	3	124	4		
42	1.25	3	9.70	4	18.0	3	129	3		
43			9.20	4	17.3	4	126	4		
45	1.26	3	9.64	4	17.8	3	126	4	1.42	4
46	1.28	2	8.58	2	17.5	4	122	3	1.39	4
48			9.64	4	19.0	0	139	0	1.40	4
50	1.18	4	9.40	4	17.0	3	123	3		
51			9.80	3	16.6	2	122	3	0.16	0
52	1.21	4	8.94	3	17.2	4	124	4	1.39	4
54	1.18	4	9.00	3	17.4	4	126	4		
55	1.10	3	9.58	4	18.2	2	128	4		
56			11.24	0	16.3	2	123	3		
57	1.16	4	12.00	0	18.7	1	126	4	0.90	0
58	1.25	3	8.80	3	13.9	0	95	0	1.45	3
60									1.49	2
61	1.20	4	9.87	3	17.8	4	126	4	1.26	1
62										
63	1.23	3	10.80	1	19.3	0	140	0	1.40	4
64			9.42	4	17.3	4	125	4	1.43	3
68			9.30	4	18.0	3	130	3	1.40	4
69	1.18	4	10.40	2	16.9	3	116	1		
70	1.17	4	10.20	2	17.7	4	127	4	1.08	0
75			8.70	2	18.0	3	126	4	1.42	4
76			9.85	3						
78	1.17	4	9.60	4	18.5	2	132	2	0.78	0
79										
81	1.10	3	9.53	4	17.0	3	173	0	1.58	0
83			11.14	0	16.4	2	116	1	1.40	4
84					17.3	4	128	4		
85	1.10	3	9.85	3	17.4	4	121	3	1.30	2
86	0.63	0	9.40	4	18.4	2	127	4	1.42	4
87			8.65	2	17.0	3	121	3	1.48	2
89	1.21	4	10.10	3	17.6	4	130	3	1.38	4
90										
93	4.42	0	10.89	0	19.6	0	124	4		
94	1.17	4	9.13	4	17.1	4	123	3	1.33	3
96	1.19	4								
97	1.14	4	9.49	4	17.3	4	110	0		

Table 6. *--Laboratory performance ratings for standard reference water sample M-128 (major constituents)--Continued*

Analyte =	F (Fluoride)		K (Potassium)		Mg (Magnesium)		Na (Sodium)		(total Phosphorus) as P	
MPV =	1.18	m g/L	9.44	m g/L	17.4	m g/L	126	m g/L	1.390	m g/L
F-pseudosigma =	0.096		0.675		0.74		5.0		0.067	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
102			7.60	0	16.7	3	113	0	1.39	4
104									0.08	0
105	1.10	3	9.25	4	16.4	2	129	3	1.38	4
107	1.20	4							1.37	4
109	1.20	4	9.85	3	18.0	3	122	3		
110			0.07	0	0.1	0	0	0		
111									1.56	0
114	1.17	4	6.00	0	18.0	3	66	0	1.36	4
116					17.3	4	124	4		
117	1.12	3	8.28	1	16.8	3	96	0		
118										
119	1.15	4	9.00	3	17.2	4	124	4	1.36	4
120	1.18	4	2.31	0	17.3	4	128	4	1.39	4
121					20.0	0	125	4		
126							55	0		
127	1.18	4	9.33	4	17.3	4	122	3	1.39	4
128	1.10	3	9.43	4	17.1	4	128	4	1.30	2
129	0.77	0	10.60	1	10.0	0	121	3	1.45	3
131			6.80	0	17.9	3	133	2	1.70	0
133					17.5	4				
134	1.20	4	9.90	3	17.8	4	127	4	1.40	4
136					18.9	1			1.40	4
138	1.07	2	9.02	3	17.4	4	136	1	1.27	1
140	1.28	2	9.50	4	17.3	4	124	4	1.36	4
141	1.16	4	9.89	3	18.3	2	133	2	1.43	3
142	1.22	4	9.76	4	19.0	0	133	2	1.32	2
145	1.03	1	9.14	4	17.0	3	126	4	1.47	2
146			7.86	0	14.9	0	119	2		
149			8.00	0	16.3	2	133	2		
153	0.89	0	9.00	3	18.7	1	143	0		
154	1.24	3	9.45	4	17.1	4	128	4	1.20	0
158									1.43	3
179			9.90	3	18.1	3	126	4	1.12	0
180	1.10	3	9.19	4	18.0	3	125	4	1.54	0
182			8.10	1	17.0	3	123	3	1.62	0
183	1.70	0								
190	1.16	4								
191			9.50	4	17.4	4	124	4	1.41	4
193										
194	1.23	3							1.39	4
196	1.00	1	8.97	3	18.0	3	134	1	1.34	3
197										
200									1.37	4
202									1.40	4
203									1.32	2
204			9.55	4	17.4	4	126	4	1.41	4
208									1.29	2
210	1.30	2	5.30	0	16.0	1	120	2	1.60	0
211	1.37	1	8.50	2	20.0	0	130	3	1.28	1
212	1.60	0	8.80	3	18.0	3	126	4	1.40	4
213									1.37	4
217	< 5.0	NR	8.70	2	16.9	3	120	2		
218	1.34	1	10.00	3	18.3	2	136	1		
219	1.24	3								
220			8.70	2	17.0	3	126	4		

Table 6. --*Laboratory performance ratings for standard reference water sample M-128 (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 for all reported values; V/16, number of reported values of 16 possible values; RV, reported value; <, less than)

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

Analyte =	pH		SiO2 (Silica)		SO4 (Sulfate)		Sp Cond		Sr (Strontium)		V (Vanadium)	
MPV =	8.29		10.8 m g/L		206 m g/L		1076 µ S/cm		705 µ g/L		2.6 µ g/L	
F-pseudosigma =	0.111		0.82		7.9		35.2		42.3		1.85	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	8.14	2	10.5	4	210	3	1085	4	700	4	3.53	4
3	8.35	3	11.7	2	186	0	1100	3	687	4	< 10	NR
4			10.5	4					710	4		
5	7.28	0	10.8	4	202	3	1020	1	701	4	7.80	0
7	8.09	1	11.1	4	2	0	1060	4	725	4	< 22	NR
8	8.02	0	11.8	2	203	4	1073	4	765	2	< 5	NR
9			10.0	3	229	0						
10	8.39	3	10.7	4	206	4	1089	4				
11	8.31	4	11.6	2	205	4	1100	3	719	4		
12	8.20	3			217	2	1080	4				
13	8.32	4	10.2	3	191	1	1040	2				
15	7.69	0	10.4	4	194	1	1120	2	723	4	1.70	4
16	7.96	0			225	0	1041	3	675	3	< 10	NR
18	8.32	4	11.6	2	211	3	1037	2	707	4	< 5	NR
19	8.24	4			203	4	1080	4				
23	8.27	4					110	0				
24	8.35	3	11.1	4	205	4	1085	4	713	4		
25	8.23	3	15.2	0	37	0	1094	3	754	2	< 4	NR
26	8.50	1			204	4	1077	4				
27												
29	8.43	2			205	4	1091	4				
30	8.16	2			199	3						
32	8.30	4	13.1	0	194	1	1030	2	727	3	3.00	4
33	8.27	4	9.5	1	196	2	1030	2	668	3		
36	8.31	4	25.5	0	200	3	1165	0				
38	8.40	3	10.6	4			1105	3				
39	8.22	3			220	1	1070	4	735	3	4.00	3
40	8.28	4	12.0	2	201	3	1089	4	669	3		
42	8.11	1	12.2	1	208	4	1069	4	758	2		
43	8.26	4	11.3	3	204	4	1090	4				
45	7.71	0	10.6	4	211	3	1070	4				
46	8.24	4			221	1	1076	4	669	3		
48	8.00	0			214	2	1094	3			80.00	0
50	8.30	4	12.2	1	206	4	1090	4				
51	8.41	2	11.6	3	213	3	1049	3			2.00	4
52	8.39	3	10.3	3	205	4	1010	1	707	4	3.50	4
54	8.33	4			214	2	1054	3				
55	8.42	2	11.0	4	216	2			69	0		
56	8.22	3			201	3	1064	4				
57	8.20	3	9.8	2	180	0	968	0			< 100	NR
58	8.14	2			215	2	913	0				
60	8.41	2					1085	4				
61	8.02	0	11.5	3	220	1	1120	2			2.60	4
62	8.29	4					1066	4				
63	8.34	4	12.2	1	187	0	1089	4	720	4	< 0.01	NR
64	8.31	4	10.2	3	211	3	1120	2				
68	8.42	2	10.8	4			1140	1	730	3	< 3.0	NR
69	8.34	4			202	4	1050	3				
70	8.22	3	10.4	4	191	1	1170	0	720	4	< 50	NR
75	8.00	0			216	2	1080	4				
76	8.07	1			205	4	1070	4				
78	8.32	4	10.1	3	170	0	1080	4			2.00	4
79	8.40	3					1050	3				
81	8.20	3					1070	4	748	2		
83			9.7	2	205	4						
84	7.48	0					1109	3				
85	8.43	2	10.7	4	200	3	1070	4	702	4	< 20	NR
86	8.29	4			228	0	1095	3			1.26	3
87	8.24	4	11.3	3	209	4	836	0				
89	8.28	4	10.4	4	204	4	1050	3				
90												
93	8.43	2			204	4	929	0				
94	8.45	2			206	4	1126	2	690	4	< 5	NR
96	8.48	1			213	3	1076	4				
97	8.33	4	10.8	4	218	1	1080	4	660	2		

Table 6. --*Laboratory performance ratings for standard reference water sample M-128 (major constituents)--Continued*

Analyte =	pH		SiO2 (Silica)		SO4 (Sulfate)		Sp Cond		Sr (Strontium)		V (Vanadium)	
MPV =	8.29		10.8 m g/L		206 m g/L		1076 µ S/cm		705 µ g/L		2.6 µ g/L	
F-pseudosigma =	0.111		0.82		7.9		35.2		42.3		1.85	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
102			11.1	4	200	3	1100	3	650	2	< 1	NR
104	8.15	2	10.7	4			1107	3				
105	8.28	4	10.2	3	213	3	1041	3	706	4	2.00	4
107	8.29	4	11.1	4			1090	4				
109	8.33	4	9.9	2	210	3	1070	4				
110												
111												
114	8.32	4			209	4	1090	4				
116			10.6	4	207	4			705	4		
117							1081	4				
118	8.34	4	12.0	2			1050	3				
119	8.40	3	11.0	4	204	4	1091	4				
120	8.40	3			200	3						
121			10.6	4					767	2		
126												
127	8.36	3	10.7	4	209	4	1060	4	718	4	< 2	NR
128	8.44	2	9.9	2	201	3	1070	4			< 5	NR
129	8.29	4	11.5	3	206	4	1141	1				
131	8.22	3	11.0	4	204	4	975	0	705	4		
133												
134	8.37	3	10.8	4	207	4	1092	4	679	3	2.20	4
136	8.19	3	10.7	4			1065	4				
138	8.22	3	10.8	4	214	2			694	4	< 3	NR
140	8.13	2	8.6	0	236	0	1060	4				
141	8.07	1	10.4	4	211	3	1121	2	795	0	< 10	NR
142	8.25	4	12.0	2	217	2	1090	4	759	2	2.00	4
145	8.40	3	10.7	4	205	4	1065	4	678	3	< 18.0	NR
146	8.16	2	16.5	0			1040	2	620	1	2.40	4
149			10.9	4	203	4						
153	8.29	4			209	4	1040	2				
154	8.40	3			212	3	1093	4	72	0	2.00	4
158	8.30	4			208	4	1098	3				
179												
180	8.40	3			236	0	1117	2			5.10	2
182	8.22	3			170	0	778	0	75	0	5.00	2
183	8.31	4			191	1	620	0				
190	8.24	4			185	0	1097	3				
191	8.23	3	12.6	0	208	4			1	0		
193					206	4	105	0				
194	8.40	3			215	2	1040	2				
196					212	3	752	0	3	0		
197	8.32	4			208	4	1382	0				
200												
202	8.30	4					1151	0				
203	8.28	4	10.0	2	230	0	920	0				
204	8.01	0	9.7	2	229	0	1040	2				
208					209	4						
210	8.35	3	4.0	0	194	1	1000	0	470	0	< 50	NR
211	7.80	0	7.6	0	203	4	1090	4	610	0	20.00	0
212	8.40	3	11.3	3	203	4	1070	4	753	2		
213	8.14	2										
217					208	4					< 10	NR
218	8.18	3			236	0			810	0		
219					219	1						
220					210	3						

Table 7. *--Laboratory performance ratings for standard reference water sample N-40 (preserved nutrients) --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/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 (total Phosphorus)		PO4 as P (Orthophosphate as P)	
			MPV =	0.035 m g/L		0.270 m g/L		0.119 m g/L		0.062 m g/L		0.054 m g/L	
			F-pseudosigma =	0.030		0.220		0.016		0.009		0.007	
Lab	OLR	V/5		RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	3.8	5		0.040	4	0.067	3	0.116	4	0.057	4	0.053	4
7	3.5	2		< 0.05	NR			0.130	3	0.060	4		
11	3.2	5		0.060	3	0.130	3	0.120	4	0.070	3	0.060	3
13	2.8	5		0.020	3	0.130	3	0.120	4	0.080	1	0.060	3
15	3.8	4		0.045	4	< 0.5	NR	0.104	3	0.062	4	0.056	4
21	2.0	2				0.134	3	0.089	1				
29	0.0	2						0.240	0			0.160	0
33	4.0	1		0.030	4								
36	1.8	5		0.175	0	0.338	4	0.087	1	0.064	4	0.578	0
42	2.3	3						0.156	0	0.064	4	0.058	3
43	4.0	1						0.120	4				
45	2.8	4				0.427	3	0.157	0	0.062	4	0.054	4
48	1.6	5		0.020	3	0.300	4	0.150	1	0.040	0	< 0.005	0
52	3.3	4		0.028	4	< 0.01	NR	0.121	4	0.076	1	0.055	4
56	4.0	3				0.370	4			0.062	4	0.054	4
60	1.6	5		0.570	0	0.950	0	0.120	4	0.072	2	0.061	2
63	2.2	5		0.300	0	0.300	4	0.160	0	0.060	4	0.050	3
68	2.3	3		0.040	4	0.140	3			0.097	0		
75	4.0	4		0.041	4			0.115	4	0.058	4	0.055	4
78	1.4	5		0.024	4	0.450	3	0.020	0	0.022	0	0.090	0
88	1.3	3		0.042	4			1.890	0			0.323	0
89	3.8	4		0.025	4	0.109	3			0.062	4	0.055	4
90	2.8	4		0.020	3	0.430	3			0.080	1	0.053	4
93	2.5	2		0.040	4			0.088	1				
97	2.8	4		< 0.03	NR	0.140	3	0.110	3	0.050	2	0.050	3
105	3.0	5		0.070	2	0.320	4	0.108	3	0.069	3	0.050	3
114	4.0	1		< 0.1	NR					0.058	4		
117	2.3	3						0.150	1	0.055	3	0.050	3
118	2.6	5		0.020	3	0.270	4	0.150	1	0.050	2	0.050	3
119	3.5	4		< 0.1	NR	0.180	4	0.110	3	0.060	4	0.060	3
120	2.0	2		0.084	1	0.129	3						
121	3.7	3		0.024	4			0.109	3			0.054	4
122	2.8	4		0.149	0			0.106	3	0.057	4	0.051	4
129	3.7	3		0.028	4					0.061	4	0.058	3
133	0.0	2		4.300	0	12.200	0						
134	3.8	4		0.043	4	< 0.2	NR	0.118	4	0.070	3	0.055	4
140	1.0	5		0.009	3	0.594	2	0.062	0	0.040	0	0.030	0
141	2.7	3		< 0.1	NR	< 0.1	NR	0.090	1	0.060	4	0.060	3
145	3.0	5		0.020	3	0.090	3	0.110	3	0.070	3	0.050	3
154	3.2	5		0.006	3	0.044	2	0.119	4	0.054	3	0.051	4
179	1.5	2		< 1.0	NR	3.870	0			< 0.18	NR	0.050	3
214	2.8	4		0.002	2	0.035	2	0.128	3			0.053	4
220	3.5	4		0.010	3			0.130	3	0.066	4	0.052	4

Table 7. *--Laboratory performance ratings for standard reference water sample N-40 (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 (total Phosphorus)		PO4 as P (Orthophosphate as P)	
		MPV =	0.024 m g/L		0.118 m g/L		0.110 m g/L		0.060 m g/L		0.052 m g/L	
		F-pseudosigma =	0.027		0.098		0.012		0.010		0.005	
Lab	OLR	V/5	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
3	2.3	4	< 0.001	NR	0.394	0	0.117	3	0.066	3	0.055	3
5	3.5	4	0.010	3			0.113	4	0.060	4	0.049	3
9	1.8	5	0.047	3	0.010	2	0.121	3	0.076	1	0.036	0
10	3.6	5	0.030	4	0.080	4	0.110	4	0.060	4	0.057	2
12	4.0	1					0.110	4				
15	2.0	4	0.051	3	< 0.5	NR	0.075	0	0.063	4	0.059	1
16	1.0	2	< 0.1	NR	0.224	2	0.736	0				
18	3.2	5	0.010	3	0.175	3	0.102	3	0.053	3	0.052	4
19	3.3	3	< 0.05	NR			0.107	4	0.050	2	0.050	4
21	3.5	4			0.087	4	0.116	4	0.062	4	0.058	2
22	4.0	1							0.059	4		
23	4.0	4	0.011	4			0.114	4	0.057	4	0.050	4
25	2.0	3	0.048	3			0.120	3	< 0.121	NR	0.041	0
26	0.0	1	< 0.05	NR			0.080	0			< 0.5	NR
29	2.0	2					0.110	4			0.150	0
32	1.0	2	< 0.02	NR			0.130	1			0.043	1
33	4.0	3	0.026	4			0.110	4			0.050	4
36	2.4	5	0.047	3	0.363	0	0.096	2	0.059	4	0.055	3
38	3.4	5	0.024	4	0.100	4	0.124	2	0.063	4	0.055	3
42	2.0	1					0.125	2				
45	2.3	4			0.301	1	0.151	0	0.057	4	0.052	4
46	4.0	4	< 0.005	NR	0.100	4	0.107	4	0.060	4	0.052	4
51	2.3	4	0.000	NR	0.260	2	0.140	0	0.051	3	0.050	4
52	2.3	3	< 0.01	NR	< 0.01	NR	0.131	1	0.053	3	0.048	3
53	4.0	2					0.109	4			0.053	4
55	2.7	3					0.120	3	0.060	4	0.060	1
56	3.0	1					0.100	3				
58	0.5	2			0.780	0	0.130	1				
59	4.0	3	< 0.04	NR	0.100	4	0.110	4	< 0.1	NR	0.050	4
60	1.6	5	0.490	0	1.000	0	0.120	3	0.066	3	0.059	2
63	1.8	5	0.200	0	0.200	3	0.180	0	0.050	2	0.050	4
68	3.5	2	0.012	4			0.120	3				
69	3.0	1					0.100	3				
70	1.5	2	< 0.1	NR	0.350	0	0.100	3	< 0.1	NR	< 0.1	NR
72	1.5	4	< 0.03	NR	0.100	4	0.070	0	0.070	2	0.070	0
78	0.6	5	0.006	3	0.430	0	< 0.01	0	0.019	0	0.130	0
79		0			< 0.2	NR			< 0.2	NR		
80	2.3	3	0.050	3			0.280	0			0.050	4
81	1.5	4	< 0.05	NR	0.208	3	0.120	3	0.023	0	0.041	0
83	2.0	2	0.000	NR			0.080	0			0.050	4
85	3.3	4	< 0.005	NR	0.100	4	0.120	3	0.050	2	0.052	4
87	3.3	4	< 0.1	NR	0.140	4	0.110	4	0.066	3	0.057	2
88	0.0	3	0.083	0			1.860	0			0.400	0
89	3.8	5	0.024	4	0.082	4	0.104	4	0.061	4	0.056	3
90	3.0	1					0.120	3				
91	2.7	3	< 0.03	NR	0.120	4	0.110	4	0.086	0		
94	3.5	4	0.026	4	0.137	4	0.100	3	0.054	3		
96	3.8	5	0.020	4	0.110	4	0.121	3	0.060	4	0.050	4
97	3.3	4	< 0.00	NR	0.090	4	0.100	3	0.070	2	0.050	4
102	2.8	4	< 0.02	NR	0.050	3	0.150	0	0.058	4	0.053	4
104	4.0	1	<0.004	NR			0.112	4				
107	3.5	4	0.025	4			0.116	4	0.058	4	0.045	2
111	3.3	3	0.040	3					0.062	4	0.055	3
114	4.0	1	< 0.1	NR					0.061	4		
117	2.0	2					0.150	0			0.050	4
118	3.4	5	0.010	3	0.070	4	0.110	4	0.050	2	0.050	4
119	4.0	4	< 0.1	NR	0.140	4	0.110	4	0.060	4	0.050	4
120	3.0	3					0.100	3	0.050	2	0.050	4
121	4.0	2					0.108	4			0.050	4
122	3.0	3	< 0.01	NR			0.107	4	0.053	3	0.046	2
126	2.0	1					0.094	2				
127	2.7	3	< 0.03	NR	< 0.15	NR	0.085	1	0.056	4	0.055	3
129	3.0	2	0.000	NR					0.053	3	0.055	3
133	2.0	3					0.080	0	0.073	2	0.050	4
134	3.0	5	0.033	4	0.226	2	0.114	4	0.070	2	0.056	3
136	3.8	5	0.024	4	0.097	4	0.116	4	0.059	4	0.057	3
138	3.6	5	0.021	4	0.116	4	0.101	3	0.057	4	0.056	3
142	2.0	5	0.006	3	0.058	3	0.103	3	0.032	0	0.061	1
145	4.0	5	0.020	4	0.080	4	0.110	4	0.060	4	0.050	4
146	4.0	2					0.104	4			0.052	4
149	0.0	2	< 0.1	NR			0.040	0	0.020	0		
179	3.0	1	< 1	NR	< 2	NR			< 0.18	NR	0.056	3
180	3.0	5	0.041	3	0.100	4	0.115	4	0.070	2	0.059	2
182	0.3	3	0.068	1					0.180	0	0.230	0
183	2.8	4	0.050	3			0.245	0	0.058	4	0.054	4
191	3.5	2					0.104	4			0.048	3
193	4.0	1					0.110	4				
196	4.0	1					0.109	4				
197	1.0	1					0.130	1				
198	3.6	5	0.022	4	0.240	2	0.113	4	0.056	4	0.051	4
200	3.0	2	< 0.02	NR			< 0.20	NR	0.050	2	0.050	4
202	2.3	4	< 0.05	NR	0.110	4	0.100	3	0.045	1	0.061	1
203	3.5	4	0.010	3			0.109	4	0.055	4	0.055	3
204	3.2	5	0.022	4	0.094	4	0.126	2	0.061	4	0.058	2
212	3.0	2					0.120	3	0.067	3		
213	1.5	4	0.400	0	0.600	0			0.070	2	0.050	4
214	3.0	4	0.002	3	0.037	3	0.126	2			0.053	4
215	2.3	3	0.090	0	0.210	3	0.110	4				
220	2.8	4	0.010	3			0.120	3	0.066	3	0.057	2
221	2.5	4	0.000	NR	0.200	3	0.143	0	0.069	3	0.050	4

Table 8. *–Laboratory performance ratings for standard reference water sample N-41 (preserved nutrient)*

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

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

			Analyte =	NH3 as N (Ammonia)		NH3 + Org N as N (Ammonia + Organic N)		NO3 + NO2 as N (Nitrate + Nitrite)		total P as P (total phosphorus)		PO4 as P (Orthophosphate as P)	
			MPV =	1.22 mg/L		1.86 mg/L		1.25 mg/L		1.64 mg/L		1.18 mg/L	
			F-pseudosigma =	0.170		0.391		0.099		0.111		0.030	
Lab	OLR	V/5		RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	4.0	5		1.22	4	1.67	4	1.25	4	1.66	4	1.18	4
7	3.3	3		1.20	4			1.30	3	1.73	3		
11	2.2	5		1.89	0	1.75	4	1.27	4	1.33	0	1.16	3
15	3.0	5		1.16	4	1.56	3	1.04	0	1.62	4	1.18	4
29	1.5	2						1.32	3			1.11	0
36	2.6	5		1.48	1	2.32	2	1.33	3	1.58	3	1.19	4
42	2.3	3						1.32	3	1.25	0	1.19	4
43	4.0	1						1.22	4				
45	3.3	4				1.67	4	1.34	3	1.61	4	1.21	2
48	3.4	5		1.10	3	2.20	3	1.20	4	1.70	3	1.17	4
52	4.0	5		1.27	4	1.70	4	1.26	4	1.67	4	1.17	4
60	1.4	5		1.54	1	2.08	3	1.14	2	1.84	1	1.29	0
61	0.8	5		1.34	3	2.73	0	1.09	1	1.09	0	0.84	0
63	2.8	5		0.80	0	1.90	4	1.21	4	1.70	3	1.20	3
75	3.0	4		1.44	2			1.30	3	1.64	4	1.20	3
78	2.6	5		1.30	4	1.86	4	1.12	2	1.53	3	1.09	0
88	1.7	3		1.14	4			2.89	0			1.24	1
89	3.8	4		1.23	4	1.83	4			1.72	3	1.18	4
90	3.0	4		1.22	4	2.08	3			1.86	1	1.18	4
93	1.0	2		1.40	2			0.93	0				
97	2.7	3		1.06	3			1.37	2			1.20	3
105	2.8	5		1.62	0	1.96	4	1.23	4	1.60	4	1.15	2
108	2.0	5		1.20	4	5.43	0	1.23	4	2.75	0	1.15	2
114	2.5	2		1.41	2					1.56	3		
117	1.3	3						1.50	0	1.69	4	1.30	0
118	3.4	5		1.12	3	2.20	3	1.27	4	1.65	4	1.20	3
119	3.4	5		1.19	4	1.72	4	1.32	3	1.65	4	1.15	2
120	3.5	2		1.36	3	1.86	4						
122	3.0	4		1.37	3			1.24	4	1.46	1	1.18	4
129	3.2	5		1.09	3	1.60	3	1.27	4	1.50	2	1.17	4
133	0.0	2		5.60	0	15.10	0						
134	4.0	5		1.15	4	1.81	4	1.24	4	1.69	4	1.19	4
140	2.6	5		1.21	4	2.40	2	0.65	0	1.56	3	1.18	4
141	3.2	5		1.16	4	1.66	3	1.16	3	1.59	4	1.22	2
145	2.8	5		1.26	4	1.48	3	1.19	3	1.64	4	1.28	0
154	1.4	5		0.98	2	1.50	3	1.10	1	1.43	1	1.10	0
179	0.0	3		< 1	NR	5.47	0			1.36	0	1.42	0
220	2.8	4		1.21	4			1.29	4	1.74	3	1.26	0

Table 8. *--Laboratory performance ratings for standard reference water sample N-41 (nonpreserved nutrient)--Continued*

			Analyte = NH3 as N (Ammonia)		NH3 + Org N as N (Ammonia + Organic N)		NO3 + NO2 as N (Nitrate + Nitrite)		total P as P (total phosphorus)		PO4 as P (Orthophosphate as P)	
		MPV =	1.22 mg/L		1.76 mg/L		1.25 mg/L		1.63 mg/L		1.29 mg/L	
		F-pseudosigma =	0.089		0.152		0.073		0.067		0.141	
Lab	OLR	V/5	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
3	2.0	5	1.63	0	1.89	3	1.00	0	1.69	3	1.22	4
5	1.8	4	1.49	0			1.23	4	1.79	0	1.39	3
9	1.8	5	1.68	0	1.94	2	1.30	3	1.46	0	1.30	4
10	3.8	5	1.24	4	1.76	4	1.24	4	1.63	4	1.18	3
11	2.0	5	1.66	0	1.67	3	1.23	4	1.47	0	1.42	3
12	3.2	5	1.30	3	1.60	2	1.27	4	1.65	4	1.39	3
13	3.0	5	1.22	4	1.76	4	1.24	4	1.95	0	1.21	3
15	2.6	5	1.21	4	1.58	2	0.89	0	1.64	4	1.19	3
16	2.0	3	1.12	2	1.68	4	1.91	0				
18	3.6	5	1.20	4	1.75	4	1.14	2	1.62	4	1.30	4
19	3.3	4	1.30	3			1.22	4	1.59	3	1.15	3
22	3.0	1							1.69	3		
23	3.5	4	1.14	3	1.84	3	1.26	4	1.63	4		
25	2.3	4	1.07	1			1.22	4	1.60	4	0.43	0
26	3.7	3	1.27	3			1.28	4			1.34	4
29	3.5	2					1.31	3			1.30	4
32	2.7	3	1.18	4			1.13	1			1.39	3
33	2.3	3	1.36	1			1.30	3			1.21	3
36	2.0	5	1.52	0	2.08	0	1.31	3	1.57	3	1.34	4
37	3.4	5	1.26	4	1.86	3	1.22	4	1.69	3	1.21	3
38	3.6	5	1.25	4	1.73	4	1.32	3	1.60	4	1.20	3
42	3.0	1					1.29	3				
45	2.3	4			1.94	2	1.35	2	1.65	4	1.52	1
46	3.8	5	1.14	3	1.69	4	1.22	4	1.81	4	1.30	4
52	3.8	5	1.26	4	1.64	3	1.25	4	1.65	4	1.35	4
53	3.0	2					1.36	2			1.36	4
55	3.0	5	1.25	4	1.51	1	1.29	3	1.62	4	1.20	3
57	0.6	5	1.15	3	2.60	0	1.09	0	2.10	0	1.83	0
58	1.3	4	1.09	2	1.13	0	1.35	2			1.53	1
59	3.8	5	1.22	4	1.70	4	1.28	4	1.60	4	1.20	3
60	1.0	5	1.67	0	2.06	1	1.14	2	1.66	0	1.50	2
63	2.6	5	1.10	2	2.00	1	1.21	3	1.60	4	1.20	3
68	1.5	2	0.55	0			1.18	3				
69	4.0	1					1.26	4				
70	1.6	5	1.20	4	1.46	1	1.09	0	1.49	0	1.40	3
72	3.0	5	1.16	3	1.75	4	1.26	4	1.50	1	1.40	3
76	3.5	2	1.19	4			1.18	3				
78	2.2	5	1.30	3	2.11	0	1.22	4	1.81	0	1.28	4
79	4.0	2			1.80	4			1.60	4		
80	2.7	3	1.34	2			1.35	2			1.36	4
81	1.6	5	1.58	0	1.55	2	1.26	4	1.95	0	1.46	2
83	1.3	3	1.00	0			1.04	0			1.32	4
84	4.0	2	1.24	4			1.22	4				
85	3.4	5	1.17	3	1.80	4	1.26	4	1.58	3	1.20	3
87	3.0	5	1.23	4	1.84	3	1.32	3	1.72	2	1.19	3
88	2.3	3	1.15	3			2.88	0			1.26	4
89	3.6	5	1.22	4	1.87	3	1.23	4	1.65	4	1.20	3
90	4.0	1					1.26	4				
91	2.8	4	1.25	4	1.81	4	1.08	0	1.68	3		
94	3.8	4	1.23	4	1.71	4	1.21	3	1.66	4		
96	4.0	5	1.19	4	1.71	4	1.28	4	1.65	4	1.29	4
97	2.7	3	1.16	3			1.36	2			1.20	3
102	2.6	5	1.12	2	1.51	1	1.20	3	1.64	4	1.15	3
104	3.5	2	1.25	4			1.20	3				
111	1.7	3	1.37	1					1.98	0	1.32	4
112	0.0	1					0.03	0				
114	1.5	2	1.50	0					1.58	3		
117	1.3	3					1.39	1	1.47	0	1.43	3
118	3.6	5	1.09	2	1.83	4	1.23	4	1.63	4	1.22	4
119	3.8	5	1.19	4	1.68	4	1.30	3	1.65	4	1.20	3
120	3.7	3					1.21	3	1.66	4	1.29	4
122	2.0	4	1.08	1			1.22	4	1.44	0	1.39	3
127	4.0	5	1.23	4	1.72	4	1.28	4	1.63	4	1.27	4
128	3.2	5	1.21	4	1.93	2	1.23	4	1.55	2	1.34	4
129	3.0	5	1.11	2	1.59	2	1.22	4	1.68	3	1.34	4
133	0.7	3					1.48	0	1.71	2	1.63	0
134	3.4	5	1.14	3	1.80	4	1.25	4	1.68	3	1.20	3
136	3.8	5	1.16	3	1.69	4	1.25	4	1.66	4	1.21	3
138	3.2	5	1.22	4	1.68	4	1.15	2	1.59	3	1.20	3
142	2.6	5	1.28	3	1.84	3	1.29	3	1.43	0	1.28	4
145	3.0	5	1.20	4	1.46	1	1.20	3	1.67	3	1.27	4
146	2.0	2					1.66	0			1.22	4
149	1.7	3	1.16	3			1.07	0	1.53	2		
179	0.5	4	< 1	0	2.82	0			1.38	0	1.44	2
180	3.8	5	1.23	4	1.71	4	1.22	4	1.61	4	1.21	3
182	0.7	3	0.49	0					1.72	2	0.08	0
183	2.0	4	1.20	4			1.00	0	1.49	0	1.24	4
191	3.5	2					1.21	3			1.30	4
193	3.0	1					1.18	3				
196	3.5	2					1.30	3			1.32	4
197	2.3	3	1.19	4			1.56	0			1.37	3
198	2.0	5	1.20	4	2.05	1	1.30	3	1.25	0	1.10	2
200	1.7	3	1.41	0			1.10	1	1.66	4		
202	2.8	5	1.28	3	1.81	4	1.17	2	1.56	2	1.20	3
205	3.5	2	1.29	3			1.28	4				
208	4.0	1					1.26	4				
211	2.8	5	1.28	3	1.58	2	1.31	3	1.60	4	1.53	1
212	1.8	4	2.00	0			1.30	3	1.60	4	1.60	0
213	2.3	4	1.20	4	1.40	0			1.72	2	1.41	3
215	2.7	3	1.21	4	2.09	0	1.28	4				
220	3.5	4	1.18	4			1.25	4	1.72	2	1.25	4
221	2.0	5	1.30	3	2.20	0	1.18	2	1.72	2	1.39	3

Table 9. *–Laboratory performance ratings for standard reference water sample P-21 (low ionic strength)*

[MPV, most probable value; ug/L, microgram per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all values; V/11, number of reported values of 11 values; RV, reported value; <, less than]

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

			Analyte =	Acidity as CaCO3		Ca (Calcium)		Cl (Chloride)		F (Fluoride)		K (Potassium)		Mg (Magnesium)	
			MPV =	7.93	mg/L	0.45	mg/L	3.90	mg/L	0.03	mg/L	0.088	mg/L	0.055	mg/L
			F-pseudosigma =	5.019		0.037		0.345		0.044		0.016		0.007	
Lab	OLR	V/11		RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	3.1	11		6.23	4	0.45	4	4.11	3	0.14	0	0.094	4	0.058	4
2	3.7	3		4.92	3										
3	2.8	11		15.10	2	0.45	4	3.83	4	0.02	4	< 0.01	0	0.040	1
5	1.8	6		< 4.5	NR	0.45	4	5.03	0			< 1	NR	0.058	4
7	2.7	3						3.26	1	< 0.5	NR				
8	3.4	7				0.45	4	3.80	4	< 0.05	NR	< 0.5	NR	0.050	3
15	2.3	10		13.00	2	0.43	3	3.50	2	0.03	4	0.079	3	0.059	3
23	2.3	9				0.65	0	3.43	2	0.03	4	0.086	4	0.073	0
26	3.0	9				0.48	3	3.90	4	0.07	3	0.070	2	0.060	3
32	3.0	5		6.17	4			3.84	4	< 0.02	NR				
33	3.3	9				0.46	4	3.96	4	0.11	1	0.100	3	0.050	3
36	2.8	11		8.03	4	0.38	1	3.97	4	0.02	4	0.085	4	0.064	2
38	3.0	7				0.44	4					0.090	4	0.057	4
39	1.3	7				0.47	4	64.00	0	0.71	0	< 1	NR	0.093	0
44	3.0	6				0.45	4	3.41	2			0.120	1	0.050	3
46	2.9	9				0.46	4	4.00	4	0.01	4	0.007	0	0.052	4
48	1.3	9				0.50	2	4.00	4			0.360	0	0.030	0
52	3.8	5		7.68	4	< 0.6	NR	3.99	4	< 0.05	NR	< 0.2	NR	0.056	4
58	2.8	5				0.45	4	4.03	4	0.03	4				
61	1.8	6		4.50	3	0.45	4	3.00	0	0.02	4	< 1	NR	< 1	NR
62	3.5	2													
63	2.2	6		< 1	NR	0.61	0	4.00	4	< 0.2	NR	< 5	NR	< 0.50	NR
64	3.6	9				0.44	4	3.87	4			0.080	4	0.050	3
78	2.6	9		< 1	NR	0.51	2	3.50	2	0.06	3	0.100	3	0.080	0
89	2.7	11		7.82	4	0.30	0	3.68	3	0.03	4	0.062	1	0.053	4
93	2.9	9				10.95	0	4.08	3	0.02	4	0.096	4	0.000	0
105	3.8	8		9.40	4	0.47	4	3.94	4	< 0.2	NR	0.094	4	0.060	3
107	3.0	4						8.40	0	0.03	4				
110	4.0	3						3.83	4						
112	2.9	7				0.41	2	1.98	0			0.081	4	0.051	3
117	1.9	7				7.30	0	3.34	1	0.08	2	0.100	3	0.070	1
127	3.8	9		9.13	4	0.46	4	3.74	4	0.04	4	0.097	3	< 0.06	NR
134	3.6	8				0.46	4	4.15	3	< 0.1	NR	0.085	4	0.050	3
136	1.4	5				0.92	0							0.000	0
138	3.3	7				0.49	3	3.61	3	0.02	4	0.107	2	0.055	4
140	2.7	9				0.50	2	3.78	4	0.04	4	0.140	0	0.060	3
141	2.4	8		16.00	1	0.48	3	3.00	0	< 0.1	NR	0.097	3	0.055	4
145	3.0	7		7.00	4	0.43	3	3.93	4	< 0.2	NR	< 0.71	NR	< 0.19	NR
158	1.9	9		116.40	0	0.13	0	5.21	0	0.17	0	0.070	2		
182	0.3	9				0.80	0	10.00	0			0.045	0	0.100	0
183	2.0	4						5.10	0	0.10	1				
185	3.9	8				0.45	4	3.94	4			0.078	3	0.052	4
190	2.0	7				0.26	0			0.02	4	0.110	2	0.042	1
196	3.8	6				0.44	4	4.07	4			0.074	3	0.053	4
197	1.8	4						3.60	3						
202	3.0	2													
203	1.0	3						2.90	0						
204	2.7	9				0.35	0	4.00	4			0.084	4	0.050	3
212	2.0	6				0.46	4	3.30	1					0.064	2

Table 9. *--Laboratory performance ratings for standard reference water sample P-21 (low ionic strength) --Continued*

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

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

Analyte =	Na (Sodium)		pH		PO4 as P		SO4 (Sulfate)		Specific Conductance	
MPV =	0.117	mg/L	4.06		0.005	mg/L	0.50	mg/L	41.8	µ S/cm
F-pseudosigma =	0.019		0.059		0.0059		0.491		4.23	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	0.128	3	4.07	4	0.027	0	0.51	4	43.0	4
2			4.06	4					41.9	4
3	0.100	3	4.06	4	0.006	4	1.44	1	42.3	4
5	0.185	0	4.00	2			< 5	NR	34.8	1
7			4.06	4	< 0.2	NR	< 0.5	NR	44.1	3
8	0.100	3	4.13	2	< 0.1	NR	0.50	4	43.0	4
15	0.347	0	3.22	0	< 0.02	NR	0.50	4	46.7	2
23	0.110	4	4.11	3	< 0.01	NR	1.80	0	42.8	4
26	0.120	4	3.90	0	< 0.5	NR	0.39	4	40.0	4
32			4.10	3	< 0.007	NR	0.43	4	32.7	0
33	0.110	4	4.09	3	< 0.01	NR	0.40	4	41.3	4
36	0.156	1	4.02	3	0.000	3	0.00	2	45.6	3
38	0.100	3	4.20	0	0.001	3			46.0	3
39	0.081	1	8.08	0	< 0.005	NR	0.44	4		
44	0.120	4					0.59	4		
46	0.104	3	4.21	0	< 0.002	NR	0.46	4	44.8	3
48	0.240	0	4.30	0	0.052	0	1.00	2	43.2	4
52	< 0.4	NR	4.07	4	< 0.005	NR	< 10	NR	39.1	3
58			3.99	2					31.9	0
61	< 1	NR	5.20	0	< 0.04	NR	< 3	NR	4.2	0
62			4.10	3					43.9	4
63	1.030	0	4.10	3	< 0.01	NR	1.20	2	43.8	4
64	0.100	3	4.06	4	0.002	3	0.40	4	37.6	3
78	0.100	3	4.05	4	0.003	4	< 1	NR	36.5	2
89	0.105	3	4.09	3	0.002	3	1.46	1	41.8	4
93	0.109	4	4.08	4			0.81	3	43.6	4
105	0.120	4	4.06	4	< 0.002	NR	< 1	NR	38.0	3
107			4.04	4	< 0.005	NR			42.0	4
110			4.08	4			0.46	4		
112	0.101	3	4.08	4			0.58	4		
117	0.120	4			< 0.001	NR	< 0.1	NR	37.5	2
127	0.109	4	4.02	3	< 0.02	NR	0.66	4	40.1	4
134	0.116	4	4.06	4	< 0.01	NR	0.44	4	44.0	3
136			3.60	0	0.001	3			40.5	4
138	< 0.2	NR	4.02	3	< 0.01	NR	0.47	4		
140	0.120	4	4.02	3	< .01	NR	2.00	0	40.0	4
141	0.125	4	4.05	4	< 0.05	NR	< 10	NR	29.0	0
145	< 0.18	NR	3.60	0	0.010	3	0.33	4	39.0	3
158	0.100	3	4.04	4			0.31	4	43.9	4
182	0.500	0	4.10	3	0.900	0	2.00	0	23.0	0
183			4.02	3					40.0	4
185	0.117	4	4.04	4			0.72	4	42.2	4
190	0.080	1	4.00	2					43.3	4
196	0.120	4					0.49	4		
197			4.22	0			0.44	4	56.4	0
202			4.02	3	< 0.005	NR			38.0	3
203			4.10	3	< 0.005	NR	< 1	NR	3.4	0
204	0.140	2	4.06	4	0.001	3	1.26	1	39.0	3
212			4.00	2			1.30	1	46.1	2

Table 10. *—Laboratory performance ratings for standard reference water sample Hg-17 (mercury)*

[MPV, most probable value; ug/L, microgram per liter; Lab, laboratory number; V/1, number of reported values of 1 value; RV, reported value]

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 = 1.55 µ g/L
F-pseudosigma = 0.311

Lab	V/1	RV	Rating
1		1.50	4
3		8.80	0
7		1.80	3
8		1.10	2
11		1.21	2
12		1.50	4
13		1.44	4
15		1.37	3
16		0.17	0
18		1.38	3
24		2.00	2
29		2.20	0
32		1.48	4
34		1.44	4
36		1.32	3
39		1.60	4
42		1.32	3
45		1.36	3
46		1.23	2
48		1.35	3
50		1.60	4
51		1.44	4
52		1.48	4
55		1.73	3
58		1.43	4
59		1.43	4
60		1.80	3
61		2.15	1
63		1.92	2
68		1.49	4
69		1.41	4
70		1.53	4
75		1.39	3
79		71900	0
86		3.00	0
87		1.60	4
89		2.04	1
96		2.30	0
97		1.38	3
105		1.66	4
108		1.97	2
109		1.02	1
117		2.04	1
118		1.70	4
119		1.80	3
120		1.83	3
122		1.29	3
127		1.37	3
128		1.73	3
133		1.57	4
138		1.59	4
141		1.47	4
142		1.35	3
144		2.06	1
145		1.33	3
146		1.92	2
149		1.76	3
158		1.27	3
179		1.20	2
180		1.80	3
182		2.50	0
194		1.64	4
198		1.59	4
202		1.60	4
210		2.00	2
211		1.80	3
213		1.50	4
219		1.50	4
220		1.70	4
221		1.33	3

Table 11. *–Laboratory performance ratings for standard reference water sample AMW-3 (acid mine water)*

[MPV, most probable value; ug/L, microgram per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all values; V/11, number of reported values of 11 values; RV, reported value; <, less than]

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

	Analyte =	Ag (Silver)			Al (Aluminum)			As (Arsenic)			B (Boron)			Ba (Barium)			Be (Beryllium)		
	MPV =	0.8	µ g/L		21000	µ g/L		72.5	µ g/L		153	µ g/L		4.5	µ g/L		12.0	µ g/L	
	F-pseudosigma =	3.85			1309			12.90			87.5			3.34			1.48		
Lab	OLR	V/24	RV		Rating	RV		Rating	RV		Rating	RV		Rating	RV		Rating	RV		Rating
1	3.3	23	< 1		NR	18910		1	72.5		4	98		3	3.5		4	12.5		4
3	3.5	23	1.0		4	20500		4	78.1		4	100		3	3.0		4	12.0		4
4	1.7	16				15000		0				166		4	3.0		4			
7	2.7	18	< 0.2		NR	21700		3	< 1		0				5.6		4	12.5		4
8	2.8	21	6.0		2	21500		4	52.0		1	< 10		NR	5.0		4	11.0		3
11	2.8	18				20800		4	130.0		0	216		3				11.0		3
15	2.8	21				22800		2	63.4		3	112		4	< 10		NR	17.6		0
18	3.2	20	< 3		NR	20254		3	69.7		4	42		2	< 5		NR	12.0		4
32	2.9	23	< 0.1		NR	19300		2	90.0		2	21		1	3.1		4	11.0		3
36	2.8	21	0.0		4	22900		2	66.5		4	190		4	366.0		0	10.8		3
37	2.4	12				20100		3										7.0		0
42	3.6	18				21400		4							3.8		4			
48	2.1	20	0.2		4	23200		1	80.7		3	180		4	5.9		4	12.8		3
52	2.8	20	5.2		2	19700		3	60.1		3	< 300		NR	< 11		NR	13.9		2
58	1.7	19	14.2		0	48700		0	241.0		0				6.6		3	26.7		0
59	3.1	16				21000		4	70.0		4				< 10		NR	11.0		3
61	2.6	19	7.4		1	21935		3	81.5		3	153		4	2.6		3	12.4		4
63	2.1	20	< 0.5		NR	21700		3	80.0		3				< 50		NR	12.0		4
84	2.2	14	21.0		0				82.0		3				140.0		0			
85	3.2	18	< 5		NR	21400		4	72.0		4	271		2	< 5		NR	11.2		3
89	2.6	18	1.7		4	7940		0	42.7		0				140.0		0			
94	3.3	20	< 5		NR	19768		3	67.9		4	15		1	4.0		4	11.0		3
105	3.1	23	0.1		4	21900		3	79.0		4				3.9		4	11.6		4
116	3.2	9										266		2	< 1		NR			
117	1.4	16	2.3		4				178.0		0				24.0		0	13.4		3
119	3.1	20	0.2		4	21000		4	79.0		4	220		3	8.0		2	14.4		1
127	3.3	23	< 1		NR	20400		4	64.1		3	19		1	3.7		4	11.7		4
141	2.7	20	23.0		0	21354		4	111.0		0	144		4	< 10		NR	11.5		4
194	2.8	17	< 1		NR	20700		4	61.5		3	380		0	< 100		NR	13.0		3
202	2.9	17	0.0		4	21300		4	1.5		0							12.4		4
210	1.3	19	0.2		4	19000		1	< 50		NR	< 100		NR	< 50		NR	24.0		0

Table 11. *--Laboratory performance ratings for standard reference water sample AMW-3 (acid mine water) --Continued*

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

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

Analyte =	Ca (Calcium)		Cd (Cadmium)		Co (Cobalt)		Cr (Chromium)		Cu (Copper)		Fe (Iron)		K (Potassium)	
MPV =	320	mg/L	121	µ g/L	133	µ g/L	11.0	µ g/L	4670	µ g/L	142650	µ g/L	3.50	m g/L
F-pseudosigma =	18.4		11.3		13.3		5.88		267		9859		0.415	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	320	4	124	4	107	1	6.4	3	4491	3	138950	4	3.25	3
3	356	1	99	1	120	3	10.0	4	4680	4	142000	4	3.37	4
4	237	0					4000.0	0	6400	0	133000	3		
7	338	3	130	3	143	3	< 8	NR	4840	3	149000	3	4.20	1
8	327	4	121	4	132	4	33.0	0	4610	4	143000	4	3.80	3
11	330	3	127	3	133	4			4710	4	141	0	3.35	4
15	298	2	136	2	116	2	8.6	4	4520	3	152000	3	3.67	4
18	312	4	121	4	133	4	24.0	0	4564	4	137800	4	3.17	3
32	318	4	116	4	132	4	8.3	4	4480	3	148000	3	4.14	1
36	239	0	114	3	120	3	12.8	4	4630	4	139000	4	3.16	3
37	376	0					8.2	4	4850	3	94400	0	3.44	4
42	310	3	111	3	128	4			4900	3	145600	4	3.50	4
48	273	0	157	0	140	3	10.7	4	5040	2	155000	2	3.76	3
52	332	3	108	2	136	4	7.7	3	4300	2	144000	4	3.41	4
58	288	1	111	3	110	1	13.2	4	4300	2	130000	2	3.43	4
59	310	3	124	4			17.0	2	4800	4	138000	4	3.90	3
61	314	4	130	3	153	2	10.3	4	4996	2	142650	4	4887	0
63	333	3	123	4	139	4	31.0	0	4820	3	174000	0	4.40	0
84	313	4	107	2			< 10	NR	4450	3	151000	3	3.20	3
85	320	4	110	3	135	4	< 20	NR	4680	4	140000	4	3.90	3
89	339	2	115	4	135	4	12.5	4	4320	2	158000	1	3.56	4
94	307	3	110	3	124	3	14.0	3	4409	3	129940	2	3.34	4
105	321	4	108	2	138	4	7.7	3	4850	3	134000	3	3.62	4
116	343	2									153000	2		
117	351	1	23	0			10.5	4	4261	1	105300	0	3.11	3
119	328	4	127	3			8.6	4	4620	4	156000	2	3.80	3
127	337	3	122	4	138	4	7.6	3	4840	3	146000	4	3.90	3
141	332	3	126	4	138	4	16.5	3	4695	4	148600	3	3.35	4
194	334	3	120	4			11.0	4	4830	3	145000	4	4.43	0
202	303	3	121	4			14.0	3	4660	4	137000	3	2.66	1
210	300	2	100	1	120	3	470.0	0	4400	2	130000	2	2.00	0

Table 11. *–Laboratory performance ratings for standard reference water sample AMW-3 (acid mine water) –Continued*

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

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

Analyte =	Li (Lithium)		Mg (Magnesium)		Mn (Manganese)		Mo (Molybdenum)		Na (Sodium)		Ni (Nickel)		Pb (Lead)	
MPV =	35	µ g/L	114	m g/L	82800	µ g/L		µ g/L	30.8	m g/L	206	µ g/L	15.5	µ g/L
F-pseudosigma =	5.5		5.8		7650		insufficient data		1.26		30.4		4.45	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	34.7	4	109	3	82043	4	< 1		30.9	4	203	4	9.4	2
3	40.0	3	115	4	83000	4	< 10		31.0	4	220	4	15.1	4
4	31	3	106	2	84000	4			28.5	1	127000	0	38.0	0
7			120	2	89800	3	< 12		31.4	4	212	4	24.9	0
8	34	4	106	2	79	0	< 10		31.3	4	187	3	< 30	NR
11			117	3	82500	4			31.5	3	208	4	38.0	0
15	30.7	3	117	3	87700	3	< 20		30.6	4	189	3	4.0	0
18			110	3	77180	3			29.8	3	22	0	19.5	3
32	37.5	4	110	3	79200	4	0.8		28.1	0	200	4	17.4	4
36			119	3	88000	3	1.3		29.7	3	180	3	10.2	2
37			140	0					30.6	4	205	4	18.9	3
42	36	4	110	3	84000	4			30.5	4	224	3	18.0	3
48			99	0	25000	0	< 10		36.2	0	230	3	13.1	3
52			114	4	82600	4	6.6		28.9	1	189	3	7.9	1
58			95	0	78400	3			22.5	0	232	3	15.4	4
59			113	4	80000	4			32.0	3	450	0	36.0	0
61			119	3	87244	3	< 50		311.1	0	153	1	< 50	NR
63	53	0	120	2	86	0			33.4	0	240	2	17.0	4
84			111	3	75800	3	< 2		29.4	2	263	1	< 20	NR
85	37	4	117	3	807000	0	< 50		30.5	4	206	4	< 50	NR
89			121	2	88900	3			30.8	4	196	4	7.5	1
94			110	3	83328	4	< 5		30.0	3	198	4	15.5	4
105	49	0	110	3	75600	3	2.0		33.9	0	214	4	17.9	3
116			115	4	87500	3			30.9	4				
117			122	2	63240	0			30.4	4			33.7	0
119			111	3	90800	2			29.6	3	279	0	16.8	4
127	31.6	3	114	4	89100	3	144.0		30.9	4	217	4	< 1	0
141			116	4	86470	4	< 10		31.7	3	773	0	14.2	4
194			120	2	83000	4			29.4	2	180	3	12.9	3
202			108	2	77900	3	< 1.0		32.8	1	175	2	13.6	4
210	30	3	8	0	630	0	11.0		31.0	4	130	0	8.9	2

Table 11. *–Laboratory performance ratings for standard reference water sample AMW-3 (acid mine water) –Continued*

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

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

	Sb (Antimony)		Se (Selenium)		SiO2 (Silica)		Sr (Strontium)		V (Vanadium)		Zn (Zinc)	
MPV =	2.7	µ g/L		µ g/L	48.0	m g/L	1474	µ g/L	15.0	µ g/L	41450	µ g/L
F-pseudosigma =	1.85		insufficient data		3.31		81		12.9		3113	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	2.5	4	< 1		44.8	3	1430	3	17.0	4	39833	3
3	5.0	2	1.3		49.2	4	1440	4	< 10	NR	41400	4
4					41.0	0	1360	2			43000	4
7	2.5	4	< 1				1580	2	< 14	NR	45200	2
8	12.0	0	< 1		48.5	4	1570	2	< 5	NR	38500	3
11					52.8	2	1540	3			41100	4
15			< 1		44.7	3	1500	4	9.5	4	44200	3
18	2.9	4	0.1				1447	4	19.0	4	39480	3
32	2.1	4	9.0		55.2	0	1410	3	4.6	3	36800	2
36	3.5	4	0.5		136.0	0					39300	3
37					48.8	4						NR
42	2.8	4			49.5	4	1530	3			42930	4
48	< 3.0	NR	< 2						90.0	0	45400	2
52	< 6	NR	< 5		43.7	2	1380	2	23.3	3	41500	4
58									22.7	3	392000	0
59							1500	4			41000	4
61	< 50	NR	< 5		50.0	3			< 5	NR	45715	2
63	< 5	NR	< 5		49.4	4	1590	2	13.0	4	45	0
84			20.0		61.4	0					41400	4
85	664.0	0	< 2				1440	4	< 20	NR	42500	4
89			< 2		45.8	3					41500	4
94	1.7	4	< 5				1422	3	< 5	NR	39920	4
105	2.6	3	< 2.0		45.8	3	1530	3	4.0	3	41100	4
116					47.4	4	1510	4			42900	4
117	135.0	0	115.0								359	0
119	2.8	4	< 1		46.9	4					44100	3
127	2.4	4	< 3		45.9	3	1520	3	5.3	3	42700	4
141	117.0	0	< 2		< 0.1	0			< 10	NR	45580	2
194	< 5	NR	< 250				1420	3			39500	3
202	2.5	4	< 1								43700	3
210	< 5.0	NR	< 5		16.5	0	1300	0	< 50	NR	130	0

Table 12. *–Laboratory performance ratings for standard reference water sample WW-1 (whole water)*

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

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

	Analyte =	Ag (Silver)			Al (Aluminum)		As (Arsenic)		B (Boron)		Ba (Barium)		Be (Beryllium)	
	MPV =	2.30	µ g/L		7084	µ g/L	19.7	µ g/L	31	µ g/L	156	µ g/L	9.0	µ g/L
	F-pseudosigma =	1.830			5688		10.30		38		34		0.89	
Lab	OLR	V/26	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	3.7	26	1.90	4	7650	4	12.1	3	9.85	3	145	4	8.8	4
3	2.9	24	1.80	4	5530	4	24.3	4	20.0	4	134	3	8.0	2
5	0.6	23	< 4	NR	33930	0	183.7	0	49.41	4	287	0	10.9	0
7	3.3	23	2.30	4	6860	4	3.7	1			152	4	9.0	4
8	2.8	22	< 5	NR	4200	3	15.0	4	< 10	NR	142	4	8.0	2
11	3.4	17			10400	3			30	4	158	4	9.0	4
15	2.6	23	17.70	0	6110	4	16.1	4	242	0	145	4	14.8	0
18	3.3	22	< 5	NR	7067	4	19.1	4	17	4	147	4	8.0	2
23	1.8	13	< 0.2	NR			8.9	2	75	2	116	2		
25	3.4	18	< 6	NR	8940	4	< 50	NR	< 23	NR	165	4	8.2	3
30	3.5	2												
32	3.6	25	1.07	3	7160	4	22.5	4	7	3	150	4	6.9	0
36	2.6	22	0.62	3	4550	4	13.8	3	33	4	133	3	8.3	3
46	1.2	12									189	3	9.9	2
48	2.1	19	0.70	3	18800	0	19.8	4	< 10.0	NR	152	4	9.2	4
52	3.1	21	1.60	4	8660	4	19.6	4	< 300	NR	157	4	6.4	0
58	2.2	19	9.55	0	14900	2	53.9	0			200	2	15.5	0
59	2.8	17			2900	3	20.0	4			130	3	9.0	4
61	1.7	22	4.70	2	14101	2	22.3	4	84.7	2	195	2	9.5	3
63	3.0	23	24.00	0	7700	4	20.0	4	68	3	160	4	9.0	4
68	1.0	20			27000	0			300	0	260	0	9.1	4
69	3.5	16	1.84	4	6833	4	19.0	4			184	3	7.6	1
89	3.0	18	2.71	4	6610	4	19.4	4			820	0		
94	3.5	22	< 5	NR	5616	4	17.0	4	11	3	142	4	9.0	4
97	1.8	22	< 0	NR	27186	0	38.1	1			254	0	9.8	3
102	2.3	21	1.00	3	15610	2	59.0	0			193	2	6.0	0
105	3.7	25	1.60	4	6550	4	16.3	4			155	4	8.7	4
117	1.3	15	4.20	2			74.0	0			377	0		
119	3.7	21	5.20	1	6940	4	19.0	4	51	3	148	4	10.0	2
120	3.2	20	1.00	3	7000	4	31.5	2			167	4	8.3	3
129	2.3	7							140	0				
140	2.2	13												
141	3.9	19	< 10	NR	6798	4	< 50	NR			158	4	9.0	4
142	3.6	24	3.50	3	6428	4	21.3	4	30	4	154	4	7.7	2
144	0.4	7	4.00	3			88.0	0						
146	2.8	25	2.50	4	7240	4	28.7	3	24.7	4	13	0	7.7	2
180	2.2	23	6.00	0	19500	0	108.0	0	20.4	4	181	3	7.8	2
190	2.8	4												
202	3.2	19	1.36	3	6350	4	4.7	2					9.0	4
204	3.1	16	1.78	4	5800	4	19.1	4			71	0		
210	1.5	20	1.53	4	19000	0	< 50	NR	< 100	NR	200	2	15.0	0
212	3.6	24			7100	4	12.0	3	31.3	4	150	4	8.5	3

Table 12. *--Laboratory performance ratings for standard reference water sample WW-1 (whole water) --Continued*

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

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

Analyte =	Ca (Calcium)		Cd (Cadmium)		Co (Cobalt)		Cr (Chromium)		Cu (Copper)		Fe (Iron)		K (Potassium)	
MPV =	17.9	m g/L	6.10	µ g/L	13.5	µ g/L	22.0	µ g/L	28.1	µ g/L	14000	µ g/L	2.80	m g/L
F-pseudosigma =	1.30		1.105		2.67		4.97		5.97		4233		0.852	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	16.8	3	6.10	4	11.9	3	19.8	4	27.3	4	12730	4	2.57	4
3	16.8	3	5.20	3	10.0	2	14.0	1	88.0	0	10400	3	2.39	4
5	19.0	3	7.89	1	22.5	0	46.6	0	52.7	0	24640	0	9.93	0
7	18.6	3	7.40	2	14.7	4	23.5	4	28.1	4	12900	4	3.22	4
8	18.6	3	7.00	3	10.0	2	17.0	2	27.0	4	8800	2	2.50	4
11	18.4	4	6.00	4	13.0	4	25.0	3	28.0	4	16700	3		
15	19.0	3	< 10	NR	11.3	3	19.7	4	9.3	0	12500	4	2.65	4
18	17.4	4	4.89	2	16.0	3	22.0	4	27.0	4	13573	4	2.80	4
23	17.6	4	5.62	4			7.9	0	18.5	1			1.74	2
25	18.9	3	8.00	1	15.0	3	22.0	4	26.0	4	14500	4	3.65	3
30	17.0	3												
32	18.3	4	6.20	4	14.5	4	22.6	4	29.0	4	14400	4	2.52	4
36	15.0	0	3.02	0	12.7	4	17.3	3	19.6	2	4720	0	3.76	2
46	19.8	2					38.6	0	38.4	1	23600	0		
48	20.1	1	6.40	4	< 50	NR	18.6	3	30.0	4	21900	1	5.06	0
52	17.7	4	0.48	0	25.1	0	24.9	3	29.0	4	14300	4	2.97	4
58	5.8	0	8.30	1	12.3	4	22.0	4	27.0	4	11700	3	2.36	3
59	18.0	4	8.00	1			14.0	1	30.0	4	6500	1	2.00	3
61	18729	0	4.30	1	14.2	4	26.3	3	39.0	1	19324	2	4623	0
63	18.4	4	3.10	0	30.0	0	17.0	2	33.0	3	17500	3	3.40	3
68	20.0	1	28.50	0	20.0	0	34.0	0	36.0	2	25000	0	6.70	0
69			5.94	4			20.0	4	24.0	3	12390	4	3.00	4
89	18.8	3	6.38	4	17.0	2	24.0	4	14.9	0	14600	4	2.88	4
94	18.2	4	6.30	4	13.0	4	18.0	3	25.0	3	10580	3	2.72	4
97	12.7	0	5.74	4	3.3	0	60.0	0	30.9	4	22360	1	1.44	1
102	18.3	4	5.00	3	11.0	3	25.0	3	32.0	3	20360	2	4.50	1
105	16.9	3	6.18	4	12.6	4	19.7	4	29.0	4	11700	3	2.58	4
117	13.7	0					24.5	4	105.0	0	15590	4	4.82	0
119	17.1	3	6.60	4			20.9	4	26.0	4	14000	4	2.80	4
120	12.8	0	6.80	3			18.7	3	21.8	2	15600	4	2.86	4
129	16.0	2											2.10	3
140	19.5	2	4.80	2			40.5	0	38.1	1	20238	2	4.50	1
141	17.8	4	6.30	4	12.0	3	23.8	4	28.3	4	13140	4	2.50	4
142	18.0	4	6.10	4			17.1	3	20.9	2	11870	4	2.58	4
144							68.0	0	112.0	0				
146	15.9	1	5.80	4	13.5	4	21.1	4	27.5	4	13000	4	2.47	4
180	16.8	3	5.80	4	15.6	3	33.1	0	34.1	2	18100	3	2.77	4
190	18.1	4											1.89	2
202	17.9	4	6.00	4			17.0	2	25.0	3	12400	4	265	0
204	17.5	4	4.55	2			17.7	3	21.9	2	11000	3	2.62	4
210	17.0	3	13.00	0	< 50	NR	110.0	0	52.9	0	23000	0	3.10	4
212	18.4	4	7.20	3	14.0	4	20.4	4	26.4	4	13400	4	2.90	4

Table 12. *–Laboratory performance ratings for standard reference water sample WW-1 (whole water) –Continued*

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

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

Analyte =	Li (Lithium)		Mg (Magnesium)		Mn (Manganese)		Mo (Molybdenum)		Na (Sodium)		Ni (Nickel)		Pb (Lead)	
MPV =	19	µ g/L	7.13	m g/L	595	µ g/L	4.9	µ g/L	19.7	m g/L	24.0	µ g/L	25.8	µ g/L
F-pseudosigma =	4.4		0.990		54		1.78		1.70		7.93		5.11	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	18	4	6.76	4	585	4	4.7	4	17.6	2	22.7	4	25.9	4
3	20	4	6.56	3	572	4	< 10	NR	18.6	3	< 40	NR	31.0	2
5	34	0	10.21	0	720	0	< 10	NR	22.5	1	25.6	4	86.7	0
7			7.14	4	646	3	6.0	3	19.9	4	29.4	3	32.6	2
8	17	4	5.60	1	575	4	< 5	NR	19.6	4	13.0	2	< 30	NR
11			7.76	3	578	4	12.0	0						
15	33	0	7.78	3	705	1	3.0	2			19.2	3	23.6	4
18			6.80	4	6	0			18.8	4	24.5	4	23.2	4
23			5.44	1	531	2			17.2	2	< 20	NR	13.9	0
25	19	4	7.59	4	607	4			20.5	4	< 49	NR	< 71	NR
30			6.69	4										
32	14	2	7.47	4	639	3	4.4	4	19.0	4	24.5	4	26.4	4
36			5.86	2	536	2	2.5	2	19.7	4	16.9	3	24.2	4
46					695	1			21.5	2			53.0	0
48			9.52	0	720	0	< 10	NR	22.9	1	37.7	1	23.2	4
52			7.13	4	608	4	< 5	NR	19.0	4	32.4	2	29.2	3
58			5.60	1	545	3			13.1	0	20.1	4	29.0	3
59			5.60	1	540	2			19.0	4	18.0	3	24.0	4
61			8339	0	707	0	6.2	3	21566	0	50.7	0	< 50	NR
63	23	3	7.27	4	633	3			21.6	2	24.0	4	19.0	2
68	32	0	10.00	0	710	0			23.0	1	39.0	1	31.0	2
69					580	4			18.2	3	20.0	4	24.1	4
89			7.50	4	607	4			20.2	4	42.5	0	24.2	4
94			6.73	4	595	4	< 5	NR	21.1	3	23.0	4	22.8	3
97			8.44	2	568	4	12.0	0	18.2	3	44.1	0	30.4	3
102			8.90	1	532	2			20.5	4	21.0	4	20.0	2
105	18	4	6.59	3	563	3	4.1	4	21.5	2	24.0	4	26.2	4
117			8.15	2	599	4			21.0	3			50.1	0
119			6.73	4	602	4			19.4	4	20.4	4	25.6	4
120			6.93	4	584	4	13.0	0	20.4	4	21.0	4	23.3	4
129			8.60	2	520	2			20.3	4				
140			8.33	2	550	3			19.5	4	31.0	3	21.4	3
141			6.94	4	624	3	< 10	NR	19.5	4	27.5	4	26.9	4
142	16	3	7.02	4	597	4	4.0	3	19.4	4	21.9	4	23.5	4
144											102.0	0		
146			6.11	2	549	3	5.5	4	17.4	2	23.5	4	25.6	4
180			7.88	3	577	4	4.8	4	19.9	4	27.1	4	52.9	0
190			5.65	2					21.2	3				
202			7.11	4	629	3	3.6	3	24.6	0	21.0	4	25.6	4
204			6.67	4	550	3			18.5	3			26.0	4
210	20	4	8.40	2	630	3	11.0	0	19.0	4	130.0	0	39.5	0
212	15	3	7.20	4	620	4			17.9	2	21.3	4	26.0	4

Table 12. *—Laboratory performance ratings for standard reference water sample WW-1 (whole water) —Continued*

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

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

	Sb (Antimony)		Se (Selenium)		SiO2 (Silica)		Sr (Strontium)		V (Vanadium)		Zn (Zinc)	
MPV =	3.6	µ g/L	5.5	µ g/L	30.8	m g/L	84	µ g/L	24.0	µ g/L	75.0	µ g/L
F-pseudosigma =	2.52		2.08		15.42		7.0		9.04		20.09	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	2.5	4	5.2	4	34.1	4	78	3	23.6	4	74.7	4
3	6.0	3	3.2	2	26.7	4	73	1	16.0	3	73.0	4
5	< 50	NR	192.1	0	149.6	0	122	0	82.1	0	115.4	1
7	2.6	4	< 1	0			85	4	34.3	2	77.6	4
8	10.0	0	7.0	3	20.9	3	84	4	10.0	1	55.0	3
11					52.8	2	90	3	26.0	4	78.0	4
15			5.1	4	24.6	4	84	4	26.5	4	450.0	0
18	4.3	4	0.3	0			79	3	24.0	4	64.0	3
23											40.0	1
25	< 51	NR	< 129	NR	45.3	3	90	3	24.0	4	89.0	3
30												NR
32	4.4	4	< 10	NR	27.3	4	82	4	23.0	4	73.0	4
36	2.1	3	4.6	4	18.2	3						NR
46							95	1	40.7	1	109.0	1
48	< 3.0	NR	4.1	3					120.0	0	100.0	2
52	< 6	NR	< 5.0	NR	10.1	2	84	4	21.2	4	67.9	4
58									22.1	4	65.5	4
59							79	3			49.0	2
61	< 50	NR	5.9	4	69.0	0			35.2	2	97.6	2
63	< 5	NR	< 5	NR	36.2	4	86	4	23.0	4	75.0	4
68							110	0	28.0	4	74.0	4
69			7.9	2							70.0	4
89			< 2	NR	39.5	3					101.0	2
94	2.8	4	2.3	1			80	3	20.0	4	69.0	4
97	4.4	4	0.6	0	11.6	2	88	3			75.0	4
102	< 1	NR	< 5	NR	66.0	0	90	3	32.0	3	71.0	4
105	4.7	4	4.2	3	29.5	4	84	4	17.5	3	81.4	4
117	22.0	0	31.0	0							38160	0
119	2.7	4	6.0	4	32.9	4					75.0	4
120	2.5	4	6.9	3							65.0	4
129					17.5	3						NR
140					10.2	2					81.1	4
141	< 20	NR	6.2	4	< 0.1	NR	82	4	23.0	4	78.5	4
142	2.1	3			30.8	4	82	4	19.5	4	72.0	4
144			21.0	0							350.0	0
146	10.1	0	4.5	4	67.6	0	75	2	43.6	0	96.1	2
180	26.6	0	24.9	0					46.6	0	84.0	4
190												NR
202	2.6	4	5.5	4							68.0	4
204			6.4	4							43.8	1
210	< 5.0	NR	< 5.0	NR	22.3	3	20	0	< 50	NR	130.0	0
212	2.9	4	1.7	1	33.7	4	82	4	23.1	4	75.0	4

Table 13. *—Statistical summary of reported data for standard reference sample T-127 (trace constituents)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

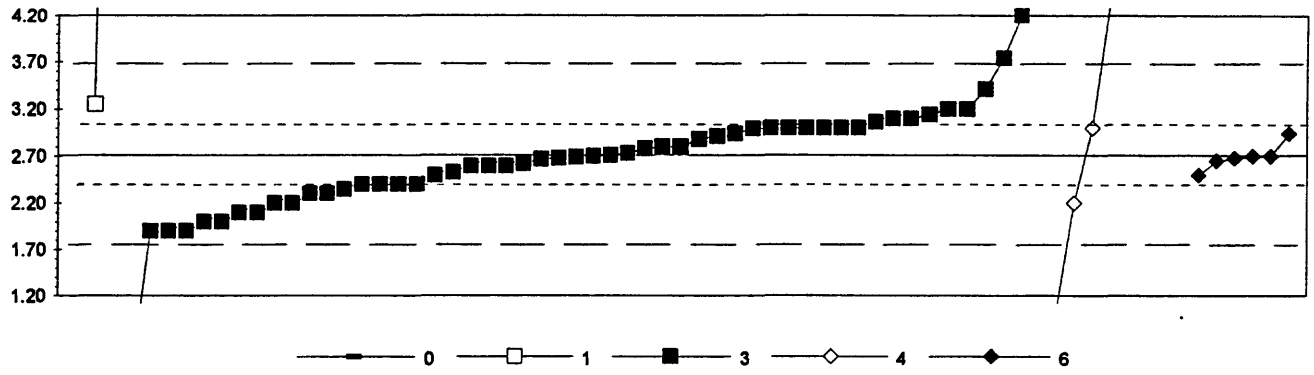
0. Other/Not reported		
1. AA: direct, air	=	atomic absorption: direct,air
2. AA: direct, N2O	=	atomic absorption: direct,nitrous oxide
3. AA: graphite furnace	=	atomic absorption: graphite furnace
4. ICP	=	inductively coupled plasma
5. DCP	=	direct current plasma
6. ICP/MS	=	inductively coupled plasma/mass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

Abbreviations and symbols

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

Table 13. *Statistical summary of reported data for standard reference water sample T-127 (trace constituents)--Continued*

Ag (Silver) **µ g/L**



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

	1	2	52	8	6
N =					
Minimum =	6.60	3.25	0.30	1.00	2.50
Maximum =		15.00	8.10	5.40	2.94
Median =			2.70		
St Dev =			0.469		

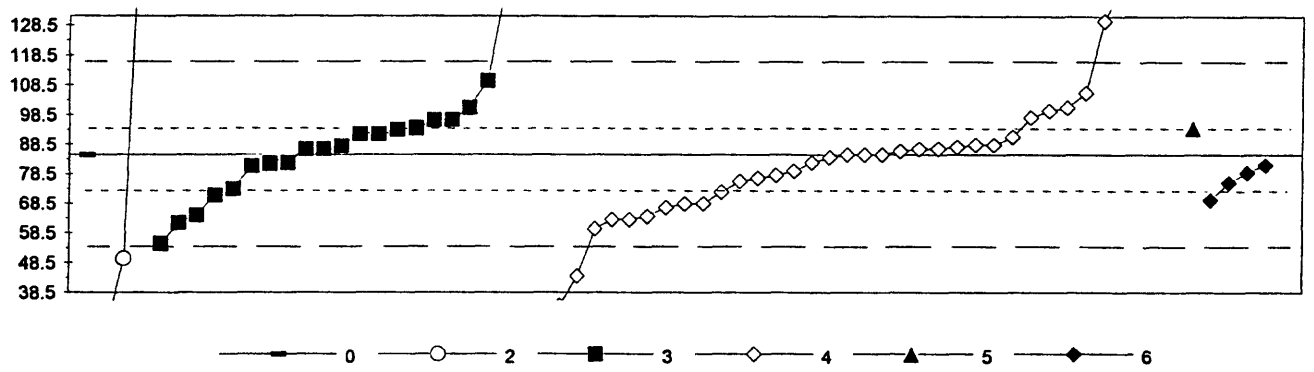
MPV =	2.71
F-pseudosigma =	0.489
N =	69
Hu =	3.06
HI =	2.40

Lab	Rating	Z-value	0	1	3	4	6
1	4	0.04			2.73		
3	2	-1.25			2.10		
5	NR					< 4	
7	3	0.59			3.00		
8	NR					< 5	
12	3	-0.63			2.40		
13	2	-1.25			2.10		
15	NR					< 10	
16	NR					< 7	
18	NR					< 3	
23	0	2.11			3.74		
24	3	0.59			3.00		
25	NR					< 6	
29	4	-0.18			2.62		
30	4	0.47					2.94
32	4	-0.43					2.50
39	4	-0.02					2.70
42	4	-0.12					2.65
45	4	-0.08			2.67		
46	3	-0.63			2.40		
48	3	-0.84			2.30		
50	3	0.59			3.00		
52	4	-0.04			2.69		
55	1	-1.66			1.90		
57	2	-1.04			2.20		
58	0	11.02			8.10		
60	3	1.00			3.20		
61	NR					< 5	
63	1	-1.66			1.90		
68	0	-4.93			0.30		
69	4	-0.06			2.68		
70	3	-0.84			2.30		
72	2	-1.04				2.20	
73	0	5.50				5.40	
75	NR					< 5	
76	4	0.47			2.94		
78	4	-0.22			2.60		
79	3	-0.63			2.40		
85	NR			< 5			
86	0	3.68				4.51	
87	NR			< 2			
89	4	0.41			2.91		
94	NR					< 5	
96	4	-0.22			2.60		
97	3	0.72			3.06		
102	0	-3.50				1.00	
105	4	-0.02					2.70
107	4	-0.22			2.60		
114	NR			< 10			
117	3	0.88			3.14		

Lab	Rating	Z-value	0	1	3	4	6
118	4	0.18			2.80		
119	4	0.18			2.80		
120	1	-1.66			1.90		
122	0	3.05			4.20		
127	4	0.14			2.78		
131	3	0.59				3.00	
133	0	4.23				4.78	
134	4	-0.02			2.70		
138	3	0.57			2.99		
141	NR					< 10	
142	2	-1.45			2.00		
144	2	-1.04			2.20		
146	0	3.45				4.40	
149	2	-1.45			2.00		
153	3	0.80			3.10		
154	3	0.80			3.10		
179	0	-3.50			< 1		
180	0	5.09				5.20	
182	0	25.12		15.00			
183	3	1.00			3.20		
190	4	-0.37			2.53		
193	3	0.59			3.00		
194	3	0.59			3.00		
196	4	-0.06					2.68
198	4	0.00			2.71		
202	4	-0.43			2.50		
203	2	1.10		3.25			
204	4	0.35			2.88		
210	3	-0.74			2.35		
211	3	0.59			3.00		
212	0	7.95	6.60				
213	NR				< 2		
217	3	-0.63			2.40		
221	2	1.43			3.41		

Table 13. *Statistical summary of reported data for standard reference water sample T-127 (trace constituents)–Continued*

Al (Aluminum) **µ g/L**



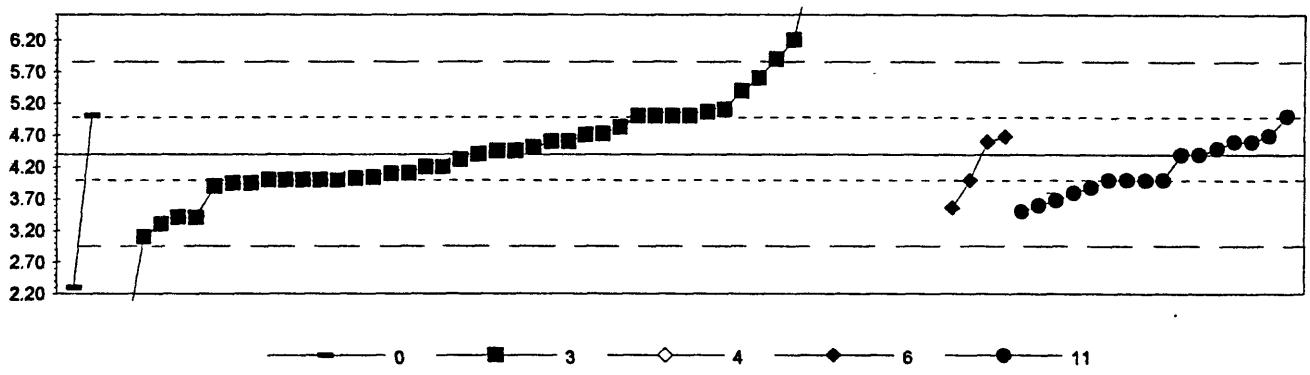
0. Other				4. ICP				
2. AA: direct nitrous oxide				5. DCP				
3. AA: graphite furnace				6. ICP/MS				
N =	1	3	21	36	1	4		
Minimum =	85.0	25.0	55.0	10.0	94.0	69.7		
Maximum =		200.0	200.0	210.0		81.6		
Median =			87.0	84.5				
St Dev =			14.20	16.46				

MPV = 85.0
F-pseudosigma = 15.49
N = 66
Hu = 93.8
Hl = 72.9

Lab	Rating	Z-value	0	2	3	4	5	6
1	4	-0.36				79.4		
3	3	0.97				100.0		
5	4	0.07				86.1		
7	4	0.00				85.0		
8	2	-1.36				64.0		
11	2	1.03				101.0		
12	NR					< 100		
13	3	-0.74			73.5			
15	3	0.82				97.7		
16	0	6.07				179.0		
18	2	-1.16				67.0		
23	3	0.76			96.8			
24	4	0.45			92.0			
25	0	-3.29				34.0		
29	0	7.42		200.0				
30	3	-0.99						69.7
32	3	-0.61						75.6
33	3	0.58					94.0	
39	4	0.00				85.0		
42	4	-0.39						79.0
45	2	-1.07				68.5		
46	3	-0.52				77.0		
48	4	-0.25			81.2			
50	3	0.77			97.0			
51	1	-1.94			55.0			
52	4	0.21				88.3		
55	4	0.19			88.0			
57	NR					< 200		
58	2	-1.32			64.6			
59	NR					< 100		
61	0	-2.65				44.0		
63	0	2.90				130.0		
68	0	6.13				180.0		
69	1	1.61			110.0			
70	NR					< 100		
72	4	-0.17				82.3		
75	4	0.00				85.0		
78	3	0.56			93.6			
83	4	0.12				86.9		
85	4	0.22				88.4		
89	4	-0.19			82.0			
94	4	-0.45				78.0		
97	4	-0.18			82.2			
102	2	-1.42				63.0		
105	4	-0.06				84.0		
107	4	0.45			92.0			
114	0	-2.26		50.0				
119	3	0.58			94.0			
120	2	-1.48			62.0			
121	2	1.03			101.0			
122	0	3.70			142.3			
127	1	-1.63				59.8		
131	0	-4.84				10.0		
134	4	0.39				91.0		
138	4	0.17				87.6		
141	2	1.36				106.0		
142	4	0.14				87.1		
145	NR					< 179		
146	3	-0.82				72.3		
154	0	3.68				142.0		
180	2	-1.08				68.3		
182	0	-3.87		25.0				
194	NR					< 500		
196	4	-0.22						81.6
198	4	0.12			86.9			
202	2	-1.42				63.0		
203	4	0.13			87.0			
204	3	-0.88			71.3			
210	0	8.07				210.0		
211	3	-0.58				76.0		
212	4	0.00	85.0					
217	NR					< 100		
221	0	7.42			200.0			

Table 13. *--Statistical summary of reported data for standard reference water sample T-127 (trace constituents)--Continued*

As (Arsenic) **µ g/L**



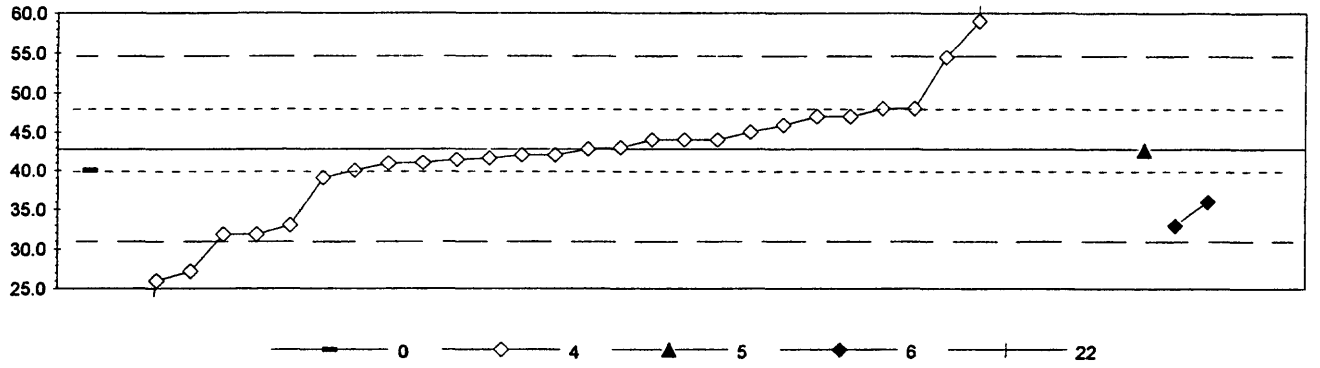
0. Other			6. ICP/MS				
3. AA: graphite furnace			11. AA: hydride				
4. ICP							
	N =	2	47	1	4	16	
	Minimum =	2.30	1.42	25.00	3.56	3.50	
	Maximum =	5.00	41.00		4.68	5.00	
	Median =		4.45			4.00	
	St Dev =		6.711			0.439	

MPV =	4.40
F-pseudosigma =	0.741
N =	70
Hu =	5.00
Hl =	4.00

Lab	Rating	Z-value	0	3	4	6	11
1	4	0.00					4.40
3	3	0.94		5.10			
5	NR				< 80		
7	4	0.00		4.40			
8	3	-0.54					4.00
12	NR			< 10			
13	NR			< 5			
15	4	-0.49		4.04			
16	NR			< 5			
18	4	-0.50		4.03			
23	4	0.07		4.45			
24	0	2.43		6.20			
25	NR				< 50		
27	0	7.08		9.65			
29	0	5.40		8.40			
32	4	0.27				4.60	
34	4	0.12					4.49
35	2	-1.08					3.60
39	2	-1.21					3.50
42	3	-0.54				4.00	
45	3	-0.54		4.00			
46	4	0.40		4.70			
48	0	4.05		7.40			
51	0	30.62		27.10			
52	3	0.89		5.06			
55	3	0.81		5.00			
57	4	0.27					4.60
58	3	-0.97					3.68
59	NR				< 5		
60	1	-1.75		3.10			
61	2	1.35		5.40			
63	NR			< 5			
69	4	0.27		4.60			
70	3	-0.54		4.00			
72	3	-0.54		4.00			
75	3	-0.54					4.00
76	4	0.43		4.72			
78	3	0.57		4.82			
79	0	5.67		8.60			
85	3	-0.81					3.80
87	3	0.81					5.00
89	3	-0.70					3.88
94	4	-0.11		4.32			
96	4	-0.27		4.20			
97	4	0.39					4.69
102	NR				< 5		
105	2	-1.13				3.56	
107	4	0.27		4.60			
109	2	-1.35		3.40			
117	0	22.39		21.00			
118	0	-4.02		1.42			
119	3	-0.54					4.00
120	4	0.00					4.40
127	3	-0.67		3.90			
133	0	-3.91		1.50			
134	4	0.27					4.60
138	3	-0.61		3.95			
141	NR				< 50		
142	4	0.07		4.45			
144	4	-0.40		4.10			
145	NR				< 39		
146	1	2.02		5.90			
149	0	49.37		41.00			
154	4	-0.27		4.20			
179	3	0.81		5.00			
180	0	27.79			25.00		
182	3	-0.54					4.00
190	3	-0.61		3.95			
193	3	0.81		5.00			
194	NR			< 10			
196	4	0.38				4.68	
198	4	0.15		4.51			
202	3	-0.54		4.00			
203	4	-0.40		4.10			
204	NR			< 5			
210	NR				< 50		
211	3	-0.54		4.00			
212	0	-2.83	2.30				
213	2	-1.48		3.30			
217	1	1.62		5.60			
219	3	0.81	5.00				
220	2	-1.35		3.40			
221	3	0.81		5.00			

Table 13. *Statistical summary of reported data for standard reference water sample T-127 (trace constituents)--Continued*

B (Boron) µ g/L



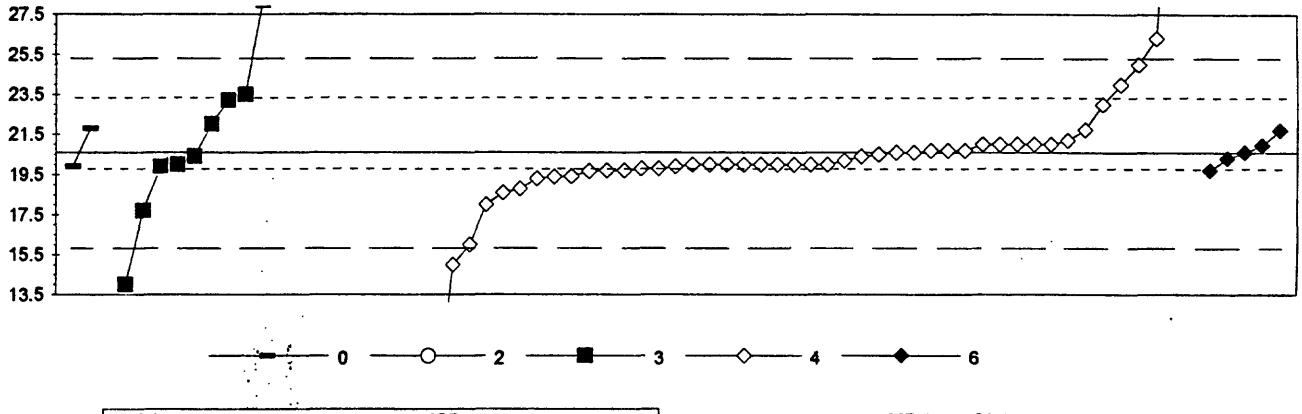
0. Other				6. ICP/MS			
4. ICP				22. Colorimetric			
5. DCP							
	N =	1	31	1	2	2	
	Minimum =	40.0	0.0	42.7	33.0	101.0	
	Maximum =		305.0		36.0	137.6	
	Median =		42.4				
	St Dev =		7.44				

MPV = 42.8
F-pseudosigma = 5.93
N = 37
Hu = 48.0
HI = 40.0

Lab	Rating	Z-value	0	4	5	6	22
1	4	-0.02			42.7		
3	3	0.71		47.0			
4	4	0.03		43.0			
5	4	-0.13		42.0			
8	0	-2.83		26.0			
11	4	0.37		45.0			
15	3	0.52		45.9			
16	0	44.21		305.0			
18	4	0.20		44.0			
24	4	-0.20		41.6			
25	0			< 23			
32	1	-1.65				33.0	
39	3	0.88		48.0			
42	2	-1.15				36.0	
45	1	-1.85		31.8			
46	4	0.00		42.8			
48	0			< 10			
52	NR			< 300			
57	0	18.75		154.0			
61	1	-1.85		31.8			
63	4	-0.13		42.0			
68	0	34.94		250.0			
70	NR			< 50			
85	3	0.88		48.0			
94	3	0.71		47.0			
109	0	-7.21		0.0			
116	4	0.20		44.0			
119	4	0.20		44.0			
127	4	-0.24		41.4			
129	0	9.81					101.0
131	0	24.82		190.0			
134	1	-1.65		33.0			
141	0	2.73		59.0			
142	1	1.97		54.5			
145	3	-0.64		39.0			
146	4	-0.30		41.0			
154	0	-2.63		27.2			
180	4	-0.32		40.9			
182	0	15.99					137.6
194	NR			< 100			
210	NR			< 100			
211	4	-0.47		40.0			
212	4	-0.47	40.0				
217	NR			< 100			

Table 13. *--Statistical summary of reported data for standard reference water sample T-127 (trace constituents)--Continued*

Ba (Barium) **µ g/L**



0. Other				4. ICP				
2. AA: direct nitrous oxide				6. ICP/MS				
3. AA: graphite furnace								
N =	1	1	18	45	1	5		
Minimum =	19.9	82.5	14.0	7.0	21.8	19.7		
Maximum =			77.0	210.0		21.7		
Median =			20.2	20.0				
St Dev =			3.11	1.90				

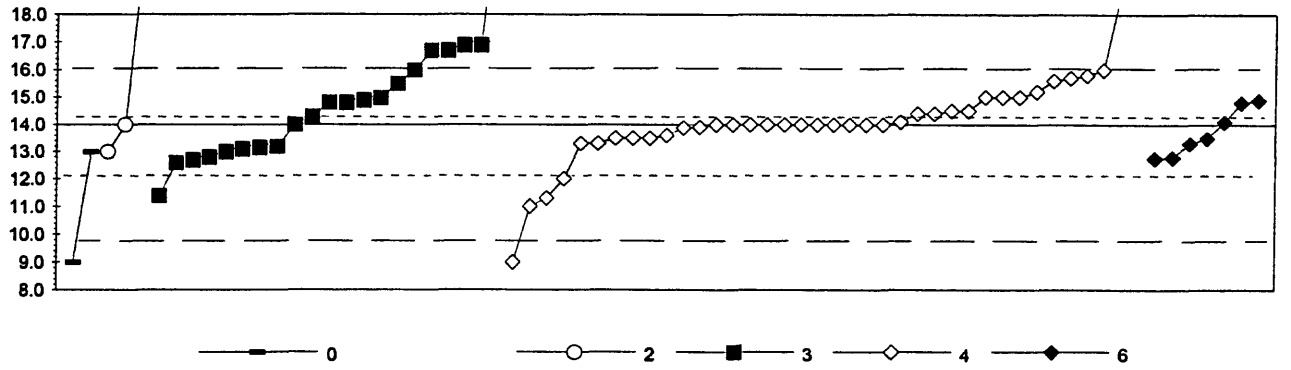
MPV = 20.6
F-pseudosigma = 2.372
N = 71
Hu = 23.1
HI = 19.9

Lab	Rating	Z-value	0	2	3	4	5	6
1	4	-0.39				19.7		
3	4	0.17				21.0		
4	4	0.17				21.0		
5	4	-0.50				19.4		
7	4	-0.04				20.5		
8	4	0.17				21.0		
11	1	-1.94				18.0		
13	0	7.63			38.7			
15	3	-0.76				18.8		
16	1	1.85				25.0		
18	4	-0.25				20.0		
23	2	1.10			23.2			
24	4	0.00				20.6		
25	2	-1.10				18.0		
29	0	26.09		82.5				
30	4	0.00						20.6
32	4	-0.38						19.7
33	3	0.51					21.8	
39	4	0.46						21.7
42	4	-0.13						20.3
45	4	-0.08				20.4		
48	4	-0.08			20.4			
50	NR				< 50			
52	0	3.25			28.3			
55	0	2.40				26.3		
57	NR					< 50		
58	0	3.71			29.4			
59	4	-0.25				20.0		
61	3	-0.55				19.3		
63	2	1.43				24.0		
68	0	79.84				210.0		
69	0	7.34			38.0			
70	4	-0.34				19.8		
72	4	-0.17				20.2		
75	4	-0.25				20.0		
78	3	0.59			22.0			
83	4	-0.38				19.7		
85	4	0.04				20.7		
86	3	-0.84				18.6		
87	NR			< 20				
89	0	23.78			77.0			
90	0	4.55			31.4			
94	4	-0.25				20.0		
96	0	4.43			31.1			
97	2	1.22			23.5			
102	0	-2.36				15.0		
105	4	-0.25				20.0		
107	4	-0.30			19.9			
116	0	-5.73				7.0		
117	0	10.29			45.0			

Lab	Rating	Z-value	0	2	3	4	5	6
119	4	0.17				21.0		
120	0	-2.78			14.0			
121	4	-0.25				20.0		
127	4	-0.30				19.9		
131	4	-0.25				20.0		
133	4	-0.38				19.7		
134	4	0.17				21.0		
138	4	-0.34				19.8		
141	4	0.25				21.2		
142	4	0.48				21.7		
145	4	0.04				20.7		
146	3	-0.51				19.4		
154	4	-0.25				20.0		
180	4	0.00				20.6		
183	2	-1.22			17.7			
193	4	-0.25			20.0			
194	NR					< 100		
196	4	0.15						21.0
198	4	0.04				20.7		
203	0	3.20			28.2			
204	2	1.01				23.0		
210	NR					< 50		
211	0	8.18				40.0		
212	4	-0.30	19.9					
217	4	-0.25				20.0		
221	0	6.28			35.5			

Table 13. *--Statistical summary of reported data for standard reference water sample T-127 (trace constituents)--Continued*

Be (Beryllium) **µ g/L**



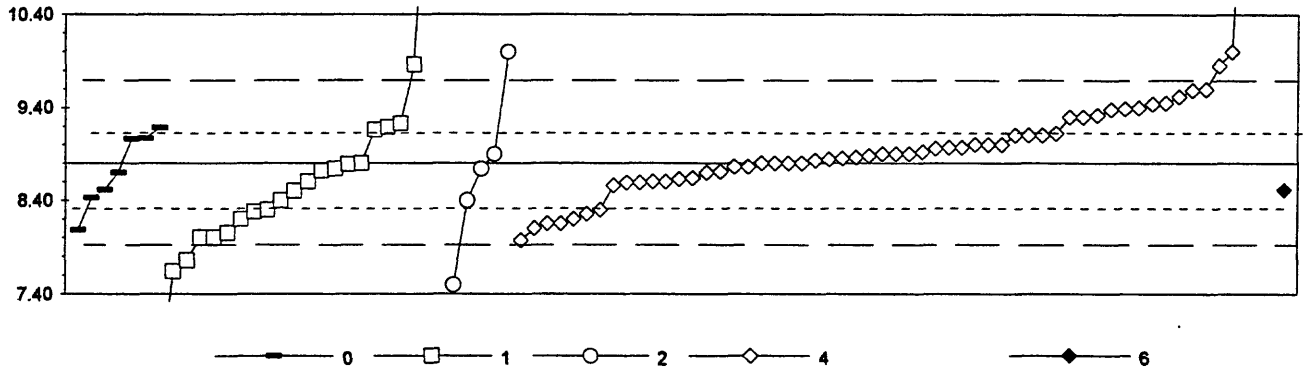
0. Other			3. AA: graphite furnace				
			4. ICP				
2. AA: direct nitrous oxide			6. ICP/MS				
N =	2		3	21	38	7
Minimum =	9.0		13.0	11.4	9.0	12.8
Maximum =	13.0		20.0	22.1	26.0	14.9
Median =				14.6	14.0	13.5
St Dev =				1.66	1.09	0.89

MPV = 14.0
F-pseudosigma = 1.25
N = 71
Hu = 15.0
Hl = 13.3

Lab	Rating	Z-value	0	2	3	4	6
1	3	-0.97					12.8
3	3	0.80				15.0	
4	4	0.00				14.0	
5	4	-0.10				13.9	
7	4	-0.40				13.5	
8	1	-1.60				12.0	
11	4	0.00				14.0	
12	NR					< 20	
15	0	3.67				18.6	
16	1	1.60				16.0	
18	4	0.00				14.0	
23	2	-1.12			12.6		
24	3	0.78			15.0		
25	4	0.32				14.4	
30	3	0.72					14.9
32	3	-0.56					13.3
39	3	0.64					14.8
42	4	-0.40					13.5
45	4	0.40				14.5	
46	3	0.96				15.2	
48	4	0.24			14.3		
52	4	0.00			14.0		
55	2	1.44				15.8	
57	3	-0.80			13.0		
58	0	6.47			22.1		
59	4	0.00				14.0	
60	0	2.16			16.7		
61	4	0.08				14.1	
63	3	0.80				15.0	
68	1	1.60			16.0		
69	3	-0.68			13.2		
70	4	0.00				14.0	
72	4	0.00				14.0	
75	4	0.00				14.0	
76	4	0.08					14.1
78	3	0.72			14.9		
79	0	-2.16				11.3	
83	4	-0.40				13.5	
85	4	0.32				14.4	
86	3	-0.56				13.3	
94	4	0.00				14.0	
97	3	-0.72			13.1		
102	0	-3.99				9.0	
105	4	0.00				14.0	
109	0	-4.03	9.0				
114	0	4.79		20.0			
117	0	2.31			16.9		
119	3	0.64			14.8		
120	0	2.16			16.7		
127	4	0.00				14.0	
133	4	-0.40				13.5	
138	2	1.28				15.6	
141	4	-0.08				13.9	
142	4	-0.32				13.6	
144	3	-0.80		13.0			
145	2	1.36				15.7	
146	3	-0.56				13.3	
149	0	-2.08			11.4		
154	3	-0.96			12.8		
179	3	-0.64			13.2		
180	4	0.00				14.0	
182	4	0.00		14.0			
183	0	2.31			16.9		
194	3	0.64			14.8		
196	3	-0.99					12.8
198	2	-1.04			12.7		
202	4	0.40				14.5	
210	0	9.58				26.0	
211	0	-2.39				11.0	
212	3	-0.80	13.0				
213	2	1.20			15.5		
217	3	0.80				15.0	

Table 13. *--Statistical summary of reported data for standard reference water sample T-127 (trace constituents)--Continued*

Ca (Calcium) m g/L



0. Other			4. ICP				
1. AA: direct air			6. ICP/MS				
2. AA: direct nitrous oxide							
	N =	7	23	5	55	1	
	Minimum =	8.08	5.15	7.50	7.97	8.51	
	Maximum =	9.18	18.12	10.00	12.80		
	Median =	8.70	8.50		8.89		
	St Dev =		0.564		0.438		

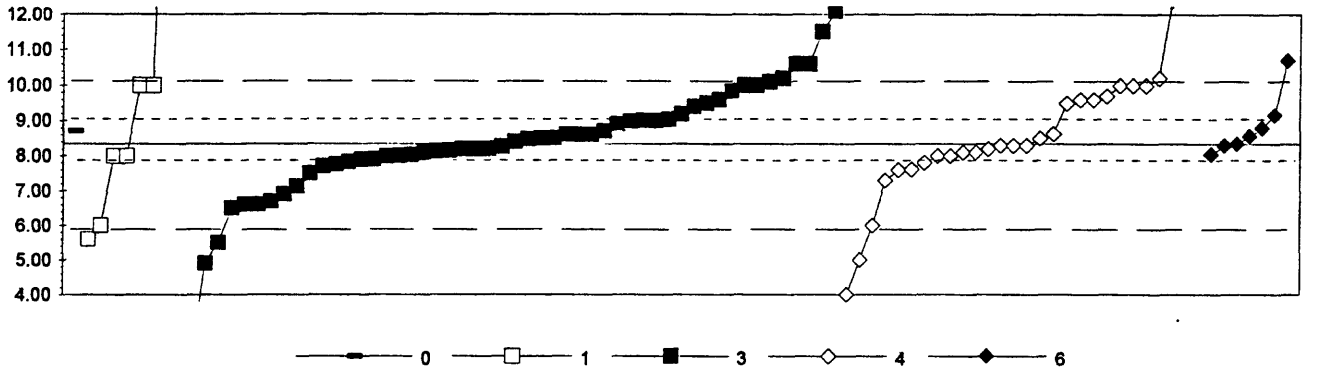
MPV =	8.80
F-pseudosigma =	0.448
N =	91
Hu =	9.11
Hl =	8.51

Lab	Rating	Z-value	0	1	2	4	6
1	4	-0.02		8.79			
3	3	0.67				9.10	
4	4	0.00				8.80	
5	2	-1.22				8.25	
7	4	0.11				8.85	
8	4	0.22				8.90	
9	1	-1.78		8.00			
11	1	1.76				9.59	
12	0	2.68				10.00	
13	3	-0.89		8.40			
15	4	-0.38				8.63	
16	4	0.22				8.90	
18	4	0.38				8.97	
19	4	-0.09				8.76	
23	0	7.80		12.30			
24	4	0.13				8.86	
25	2	1.32				9.39	
27	3	-0.65	8.51				
32	3	-0.65					8.51
33	3	0.60	9.07				
39	1	1.61				9.52	
42	3	0.67				9.10	
43	4	0.45				9.00	
45	3	-0.83	8.43				
46	3	0.67				9.10	
48	2	1.11				9.30	
51	2	-1.45				8.15	
52	4	-0.20				8.71	
54	4	0.00		8.80			
55	4	-0.47				8.59	
57	4	0.45				9.00	
58	0	-2.32		7.76			
59	2	-1.11				8.30	
61	4	0.38				8.97	
63	0	2.34				9.85	
68	4	0.45				9.00	
69	2	-1.34		8.20			
70	3	0.71				9.12	
72	0	8.92				12.80	
75	4	0.22				8.90	
76	3	0.80		9.16			
78	3	-0.67		8.50			
83	3	-0.54				8.56	
84	4	-0.18		8.72			
85	4	-0.13		8.74			
86	4	0.18				8.88	
87	0	-2.90			7.50		
89	3	0.96		9.23			
94	4	0.09				8.84	
97	2	-1.16		8.28			

Lab	Rating	Z-value	0	1	2	4	6
102	1	-1.56				8.10	
105	4	-0.45				8.60	
107	2	-1.11		8.30			
109	3	0.85	9.18				
114	0	2.68			10.00		
116	2	1.45				9.45	
117	0	-2.59		7.64			
119	4	-0.36				8.64	
120	0	20.78		18.12			
121	4	0.00				8.80	
127	4	-0.22				8.70	
129	1	-1.78		8.00			
131	1	1.78				9.60	
133	2	-1.45				8.15	
134	4	-0.47				8.59	
136	1	-1.61	8.08				
138	2	1.29				9.38	
140	4	-0.45		8.60			
141	2	1.16				9.32	
142	2	1.43				9.44	
145	2	1.34				9.40	
146	1	-1.85				7.97	
149	0	-5.57		6.30			
154	4	-0.09				8.76	
179	1	-1.67		8.05			
180	4	0.07				8.83	
182	4	0.22			8.90		
185	4	-0.13			8.74		
190	3	0.58	9.06				
193	3	-0.89			8.40		
194	4	0.00				8.80	
196	3	0.87		9.19			
198	4	0.36				8.96	
202	4	-0.45				8.60	
203	0	2.36		9.86			
204	4	0.27				8.92	
210	2	-1.34				8.20	
211	2	1.11				9.30	
212	4	-0.22	8.70				
217	4	0.00				8.80	
221	0	-8.14		5.15			

Table 13. *--Statistical summary of reported data for standard reference water sample T-127 (trace constituents)--Continued*

Cd (Cadmium) **µ g/L**



0. Other			4. ICP			
1. AA: direct air			6. ICP/MS			
3. AA: graphite furnace						
N =	1	7	52	28	7	
Minimum =	8.70	5.60	1.29	4.00	8.05	
Maximum =		21.30	12.10	17.00	10.70	
Median =		8.00	8.40	8.30	8.56	
St Dev =		1.883	1.288	1.276	0.896	

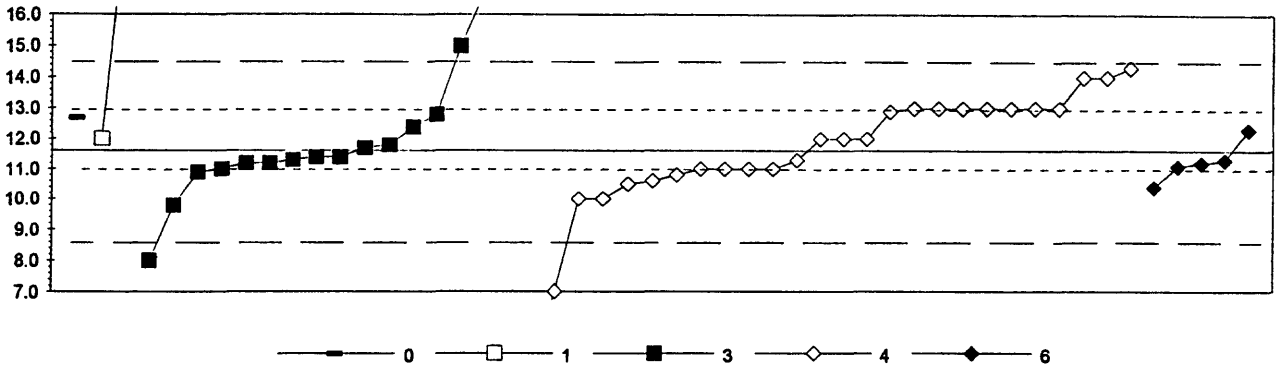
MPV = 8.34
F-pseudosigma = 1.227
N = 95
Hu = 9.55
Hl = 7.90

Lab	Rating	Z-value	0	1	3	4	6
1	4	0.18					8.56
3	3	0.54			9.00		
4	0	-3.54				4.00	
5	4	0.24				8.63	
7	2	1.03			9.60		
8	2	1.35				10.00	
9	4	0.21			8.60		
11	4	-0.28				8.00	
12	4	0.21			8.60		
13	2	-1.50			6.50		
15	NR					< 10	
16	0	6.24				16.00	
18	0	-5.75			1.29		
19	3	-0.85				7.30	
23	1	1.52			10.20		
24	4	-0.11				8.20	
25	2	1.35				10.00	
29	3	-0.68			7.50		
30	1	1.92					10.70
32	4	-0.03					8.30
39	4	0.37					8.80
42	4	-0.24					8.05
45	4	0.11			8.47		
46	4	-0.15			8.15		
48	4	-0.28			8.00		
50	2	1.35			10.00		
51	0	3.06			12.10		
52	4	-0.37			7.89		
55	4	0.46			8.90		
57	3	0.86			9.40		
58	2	1.43			10.10		
59	4	-0.28				8.00	
60	4	0.13			8.50		
61	0	3.31				12.40	
63	2	-1.17			6.90		
68	0	-2.31			5.50		
69	4	-0.29			7.98		
70	2	-1.42			6.60		
72	4	-0.20				8.10	
73	4	-0.20				8.10	
75	4	0.13				8.50	
76	4	-0.42			7.83		
78	4	-0.11			8.20		
79	4	0.21			8.60		
80	2	1.35		10.00			
83	4	-0.03				8.30	
85	0	-2.23		5.60			
86	4	-0.44				7.80	
87	4	-0.28		8.00			
89	3	0.51			8.97		

Lab	Rating	Z-value	0	1	3	4	6
94	4	-0.03				8.30	
96	4	-0.36			7.90		
97	3	0.68			9.18		
102	0	-2.72				5.00	
105	4	0.00					8.34
107	0	-5.12			2.06		
108	4	-0.20			8.10		
111	4	0.05			8.40		
114	2	1.35		10.00			
117	0	2.58			11.50		
118	2	1.22			9.84		
119	4	0.29			8.70		
120	3	-0.52			7.70		
121	2	1.35			10.00		
127	3	-0.59				7.62	
131	1	-1.91				6.00	
133	1	1.52				10.20	
134	3	0.95			9.50		
138	4	-0.07			8.26		
140	1	-1.91		6.00			
141	2	1.03				9.60	
142	4	-0.11			8.20		
144	4	-0.11			8.20		
145	2	1.11				9.70	
146	3	0.95				9.50	
154	4	0.13			8.50		
158	2	-1.42			6.60		
179	2	-1.34			6.70		
180	4	-0.03				8.30	
183	1	1.84			10.60		
190	3	0.57			9.04		
193	4	-0.28		8.00			
194	3	0.54			9.00		
196	3	0.68					9.17
198	4	-0.47			7.76		
202	2	1.03				9.60	
203	0	-2.80			4.90		
204	3	-0.99			7.13		
210	0	7.06				17.00	
211	2	1.35				10.00	
212	4	0.29	8.70				
213	4	-0.17			8.13		
216	0	10.56		21.30			
217	3	-0.60				7.60	
220	4	-0.25			8.03		
221	1	1.84			10.60		

Table 13. --*Statistical summary of reported data for standard reference water sample T-127 (trace constituents)--Continued*

Co (Cobalt) **µ g/L**



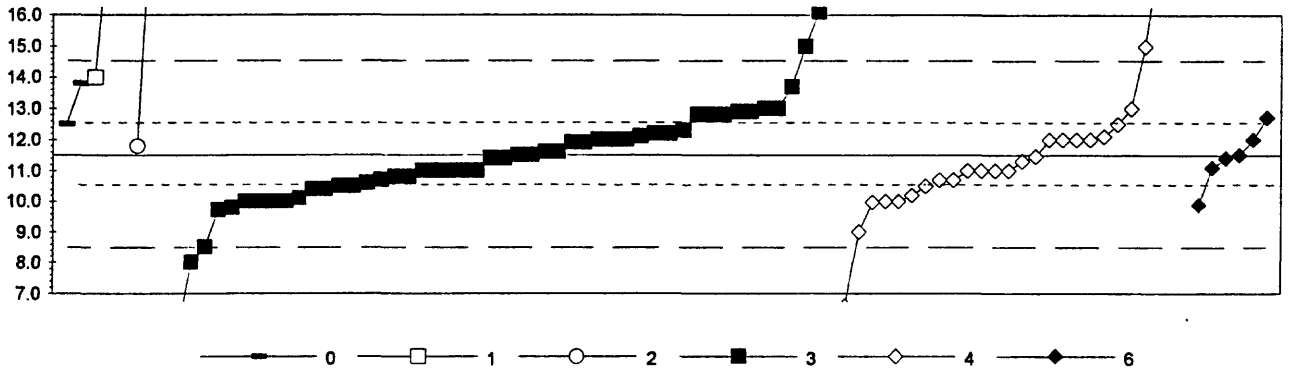
0. Other			4. ICP			
1. AA: direct air			6. ICP/MS			
3. AA: graphite furnace						
N =	1	2	16	26	5	
Minimum =	12.7	12.0	8.0	4.6	10.4	
Maximum =		20.0	29.0	14.3	12.3	
Median =			11.4	12.0		
St Dev =			1.54	1.31		

MPV = 11.6
F-pseudosigma = 1.48
N = 50
Hu = 13.0
HI = 11.0

Lab	Rating	Z-value	0	1	3	4	6
1	4	-0.17			11.3		
3	1	1.65				14.0	
5	4	-0.18				11.3	
7	4	-0.37				11.0	
8	4	-0.37				11.0	
11	3	0.98				13.0	
15	4	-0.24			11.2		
16	1	1.65				14.0	
18	3	0.98				13.0	
24	3	0.91				12.9	
25	3	0.98				13.0	
30	3	-0.78					10.4
32	4	-0.24					11.2
39	4	-0.17					11.3
42	4	-0.30					11.1
48	NR					< 50	
50	0	2.33			15.0		
51	3	0.57			12.4		
52	4	-0.44			10.9		
55	2	-1.18			9.8		
57	NR				< 40		
58	4	0.10			11.7		
61	2	-1.05				10.0	
63	0	5.70		20.0			
68	3	0.98				13.0	
70	NR					< 50	
72	0	-4.69				4.6	
75	4	0.30				12.0	
85	3	0.98				13.0	
86	3	-0.64				10.6	
89	0	11.77			29.0		
94	4	-0.37				11.0	
97	4	-0.24			11.2		
102	0	-3.07				7.0	
105	3	0.98				13.0	
121	4	-0.37			11.0		
127	4	-0.10			11.4		
131	4	0.30				12.0	
134	3	0.84			12.8		
138	4	0.17			11.8		
141	4	-0.37				11.0	
145	1	1.85				14.3	
146	3	-0.71				10.5	
154	3	0.98				13.0	
180	3	-0.51				10.8	
190	4	-0.10			11.4		
193	4	0.30		12.0			
196	3	0.51					12.3
210	NR					< 50	
211	4	0.30				12.0	
212	3	0.78	12.7				
213	0	-2.39			8.0		
217	2	-1.05				10.0	
221	0	3.54			16.8		

Table 13. *--Statistical summary of reported data for standard reference water sample T-127 (trace constituents)--Continued*

Cr (Chromium) µ g/L



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

	0	1	2	3	4	6
N =	2	3	2	50	26	6
Minimum =	12.5	14.0	11.8	0.2	6.6	9.9
Maximum =	13.8	95.0	20.0	18.4	10000	12.7
Median =				11.4	11.0	
St Dev =				1.33	1.27	

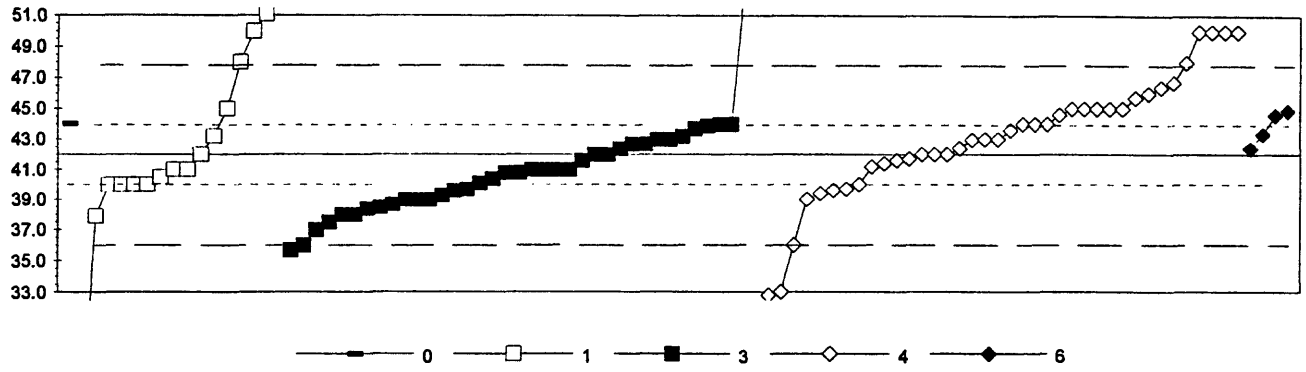
MPV = 11.5
F-pseudosigma = 1.48
N = 89
Hu = 12.5
HI = 10.5

Lab	Rating	Z-value	0	1	2	3	4	6
1	3	-0.67				10.5		
3	2	-1.01					10.0	
4	0	6737.24					10000	
5	4	-0.03					11.5	
7	4	-0.13					11.3	
8	1	-1.69					9.0	
9	4	-0.47				10.8		
12	NR						< 20	
13	0	3.10				16.1		
15	4	-0.07				11.4		
16	0	4.38					18.0	
18	4	0.34					12.0	
19	3	-0.54					10.7	
23	0	-7.63				0.2		
24	3	-0.67					10.5	
25	4	0.34					12.0	
29	3	0.88				12.8		
30	2	-1.09						9.9
32	4	-0.27						11.1
39	4	0.34						12.0
42	4	-0.07						11.4
45	4	0.34				12.0		
46	3	-0.61				10.6		
48	2	-1.15				9.8		
50	0	2.36				15.0		
51	3	0.94				12.9		
52	4	0.00				11.5		
55	3	-0.74				10.4		
57	4	-0.34				11.0		
58	3	0.94				12.9		
59	4	-0.34					11.0	
60	3	0.54				12.3		
61	0	-3.31					6.6	
63	4	-0.34				11.0		
68	4	0.34					12.0	
69	4	0.40				12.1		
70	3	0.67					12.5	
72	3	-0.54					10.7	
75	4	0.34				12.0		
76	4	-0.47				10.8		
78	4	0.07				11.6		
79	4	0.34				12.0		
85	NR						< 20	
86	3	-0.88					10.2	
87	4	0.20			11.8			
89	2	1.48				13.7		
90	4	-0.34				11.0		
94	4	-0.34					11.0	
96	4	0.47				12.2		
97	4	0.07				11.6		

Lab	Rating	Z-value	0	1	2	3	4	6
102	0	2.36					15.0	
105	4	0.00						11.5
107	3	0.88				12.8		
108	2	-1.01				10.0		
111	4	-0.07				11.4		
114	0	5.73			20.0			
117	0	-2.36				8.0		
118	0	-3.91				5.7		
119	4	0.27				11.9		
120	3	-0.54				10.7		
127	4	0.00				11.5		
131	4	-0.34					11.0	
133	2	-1.03					10.0	
134	3	0.67	12.5					
138	4	-0.34				11.0		
140	1	1.69		14.0				
141	2	1.01					13.0	
142	2	-1.01				10.0		
144	3	-0.67				10.5		
145	NR						< 14	
146	4	0.40					12.1	
153	3	0.88				12.8		
158	3	-0.94				10.1		
179	2	1.01				13.0		
180	4	-0.34					11.0	
182	0	56.32		95.0				
183	1	-2.02				8.5		
190	3	-0.74				10.4		
193	2	-1.01				10.0		
194	2	1.01				13.0		
196	3	0.82						12.7
198	4	-0.34				11.0		
202	4	0.34					12.0	
203	4	0.27				11.9		
204	2	-1.20				9.7		
210	0	457.65					690.0	
211	2	-1.01					10.0	
212	1	1.55	13.8					
213	4	0.47				12.2		
216	0	5.19		19.2				
217	2	-1.01				10.0		
221	0	4.65				18.4		

Table 13. *--Statistical summary of reported data for standard reference water sample T-127 (trace constituents)--Continued*

Cu (Copper) **µ g/L**



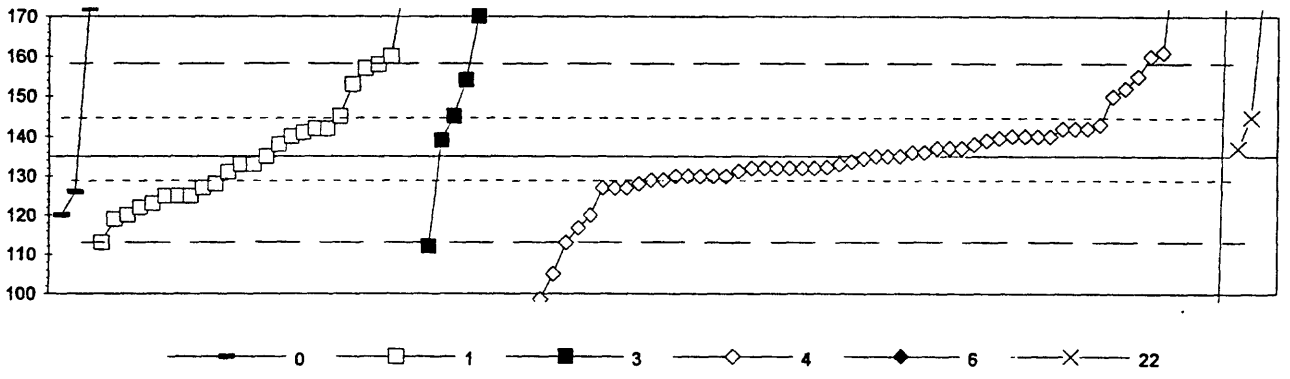
0. Other			4. ICP		
1. AA: direct air			6. ICP/MS		
3. AA: graphite furnace					
N =	1	16	38	38	4
Minimum =	44.0	25.0	35.7	32.8	42.4
Maximum =		96.5	84.3	50.0	44.9
Median =		41.0	40.8	43.8	
St Dev =		3.50	2.30	3.34	

MPV = 42.0
F-pseudosigma = 2.97
N = 97
Hu = 44.0
Hl = 40.0

Lab	Rating	Z-value	0	1	3	4	6
1	4	0.24			42.7		
3	0	2.70				50.0	
5	4	0.32				43.0	
7	4	-0.20				41.4	
8	4	0.00				42.0	
9	4	0.34			43.0		
11	2	1.01				45.0	
12	4	-0.34			41.0		
13	1	-1.52			37.5		
15	3	-0.91			39.3		
16	2	1.01				45.0	
18	3	0.67				44.0	
23	1	-1.69			37.0		
24	2	1.01				45.0	
25	4	0.34				43.0	
29	3	-0.67		40.0			
30	3	0.98					44.9
32	3	0.88					44.6
39	2	1.01				45.0	
42	4	0.13					42.4
45	3	-0.78			39.7		
46	3	-0.54			40.4		
48	0	2.70				50.0	
50	4	0.34			43.0		
51	3	0.67			44.0		
52	3	0.54				43.6	
55	4	-0.27				41.2	
57	0	2.70		50.0			
58	4	-0.34			41.0		
59	2	1.01				45.0	
60	3	0.57			43.7		
61	2	1.48				46.4	
63	2	-1.01			39.0		
68	0	2.70				50.0	
69	4	0.00			42.0		
70	4	0.13				42.4	
72	3	-0.88				39.4	
73	0	2.70				50.0	
75	4	0.00				42.0	
76	2	-1.38		37.9			
78	4	-0.40			40.8		
79	2	-1.01			39.0		
80	2	-1.01			39.0		
83	4	-0.10				41.7	
85	4	0.40		43.2			
86	3	-0.81				39.6	
87	4	0.00		42.0			
89	2	-1.35			38.0		
94	4	0.00				42.0	
96	3	-0.64			40.1		
97	4	-0.34			41.0		
102	0	-3.04				33.0	
105	3	0.67				44.0	
107	3	0.67			44.0		
108	3	-0.67		40.0			
111	0	-2.12			35.7		
114	3	-0.67		40.0			
117	0	18.38		96.5			
118	4	0.13			42.4		
119	4	0.34				43.0	
120	2	-1.18			38.5		
121	4	0.00			42.0		
127	3	0.64			43.9		
131	1	2.02				48.0	
133	0	-3.10				32.8	
134	4	0.24			42.7		
138	3	0.88				44.6	
140	1	2.02		48.0			
141	2	1.25				45.7	
142	3	-0.67				40.0	
144	4	-0.40			40.8		
145	1	1.59				46.7	
146	3	-0.78				39.7	
149	2	1.01		45.0			
153	4	0.40			43.2		
154	2	-1.35			38.0		
158	1	-2.02			36.0		
179	3	-0.81			39.6		
180	4	-0.13				41.6	
182	0	-5.73		25.0			
183	4	-0.13			41.6		
190	2	-1.21			38.4		
193	4	-0.34		41.0			
194	4	-0.34		41.0			
196	4	0.46					43.4
198	3	0.67				44.0	
202	2	1.35				46.0	
203	3	-0.51		40.5			
204	2	-1.11			38.7		
210	0	14.27			84.3		
211	1	-2.02				36.0	
212	3	0.67	44.0				
213	3	-0.67		40.0			
216	0	3.07		51.1			
217	2	-1.01				39.0	
220	4	-0.34			41.0		
221	0	3.81			53.3		

Table 13. *--Statistical summary of reported data for standard reference water sample T-127 (trace constituents)--Continued*

Fe (Iron) **µ g/L**



0. Other			4. ICP					
1. AA: direct air			6. ICP/MS					
3. AA: graphite furnace			22. Colorimetric					
N =	3	26	8	55	2	3		
Minimum =	120	113	112	40	12	137		
Maximum =	172	450	189	2800	174	180		
Median =		133		134				
St Dev =		13.1		10.1				

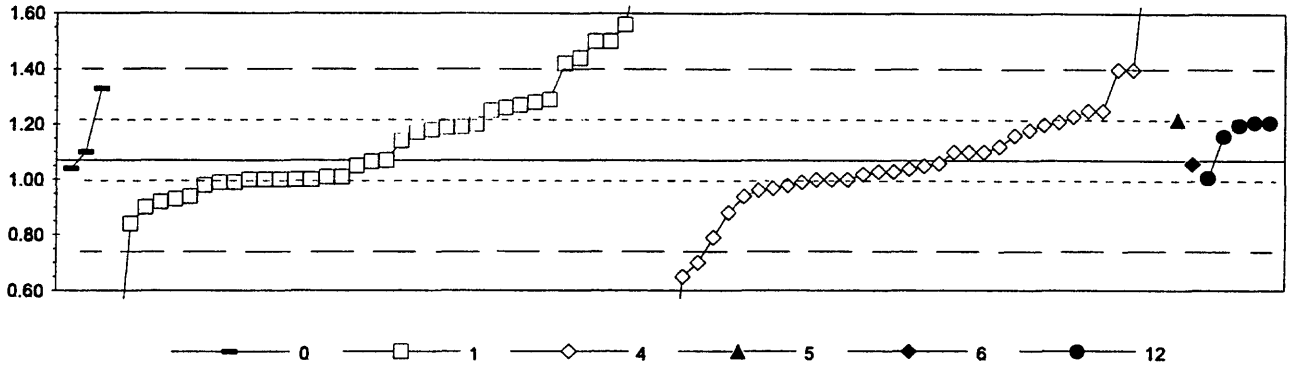
MPV =	135
F-pseudosigma =	11.7
N =	97
Hu =	145
HI =	129

Lab	Rating	Z-value	0	1	3	4	6	22
1	4	-0.32				131		
3	2	-1.28				120		
4	0	2.22				161		
5	4	-0.05				134		
7	4	0.00				135		
8	0	-2.56				105		
9	4	-0.17		133				
11	0	4.61				189		
12	4	-0.43				130		
13	4	0.26		138				
15	3	-0.51				129		
16	2	1.28				150		
18	4	0.17				137		
19	4	-0.23				132		
21	4	0.17						137
23	3	0.51		141				
24	4	-0.26				132		
25	0	-8.11				40		
30	0	-10.54					12	
32	0	3.33					174	
33	3	-0.77	126					
39	3	0.60				142		
42	3	0.60				142		
43	4	0.00				135		
45	3	-0.60		128				
46	4	-0.43				130		
48	0	2.13				160		
50	4	0.34			139			
51	0	2.99			170			
52	3	-0.68				127		
55	1	1.71				155		
57	0	3.84		180				
58	2	-1.02		123				
59	4	0.17				137		
61	4	0.38				140		
63	1	1.88		157				
68	4	0.43				140		
69	4	0.00		135				
70	0	-3.11				99		
72	1	-1.88				113		
73	3	0.68				143		
75	4	0.00				135		
76	2	-1.11		122				
78	3	-0.85		125				
80	2	-1.37		119				
83	4	-0.12				134		
85	4	-0.43				130		
86	4	0.34				139		
87	0	3.16	172					
89	1	-1.96			112			

Lab	Rating	Z-value	0	1	3	4	6	22
90	1	1.54		153				
91	4	-0.26				132		
94	4	-0.43				130		
96	3	0.60		142				
97	3	0.85			145			
102	4	-0.26				132		
105	4	-0.43				130		
107	3	-0.85		125				
109	4	-0.17		133				
114	4	0.43		140				
117	4	-0.34		131				
119	4	-0.26				132		
120	0	3.59			177			
121	4	0.43				140		
127	4	-0.17				133		
129	0	3.84						180
131	4	0.26				138		
133	3	-0.68				127		
134	3	-0.60				128		
136	3	0.84						145
138	3	0.60				142		
140	2	-1.28		120				
141	2	1.45				152		
142	4	0.17				137		
145	1	-1.56				117		
146	3	-0.68				127		
149	3	0.60		142				
153	1	1.62			154			
154	4	0.09				136		
179	0	2.13		160				
180	4	-0.26				132		
182	0	26.89		450				
183	3	0.85		145				
190	1	1.96		158				
193	3	-0.68		127				
194	4	0.43				140		
198	4	0.09				136		
202	4	-0.26				132		
203	3	-0.85		125				
204	3	-0.51				129		
210	0	227.54				2800		
211	0	82.39				1100		
212	2	-1.28	120					
213	0	3.67			178			
217	4	0.43				140		
220	1	-1.88		113				
221	0	4.61			189			

Table 13. *--Statistical summary of reported data for standard reference water sample T-127 (trace constituents)--Continued*

K (Potassium) **m g/L**



0. Other			5. DCP					
1. AA: direct air			6. ICP/MS					
4. ICP			12. AA: flame emission					
N =	3	37	34	1	1	5		
Minimum =	1.04	0.17	0.09	1.22	1.06	1.01		
Maximum =	1.33	7.00	1.86			1.21		
Median =		1.07	1.05					
St Dev =		0.191	0.255					

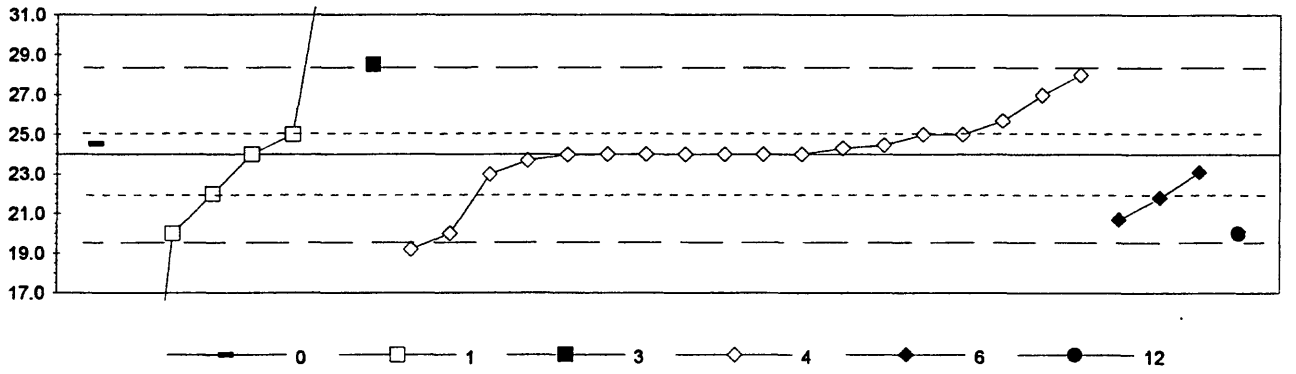
MPV = 1.07
F-pseudosigma = 0.163
N = 81
Hu = 1.22
HI = 1.00

Lab	Rating	Z-value	0	1	4	5	6	12
1	3	0.72		1.19				
3	2	-1.41		0.84				
5	3	0.67			1.18			
7	2	1.10			1.25			
8	4	0.18			1.10			
9	4	-0.43		1.00				
11	4	-0.43			1.00			
12	3	0.80			1.20			
13	4	-0.49		0.99				
15	4	-0.06			1.06			
16	0	4.48		1.80				
18	3	-0.80			0.94			
19	3	0.86			1.21			
23	3	-0.55		0.98				
24	3	-0.55			0.98			
25	0	4.84			1.86			
27	2	1.23		1.27				
32	4	-0.06					1.06	
33	3	0.92				1.22		
39	NR				< 1			
42	2	1.10			1.25			
43	4	0.18			1.10			
45	2	1.17		1.26				
46	4	-0.25			1.03			
48	3	0.55			1.16			
51	3	0.55						1.16
52	3	-0.62			0.97			
54	4	-0.43		1.00				
55	4	-0.18	1.04					
57	0	2.27		1.44				
58	2	1.10		1.25				
59	4	0.18			1.10			
61	0	-6.01			0.09			
63	1	2.02			1.40			
68	1	-1.72			0.79			
69	3	0.80						1.20
70	0	2.64		1.50				
72	3	0.98			1.23			
75	1	2.02			1.40			
76	3	0.67		1.18				
78	4	0.00		1.07				
83	0	2.15		1.42				
85	3	0.74		1.19				
86	4	-0.12			1.05			
87	3	-0.80		0.94				
89	4	-0.12		1.05				
94	4	-0.48			0.99			
97	3	-0.92		0.92				
102	0	-2.58			0.65			
105	4	-0.25			1.03			

Lab	Rating	Z-value	0	1	4	5	6	12
107	2	1.29		1.28				
109	2	1.35		1.29				
114	0	36.36		7.00				
117	3	-0.86		0.93				
119	3	0.61		1.17				
120	4	-0.37		1.01				
127	0	-5.52		0.17				
129	0	2.64		1.50				
131	4	-0.43			1.00			
134	4	-0.43		1.00				
138	4	-0.31			1.02			
140	2	-1.04		0.90				
141	4	-0.43			1.00			
142	3	-0.66			0.96			
145	4	-0.18			1.04			
146	0	-5.03			< 0.25			
149	4	-0.43		1.00				
154	0	-2.27			0.70			
179	4	-0.43		1.00				
180	0	4.84			1.86			
182	4	-0.49		0.99				
185	4	-0.03		1.07				
190	1	1.59	1.33					
193	4	0.43		1.14				
194	0	3.00		1.56				
196	4	-0.37		1.01				
198	4	-0.37						1.01
202	2	-1.17			0.88			
203	3	0.86						1.21
204	3	0.86						1.21
210	NR							< 1
211	4	0.31			1.12			
212	4	0.18	1.10					
217	NR				< 5			
221	3	0.80		1.20				

Table 13. *--Statistical summary of reported data for standard reference water sample T-127 (trace constituents)--Continued*

Li (Lithium) **μ g/L**



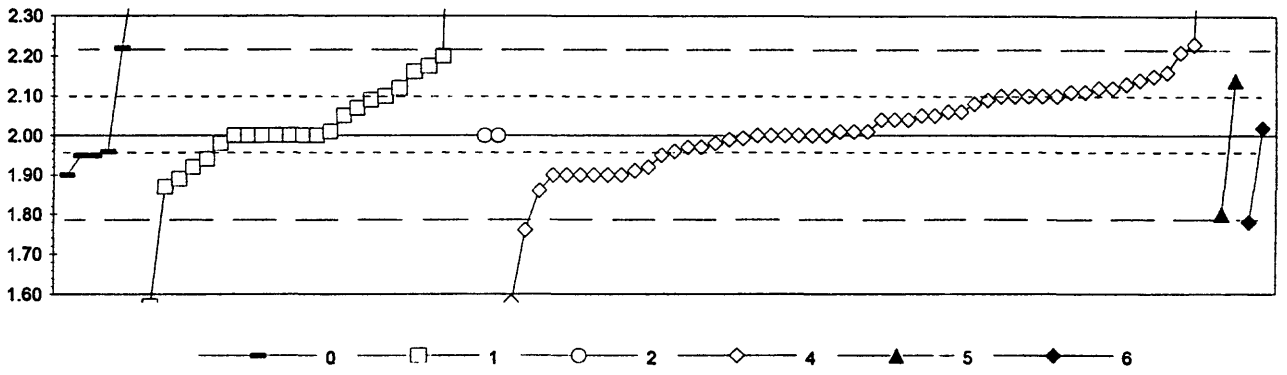
0. Other				4. ICP				
1. AA: direct air				6. ICP/MS				
3. AA: graphite furnace				12. AA: flame emission				
	N =	1	6	1	18	3	1	
	Minimum =	24.5	2.0	28.5	19.2	20.7	20.0	
	Maximum =		37.0		28.0	23.1		
	Median =				24.0			
	St Dev =				2.03			

MPV = 24.0
F-pseudosigma = 2.22
N = 30
Hu = 25.0
Hl = 22.0

Lab	Rating	Z-value	0	1	3	4	6	12
1	4	0.00				24.0		
3	1	-1.80				20.0		
4	4	-0.45				23.0		
5	4	0.21				24.5		
7	4	0.00				24.0		
8	4	0.00				24.0		
15	4	-0.13				23.7		
16	NR					< 100		
24	0	-2.16				19.2		
25	4	0.45				25.0		
30	2	-1.48					20.7	
32	4	-0.40					23.1	
39	4	0.00				24.0		
42	2	1.35				27.0		
50	NR		< 50					
55	3	-0.90		22.0				
63	0	5.85		37.0				
68	1	1.80				28.0		
69	0	-9.89		2.0				
75	4	0.00				24.0		
85	4	0.45		25.0				
105	4	0.00				24.0		
109	4	0.00		24.0				
127	4	0.13				24.3		
131	4	0.45				25.0		
134	4	0.00				24.0		
142	1	2.02			28.5			
145	3	0.76				25.7		
182	1	-1.80		20.0				
196	3	-0.99					21.8	
210	1	-1.80						20.0
212	4	0.22	24.5					
217	NR					< 50		

Table 13. *--Statistical summary of reported data for standard reference water sample T-127 (trace constituents)--Continued*

Mg (Magnesium) **m g/L**



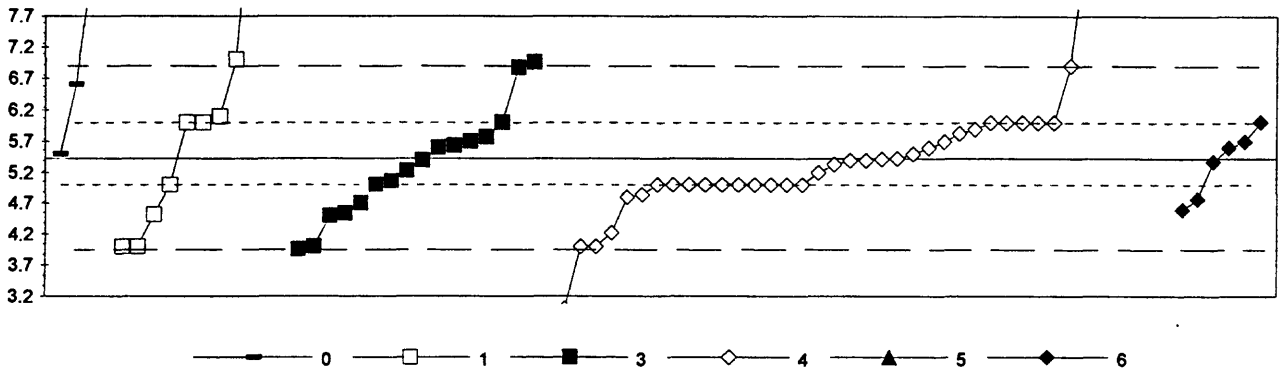
0. Other			4. ICP					
1. AA: direct air			5. DCP					
2. AA: direct nitrous oxide			6. ICP/MS					
N =	6	24	2	52	2	2
Minimum =	1.90	1.57	2.00	1.58	1.80	1.78
Maximum =	2.47	12.10	2.00	2.94	2.14	2.02
Median =		2.00		2.01		
St Dev =		0.089		0.095		

MPV = 2.00
F-pseudosigma = 0.107
N = 88
Hu = 2.10
HI = 1.96

Lab	Rating	Z-value	0	1	2	4	5	6
1	2	1.50		2.16				
3	2	1.02				2.11		
4	4	0.00				2.00		
5	4	-0.07				1.99		
7	3	0.56				2.06		
8	3	-0.93				1.90		
9	4	0.00		2.00				
11	2	1.40				2.15		
12	3	0.93				2.10		
13	2	1.12		2.12				
15	2	1.30				2.14		
16	3	0.93				2.10		
18	4	-0.19				1.98		
19	4	0.09				2.01		
23	4	-0.37	1.96					
24	4	0.09				2.01		
25	2	1.49				2.16		
27	1	-1.86					1.80	
30	1	-2.05						1.78
32	4	0.19						2.02
33	2	1.30					2.14	
39	2	1.12				2.12		
42	3	0.93				2.10		
45	3	-0.93	1.90					
46	3	0.93				2.10		
48	2	1.21				2.13		
51	4	0.00		2.00				
52	4	-0.37				1.96		
54	4	0.00		2.00				
55	4	-0.09				1.99		
57	4	0.00				2.00		
58	0	-4.00		1.57				
59	3	-0.93				1.90		
61	4	0.47				2.05		
63	0	2.14				2.23		
68	3	0.93				2.10		
70	4	0.37				2.04		
72	0	8.75				2.94		
75	4	0.00				2.00		
78	4	0.00		2.00				
83	4	-0.47	1.95					
84	4	0.47		2.05				
85	4	0.00		2.00				
86	3	0.84				2.09		
87	3	-0.56		1.94				
89	2	-1.02		1.89				
94	4	-0.28				1.97		
97	0	93.96		12.10				
102	3	-0.93				1.90		
105	3	-0.84				1.91		
107	2	-1.21		1.87				
109	4	0.00		2.00				
114	4	0.00			2.00			
116	4	0.00				2.00		
117	3	-0.74		1.92				
119	4	0.47				2.05		
120	1	1.63		2.18				
121	4	0.00				2.00		
127	3	-0.74				1.92		
129	0	16.75		3.80				
131	3	0.56				2.06		
133	2	-1.30				1.86		
134	4	-0.47				1.95		
136	0	4.37	2.47					
138	4	0.00				2.00		
140	4	0.00		2.00				
141	2	1.12				2.12		
142	1	1.95				2.21		
145	3	0.74				2.08		
146	0	-2.23				1.76		
149	1	1.86		2.20				
154	0	-3.91				1.58		
179	3	0.84		2.09				
180	2	1.02				2.11		
182	4	0.00			2.00			
190	1	2.05	2.22					
193	4	-0.19		1.98				
194	3	-0.93				1.90		
196	3	0.65		2.07				
198	4	0.37				2.04		
202	4	0.09				2.01		
203	4	0.09		2.01				
204	4	0.37				2.04		
210	3	-0.93				1.90		
211	4	-0.28				1.97		
212	4	-0.47	1.95					
217	3	-0.93				1.90		
221	3	0.93		2.10				

Table 13. --*Statistical summary of reported data for standard reference water sample T-127 (trace constituents)--Continued*

Mn (Manganese) **μ g/L**



0. Other			4. ICP				
1. AA: direct air			5. DCP				
3. AA: graphite furnace			6. ICP/MS				
N =	4	11	16	39	1	6
Minimum =	5.50	4.00	3.95	2.00	67.00	4.60
Maximum =	10.30	32.00	6.95	270.0		6.01
Median =		5.50	5.32	5.27		
St Dev =		1.107	0.876	0.620		

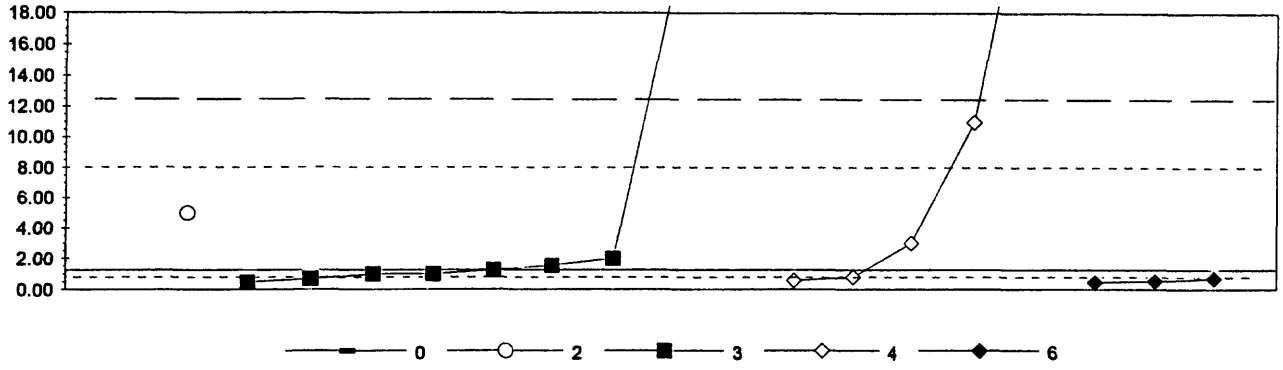
MPV = 5.43
F-pseudosigma = 0.741
N = 77
Hu = 6.00
Hl = 5.00

Lab	Rating	Z-value	0	1	3	4	5	6
1	3	-0.89						4.8
3	3	-0.58				5.0		
5	4	-0.13				5.3		
7	4	0.09				5.5		
8	1	-1.93				4.0		
11	0	4.82				9.0		
12	NR					< 20		
13	3	0.90		6.1				
15	4	-0.01				5.4		
16	0	6.16				10.0		
18	3	-0.58				5.0		
19	3	-0.58				5.0		
23	4	0.46			5.8			
24	4	-0.31				5.2		
25	3	-0.58				5.0		
29	3	0.77		6.0				
30	4	-0.07						5.4
32	4	0.36						5.7
33	0	110.04					87.0	
39	4	0.23						5.6
42	2	-1.12						4.6
43	0	-4.63				2.0		
45	2	-1.20			4.5			
48	4	-0.04			5.4			
50	3	0.77			6.0			
51	0	6.57	10.3					
52	1	-2.00			4.0			
55	3	-0.85				4.8		
57	NR			< 20				
59	3	0.77				6.0		
61	0	15.61				17.0		
63	NR					< 10		
68	1	-1.93				4.0		
70	NR					< 10		
72	4	0.36				5.7		
75	3	-0.58				5.0		
78	4	0.23			5.6			
79	1	1.98				6.9		
80	3	-0.58			5.0			
83	4	0.09	5.5					
85	NR			< 10				
86	3	-0.80				4.8		
87	3	-0.58		5.0				
89	4	-0.27			5.2			
91	3	0.54				5.8		
94	3	-0.58				5.0		
96	4	0.36			5.7			
97	4	0.27			5.6			
102	0	-3.28				3.0		
105	3	-0.58				5.0		

Lab	Rating	Z-value	0	1	3	4	5	6
107	0	2.05			7.0			
109	2	-1.23		4.5				
114	0	6.16		10.0				
116	3	0.77				6.0		
117	0	35.84		32.0				
118	0	4.14	8.5					
119	4	-0.04				5.4		
120	3	-0.98			4.7			
127	1	-1.63				4.2		
129	0	6.16		10.0				
131	3	0.77				6.0		
134	4	0.00				5.4		
138	1	1.94			6.9			
140	1	-1.93		4.0				
141	0	13.72				15.6		
142	2	-1.25			4.5			
145	3	0.77				6.0		
146	3	0.63				5.9		
149	3	0.77		6.0				
154	3	-0.58				5.0		
179	NR			< 10				
180	4	-0.04				5.4		
182	1	-1.93		4.0				
190	4	-0.50			5.1			
194	NR					< 5		
196	3	0.78						6.0
198	4	0.23				5.6		
202	3	0.77				6.0		
203	0	2.12		7.0				
204	3	-0.58				5.0		
210	0	356.90				270.0		
211	3	-0.58				5.0		
212	1	1.58	6.6					
217	NR					< 10		
220	NR			< 10				
221	1	-1.93			4.0			

Table 13. *--Statistical summary of reported data for standard reference water sample T-127 (trace constituents)--Continued*

Mo (Molybdenum) **µ g/L**



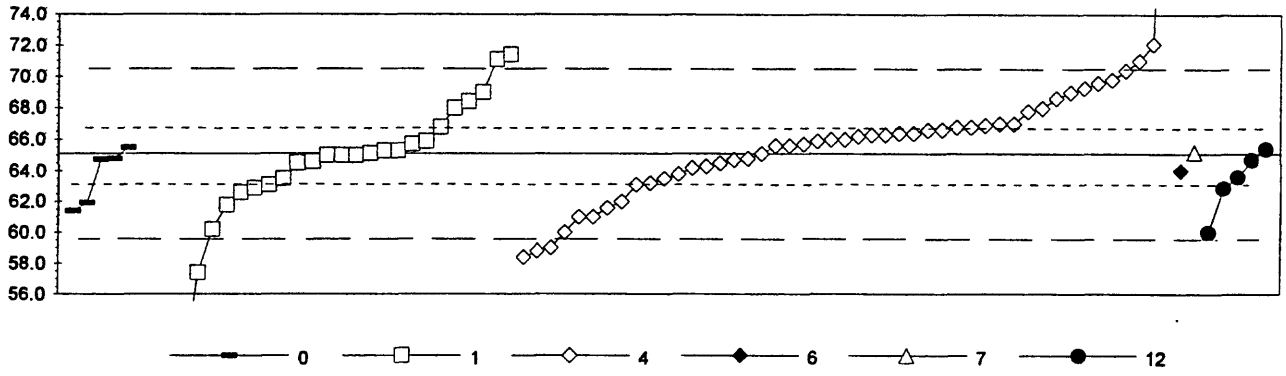
0. Other				4. ICP			
2. AA: direct nitrous oxide				6. ICP/MS			
3. AA: graphite furnace							
	N =	1	1	9	5	3	
	Minimum =	50.00	5.00	0.50	0.60	0.46	
	Maximum =			52.00	31.00	0.72	
	Median =			1.02			
	St Dev =			0.509			

MPV = 1.25
F-pseudosigma = 5.404
N = 19
Hu = 8.00
HI = 0.71

Lab	Rating	Z-value	0	2	3	4	6
1	4	-0.15					0.46
3	NR					< 10	
4	0	5.51				31.00	
5	NR					< 10	
7	NR					< 9	
8	NR					< 5	
15	NR					< 20	
16	NR					< 20	
23	4	-0.04			1.02		
30	4	-0.13					0.56
32	NR						< 0.3
39	NR					< 5	
43	NR					< 10	
45	4	0.06			1.55		
48	NR					< 10	
50	NR				< 5		
52	NR				< 5		
57	NR					< 100	
61	NR					< 10	
70	NR					< 50	
72	NR					< 1	
75	NR					< 10	
78	4	-0.14			0.50		
85	NR					< 50	
87	NR				< 2		
94	NR				< 5		
97	NR				< 0.96		
105	4	-0.09				0.79	
109	4	-0.10			0.70		
114	0	9.02	50.00				
127	NR					< 25	
131	NR					< 3	
138	NR				< 2		
141	NR					< 10	
142	4	0.00			1.25		
145	NR					< 11	
146	4	-0.12				0.60	
149	4	0.14			2.00		
179	NR				< 10		
180	4	0.32				3.00	
182	3	0.69		5.00			
183	0	3.54			20.40		
196	4	-0.10					0.72
202	NR				< 1		
210	1	1.80				11.00	
211	0	9.39			52.00		
217	NR					< 20	
221	4	-0.05			1.00		

Table 13. *--Statistical summary of reported data for standard reference water sample T-127 (trace constituents)--Continued*

Na (Sodium) **m g/L**



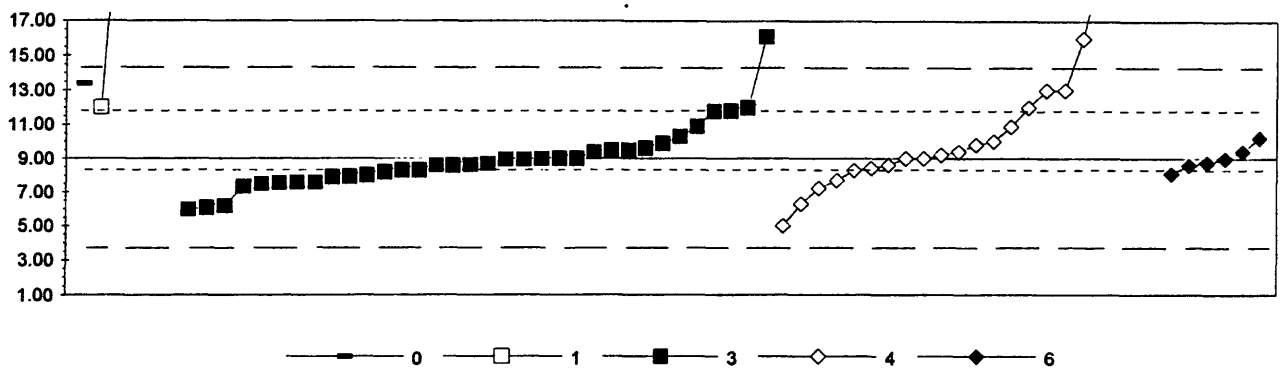
0. Other			6. ICP/MS				
1. AA: direct air			7. Ion chromatography				
4. ICP			12. AA: flame emission				
N =	5	27	47	1	1	5	
Minimum =	61.4	19.7	58.4	64.0	65.2	60.0	
Maximum =	65.5	71.4	87.8			65.4	
Median =		65.0	66.0				
St Dev =		3.21	3.18				

MPV = 65.1
F-pseudosigma = 2.74
N = 86
Hu = 66.8
HI = 63.1

Lab	Rating	Z-value	0	1	4	6	7	12
1	0	2.18		71.1				
3	4	0.43			66.3			
4	2	-1.50			61.0			
5	3	0.55			66.6			
7	4	0.47			66.4			
8	2	1.05			68.0			
9	4	-0.04		65.0				
11	2	1.42			69.0			
12	0	2.15			71.0			
13	4	0.07		65.3				
15	4	0.29			65.9			
16	3	0.69			67.0			
18	4	-0.22			64.5			
19	4	0.18			65.6			
23	4	0.29		65.9				
24	3	0.61			66.8			
25	1	1.93			70.4			
27	0	-16.56		19.7				
32	4	-0.40				64.0		
33	2	-1.17	61.9					
39	4	0.43			66.3			
42	3	0.61			66.8			
45	4	0.14	65.5					
46	3	0.98			67.8			
48	1	1.71			69.8			
51	3	-0.81						62.9
52	3	-0.73			63.1			
54	4	-0.22		64.5				
55	4	0.21		65.7				
57	2	-1.28			61.6			
58	0	-5.51		50.0				
59	1	-1.86			60.0			
61	4	0.47			66.4			
63	0	2.55			72.1			
68	3	0.69			67.0			
69	1	-1.86						60.0
70	4	0.40			66.2			
72	0	8.27			87.8			
75	4	-0.15			64.7			
78	3	0.61		66.8				
83	2	-1.35	61.4					
84	4	-0.15						64.7
85	3	-0.92		62.6				
86	4	0.21			65.7			
87	3	-0.59		63.5				
89	2	1.20		68.4				
94	4	-0.01			65.1			
97	0	-2.81		57.4				
102	0	-2.23			59.0			
105	0	-2.30			58.8			
107	3	-0.81		62.9				
107	3	-0.81		62.9				
109	2	-1.21		61.8				
114	0	-11.71		33.0				
116	4	-0.33			64.2			
117	0	-5.35		50.5				
119	4	-0.30			64.3			
120	4	0.01		65.1				
121	4	0.32			66.0			
127	4	-0.48			63.8			
129	4	-0.04		65.0				
131	4	0.32			66.0			
134	4	-0.19		64.6				
138	3	-0.70			63.2			
140	4	-0.04		65.0				
141	1	1.64			69.6			
142	1	1.51			69.3			
145	2	1.28			68.6			
148	0	-2.45			58.4			
149	0	2.29		71.4				
154	4	0.18			65.6			
179	2	1.05		68.0				
180	3	0.54			66.6			
182	4	0.07		65.3				
190	4	0.03					65.2	
193	1	-1.79		60.2				
194	3	0.65			66.9			
196	2	1.42		69.0				
198	4	-0.11			64.8			
202	4	-0.15	64.7					
203	4	0.10						65.4
204	3	-0.55						63.6
210	2	-1.50			61.0			
211	3	-0.59			63.5			
212	4	-0.11	64.8					
217	2	-1.14			62.0			
221	3	-0.73		63.1				

Table 13. *–Statistical summary of reported data for standard reference water sample T-127 (trace constituents)–Continued*

Ni (Nickel) **µ g/L**



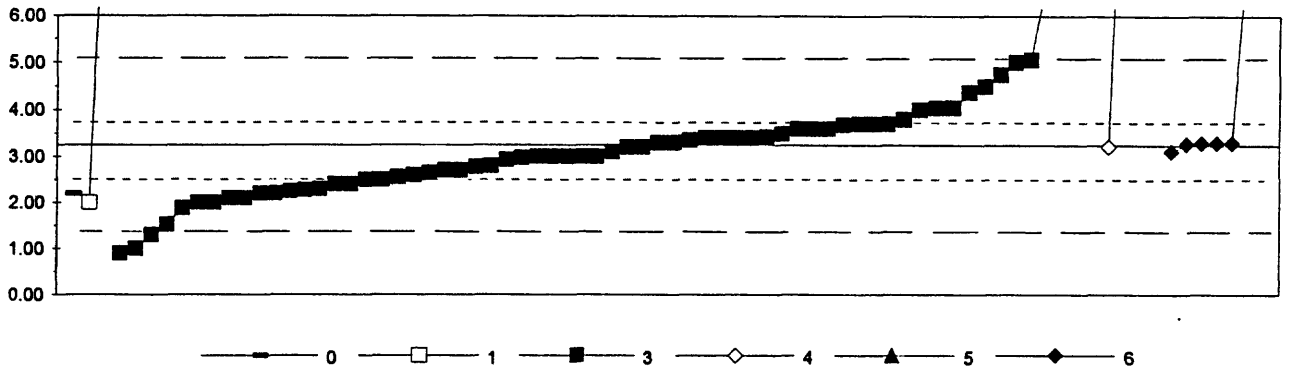
0. Other		4. ICP			
1. AA: direct air		6. ICP/MS			
3. AA: graphite furnace					
N =	1	5	34	22	6
Minimum =	13.40	12.00	6.00	5.00	8.10
Maximum =		185.00	16.10	260.0	10.23
Median =			8.66	9.10	
St Dev =			1.937	2.634	

MPV = 9.00
F-pseudosigma = 2.632
N = 68
Hu = 11.80
HI = 8.25

Lab	Rating	Z-value	0	1	3	4	6
1	4	0.15			9.40		
3	NR					< 40	
5	3	0.72				10.89	
7	NR					< 15	
8	4	0.00				9.00	
11	1	1.52				13.00	
12	NR					< 20	
13	NR			< 50			
15	3	-0.54			7.57		
16	NR					< 25	
18	4	0.38				10.00	
23	3	-0.54			7.59		
24	0	2.70			16.10		
25	NR					< 49	
29	0	6.08		25.00			
30	4	0.16					9.41
32	4	0.00					9.00
39	4	-0.34					8.10
42	4	-0.15					8.60
43	0	21.89				66.60	
45	4	-0.40			7.94		
48	2	1.06			11.80		
50	4	-0.38			8.00		
51	3	-0.53			7.60		
52	4	0.49			10.30		
55	4	-0.27			8.30		
57	NR			< 100			
58	4	-0.30			8.20		
59	4	-0.49				7.70	
61	0	4.37				20.50	
63	4	0.00			9.00		
68	1	1.52				13.00	
69	4	0.00			9.00		
70	NR					< 50	
72	4	0.30				9.80	
73	2	-1.03				6.30	
75	4	-0.15			8.60		
76	4	-0.10					8.75
78	4	0.23			9.60		
79	4	-0.11			8.70		
85	NR					< 10	
86	3	-0.67				7.23	
87	NR			< 10			
89	NR				< 12.5		
90	0	66.88		185.00			
94	4	-0.15				8.60	
97	4	-0.14			8.62		
102	1	-1.52				5.00	
105	2	1.14				12.00	
107	2	-1.10			6.10		
108	2	-1.14			6.00		
111	4	0.00			9.00		
114	NR			< 10			
118	4	-0.41			7.91		
119	4	0.34			9.90		
120	4	-0.15			8.60		
121	2	1.14			12.00		
127	4	-0.02			8.95		
131	4	0.00				9.00	
133	4	-0.22				8.42	
134	4	0.19			9.50		
138	4	-0.02			8.95		
140	2	1.14		12.00			
141	NR					< 10	
142	4	0.19			9.50		
144	3	-0.57			7.50		
145	NR					< 22	
146	4	0.15				9.40	
154	4	0.08				9.20	
179	2	-1.06			6.20		
180	4	-0.27				8.30	
183	3	-0.62			7.36		
190	3	0.72			10.90		
193	NR				< 10		
194	NR					< 100	
196	4	0.47					10.23
198	0	2.66				16.00	
202	4	-0.27			8.30		
210	0	95.38				260.0	
211	0	9.50				34.00	
212	1	1.67	13.40				
213	0	49.40		139.00			
216	0	8.09		30.30			
217	NR					< 40	
221	2	1.06			11.80		

Table 13. *--Statistical summary of reported data for standard reference water sample T-127 (trace constituents)--Continued*

Pb (Lead) **µ g/L**



0. Other			4. ICP				
1. AA: direct air			5. DCP				
3. AA: graphite furnace			6. ICP/MS				
N =	1	2	64	3	1	7	
Minimum =	2.20	2.00	0.90	3.22	59.10	3.12	
Maximum =		10.00	23.00	14.40		7.80	
Median =			3.00			3.30	
St Dev =			0.891			0.079	

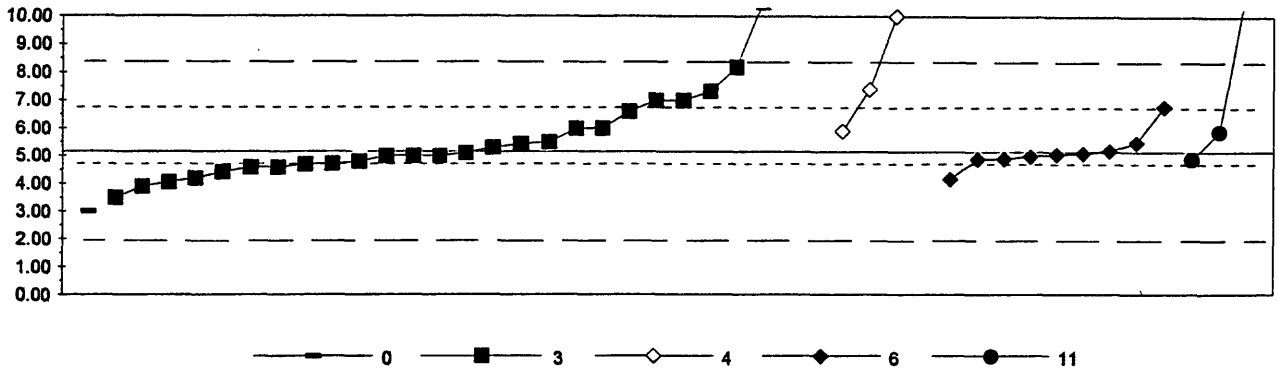
MPV = 3.25
F-pseudosigma = 0.890
N = 78
Hu = 3.70
HI = 2.50

Lab	Rating	Z-value	0	1	3	4	5	6
1	4	0.39			3.60			
3	4	-0.28			3.00			
5	NR					< 30		
7	0	5.11						7.80
8	NR					< 30		
12	NR				< 10			
13	NR				< 5			
15	4	-0.04			3.21			
16	3	-0.78			2.56			
18	1	2.03			5.06			
23	2	-1.09			2.28			
24	4	0.17			3.40			
25	NR					< 71		
27	0	6.06			8.64			
29	2	-1.12			2.25			
30	4	-0.15						3.12
32	4	0.06						3.30
33	0	62.78					59.10	
39	0	5.11						7.80
42	4	0.06						3.30
45	1	-1.93			1.53			
46	4	0.17			3.40			
48	4	0.39			3.60			
50	4	-0.28			3.00			
51	3	0.51			3.70			
52	4	0.48			3.68			
55	3	-0.73			2.60			
57	2	1.41			4.50			
58	1	1.69			4.75			
59	NR					< 5		
60	3	0.62			3.80			
61	NR					< 50		
63	4	-0.28			3.00			
68	3	-0.62			2.70			
69	4	0.17			3.40			
70	2	-1.18			2.20			
72	0	19.05			20.20			
73	0	10.62				12.70		
75	NR					< 40		
76	4	-0.36			2.93			
78	0	-2.64			0.90			
79	4	0.06			3.30			
80	0	-2.53			1.00			
83	3	-0.51			2.80			
84	3	-0.53			2.78			
85	NR			< 50				
86	4	-0.03				3.22		
87	NR			< 20				
89	4	0.11			3.35			
90	0	4.10			6.90			

Lab	Rating	Z-value	0	1	3	4	5	6
94	4	-0.31			2.97			
96	3	-0.96			2.40			
97	3	-0.67			2.65			
102	NR					< 5		
105	4	0.06						3.30
107	4	-0.06			3.20			
108	0	22.20			23.00			
109	0	-2.19			1.30			
111	3	0.51			3.70			
114	0	7.59		10.00				
117	3	0.84			4.00			
118	3	0.90			4.05			
119	2	-1.07			2.30			
120	2	-1.18			2.20			
122	2	1.26			4.37			
127	4	0.19			3.42			
131	NR					< 5		
133	2	-1.29			2.10			
134	3	0.51			3.70			
138	4	0.27			3.49			
140	2	-1.41		2.00				
141	NR				< 5			
142	3	-0.84			2.50			
145	NR					< 84		
146	4	0.06			3.30			
154	4	0.17			3.40			
158	3	-0.96			2.40			
179	NR				< 5			
180	0	12.53				14.40		
183	4	0.39			3.60			
190	2	-1.29			2.10			
193	2	-1.41			2.00			
194	NR				< 5			
196	4	0.03						3.28
198	4	-0.28			3.00			
202	4	-0.17			3.10			
203	3	-0.84			2.50			
204	1	-1.54			1.88			
210	1	1.97			5.00			
211	4	-0.28			3.00			
212	2	-1.18	2.20					
213	2	-1.41			2.00			
217	NR				< 5			
220	3	-0.62			2.70			
221	3	0.89			4.04			

Table 13. *--Statistical summary of reported data for standard reference water sample T-127 (trace constituents)--Continued*

Sb (Antimony) **µ g/L**



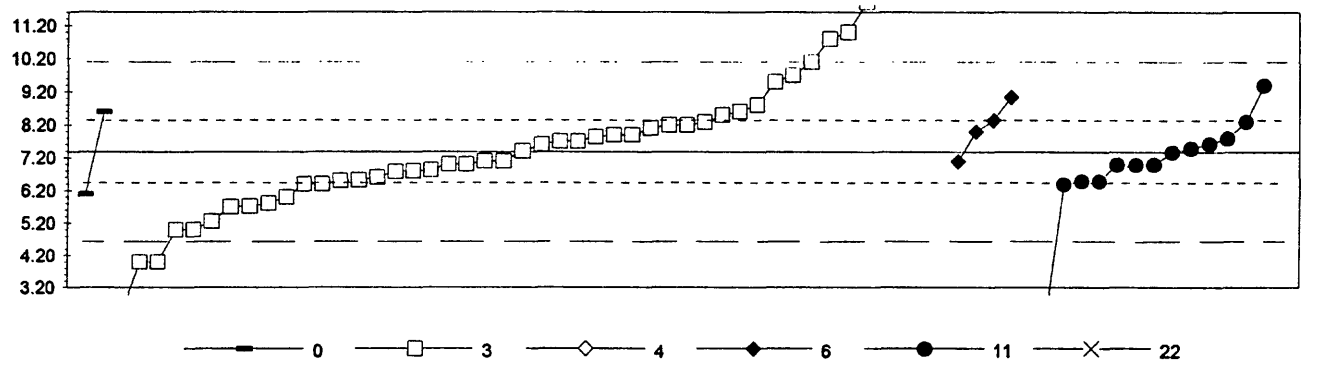
0. Other			6. ICP/MS			
3. AA: graphite furnace			11. AA: hydride			
4. ICP						
N =	1	27	4	9	3	
Minimum =	3.00	3.50	5.90	4.18	4.90	
Maximum =		13.00	23.60	6.79	11.00	
Median =		5.00		5.06		
St Dev =		1.180		0.698		

MPV = 5.15
F-pseudosigma = 1.583
N = 44
Hu = 6.90
HI = 4.76

Lab	Rating	Z-value	0	3	4	6	11
1	4	-0.03				5.10	
3	2	1.17		7.00			
5	NR				< 50		
7	4	-0.09				5.00	
8	0	3.70					11.00
12	NR				< 100		
16	4	0.47			5.90		
18	4	0.09		5.30			
23	4	-0.46		4.42			
24	1	1.93		8.20			
25	NR				< 51		
30	2	1.04				6.79	
32	4	-0.16				4.90	
39	4	0.22				5.50	
42	4	0.03				5.20	
45	3	0.54		6.01			
48	4	-0.35		4.60			
52	NR			< 6			
55	4	-0.03		5.10			
57	2	1.17		7.00			
58	0	4.96		13.00			
60	4	0.22		5.50			
61	NR				< 50		
63	NR			< 5			
69	4	-0.35		4.60			
70	4	-0.22		4.80			
72	4	-0.26		4.70			
75	NR				< 50		
76	3	-0.61				4.18	
78	3	-0.60		4.20			
85	NR				< 100		
86	0	3.06			10.00		
94	2	1.38		7.34			
97	4	-0.27		4.72			
102	NR				< 5		
105	4	-0.06				5.06	
117	0	3.38		10.50			
119	4	-0.16					4.90
120	4	-0.09		5.00			
127	4	0.18		5.44			
134	4	0.47					5.90
138	3	-0.79		3.90			
141	NR				< 20		
142	2	-1.04		3.50			
146	2	1.42			7.40		
179	4	-0.09		5.00			
180	0	11.66			23.60		
194	3	0.54		6.00			
196	4	-0.15				4.91	
198	3	-0.69		4.06			
202	3	0.92		6.60			
210	0	3.51		10.70			
211	4	-0.09		5.00			
212	2	-1.36	3.00				
217	NR			< 10			

Table 13. *--Statistical summary of reported data for standard reference water sample T-127 (trace constituents)--Continued*

Se (Selenium) **µ g/L**



0. Other				6. ICP/MS				
3. AA: graphite furnace				11. AA: hydride				
4. ICP				22. Colorimetric				
N =	2	44	2	4	14	1		
Minimum =	6.10	2.35	15.60	7.10	2.00	1.90		
Maximum =	8.60	33.00	22.10	9.04	9.40			
Median =		7.10			7.00			
St Dev =		1.635			2.103			

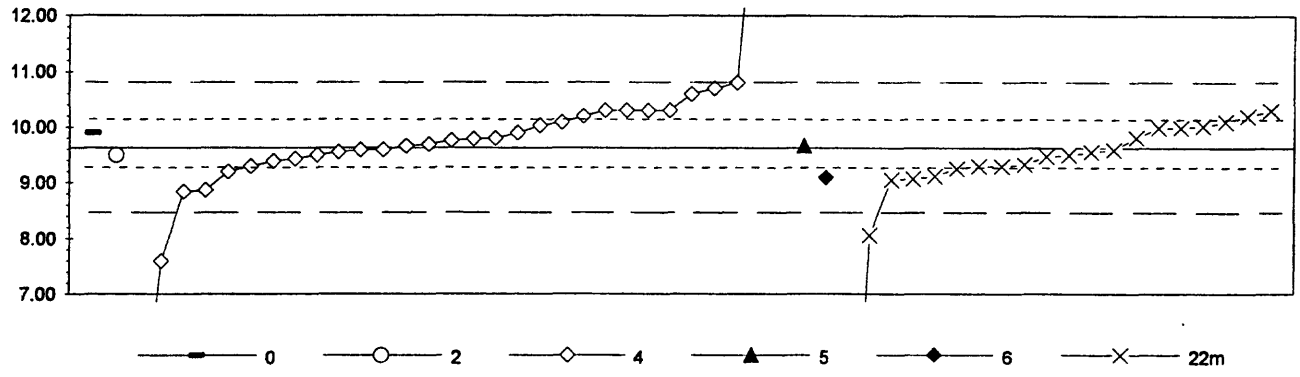
MPV = 7.38
F-pseudosigma = 1.386
N = 67
Hu = 8.32
HI = 6.45

Lab	Rating	Z-value	0	3	4	6	11	22
1	3	-0.71					6.40	
3	2	1.02		8.80				
5	NR				< 50			
7	0	-4.60		< 1				
8	0	-3.88					2.00	
12	0	-2.44		4.00				
13	NR			< 5				
15	4	0.18					7.63	
16	4	-0.27		7.00				
18	3	0.59		8.20				
23	2	-1.20		5.72				
25	NR				< 129			
29	3	0.65		8.28				
30	2	1.20				9.04		
32	4	0.45				8.00		
34	4	0.00					7.38	
39	3	-0.63					6.50	
42	4	-0.20				7.10		
45	3	-0.63		6.51				
46	4	0.01		7.40				
48	4	-0.20		7.10				
50	4	-0.27					7.00	
52	NR						< 5	
55	3	-0.63		6.50				
57	0	-3.95						1.90
60	4	0.23		7.70				
61	4	-0.42		6.80				
63	1	-1.72		5.00				
69	3	0.59		8.20				
70	2	-1.13		5.82				
72	1	1.53		9.50				
73	0	5.93			15.60			
75	4	-0.27					7.00	
78	4	-0.20		7.10				
79	0	3.26		11.90				
85	3	-0.63					6.50	
87	0	-3.88					2.00	
89	0	-3.88					< 2	
94	4	0.33		7.84				
96	4	0.38		7.90				
97	4	0.30					7.80	
102	NR				< 5			
105	4	-0.43		6.78				
107	1	1.67		9.70				
109	3	0.88		8.60				
117	0	18.48		33.00				
118	0	-3.63		2.35				
119	4	-0.27					7.00	
120	2	1.46					9.40	
127	4	0.38		7.90				

Lab	Rating	Z-value	0	3	4	6	11	22
133	3	-0.71		6.40				
134	4	0.09					7.50	
138	4	-0.40		6.83				
141	3	0.66					8.30	
142	3	0.81		8.50				
144	4	0.16		7.60				
146	4	0.23		7.70				
154	1	1.96		10.10				
179	2	-1.21		5.70				
180	0	10.62			22.10			
193	1	-1.72		5.00				
194	3	-1.00		6.00				
196	3	0.69				8.34		
198	1	-1.54		5.25				
202	3	-0.71		6.40				
203	0	2.61		11.00				
204	0	2.47		10.80				
210	0	5.50		15.00				
211	4	-0.27		7.00				
212	3	-0.92	6.10					
217	3	0.52		8.10				
219	3	0.88	8.60					
220	3	-0.56		6.60				
221	0	-2.44		4.00				

Table 13. *--Statistical summary of reported data for standard reference water sample T-127 (trace constituents)--Continued*

SiO2 (Silica) **m g/L**



0. Other
2. AA: direct nitrous oxide
4. ICP
5. DCP
6. ICP/MS
22m. Color: molybdate blue

	0	2	4	5	6	22m
N =	1	1	30	1	1	20
Minimum =	9.90	9.50	3.60	9.67	9.09	0.27
Maximum =			18.90			10.30
Median =			9.78			9.50
St Dev =			0.519			0.533

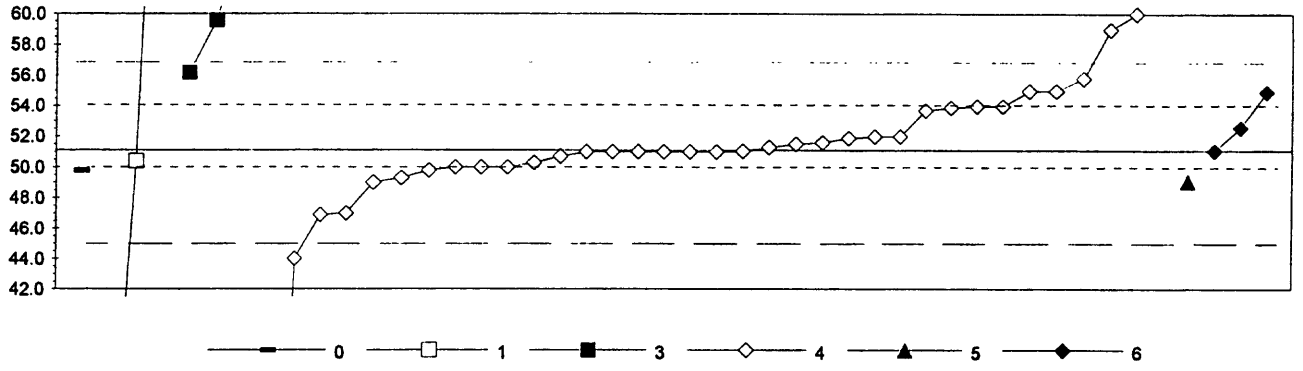
MPV = 9.63
F-pseudosigma = 0.586
N = 54
Hu = 10.09
Hl = 9.30

Lab	Rating	Z-value	0	2	4	5	6	22m
1	4	-0.13			9.55			
3	2	1.15			10.30			
4	4	-0.07			9.59			
5	4	0.22			9.76			
7	3	0.98			10.20			
8	3	-0.56						9.30
11	2	1.15			10.30			
13	3	-0.51						9.33
15	3	-0.73			9.20			
23	3	-0.56						9.30
24	2	1.15			10.30			
25	3	0.68			10.03			
32	3	-0.92					9.09	
33	4	0.07				9.67		
42	1	1.66			10.60			
43	4	0.46			9.90			
45	4	-0.34			9.43			
51	3	0.67						10.02
52	3	-0.95						9.07
55	4	-0.07			9.59			
57	3	-0.56			9.30			
61	2	1.15			10.30			
63	1	1.83			10.70			
70	3	-0.63						9.26
78	4	-0.22		9.50				
83	2	-1.35			8.84			
87	3	0.98						10.20
89	4	-0.25						9.48
97	3	0.62						9.99
102	0	-3.46			7.60			
104	4	-0.22						9.50
105	4	-0.22			9.50			
107	3	0.80						10.10
109	2	-1.30			8.87			
116	4	-0.41			9.39			
118	4	0.31						9.81
119	4	0.27			9.79			
121	4	0.29			9.80			
127	4	0.05			9.66			
129	2	1.15						10.30
131	0	15.83			18.90			
134	4	0.10			9.69			
136	4	-0.05						9.60
138	4	-0.12						9.56
140	3	0.63						10.00
141	3	-0.97						9.06
142	1	2.02			10.81			
145	3	0.79			10.09			
146	0	10.54			15.80			
185	0	-15.99						0.27

Lab	Rating	Z-value	0	2	4	5	6	22m
203	3	-0.87						9.12
210	0	-10.30			3.60			
211	0	-2.68						8.06
212	4	0.46	9.90					

Table 13. *--Statistical summary of reported data for standard reference water sample T-127 (trace constituents)--Continued*

Sr (Strontium) **µ g/L**



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

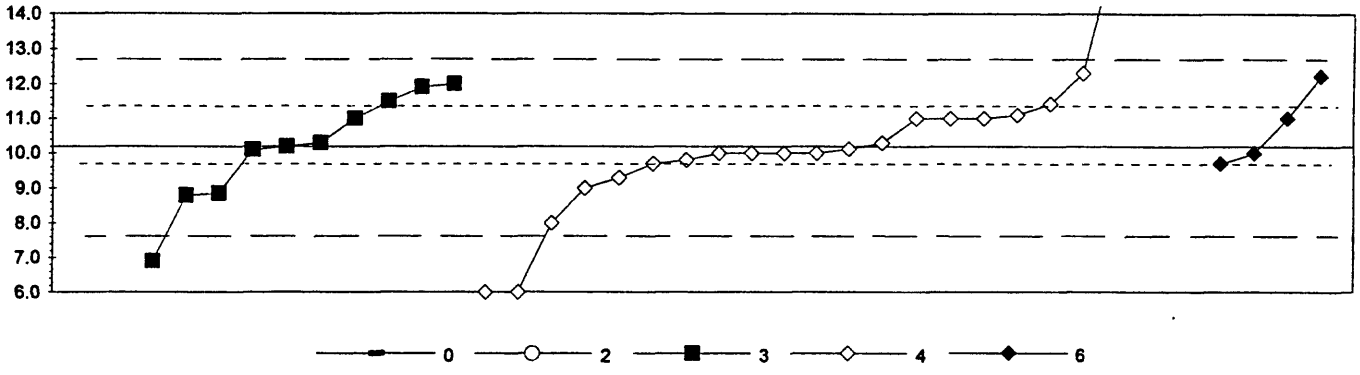
	0	1	3	4	5	6
N =	1	3	3	35	1	3
Minimum =	49.8	25.0	56.2	6.9	49.1	51.1
Maximum =		91.0	66.0	70.0		55.0
Median =				51.0		
St Dev =				3.15		

MPV = 51.1
F-pseudosigma = 2.97
N = 46
Hu = 54.0
HI = 50.0

Lab	Rating	Z-value	0	1	3	4	5	6
1	4	-0.43				49.8		
3	4	0.31				52.0		
4	4	-0.03				51.0		
5	4	-0.01				51.1		
7	4	0.14				51.5		
8	2	1.32				55.0		
9	0	13.46		91.0				
11	4	-0.03				51.0		
15	3	0.89				53.7		
16	0	2.67				59.0		
18	4	-0.03				51.0		
23	1	1.73			56.2			
24	4	-0.13				50.7		
25	3	0.99				54.0		
32	4	0.01						51.1
33	3	-0.67					49.1	
39	3	0.51						52.6
42	3	0.95				53.9		
46	4	-0.03				51.0		
50	NR		< 100					
52	4	-0.36				50.0		
59	4	-0.36				50.0		
63	2	1.32				55.0		
68	4	0.31				52.0		
70	4	0.18				51.6		
85	4	0.28				51.9		
94	4	-0.36				50.0		
97	0	2.88			59.6			
102	0	-2.39				44.0		
105	4	-0.03				51.0		
109	4	-0.23		50.4				
116	3	-0.70				49.0		
121	3	0.99				54.0		
127	4	-0.26				50.3		
131	4	-0.03				51.0		
134	2	-1.37				47.0		
138	3	-0.60				49.3		
141	0	5.03			66.0			
142	1	1.59				55.8		
145	4	0.08				51.3		
146	2	-1.41				46.9		
154	0	-14.90				6.9		
182	0	-8.79		25.0				
194	NR					< 100		
196	2	1.31						55.0
210	0	3.01				60.0		
211	0	6.38				70.0		
212	4	-0.43	49.8					

Table 13. *Statistical summary of reported data for standard reference water sample T-127 (trace constituents)--Continued*

V (Vanadium) **µ g/L**



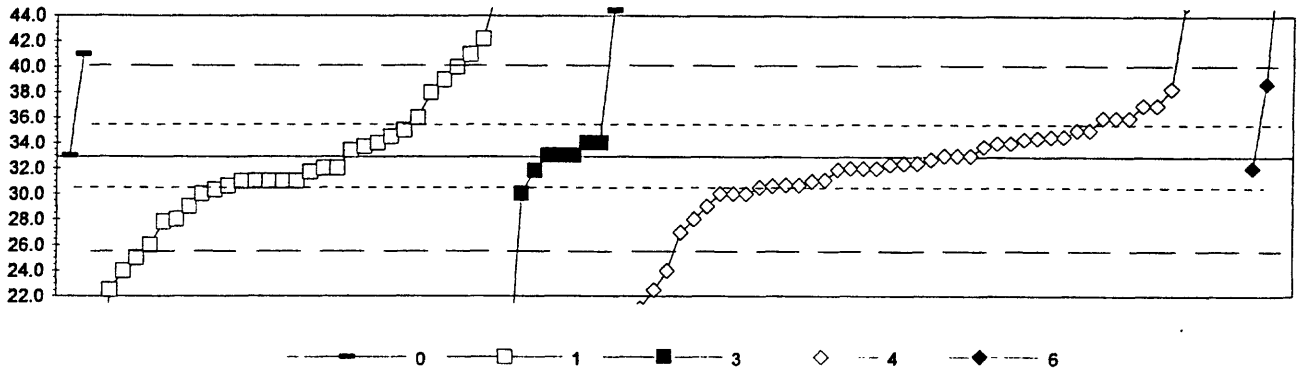
0. Other			4. ICP			
2. AA: direct nitrous oxide			6. ICP/MS			
3. AA: graphite furnace						
N =	1	1	10	22	4	
Minimum =	14.3	5.0	6.9	6.0	9.7	
Maximum =			12.0	80.0	12.2	
Median =			10.3	10.0		
St Dev =			1.60	1.01		

MPV =	10.2
F-pseudosigma =	1.28
N =	38
Hu =	11.4
HI =	9.7

Lab	Rating	Z-value	0	2	3	4	6
1	4	-0.03				10.1	
3	4	-0.13				10.0	
5	3	0.99				11.4	
7	0	6.23				18.1	
8	1	-1.69				8.0	
15	2	1.36			11.9		
16	NR					< 10	
18	4	-0.13				10.0	
23	4	-0.05			10.1		
24	3	0.74				11.1	
25	3	0.66				11.0	
32	3	0.66					11.0
39	4	-0.36					9.7
42	4	-0.13					10.0
48	0	54.78				80.0	
50	3	0.66			11.0		
51	2	-1.07			8.8		
52	0	-2.56			6.9		
57	NR					< 100	
58	2	-1.03			8.9		
61	4	-0.28				9.8	
63	0	4.58				16.0	
68	4	-0.13				10.0	
70	NR					< 50	
75	3	-0.67				9.3	
78	4	0.11			10.3		
85	NR					< 20	
94	4	-0.13				10.0	
102	0	-3.26				6.0	
105	1	1.68				12.3	
127	4	0.03			10.2		
134	2	1.44			12.0		
138	3	0.66				11.0	
141	3	0.66				11.0	
142	2	1.05			11.5		
145	NR					< 18	
146	4	-0.36				9.7	
154	3	-0.91				9.0	
180	4	0.11				10.3	
182	0	-4.05		5.0			
196	1	1.62					12.2
210	NR					< 50	
211	0	-3.26				6.0	
212	0	3.25	14.3				
217	NR					< 10	

Table 13. *--Statistical summary of reported data for standard reference sample T-127 (trace constituents)--Continued*

Zn (Zinc) **m g/L**



0. Other			4. ICP			
1. AA: direct air			6. ICP/MS			
3. AA: graphite furnace						
N =	2	31	10	46	3	
Minimum =	33.0	5.0	13.9	21.0	32.0	
Maximum =	41.0	46.0	50.0	60.0	51.0	
Median =		31.0	33.0	32.4		
St Dev =		4.89	1.40	3.27		

MPV =	32.9
F-pseudosigma =	3.63
N =	92
Hu =	35.5
HI =	30.6

Lab	Rating	Z-value	0	1	3	4	6
1	4	-0.29			31.8		
3	4	0.32				34.0	
4	0	-2.44				24.0	
5	4	-0.04				32.7	
7	3	0.59				35.0	
8	3	0.59				35.0	
9	2	-1.06		29.0			
11	2	1.14				37.0	
12	3	-0.78				30.0	
13	3	-0.51		31.0			
15	4	0.45				34.5	
16	4	0.32				34.0	
18	2	-1.06				29.0	
23	4	-0.32		31.7			
24	4	-0.26				31.9	
25	1	-1.61				27.0	
29	0	-2.85		22.5			
30	1	1.61					38.7
32	0	5.00					51.0
42	4	-0.23					32.0
45	0	2.57		42.2			
46	4	0.04				33.0	
48	3	-0.78				30.0	
50	4	0.04			33.0		
51	4	0.32			34.0		
52	3	-0.59				30.7	
55	3	-0.65				30.5	
57	1	1.97		40.0			
58	3	-0.51		31.0			
59	3	-0.78				30.0	
61	0	3.46				45.4	
63	4	0.04			33.0		
68	2	1.14				37.0	
70	4	-0.12				32.4	
72	3	-0.62				30.6	
73	4	-0.48				31.1	
75	4	0.04				33.0	
78	3	-0.62		30.6			
79	0	3.98				47.3	
80	4	-0.23		32.0			
83	3	-0.59				30.7	
85	4	0.15		33.4			
86	4	-0.15				32.3	
87	4	0.32		34.0			
89	3	0.87		36.0			
90	4	0.04			33.0		
94	3	0.87				36.0	
96	0	3.62		46.0			
97	0	-2.44		24.0			
102	0	-3.26				21.0	

Lab	Rating	Z-value	0	1	3	4	6
105	3	0.87				36.0	
107	4	0.45		34.5			
108	2	1.42		38.0			
111	0	3.29			44.8		
114	3	-0.78		30.0			
116	4	-0.23				32.0	
117	0	-2.16		25.0			
118	0	2.24	41.0				
119	0	3.34				45.0	
120	4	0.32			34.0		
122	0	-5.22			13.9		
127	4	0.23		33.7			
131	2	-1.34				28.0	
133	4	0.23				33.7	
134	4	-0.23				32.0	
138	4	0.43				34.4	
140	4	-0.23		32.0			
141	0	4.58				49.5	
142	2	1.50				38.3	
144	3	-0.51		31.0			
145	3	0.87				36.0	
146	0	-2.85				22.5	
149	3	0.59		35.0			
154	4	-0.23				32.0	
158	2	-1.34		28.0			
179	1	1.69		39.0			
180	4	0.40				34.3	
182	0	-7.67		5.0			
183	2	-1.39		27.8			
190	0	2.24		41.0			
193	3	-0.51		31.0			
194	0					< 5	
198	4	0.45				34.5	
202	3	-0.51				31.0	
203	3	-0.70		30.3			
204	4	-0.12				32.4	
210	0	4.72			50.0		
211	0	7.47				60.0	
212	4	0.04	33.0				
213	3	-0.51		31.0			
217	4	0.04				33.0	
220	1	-1.89		26.0			
221	3	-0.78			30.0		

Table 14. *—Statistical summary of reported data for standard reference sample M-128 (major constituents)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

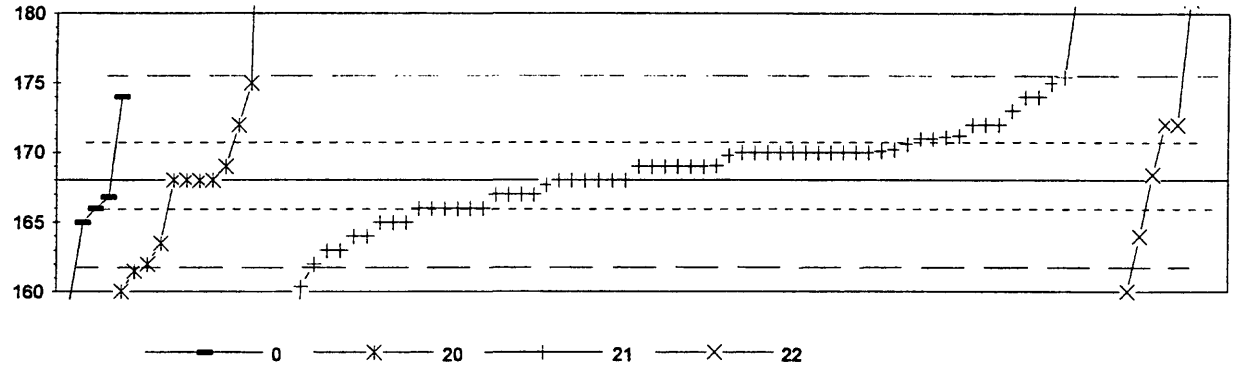
0. Other/Not reported		
1. AA: direct, air	=	atomic absorption: direct,air
2. AA: direct, N2O	=	atomic absorption: direct,nitrous oxide
3. AA: graphite furnace	=	atomic absorption: graphite furnace
4. ICP	=	inductively coupled plasma
5. DCP	=	direct current plasma
6. ICP/MS	=	mass spectrometry/inductively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

Abbreviations and symbols

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

Table 14. *--Statistical summary of reported data for standard reference sample M-128 (major constituents)--Continued*

Alk (Alkalinity as calcium carbonate) m g/L



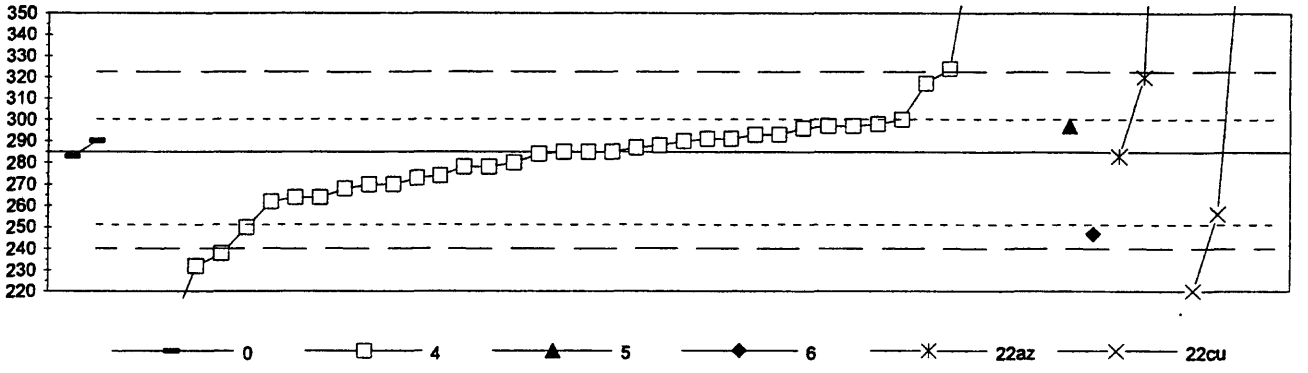
0. Other			22. Colorimetric				
20. Titrate: colorimetric							
21. Titrate: electrometric							
N =	3	13	65	7	1	1
Minimum =	159	157	17	150	174	165
Maximum =	167	223	202	181		
Median =		168	169	168		
St Dev =		4.6	3.1	5.2		

MPV = 169
F-pseudosigma = 3.4
N = 90
Hu = 171
Hl = 166

Lab	Rating	Z-value	0	20	21	22
1	3	0.70			171	
3	3	0.97			172	
5	0	9.77			202	
8	1	1.55			174	
9	4	0.38			170	
10	3	0.56			171	
11	1	1.55	174			
12	4	-0.21			168	
13	4	0.09			169	
15	0	-2.55		160		
16	0	15.99		223		
18	3	0.97				172
19	4	0.38			170	
24	4	-0.21			168	
25	3	0.67			171	
26	4	0.32			170	
27	4	-0.50			167	
29	4	0.09			169	
33	4	0.41			170	
36	4	0.38			170	
38	4	-0.30			168	
40	2	-1.38			164	
42	2	1.26			173	
43	4	0.38			170	
45	0	7.13			193	
46	4	-0.50			167	
48	0	3.61				181
50	4	0.09			169	
51	4	-0.50			167	
52	3	-0.79	166			
54	4	-0.21			168	
55	1	1.85			175	
56	0	-2.45			160	
57	2	-1.38				164
58	4	-0.21			168	
60	4	-0.50			167	
61	3	0.97			172	
63	3	-0.79			166	
68	3	0.97				172
69	4	-0.09				168
70	3	-0.79			166	
75	4	0.38			170	
76	1	-1.96		162		
78	1	-1.67			163	
79	0	-11.35			130	
81	1	-1.96			162	
83	4	0.38			170	
84	0	-2.11		162		
85	4	0.44			170	
87	0	-44.49			17	
89	4	0.38			170	
90	4	-0.21			168	
94	4	-0.21		168		
96	3	0.67			171	
97	1	1.96			175	
105	4	0.09			169	
107	2	-1.09			165	
109	1	1.55			174	
114	4	-0.21			168	
117	4	0.12			169	
118	1	1.85		175		
119	4	-0.21		168		
120	2	-1.09	165			
127	4	0.09			169	
128	0	-5.48				150
129	4	-0.21		168		
134	4	0.38			170	
136	1	-1.52		164		
138	3	0.97			172	
141	2	-1.09			165	
142	4	0.38			170	
145	0	-2.55				160
146	3	-0.79			166	
153	1	-1.67			163	
154	4	0.38			170	
158	2	-1.09			165	
180	3	-0.79			166	
183	4	-0.21		168		
191	4	0.09		169		
194	4	0.38			170	
197	3	0.73			171	
202	3	0.97		172		
203	0	-3.47		157		
204	2	-1.38			164	
210	3	-0.79			166	
211	0	3.90			182	
212	0	-2.84	159			
213	3	-0.79			166	
218	3	-0.56	167			
220	4	0.09			169	

Table 14. *--Statistical summary of reported data for standard reference sample M-128 (major constituents)--Continued*

B (Boron) **m g/L**



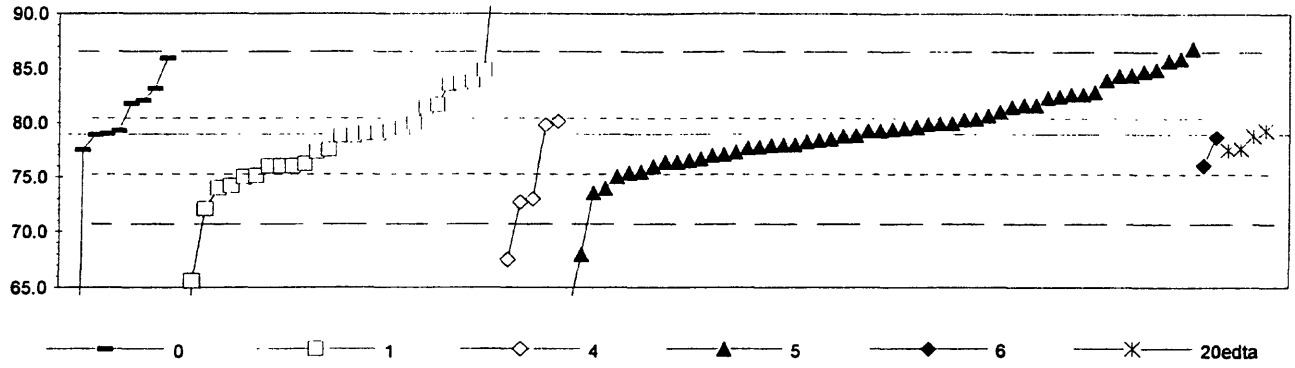
0. Other				6. ICP/MS				
4. ICP				22az: Titrate: azomethine				
5. DCP				22cu: Titrate: curcimin				
N =	2	40	1	1	3	4		
Minimum =	283	0	297	247	283	220		
Maximum =	290	700			593	451		
Median =		285						
St Dev =		19.6						

MPV =	285
F-pseudosigma =	21.5
N =	50
Hu =	297
HI =	268

Lab	Rating	Z-value	0	4	5	6	22az	22cu
1	3	0.56			297			
3	3	-0.51		274				
4	3	0.60		298				
5	4	-0.32		278				
8	3	-0.70		270				
11	4	0.28		291				
15	4	0.37		293				
16	0	5.72		408				
18	4	0.00		285				
23	0	7.72						451
24	1	1.81		324				
25	3	-0.98		264				
29	0	-3.02						220
32	1	-1.77				247		
36	0	14.33					593	
39	4	-0.09	283					
40	2	-1.07		262				
42	2	1.49		317				
45	3	-0.56		273				
46	4	-0.05		284				
50	1	1.63					320	
52	NR			< 300				
57	0	4.88		390				
61	3	-0.70		270				
63	3	0.56		297				
68	0	12.33		550				
70	4	0.09		287				
85	4	0.37		293				
86	3	-0.79		268				
94	4	0.14		288				
109	0	-13.25		0				
116	4	0.28		291				
119	3	0.70		300				
121	4	-0.23		280				
127	3	0.56		297				
128	0	-2.19		238				
129	4	-0.09					283	
131	0	19.30		700				
134	3	0.51		296				
141	0	-2.47		232				
142	4	0.00		285				
145	4	-0.33		278				
146	1	-1.63		250				
149	0	5.44						402
154	3	-0.98		264				
180	4	0.00		285				
182	2	-1.34						256
210	0	-3.95		200				
211	0	-11.40		40				
212	4	0.23	290					
217	4	0.23		290				

Table 14. *--Statistical summary of reported data for standard reference sample M-128 (major constituents)--Continued*

Ca (Calcium) m g/L



0. Other			5. DCP				
1. AA: direct air			6. ICP/MS				
4. ICP			20. Titrate: edta				
N =	7	27	5	53	2	4
Minimum =	0.5	23.0	67.5	62.7	76.1	77.5
Maximum =	86.0	98.0	80.1	86.9	78.7	79.3
Median =	82.0	78.8		79.4		
St Dev =	2.68	3.47		3.61		

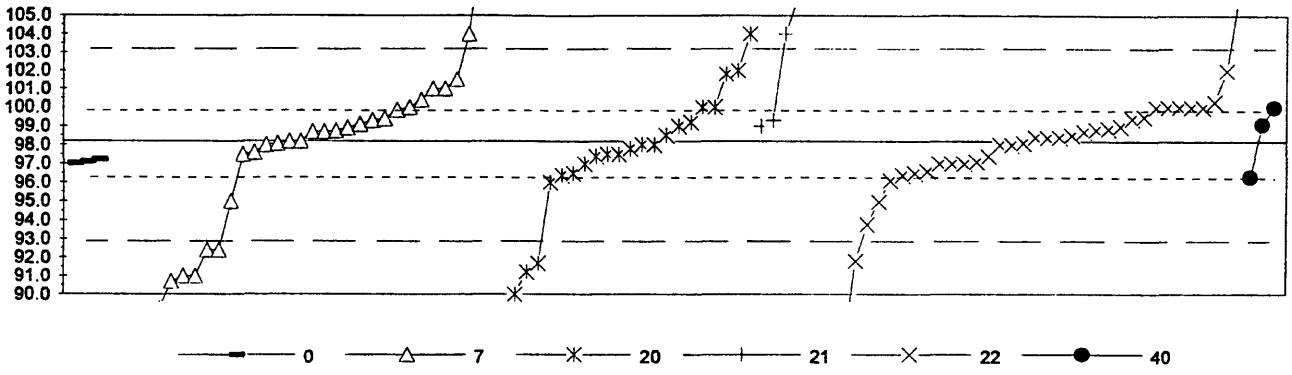
MPV =	78.9
F-pseudosigma =	3.92
N =	98
Hu =	81.7
HI =	76.4

Lab	Rating	Z-value	0	1	4	5	6	20edta
1	2	1.28		83.9				
3	2	1.41				84.4		
4	3	-0.86				75.5		
5	3	-0.59				76.6		
7	4	0.26				79.9		
8	3	0.72				81.7		
9	3	-0.73		76.0				
10	4	0.08		79.2				
11	3	0.90				82.4		
12	2	1.31				84.0		
13	4	0.16		79.5				
15	3	-0.63				76.4		
16	4	-0.22				78.0		
18	4	0.11				79.3		
19	4	-0.10				78.5		
24	4	-0.45				77.1		
25	1	1.51				84.8		
26	3	0.82	82.1					
27	3	-0.71					76.1	
29	4	0.11						79.3
30	4	-0.40		77.3				
32	4	-0.02						78.8
33	4	-0.05					78.7	
36	0	-2.90			67.5			
38	4	0.23			79.8			
39	2	1.10	83.2					
40	4	0.39				80.4		
42	4	0.29				80.0		
43	4	0.16				79.5		
45	4	0.01	78.9					
46	3	-0.56				76.7		
48	1	1.76				85.8		
50	3	-0.73		76.0				
51	3	-0.63				76.4		
52	4	-0.02				78.8		
54	4	-0.35		77.5				
55	3	0.67				81.5		
56	3	-0.96		75.1				
57	1	1.82				86.0		
58	2	-1.19		74.2				
61	4	-0.15				78.3		
63	1	2.05				86.9		
64	4	0.29				80.0		
68	4	-0.22				78.0		
69	3	-0.68		76.2				
70	4	0.46				80.7		
75	2	-1.24		74.0				
76	1	1.54		84.9				
78	2	1.23		83.7				
81	3	0.92				82.5		

Lab	Rating	Z-value	0	1	4	5	6	20edta
83	3	-0.97				75.1		
84	4	-0.02		78.8				
85	3	-0.73		76.0				
86	4	-0.28				77.8		
87	2	-1.50			73.0			
89	4	0.03		79.0				
90	4	0.03	79.0					
93	2	1.42				84.5		
94	4	-0.24				77.9		
97	0	-3.39		65.6				
102	2	-1.24				74.0		
105	3	-0.89				75.4		
109	4	-0.02		78.8				
110	0	-19.99	0.5					
114	4	0.29		80.0				
116	3	0.97				82.7		
117	2	1.20		83.6				
119	4	-0.40				77.3		
120	3	0.67		81.5				
121	4	-0.48				77.0		
127	4	0.11				79.3		
128	4	0.21				79.7		
129	0	4.88		98.0				
131	2	-1.35				73.6		
133	3	0.55				81.1		
134	4	0.37				80.3		
136	4	-0.35						77.5
138	2	1.03				82.9		
140	4	0.03		79.0				
141	3	0.72				81.7		
142	3	0.97				82.7		
145	4	-0.01				78.9		
146	0	-4.13				62.7		
149	0	-14.25		23.0				
153	1	1.82	86.0					
154	4	0.13				79.4		
179	1	-1.73		72.1				
180	3	-0.73				76.0		
182	1	-1.58			72.7			
191	4	-0.33						77.6
196	3	0.72		81.7				
204	4	-0.12				78.4		
210	0	-2.77				68.0		
211	1	1.56				85.0		
212	3	0.74	81.8					
217	4	-0.30				77.7		
218	4	0.32			80.1			
220	3	-0.99		75.0				

Table 14. *--Statistical summary of reported data for standard reference sample M-128 (major constituents)--Continued*

Cl (Chloride) **m g/L**



0. Other			21. Titrate: electrometric		
7. Ion chromatography			22. Colorimetric		
20. Titrate: colorimetric			40. Selective ion electrode		
N =	3	34	21	4	37	3
Minimum =	97	36	90	99	11	96
Maximum =	97	119	104	106	106	100
Median =		98.7	97.8		98.1	
St Dev =		3.51	3.43		18.13	

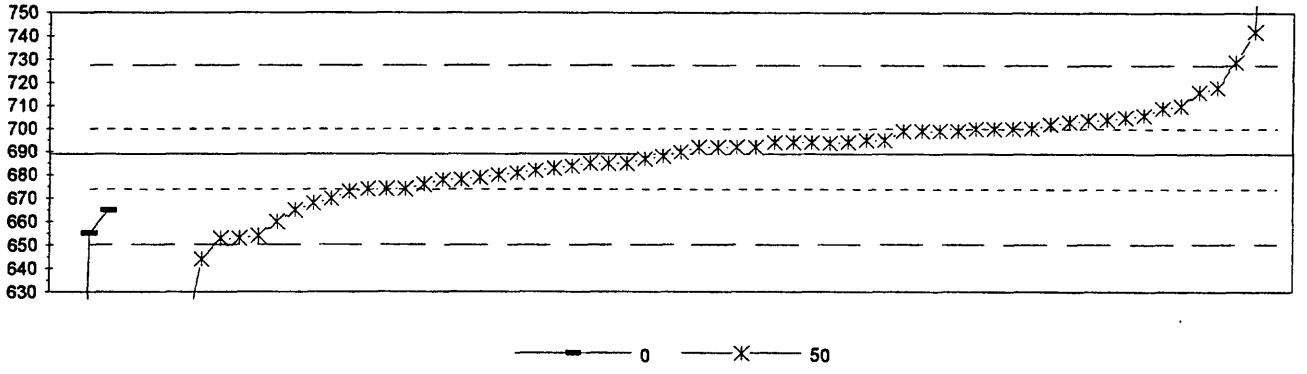
MPV =	98.2
F-pseudosigma =	2.56
N =	102
Hu =	99.9
HI =	96.4

Lab	Rating	Z-value	0	7	20	21	22	40
1	1	-1.70					93.8	
3	3	-0.60					96.6	
5	4	0.21		98.7				
7	0	-2.90		90.7				
8	2	-1.23		95.0				
10	4	-0.41					97.1	
11	3	0.72					100.0	
12	4	-0.06					98.0	
13	2	1.50					102.0	
15	0	-5.13		85.0				
16	4	0.10					98.4	
18	4	-0.45					97.0	
19	3	0.72			100.0			
24	4	-0.02					98.1	
25	0	-24.39		35.6				
26	0	-3.96		88.0				
29	0	2.28			104.0			
30	0	-2.24		92.4				
32	0	-2.24		92.4				
33	2	1.31		101.5				
36	3	-0.68					96.4	
39	0	2.28				104.0		
40	3	0.72					100.0	
42	4	0.21		98.7				
43	3	0.72						100.0
45	3	0.53					99.5	
46	3	0.84					100.3	
48	4	-0.45			97.0			
50	2	-1.23					95.0	
51	0	4.07		108.6				
52	4	0.14					98.5	
54	0	-19.20					48.9	
55	0	-2.48					91.8	
56	0	-2.53			91.7			
57	0	-33.98					11.0	
58	3	-0.68			96.4			
60	2	1.50			102.0			
61	0	3.06				106.0		
63	4	-0.45					97.0	
64	4	0.45		99.3				
68	0	-4.43					86.8	
69	4	0.33					99.0	
70	4	-0.06			98.0			
75	3	0.72		100.0				
76	4	-0.21		97.6				
78	4	-0.06					98.0	
81	4	-0.14			97.8			
83	4	0.14			98.5			
84	4	-0.29					97.4	
85	4	0.10					98.4	

Lab	Rating	Z-value	0	7	20	21	22	40
86	0	6.18		114.0				
87	0	-19.55					48.0	
89	4	0.41			99.2			
93	3	0.67		99.9				
94	4	-0.45					97.0	
96	4	0.25					98.8	
97	4	0.10					98.4	
102	3	0.72					100.0	
105	4	0.02		98.2				
107	3	0.72			100.0			
109	4	0.33				99.0		
114	4	0.37						99.1
116	4	0.29		98.9				
117	2	1.42			101.8			
119	3	-0.84			96.0			
120	3	-0.64			96.5			
127	4	-0.25		97.5				
128	3	0.72					100.0	
129	0	-2.79		91.0				
131	4	-0.06		98.0				
134	4	0.49		99.4				
138	2	1.11		101.0				
140	4	0.27					98.9	
141	3	-0.80					96.1	
142	4	0.21					98.7	
145	4	0.23		98.8				
146	0	3.06					108.0	
149	2	1.11		101.0				
153	0	-2.79		91.0				
154	3	-0.64					96.5	
179	4	-0.06			98.0			
180	3	0.72					100.0	
182	0	-3.18			90.0			
183	4	-0.29			97.4			
190	4	0.02		98.2				
191	3	0.88		100.4				
193	0	-3.49		89.2				
194	3	-0.72						96.3
196	4	-0.03		98.1				
197	4	0.37		99.1				
202	4	0.33			99.0			
203	0	-2.71			91.2			
204	4	0.45				99.3		
208	0	2.28		104.0				
210	0	-5.91		83.0				
211	4	-0.25			97.5			
212	4	-0.41	97.1					
213	4	-0.25			97.5			
217	4	-0.37	97.2					
218	0	8.21		119.2				

Table 14. *--Statistical summary of reported data for standard reference sample M-128 (major constituents)--Continued*

DSRD (Dissolved solids) m g/L



0. Other
50. Gravimetric

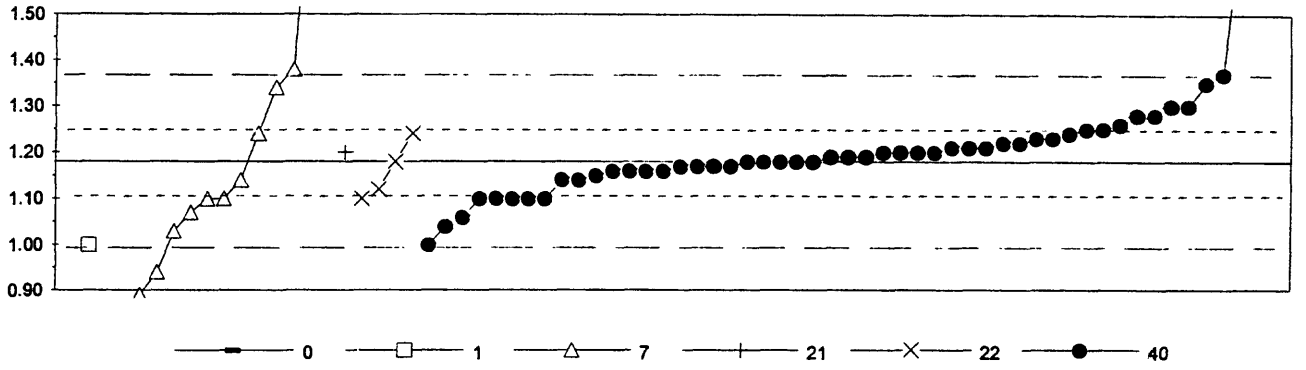
	0	50
N =	3	63
Minimum =	0	17
Maximum =	665	868
Median =		692
St Dev =		18.31

MPV = 689
F-pseudosigma = 19.3
N = 66
Hu = 700
Hl = 674

Lab	Rating	Z-value	0	50
1	4	-0.26		684
3	3	0.57		700
5	0	-32.10		70
8	4	-0.21		685
10	4	0.16		692
11	3	-0.57		678
12	2	1.50		718
13	4	-0.31		683
15	2	-1.25		665
16	0	-32.24		68
18	4	-0.47		680
19	3	-0.67		676
23	4	0.16		692
25	1	-1.82		654
26	4	0.31		695
29	4	0.26		694
32	0	-4.41		604
36	3	0.52		699
38	0	-34.87		17
39	2	1.09		710
40	3	0.88		706
43	3	0.78		704
45	3	0.67		702
46	4	0.26		694
48	3	0.57		700
50	4	-0.21		685
51	3	-0.57		678
52	4	-0.42		681
54	3	-0.99		670
55	4	0.26		694
57	4	0.05		690
60	3	0.52		699
61	4	-0.21		685
63	3	-0.78		674
69	2	1.04		709
70	4	-0.36		682
75	3	0.57		700
76	4	-0.05		688
78	2	-1.25	665	
81	4	0.16		692
85	4	-0.10		687
89	0	2.08		729
90	2	-1.50		660
94	3	0.83		705
97	2	-1.09		668
105	0	9.29		868
109	2	1.40		716
114	0	2.75		742
119	3	-0.78		674
120	3	0.73		703
127	4	0.31		695
129	0	-2.33		644
131	1	-1.76	655	
134	3	0.52		699
136	3	0.77		704
138	1	-1.87		653
140	1	-1.87		653
141	4	0.26		694
142	4	0.26		694
146	3	-0.83		673
158	3	0.52		699
182	3	-0.52		679
183	3	0.57		700
190	0	-35.74	0	
202	3	-0.78		674
211	4	0.16		692

Table 14. *–Statistical summary of reported data for standard reference sample M-128 (major constituents)–Continued*

F (Fluoride) **m g/L**



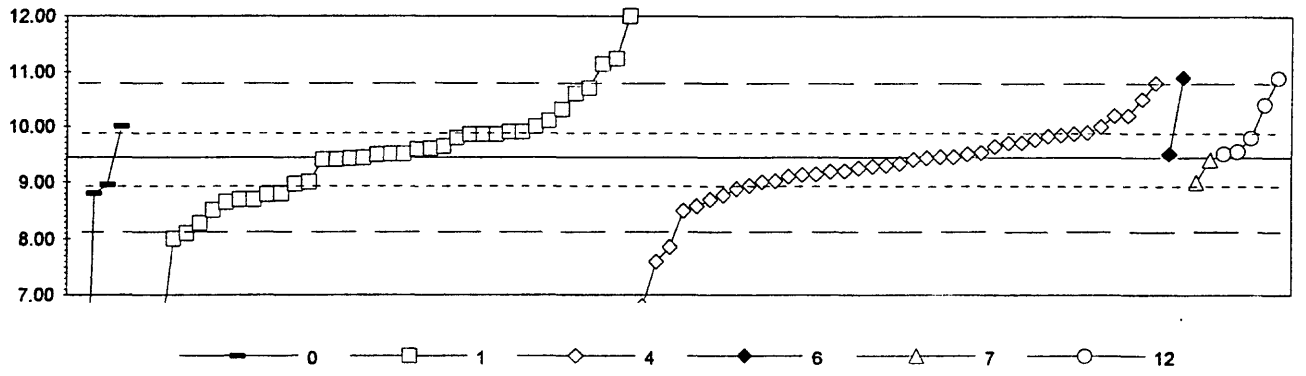
0. Other				21. Titrate: electrometric				
1. AA: direct air				22. Colorimetric				
7. Ion chromatography				40. Ion electrode				
N =	1	1	14	1	4	50		
Minimum =	1.60	1.00	0.63	1.20	1.10	1.00		
Maximum =			2.05		1.24	4.42		
Median =			1.10			1.19		
St Dev =			0.159			0.073		

MPV = 1.18
F-pseudosigma = 0.096
N = 71
Hu = 1.24
HI = 1.11

Lab	Rating	Z-value	0	1	7	21	22	40
1	4	-0.42			1.14			
3	4	0.42						1.22
7	0	7.26			1.88			
8	1	-1.87						1.00
9	2	-1.25						1.06
10	4	0.00						1.18
11	3	-0.83					1.10	
13	4	-0.42						1.14
15	3	-0.83						1.10
16	4	0.10						1.19
18	4	0.31						1.21
23	3	0.62						1.24
24	4	-0.21						1.16
25	2	1.25						1.30
26	0	-2.49			0.94			
29	1	1.76						1.35
32	0	2.08			1.38			
33	0	9.03			2.05			
36	2	-1.45						1.04
39	4	0.10						1.19
40	4	0.21						1.20
42	3	0.73						1.25
45	3	0.83						1.26
46	2	1.04						1.28
50	4	0.00						1.18
52	4	0.31						1.21
54	4	0.00						1.18
55	3	-0.83			1.10			
57	4	-0.21						1.16
58	3	0.73						1.25
61	4	0.21						1.20
63	3	0.52						1.23
69	4	0.00						1.18
70	4	-0.10						1.17
78	4	-0.10						1.17
81	3	-0.83						1.10
85	3	-0.83						1.10
86	0	-5.70			0.63			
89	4	0.31						1.21
93	0	33.62						4.42
94	4	-0.10						1.17
96	4	0.10						1.19
97	4	-0.42						1.14
105	3	-0.83			1.10			
107	4	0.21						1.20
109	4	0.21						1.20
114	4	-0.10						1.17
117	3	-0.62					1.12	
119	4	-0.31						1.15
120	4	0.00					1.18	
127	4	0.00						1.18
128	3	-0.83						1.10
129	0	-4.24			0.77			
134	4	0.21				1.20		
138	2	-1.14			1.07			
140	2	1.04						1.28
141	4	-0.21						1.16
142	4	0.42						1.22
145	1	-1.56			1.03			
153	0	-3.01			0.89			
154	3	0.62					1.24	
180	3	-0.83						1.10
183	0	5.40						1.70
190	4	-0.21						1.16
194	3	0.52						1.23
196	1	-1.87		1.00				
210	2	1.25						1.30
211	1	1.97						1.37
212	0	4.36	1.60					
217	NR				< 5			
218	1	1.66			1.34			
219	3	0.62			1.24			

Table 14. *--Statistical summary of reported data for standard reference sample M-128 (major constituents)--Continued*

K (Potassium) **m g/L**



0. Other			6. ICP/MS				
1. AA: direct air			7. Ion chromatography				
4. ICP			12. Flame emission				
N =	4	38	39	2	2	5
Minimum =	0.07	2.31	6.80	9.50	9.00	9.51
Maximum =	10.00	12.00	10.80	10.90	9.40	10.89
Median =		9.50	9.37			
St Dev =		0.791	0.639			

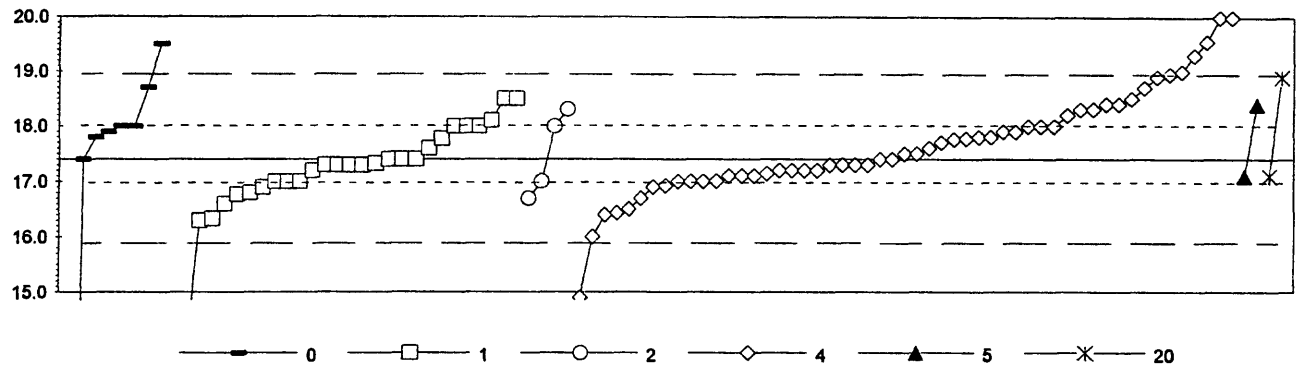
MPV = 9.44
F-pseudosigma = 0.675
N = 90
Hu = 9.85
HI = 8.94

Lab	Rating	Z-value	0	1	4	6	7	12
1	4	-0.01		9.43				
3	1	1.57			10.50			
5	3	0.57			9.83			
7	3	0.83			10.00			
8	4	0.09			9.50			
9	4	-0.06		9.40				
10	4	0.09		9.50				
11	3	-0.83			8.88			
12	4	0.39			9.70			
13	2	-1.38		8.51				
15	3	0.59			9.84			
16	1	1.87		10.70				
18	4	-0.50			9.10			
19	4	0.01			9.45			
23	3	-0.98		8.78				
24	3	-0.99			8.77			
25	2	1.13			10.20			
26	4	-0.06					9.40	
27	2	1.27		10.30				
29	4	0.10						9.51
32	0	2.16				10.90		
33	3	0.83	10.00					
36	3	-0.73	8.95					
38	3	0.52		9.79				
40	4	-0.24			9.28			
42	4	0.39			9.70			
43	4	-0.36			9.20			
45	4	0.30		9.64				
46	2	-1.27			8.58			
48	4	0.30			9.64			
50	4	-0.06		9.40				
51	3	0.53						9.80
52	3	-0.74			8.94			
54	3	-0.65		9.00				
55	4	0.21		9.58				
56	0	2.67		11.24				
57	0	3.79		12.00				
58	3	-0.95		8.80				
61	3	0.64			9.87			
63	1	2.02			10.80			
64	4	-0.03		9.42				
68	4	-0.21			9.30			
69	2	1.42						10.40
70	2	1.13			10.20			
75	2	-1.10		8.70				
76	3	0.61		9.85				
78	4	0.24		9.60				
81	4	0.13			9.53			
83	0	2.52		11.14				
85	3	0.61		9.85				
86	4	-0.06			9.40			

Lab	Rating	Z-value	0	1	4	6	7	12
86	4	-0.06			9.40			
87	2	-1.17		8.65				
89	3	0.98		10.10				
93	0	2.15						10.89
94	4	-0.46			9.13			
97	4	0.07		9.49				
102	0	-2.73			7.60			
105	4	-0.28			9.25			
109	3	0.61		9.85				
110	0	-13.89	0.07					
114	0	-5.10		6.00				
117	1	-1.72		8.28				
119	3	-0.65			9.00			
120	0	-10.57		2.31				
127	4	-0.16			9.33			
128	4	-0.01			9.43			
129	1	1.72		10.60				
131	0	-3.91			6.80			
134	3	0.68		9.90				
138	3	-0.62			9.02			
140	4	0.09		9.50				
141	3	0.67			9.89			
142	4	0.47			9.76			
145	4	-0.44			9.14			
146	0	-2.34			7.86			
149	0	-2.13		8.00				
153	3	-0.65					9.00	
154	4	0.01			9.45			
179	3	0.68		9.90				
180	4	-0.37			9.19			
182	1	-1.99		8.10				
191	4	0.09				9.50		
196	3	-0.70		8.97				
204	4	0.16						9.55
210	0	-6.14		5.30				
211	2	-1.39			8.50			
212	3	-0.95	8.80					
217	2	-1.10			8.70			
218	3	0.83		10.00				
220	2	-1.10		8.70				

Table 14. *–Statistical summary of reported data for standard reference sample M-128 (major constituents)–Continued*

Mg (Magnesium) **m g/L**



0. Other			4. ICP					
1. AA: direct air			5. DCP					
2. AA: direct nitrous oxide			20. Titrate: edta					
N =	8	28	4	53	2	2		
Minimum =	0.1	10.0	16.7	14.9	17.1	17.1		
Maximum =	19.5	18.5	18.3	20.0	18.4	18.9		
Median =	18.0	17.3		17.5				
St Dev =	0.70	0.59		0.78				

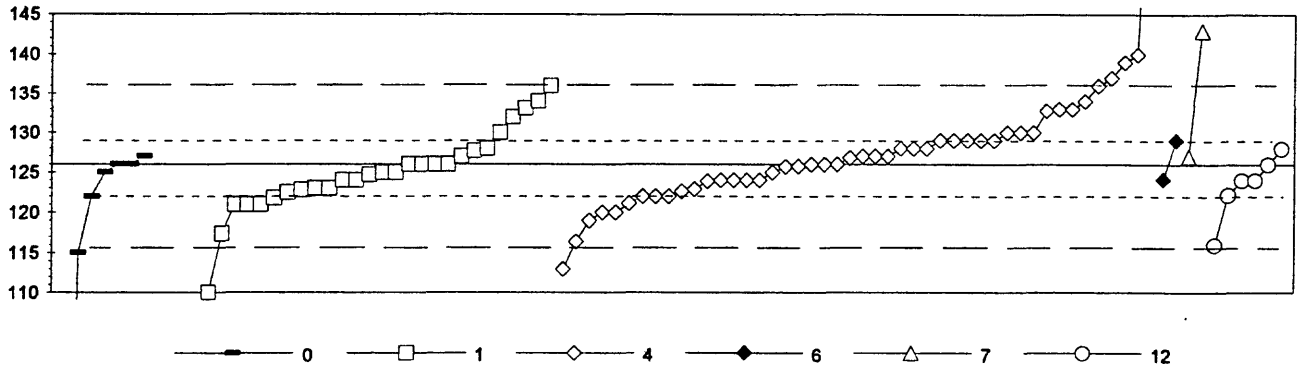
MPV =	17.4
F-pseudosigma =	0.74
N =	97
Hu =	18.0
Hl =	17.0

Lab	Rating	Z-value	0	1	2	4	5	20
1	4	-0.40				17.1		
3	3	0.54				17.8		
4	3	-0.54				17.0		
5	3	-0.65				16.9		
7	3	0.67				17.9		
8	2	-1.21				16.5		
9	3	-0.81		16.8				
10	4	-0.13		17.3				
11	2	1.35				18.4		
12	2	1.21				18.3		
13	2	1.48		18.5				
15	2	1.48				18.5		
16	3	-0.54				17.0		
18	4	-0.27				17.2		
19	4	0.27				17.6		
23	4	0.00		17.4				
24	4	-0.27				17.2		
25	1	2.02				18.9		
26	3	0.67	17.9					
27	4	-0.40					17.1	
29	4	-0.40						17.1
30	4	-0.27		17.2				
32	0	2.83	19.5					
33	2	1.35					18.4	
36	3	-0.94			16.7			
38	4	0.50		17.8				
39	3	0.81	18.0					
40	3	0.54				17.8		
42	3	0.81				18.0		
43	4	-0.13				17.3		
45	3	0.54	17.8					
46	4	0.13				17.5		
48	0	2.16				19.0		
50	3	-0.54		17.0				
51	2	-1.08		16.6				
52	4	-0.27				17.2		
54	4	0.00		17.4				
55	2	1.08				18.2		
56	2	-1.44		16.3				
57	1	1.75				18.7		
58	0	-4.72		13.9				
61	4	0.49				17.8		
63	0	2.56				19.3		
64	4	-0.13				17.3		
68	3	0.81				18.0		
69	3	-0.67		16.9				
70	4	0.40				17.7		
75	3	0.81		18.0				
78	2	1.48		18.5				
81	3	-0.54				17.0		

Lab	Rating	Z-value	0	1	2	4	5	20
83	2	-1.31				16.4		
84	4	-0.13		17.3				
85	4	0.00		17.4				
86	2	1.35				18.4		
87	3	-0.54		17.0				
89	4	0.27		17.6				
93	0	2.90				19.6		
94	4	-0.40				17.1		
97	4	-0.13		17.3				
102	3	-0.94				16.7		
105	2	-1.35				16.4		
109	3	0.81		18.0				
110	0	-23.39	0.1					
114	3	0.81			18.0			
116	4	-0.13				17.3		
117	3	-0.85		16.8				
119	4	-0.27				17.2		
120	4	-0.10		17.3				
121	0	3.51				20.0		
127	4	-0.13				17.3		
128	4	-0.35				17.1		
129	0	-9.98		10.0				
131	3	0.67				17.9		
133	4	0.13				17.5		
134	4	0.50				17.8		
136	1	2.02						18.9
138	4	0.00				17.4		
140	4	-0.13		17.3				
141	2	1.23				18.3		
142	0	2.09				19.0		
145	3	-0.53				17.0		
146	0	-3.37				14.9		
149	2	-1.48		16.3				
153	1	1.75	18.7					
154	4	-0.40				17.1		
179	3	0.94		18.1				
180	3	0.81				18.0		
182	3	-0.54			17.0			
191	4	0.00	17.4					
196	3	0.81		18.0				
204	4	0.00				17.4		
210	1	-1.89				16.0		
211	0	3.51				20.0		
212	3	0.81	18.0					
217	3	-0.67				16.9		
218	2	1.23			18.3			
220	3	-0.54		17.0				

Table 14. *–Statistical summary of reported data for standard reference sample M-128 (major constituents)–Continued*

Na (Sodium) **m g/L**



0. Other			6. ICP/MS				
1. AA: direct air			7. Ion chromatography				
4. ICP			12. Flame emission				
N =	7	31	46	2	2	6
Minimum =	0	55	113	124	127	116
Maximum =	127	136	173	129	143	128
Median =	126	125	127			
St Dev =	4.5	4.4	5.6			

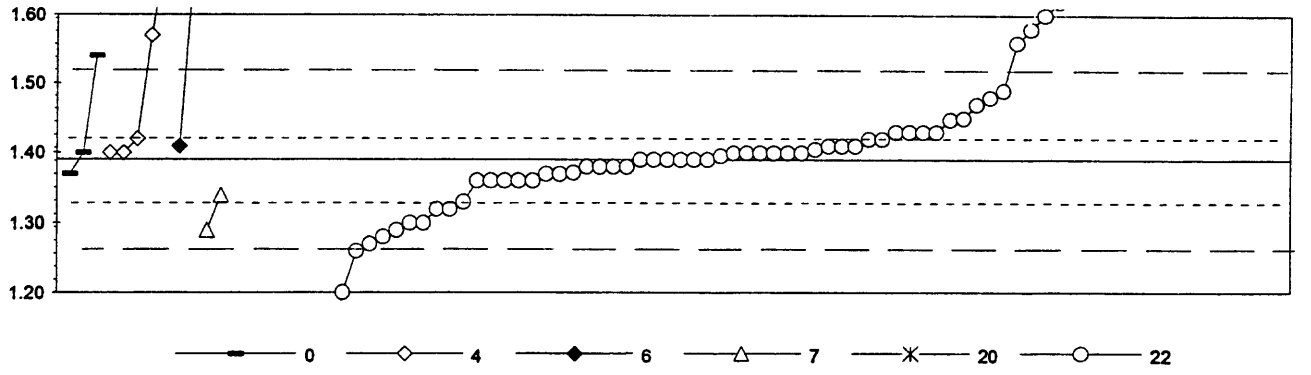
MPV = 126
F-pseudosigma = 5.0
N = 94
Hu = 129
HI = 122

Lab	Rating	Z-value	0	1	4	6	7	12
1	3	-0.94			121			
3	0	2.21			137			
4	3	0.62			129			
5	4	-0.39			124			
7	3	0.62			129			
8	3	0.62			129			
9	4	-0.37		124				
10	4	-0.23		125				
11	3	0.82			130			
12	4	0.42			128			
13	4	-0.17		125				
15	4	0.22			127			
16	4	0.02			126			
18	3	-0.59			123			
19	4	0.18			127			
23	3	-0.57		123				
24	3	-0.77			122			
25	1	1.61			134			
26	4	0.22					127	
29	4	-0.37						124
32	3	0.62				129		
33	0	-2.16	115					
36	3	-0.77	122					
38	1	-1.68		117				
39	4	0.22	127					
40	4	-0.37			124			
42	3	0.62			129			
43	4	0.02			126			
45	4	0.02	126					
46	3	-0.77			122			
48	0	2.60			139			
50	3	-0.57		123				
51	3	-0.73						122
52	4	-0.37			124			
54	4	0.02		126				
55	4	0.42		128				
56	3	-0.61		123				
57	4	0.02			126			
58	0	-6.21		95				
61	4	-0.04			126			
63	0	2.80			140			
64	4	-0.17		125				
68	3	0.82			130			
69	1	-1.96						116
70	4	0.22			127			
75	4	0.02		126				
78	2	1.21		132				
81	0	9.35			173			
83	1	-1.88			116			
84	4	0.42						128

Lab	Rating	Z-value	0	1	4	6	7	12
85	3	-0.97		121				
86	4	0.22			127			
87	3	-0.97		121				
89	3	0.82		130				
93	4	-0.37						124
94	3	-0.65			123			
97	0	-3.15		110				
102	0	-2.56			113			
105	3	0.62			129			
109	3	-0.81		122				
110	0	-24.95	0					
114	0	-11.88		66				
116	4	-0.37			124			
117	0	-5.97		96				
119	4	-0.37			124			
120	4	0.36		128				
121	4	-0.17			125			
126	0	-14.14		55				
127	3	-0.77			122			
128	4	0.42			128			
129	3	-0.97		121				
131	2	1.41			133			
134	4	0.22		127				
138	1	2.01			136			
140	4	-0.37		124				
141	2	1.41			133			
142	2	1.37			133			
145	4	-0.02			126			
146	2	-1.36			119			
149	2	1.43		133				
153	0	3.40					143	
154	4	0.42			128			
179	4	0.02		126				
180	4	-0.17	125					
182	3	-0.67		123				
191	4	-0.35				124		
196	1	1.61		134				
204	4	0.02						126
210	2	-1.17			120			
211	3	0.82			130			
212	4	0.02	126					
217	2	-1.17			120			
218	1	2.01		136				
220	4	0.02		126				

Table 14. *--Statistical summary of reported data for standard reference sample M-128 (major constituents)--Continued*

total P (total Phosphorus) m g/L



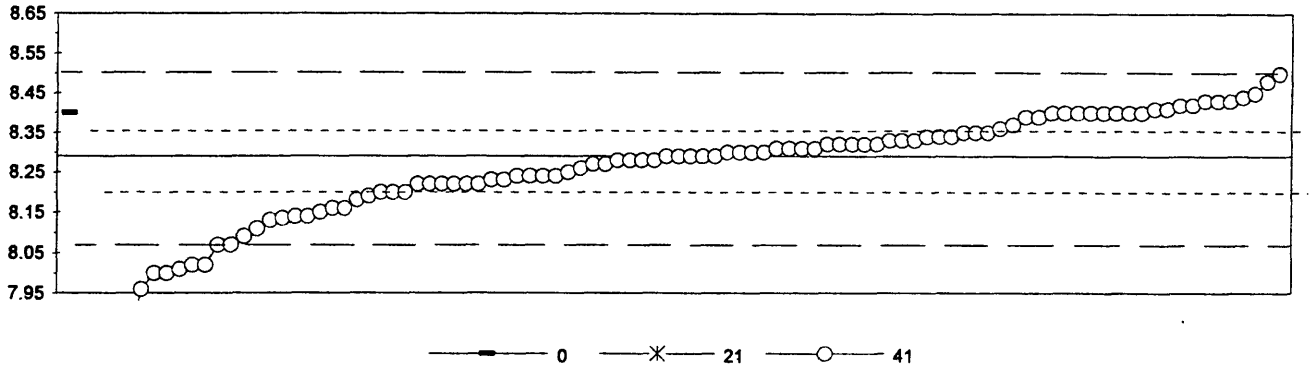
0. Other				7. Ion chromatography				
4. ICP				20. Titrate: colorimetric				
6. ICP/MS				22. Color: phosphomolybdate				
	N =	3	5	2	2	1	61	
	Minimum =	1.37	1.40	1.41	1.29	1.12	0.08	
	Maximum =	1.54	1.70	1.68	1.34	1.12	1.62	
	Median =						1.39	
	St Dev =						0.067	

MPV = 1.39
F-pseudosigma = 0.067
N = 74
Hu = 1.42
HI = 1.33

Lab	Rating	Z-value	0	4	6	7	20	22
1	4	0.22						1.41
3	3	0.60						1.43
7	4	0.30						1.41
8	0	-19.61						0.08
9	4	0.15						1.40
11	0	-6.75						0.94
12	4	0.30						1.41
13	4	-0.15						1.38
15	4	-0.45						1.36
18	4	-0.45						1.36
19	4	0.15						1.40
23	4	-0.15						1.38
25	0	2.70		1.57				
32	0	4.35			1.68			
36	2	-1.50						1.29
38	4	-0.27						1.37
45	4	0.45						1.42
46	4	0.00						1.39
48	4	0.15						1.40
51	0	-18.45						0.16
52	4	0.00						1.39
57	0	-7.34						0.90
58	3	0.90						1.45
60	2	1.50						1.49
61	1	-1.95						1.26
63	4	0.15						1.40
64	3	0.60						1.43
68	4	0.15		1.40				
70	0	-4.65						1.08
75	4	0.45						1.42
78	0	-9.14						0.78
81	0	2.85						1.58
83	4	0.15		1.40				
85	2	-1.35						1.30
86	4	0.45		1.42				
87	2	1.35						1.48
89	4	-0.15						1.38
94	3	-0.90						1.33
102	4	0.00						1.39
104	0	-19.64						0.08
105	4	-0.15						1.38
107	4	-0.30						1.37
111	0	2.55						1.56
114	4	-0.45						1.36
119	4	-0.45						1.36
120	4	0.00						1.39
127	4	0.00						1.39
128	2	-1.35						1.30
129	3	0.87						1.45
131	0	4.65		1.70				
134	4	0.15						1.40
136	4	0.09						1.40
138	1	-1.80						1.27
140	4	-0.45						1.36
141	3	0.60						1.43
142	2	-1.05						1.32
145	2	1.20						1.47
154	0	-2.85						1.20
158	3	0.60						1.43
179	0	-4.05					1.12	
180	0	2.25	1.54					
182	0	3.45						1.62
191	4	0.30			1.41			
194	4	0.00						1.39
196	3	-0.75				1.34		
200	4	-0.30	1.37					
202	4	0.15						1.40
203	2	-1.05						1.32
204	4	0.30						1.41
208	2	-1.50				1.29		
210	0	3.15						1.60
211	1	-1.65						1.28
212	4	0.15	1.40					
213	4	-0.30						1.37

Table 14. *--Statistical summary of reported data for standard reference sample M-128 (major constituents)--Continued*

pH



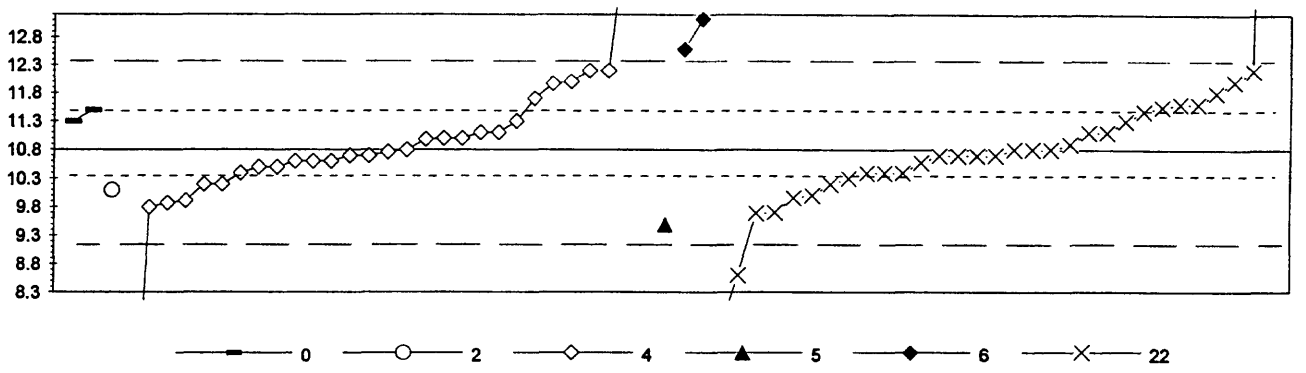
0. Other			
21. Titrate: electrometric			
41. Direct reading			
N =	1	1	96
Minimum =	8.40	7.28	7.48
Maximum =			8.50
Median =			8.29
St Dev =			0.120

MPV = 8.29
F-pseudosigma = 0.111
N = 98
Hu = 8.35
HI = 8.20

Lab	Rating	Z-value	0	21	41
1	2	-1.39			8.14
3	3	0.54			8.35
5	0	-9.08		7.28	
7	1	-1.80			8.09
8	0	-2.43			8.02
10	3	0.90			8.39
11	4	0.18			8.31
12	3	-0.81			8.20
13	4	0.27			8.32
15	0	-5.40			7.69
16	0	-2.97			7.96
18	4	0.27			8.32
19	4	-0.45			8.24
23	4	-0.18			8.27
24	3	0.54			8.35
25	3	-0.54			8.23
26	1	1.89			8.50
29	2	1.26			8.43
30	2	-1.17			8.16
32	4	0.09			8.30
33	4	-0.18			8.27
36	4	0.18			8.31
38	3	0.99			8.40
39	3	-0.63			8.22
40	4	-0.09			8.28
42	1	-1.62			8.11
43	4	-0.27			8.26
45	0	-5.22			7.71
46	4	-0.45			8.24
48	0	-2.61			8.00
50	4	0.09			8.30
51	2	1.08			8.41
52	3	0.90			8.39
54	4	0.36			8.33
55	2	1.17			8.42
56	3	-0.63			8.22
57	3	-0.81			8.20
58	2	-1.35			8.14
60	2	1.08			8.41
61	0	-2.43			8.02
62	4	0.00			8.29
63	4	0.45			8.34
64	4	0.18			8.31
68	2	1.17			8.42
69	4	0.45			8.34
70	3	-0.63			8.22
75	0	-2.61			8.00
76	1	-1.98			8.07
78	4	0.27			8.32
79	3	0.99			8.40
81	3	-0.81			8.20
84	0	-7.28			7.48
85	2	1.26			8.43
86	4	0.00			8.29
87	4	-0.45			8.24
89	4	-0.09			8.28
93	2	1.26			8.43
94	2	1.44			8.45
96	1	1.71			8.48
97	4	0.36			8.33
104	2	-1.26			8.15
105	4	-0.09			8.28
107	4	0.00			8.29
109	4	0.36			8.33
114	4	0.27			8.32
118	4	0.45			8.34
119	3	0.99			8.40
120	3	0.99			8.40
127	3	0.63			8.36
128	2	1.35			8.44
129	4	0.00			8.29
131	3	-0.63			8.22
134	3	0.72			8.37
136	3	-0.90			8.19
138	3	-0.63			8.22
140	2	-1.44			8.13
141	1	-1.98			8.07
142	4	-0.36			8.25
145	3	0.99			8.40
146	2	-1.17			8.16
153	4	0.00			8.29
154	3	0.99			8.40
158	4	0.09			8.30
180	3	0.99			8.40
182	3	-0.63			8.22
183	4	0.18			8.31
190	4	-0.45			8.24
191	3	-0.54			8.23
194	3	0.99			8.40
197	4	0.27			8.32
202	4	0.09			8.30
203	4	-0.09			8.28
204	0	-2.52			8.01
210	3	0.54			8.35
211	0	-4.41			7.80
212	3	0.99	8.40		
213	2	-1.35			8.14
218	3	-0.99			8.18

Table 14. *--Statistical summary of reported data for standard reference sample M-128 (major constituents)--Continued*

SiO2 (Silica) **m g/L**



0. Other			5. DCP				
2. AA: direct nitrous oxide			6. ICP/MS				
4. ICP			22. Color: molybdate blue				
N =	2	1	29	1	2	31	
Minimum =	11.3	10.1	4.0	9.5	12.6	7.6	
Maximum =	11.5		16.5		13.1	25.5	
Median =			10.7			10.7	
St Dev =			0.69			0.78	

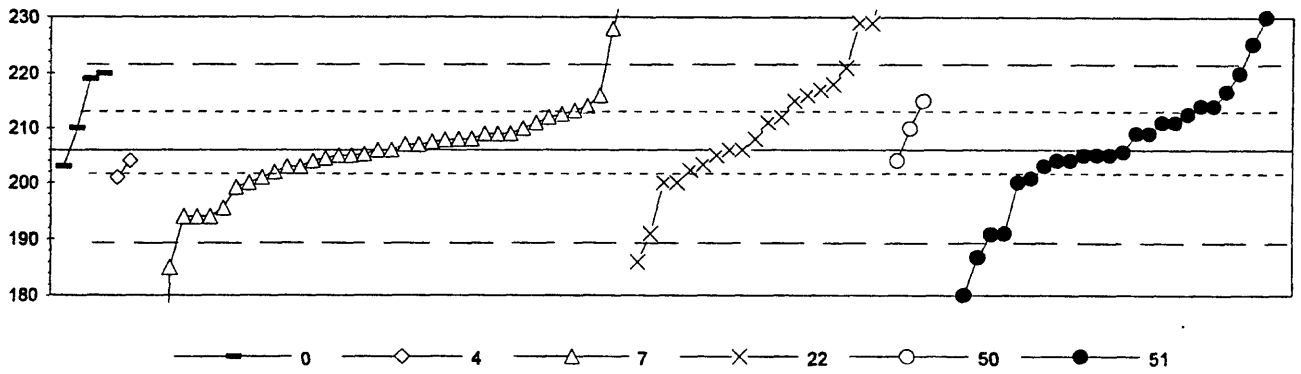
MPV = 10.8
F-pseudosigma = 0.82
N = 66
Hu = 11.5
Hl = 10.4

Lab	Rating	Z-value	0	2	4	5	6	22
1	4	-0.34			10.5			
3	2	1.13			11.7			
4	4	-0.34			10.5			
5	4	0.02			10.8			
7	4	0.39			11.1			
8	2	1.25						11.8
9	3	-0.96						10.0
10	4	-0.10						10.7
11	2	1.01						11.6
13	3	-0.71						10.2
15	4	-0.47			10.4			
18	2	1.01						11.6
24	4	0.39			11.1			
25	0	5.42			15.2			
32	0	2.88					13.1	
33	1	-1.57				9.5		
36	0	18.05						25.5
38	4	-0.24						10.6
40	2	1.50			12.0			
42	1	1.74			12.2			
43	3	0.64			11.3			
45	4	-0.22			10.6			
50	1	1.74						12.2
51	3	0.94						11.6
52	3	-0.59						10.3
55	4	0.25			11.0			
57	2	-1.20			9.8			
61	3	0.88	11.5					
63	1	1.74			12.2			
64	3	-0.71			10.2			
68	4	0.03						10.8
70	4	-0.47						10.4
78	3	-0.83		10.1				
83	2	-1.31						9.7
85	4	-0.10						10.7
87	3	0.64						11.3
89	4	-0.47						10.4
97	4	0.03						10.8
102	4	0.39						11.1
104	4	-0.10						10.7
105	3	-0.71			10.2			
107	4	0.39						11.1
109	2	-1.12			9.9			
116	4	-0.22			10.6			
118	2	1.50						12.0
119	4	0.27			11.0			
121	4	-0.22			10.6			
127	4	-0.10			10.7			
128	2	-1.06			9.9			
129	3	0.85						11.5

Lab	Rating	Z-value	0	2	4	5	6	22
131	4	0.27			11.0			
134	4	-0.02			10.8			
136	4	-0.09						10.7
138	4	0.03						10.8
140	0	-2.67						8.6
141	4	-0.47						10.4
142	2	1.46			12.0			
145	4	-0.10			10.7			
146	0	7.02			16.5			
149	4	0.15						10.9
191	0	2.23					12.6	
203	2	-1.01						10.0
204	2	-1.34						9.7
210	0	-8.36			4.0			
211	0	-3.90						7.6
212	3	0.64	11.3					

Table 14. *–Statistical summary of reported data for standard reference sample M-128 (major constituents)–Continued*

SO4 (Sulfate) **m g/L**



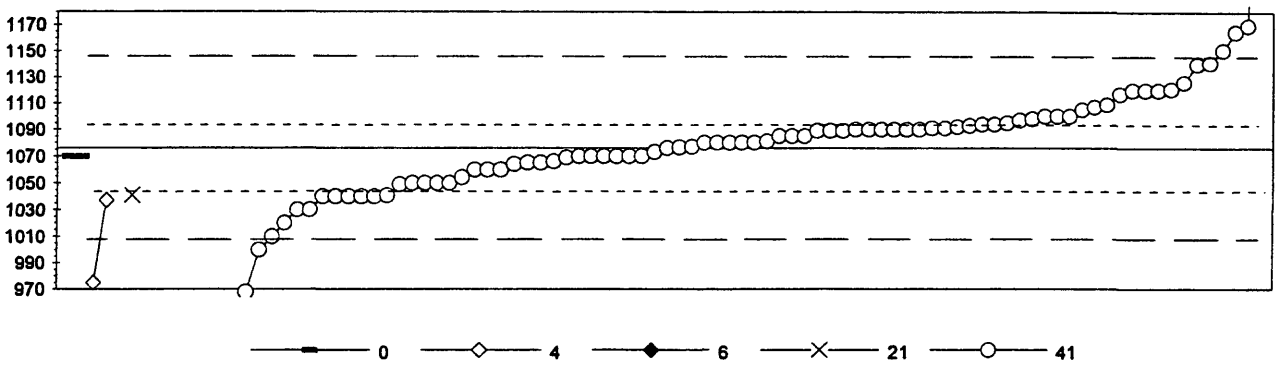
0. Other			22. Colorimetric				
4. ICP			50. Gravimetric				
7. Ion chromatography			51. Turbidimetric				
N =	4	2	38	20	3	27	
Minimum =	203	201	2	186	204	170	
Maximum =	220	204	236	236	215	236	
Median =			206	208		206	
St Dev =			7.7	11.3		10.3	

MPV = 206
F-pseudosigma = 7.9
N = 94
Hu = 213
HI = 202

Lab	Rating	Z-value	0	4	7	22	50	51
1	3	0.51			210			
3	0	-2.55				186		
5	3	-0.51			202			
7	0	-25.95			2			
8	4	-0.38			203			
9	0	2.93				229		
10	4	-0.05						206
11	4	-0.13						205
12	2	1.40				217		
13	1	-1.91				191		
15	1	-1.53			194			
16	0	2.46						225
18	3	0.64				211		
19	4	-0.33				203		
24	4	-0.13				205		
25	0	-21.52			37			
26	4	-0.25			204			
29	4	-0.13			205			
30	3	-0.87			199			
32	1	-1.53			194			
33	2	-1.34			196			
36	3	-0.76						200
39	1	1.78	220					
40	3	-0.64			201			
42	4	0.19			208			
43	4	-0.25					204	
45	3	0.64						211
46	1	1.91				221		
48	2	1.02						214
50	4	0.00				206		
51	3	0.84			213			
52	4	-0.13						205
54	2	1.02						214
55	2	1.27				216		
56	3	-0.66						201
57	0	-3.31						180
58	2	1.15					215	
61	1	1.78						220
63	0	-2.44						187
64	3	0.64			211			
69	4	-0.47				202		
70	1	-1.91						191
75	2	1.27			216			
76	4	-0.13			205			
78	0	-4.58						170
83	4	-0.14						205
85	3	-0.76			200			
86	0	2.80			228			
87	4	0.38						209
89	4	-0.25						204
93	4	-0.19			204			
93	4	-0.19			204			
94	4	0.00				206		
96	3	0.83						213
97	1	1.53				218		
102	3	-0.76				200		
105	3	0.92			213			
109	3	0.51					210	
114	4	0.38						209
116	4	0.13			207			
119	4	-0.25						204
120	3	-0.76				200		
127	4	0.38			209			
128	3	-0.64		201				
129	4	0.00			206			
131	4	-0.25		204				
134	4	0.13			207			
138	2	1.02			214			
140	0	3.82						236
141	3	0.64						211
142	2	1.36						217
145	4	-0.10			205			
149	4	-0.38			203			
153	4	0.38			209			
154	3	0.76				212		
158	4	0.25				208		
180	0	3.82				236		
182	0	-4.58						170
183	1	-1.92						191
190	0	-2.67			185			
191	4	0.25			208			
193	4	0.00			206			
194	2	1.15				215		
196	3	0.76			212			
197	4	0.23			208			
203	0	3.05						230
204	0	2.93				229		
208	4	0.38			209			
210	1	-1.53			194			
211	4	-0.38						203
212	4	-0.38	203					
217	4	0.25			208			
218	0	3.81			236			
219	1	1.65	219					
220	3	0.51	210					

Table 14. *--Statistical summary of reported data for standard reference water sample M-128 (major constituents)--Continued*

Sp Cond (Specific Conductance) µ S/cm



0. Other			21. Titrate: electrometric			
4. ICP			41. Direct reading			
6. ICP/MS						
N =	2	2	1	1	89	
Minimum =	1070	975	752	1041	105	
Maximum =	1070	1037			1382	
Median =					1080	
St Dev =					32.3	

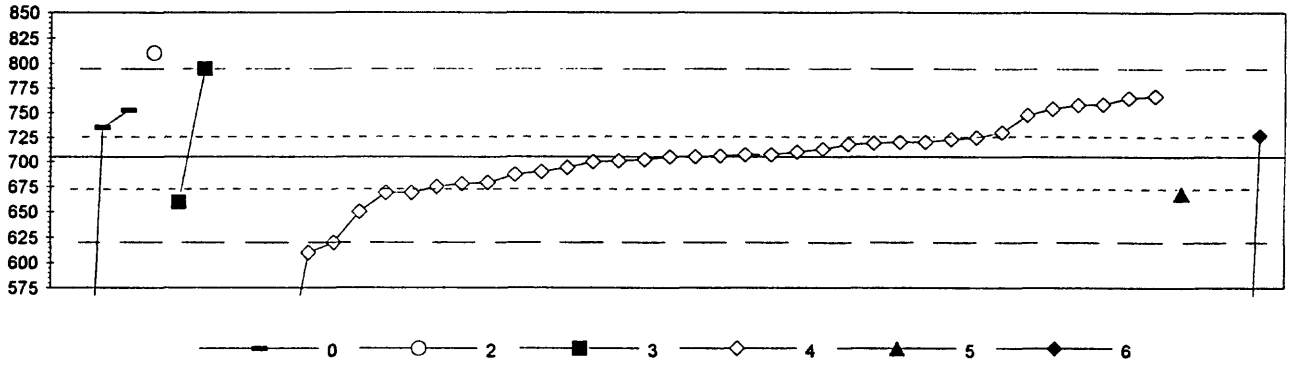
MPV = 1076
F-pseudosigma = 35.2
N = 95
Hu = 1093
Hl = 1045

Lab	Rating	Z-value	0	4	6	21	41
1	4	0.26					1085
3	3	0.68					1100
5	1	-1.59					1020
7	4	-0.45					1060
8	4	-0.09					1073
10	4	0.37					1089
11	3	0.68					1100
12	4	0.11					1080
13	2	-1.02					1040
15	2	1.25					1120
16	3	-1.00					1041
18	2	-1.11		1037			
19	4	0.11					1080
23	0	-27.43					110
24	4	0.26					1085
25	3	0.51					1094
26	4	0.03					1077
29	4	0.43					1091
32	2	-1.31					1030
33	2	-1.31					1030
36	0	2.53					1165
38	3	0.83					1105
39	4	-0.17	1070				
40	4	0.37					1089
42	4	-0.20					1069
43	4	0.40					1090
45	4	-0.17					1070
46	4	0.00					1076
48	3	0.51					1094
50	4	0.40					1090
51	3	-0.77					1049
52	1	-1.87					1010
54	3	-0.62					1054
56	4	-0.34					1064
57	0	-3.07					968
58	0	-4.63					913
60	4	0.26					1085
61	2	1.25					1120
62	4	-0.28					1066
63	4	0.37					1089
64	2	1.25					1120
68	1	1.82					1140
69	3	-0.74					1050
70	0	2.67					1170
75	4	0.11					1080
76	4	-0.17					1070
78	4	0.11					1080
79	3	-0.74					1050
81	4	-0.17					1070
84	3	0.94					1109

Lab	Rating	Z-value	0	4	6	21	41
85	4	-0.17					1070
86	3	0.54					1095
87	0	-6.82					836
89	3	-0.74					1050
93	0	-4.17					929
94	2	1.42					1126
96	4	0.01					1076
97	4	0.11					1080
102	3	0.68					1100
104	3	0.88					1107
105	3	-0.99				1041	
107	4	0.40					1090
109	4	-0.17					1070
114	4	0.40					1090
117	4	0.14					1081
118	3	-0.74					1050
119	4	0.43					1091
127	4	-0.45					1060
128	4	-0.17					1070
129	1	1.85					1141
131	0	-2.87		975			
134	4	0.45					1092
136	4	-0.31					1065
140	4	-0.45					1060
141	2	1.28					1121
142	4	0.40					1090
145	4	-0.31					1065
146	2	-1.02					1040
153	2	-1.02					1040
154	4	0.48					1093
158	3	0.62					1098
180	2	1.16					1117
182	0	-8.46					778
183	0	-12.95					620
190	3	0.60					1097
193	0	-27.58					105
194	2	-1.02					1040
196	0	-9.21			752		
197	0	8.69					1382
202	0	2.13					1151
203	0	-4.43					920
204	2	-1.02					1040
210	0	-2.16					1000
211	4	0.40					1090
212	4	-0.17	1070				

Table 14. *--Statistical summary of reported data for standard reference water sample M-128 (major constituents)--Continued*

Sr (Strontium) µ g/L



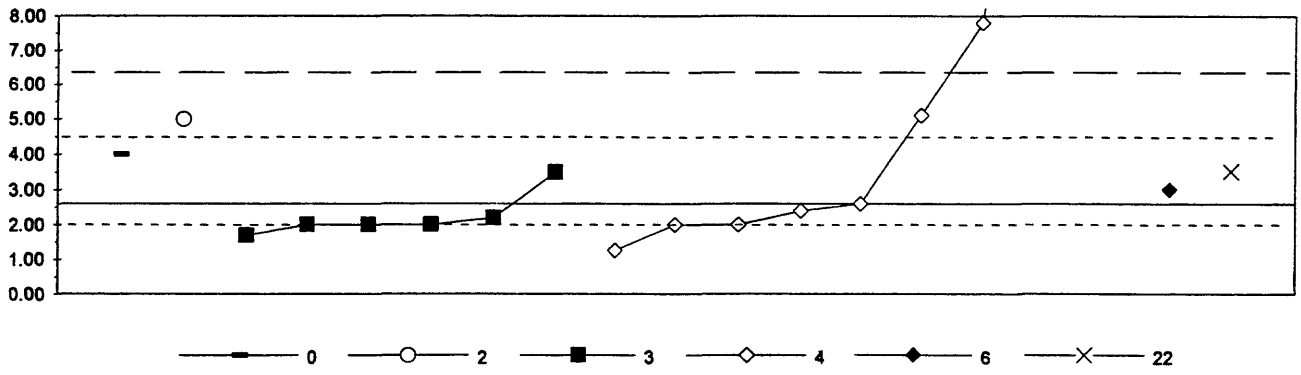
0. Other				4. ICP				
2. AA: direct nitrous oxide				5. DCP				
3. AA: graphite furnace				6. ICP/MS				
	N =	3	1	2	37	1	3	
	Minimum =	75	810	660	69	668	1	
	Maximum =	753		795	767		727	
	Median =				707			
	St Dev =				36.7			

MPV =	705
F-pseudosigma =	42.3
N =	47
Hu =	726
Hl =	669

Lab	Rating	Z-value	0	2	3	4	5	6
1	4	-0.13				700		
3	4	-0.43				687		
4	4	0.12				710		
5	4	-0.10				701		
7	4	0.47				725		
8	2	1.42				765		
11	4	0.33				719		
15	4	0.43				723		
16	3	-0.71				675		
18	4	0.05				707		
24	4	0.19				713		
25	2	1.16				754		
32	3	0.52						727
33	3	-0.87					668	
39	3	0.71	735					
40	3	-0.85				669		
42	2	1.25				758		
46	3	-0.85				669		
52	4	0.05				707		
55	0	-15.05				69		
63	4	0.36				720		
68	3	0.59				730		
70	4	0.36				720		
81	2	1.02				748		
85	4	-0.07				702		
94	4	-0.36				690		
97	2	-1.07			660			
102	2	-1.30				650		
105	4	0.02				706		
116	4	0.00				705		
121	2	1.47				767		
127	4	0.31				718		
131	4	0.00				705		
134	3	-0.62				679		
138	4	-0.26				694		
141	0	2.13			795			
142	2	1.27				759		
145	3	-0.65				678		
146	1	-2.01				620		
154	0	-14.97				72		
182	0	-14.91	75					
191	0	-16.67						1
196	0	-16.62						3
210	0	-5.56				470		
211	0	-2.25				610		
212	2	1.14	753					
218	0	2.49		810				

Table 14. *--Statistical summary of reported data for standard reference sample M-128 (major constituents)--Continued*

V (Vanadium) **µ g/L**



0. Other
2. AA: direct nitrous oxide
3. AA: graphite furnace
4. ICP
6. ICP/MS
22. Color: gallic acid

MPV = 2.6
F-pseudosigma = 1.85
N = 19
Hu = 4.50
HI = 2.00

		N =	1	1	6	9	1	1
		Minimum =	4.0	5.0	1.7	1.3	3.0	3.5
		Maximum =			3.5	80.0		
		Median =				2.4		
		St Dev =				2.32		
Lab	Rating	Z-value	0	2	3	4	6	22
1	4	0.50						3.5
3	NR					< 10		
5	0	2.81				7.8		
7	NR					< 22		
8	NR					< 5		
15	4	-0.49			1.7			
16	NR					< 10		
18	NR					< 5		
25	NR					< 4		
32	4	0.22					3.0	
39	3	0.76	4.0					
48	0	41.77				80.0		
51	4	-0.32			2.0			
52	4	0.49			3.5			
57	NR					< 100		
61	4	0.00				2.6		
63	NR					< 0.01		
68	NR					< 3.0		
70	NR					< 50		
78	4	-0.32			2.0			
85	NR					< 20		
86	3	-0.72				1.3		
94	NR					< 5		
102	NR					< 1		
105	4	-0.32				2.0		
127	NR				< 2			
128	NR					< 5		
134	4	-0.22			2.2			
138	NR					< 3		
141	NR					< 10		
142	4	-0.32			2.0			
145	NR					< 18.0		
146	4	-0.11				2.4		
154	4	-0.32				2.0		
180	2	1.35				5.1		
182	2	1.30		5.0				
210	NR					< 50		
211	0	9.39				20.0		
217	NR					< 10		

Table 15. *–Statistical summary of reported data for standard reference sample N-41(nutrients)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

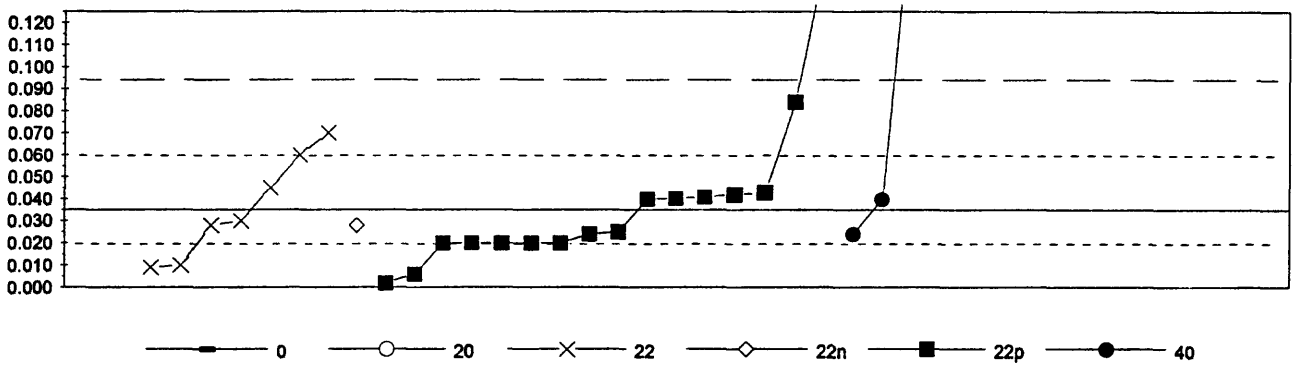
0. Other/Not reported
4. ICP = inductively coupled plasma
7. IC = ion chromatography
20. Titrate: colorimetric
22. Color: = colorimetric [color reagent specified]
40. Ion electrode = specific ion electrode

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 15. *–Statistical summary of reported data for standard reference sample N-40 (preserved nutrients)–Continued*

NH3 as N (Ammonia) m g/L



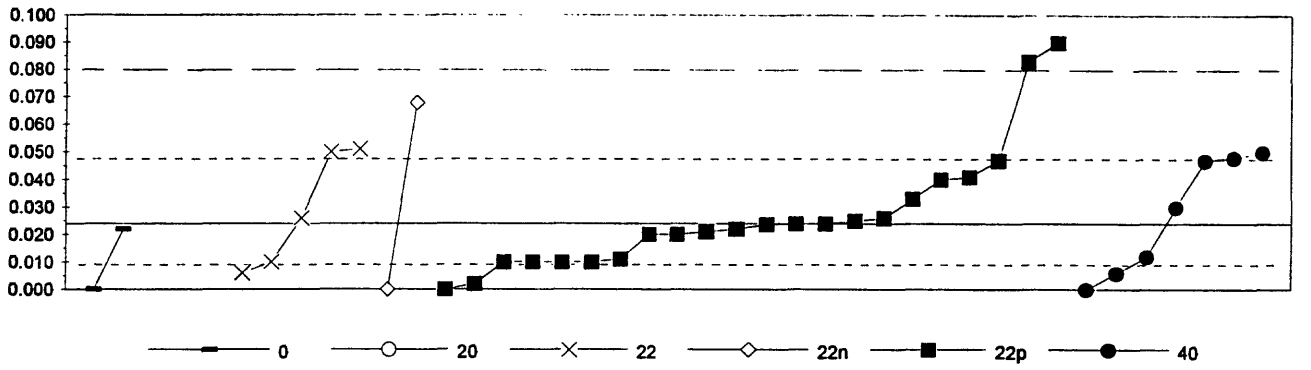
0. Other					22n. Color: Nesslerization			
20. Titrate: colorimetric					22p. Color: phenate			
22. Colorimetric					40. Selective ion electrode			
		N =	0	2	7	1	16	4
		Minimum =		0.300	0.009	0.028	0.002	0.024
		Maximum =		0.570	0.070		0.149	4.300
		Median =			0.030		0.024	
		St Dev =			0.024		0.020	

MPV = 0.035
F-pseudosigma = 0.030
N = 30
Hu = 0.060
Hl = 0.020

Lab	Rating	Z-value	0	20	22	22n	22p	40
1	4	0.18					0.040	
7	NR				< 0.05			
11	3	0.84			0.060			
13	3	-0.51					0.020	
15	4	0.34			0.045			
33	4	-0.17			0.030			
36	0	4.72						0.175
48	3	-0.51					0.020	
52	4	-0.24			0.028			
60	0	18.04		0.570				
63	0	8.94		0.300				
68	4	0.17						0.040
75	4	0.20					0.041	
78	4	-0.37						0.024
88	4	0.24					0.042	
89	4	-0.34					0.025	
90	3	-0.51					0.020	
93	4	0.17					0.040	
97	NR				< 0.03			
105	2	1.18			0.070			
114	NR							< 0.1
118	3	-0.51					0.020	
119	NR							< 0.1
120	1	1.65					0.084	
121	4	-0.37					0.024	
122	0	3.84					0.149	
129	4	-0.24				0.028		
133	0	143.84						4.300
134	4	0.27					0.043	
140	3	-0.88			0.009			
141	NR						< 0.1	
145	3	-0.51					0.020	
154	3	-0.98					0.006	
179	NR		< 1					
214	2	-1.11					0.002	
220	3	-0.84			0.010			

Table 15. *--Statistical summary of reported data for standard reference sample N-40 (nonpreserved nutrients)--Continued*

NH3 as N (Ammonia) m g/L



0. Other				22n. Color: Nesslerization				
20. Titrate: colorimetric				22p. Color: phenate				
22. Colorimetric				40. Selective ion electrode				
N =	2	3	5	2	22	7		
Minimum =	0.000	0.200	0.006	0.000	0.000	0.000		
Maximum =	0.022	0.490	0.051	0.068	0.090	0.050		
Median =					0.023	0.030		
St Dev =					0.023	0.021		

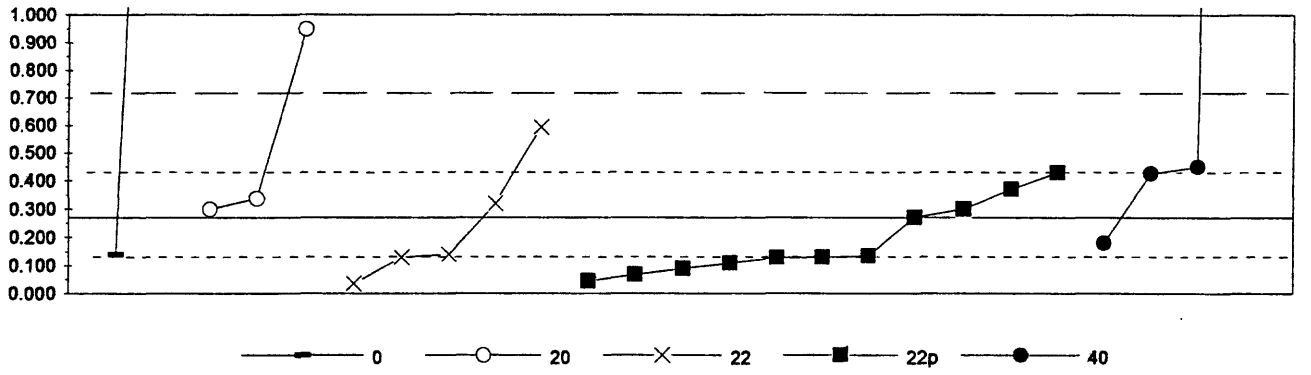
MPV = 0.024
F-pseudosigma = 0.027
N = 41
Hu = 0.047
HI = 0.010

Lab	Rating	Z-value	0	20	22	22n	22p	40
3	NR				< 0.001			
5	3	-0.51					0.010	
9	3	0.84					0.047	
10	4	0.22						0.030
15	3	0.98			0.051			
16	NR			< 0.1				
18	3	-0.51					0.010	
19	NR						< 0.05	
23	4	-0.47					0.011	
25	3	0.88						0.048
26	NR		< 0.05					
32	NR		< 0.02					
33	4	0.07			0.026			
36	3	0.84						0.047
38	4	0.00					0.024	
46	NR						< 0.005	
51	NR	-0.88						0.000
52	NR				< 0.01			
59	NR						< 0.04	
60	0	16.99		0.490				
63	0	6.42		0.200				
68	4	-0.44						0.012
70	NR						< 0.1	
72	NR				< 0.03			
78	3	-0.66						0.006
80	3	0.95			0.050			
81	NR				< 0.05			
83	NR	-0.88					0.000	
85	NR						< 0.005	
87	NR						< 0.1	
88	0	2.15					0.083	
89	4	0.00					0.024	
91	NR						< 0.03	
94	4	0.07					0.026	
96	4	-0.15					0.020	
97	NR				< 0			
102	NR						< 0.02	
104	NR						<0.004	
107	4	0.04					0.025	
111	3	0.58					0.040	
114	NR							< 0.10
118	3	-0.51					0.010	
119	NR							< 0.1
122	NR						< 0.01	
127	NR						< 0.03	
129	NR	-0.88				0.000		
134	4	0.33					0.033	
136	4	-0.01					0.024	
138	4	-0.11					0.021	
142	3	-0.66			0.006			

Lab	Rating	Z-value	0	20	22	22n	22p	40
145	4	-0.15					0.020	
149	NR							< 0.1
179	NR		< 1					
180	3	0.62					0.041	
182	1	1.60				0.068		
183	3	0.95						0.050
198	4	-0.07	0.022					
200	NR		< 0.02					
202	NR						< 0.05	
203	3	-0.51					0.010	
204	4	-0.07					0.022	
213	0	13.71		0.400				
214	3	-0.80					0.002	
215	0	2.41					0.090	
220	3	-0.51			0.010			
221	NR	-0.88	0.000					

Table 15. *--Statistical summary of reported data for standard reference sample N-40 (preserved nutrients)--Continued*

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



0. Other
20. Titrate: colorimetric
22. Colorimetric
22p. Color: phenate
40. Selective ion electrode

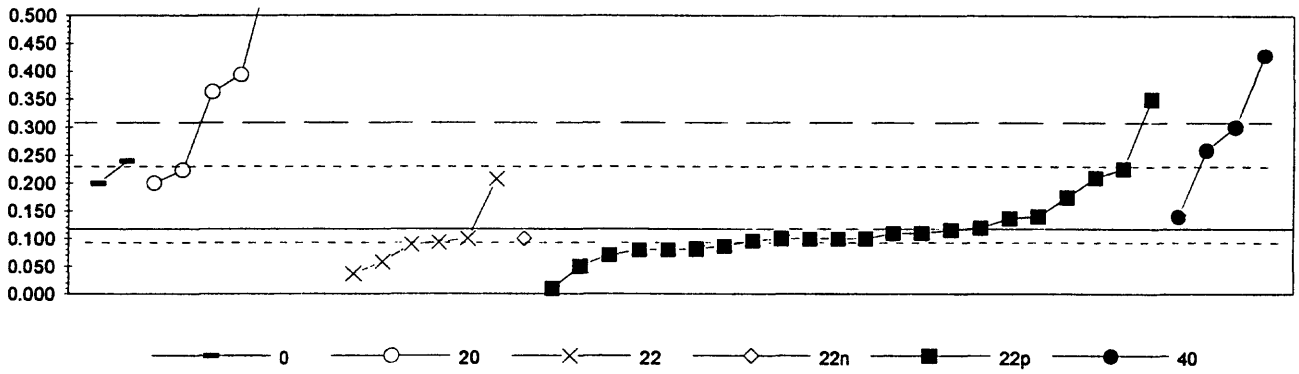
	2	3	5	11	4
N =					
Minimum =	0.140	0.300	0.035	0.044	0.180
Maximum =	3.870	0.950	0.594	0.430	12.200
Median =				0.130	
St Dev =				0.131	

MPV = 0.270
F-pseudosigma = 0.220
N = 25
Hu = 0.427
Hl = 0.130

Lab	Rating	Z-value	0	20	22	22p	40
1	3	-0.92				0.067	
11	3	-0.64			0.130		
13	3	-0.64				0.130	
15	NR				< 0.5		
21	3	-0.62				0.134	
36	4	0.31		0.338			
45	3	0.71					0.427
48	4	0.14				0.300	
52	NR				< 0.01		
56	4	0.45				0.370	
60	0	3.09		0.950			
63	4	0.14		0.300			
68	3	-0.59	0.140				
78	3	0.82					0.450
89	3	-0.73				0.109	
90	3	0.73				0.430	
97	3	-0.59			0.140		
105	4	0.23			0.320		
118	4	0.00				0.270	
119	4	-0.41					0.180
120	3	-0.64				0.129	
133	0	54.19					12.200
134	NR					< 0.2	
140	2	1.47			0.594		
141	NR					< 0.1	
145	3	-0.82				0.090	
154	2	-1.03				0.044	
179	0	16.35	3.870				
214	2	-1.07			0.035		

Table 15. *--Statistical summary of reported data for standard reference sample N-40 (nonpreserved nutrients)--Continued*

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



0. Other
20. Titrate: colorimetric
22. Colorimetric
22n. Color: Nesslerization
22p. Color: phenate
40. Selective ion electrode

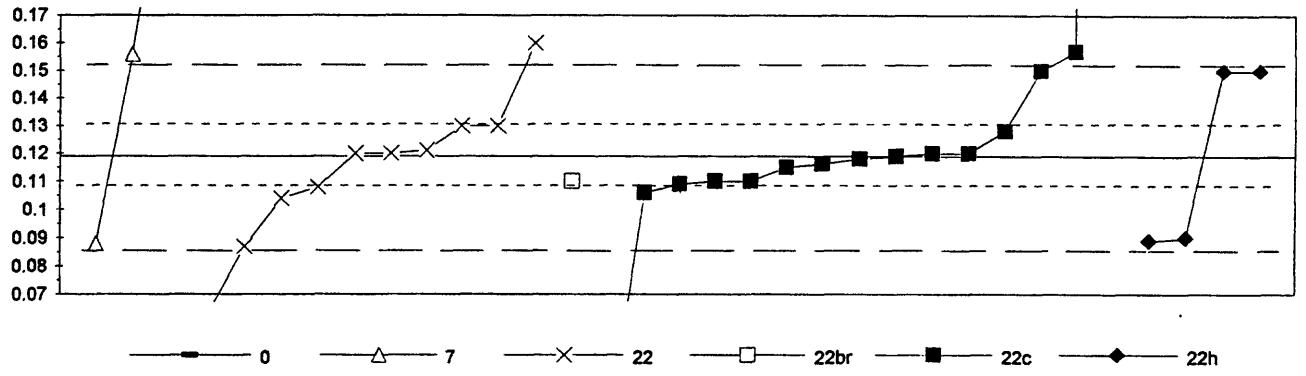
	2	7	6	1	22	4
N =						
Minimum =	0.200	0.200	0.037	0.100	0.010	0.140
Maximum =	0.240	1.000	0.208	0.100	0.350	0.430
Median =					0.100	
St Dev =					0.070	

MPV = 0.118
F-pseudosigma = 0.098
N = 42
Hu = 0.226
HI = 0.094

Lab	Rating	Z-value	0	20	22	22n	22p	40
3	0	2.82		0.394				
9	2	-1.10					0.010	
10	4	-0.39					0.080	
15	NR				< 0.5			
16	2	1.08		0.224				
18	3	0.58					0.175	
21	4	-0.32					0.087	
36	0	2.50		0.363				
38	4	-0.18				0.100		
45	1	1.87						0.301
46	4	-0.18					0.100	
51	2	1.45						0.260
52	NR				< 0.01			
58	0	6.77		0.780				
59	4	-0.18					0.100	
60	0	9.01		1.000				
63	3	0.84		0.200				
70	0	2.37					0.350	
72	4	-0.18			0.100			
78	0	3.19						0.430
79	NR						< 0.2	
81	3	0.92			0.208			
85	4	-0.18					0.100	
87	4	0.22					0.140	
89	4	-0.37					0.082	
91	4	0.02					0.120	
94	4	0.19					0.137	
96	4	-0.08					0.110	
97	4	-0.29			0.090			
102	3	-0.69					0.050	
118	4	-0.49					0.070	
119	4	0.22						0.140
127	NR						< 0.15	
134	2	1.10					0.226	
136	4	-0.22					0.097	
138	4	-0.02					0.116	
142	3	-0.61			0.058			
145	4	-0.39					0.080	
179	NR		< 2.0					
180	4	-0.18					0.100	
198	2	1.25	0.240					
202	4	-0.08					0.110	
204	4	-0.25			0.094			
213	0	4.93		0.600				
214	3	-0.83			0.037			
215	3	0.94					0.210	
221	3	0.84	0.200					

Table 15. *--Statistical summary of reported data for standard reference sample N-40 (preserved nutrients)--Continued*

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



0. Other
7. Ion chromatography
22. Colorimetric
22br. Color: brucine sulfate
22c. Color: Cd diazo
22h. Color: hydrazine diazo

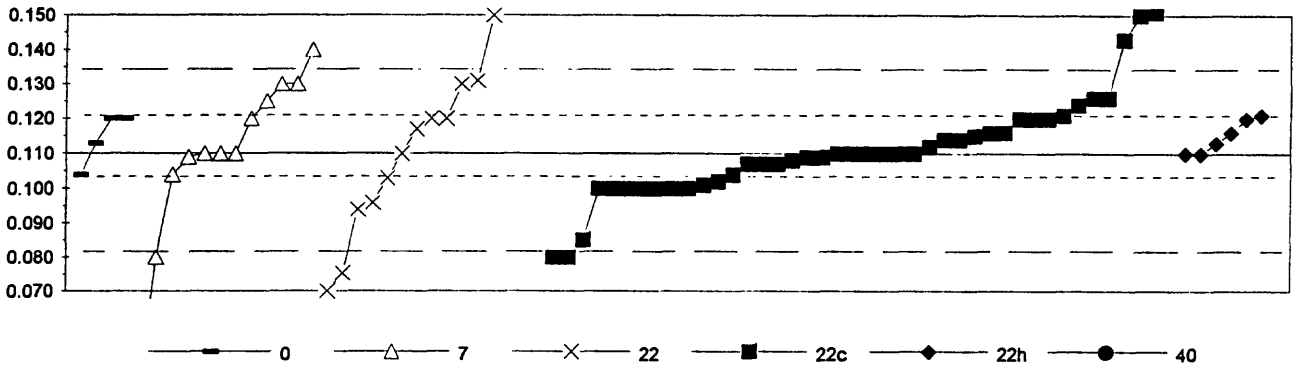
	0	3	10	1	15	4
N =						
Minimum =		0.088	0.062	0.110	0.020	0.089
Maximum =		0.240	0.160		1.890	0.150
Median =			0.120		0.118	
St Dev =			0.026		0.459	

MPV = 0.119
F-pseudosigma = 0.016
N = 33
Hu = 0.130
Hl = 0.108

Lab	Rating	Z-value	0	7	22	22br	22c	22h
1	4	-0.17					0.116	
7	3	0.67			0.130			
11	4	0.06			0.120			
13	4	0.06					0.120	
15	3	-0.92			0.104			
21	1	-1.84						0.089
29	0	7.42		0.240				
36	1	-1.96			0.087			
42	0	2.27		0.156				
43	4	0.06			0.120			
45	0	2.33					0.157	
48	1	1.90						0.150
52	4	0.12			0.121			
60	4	0.06					0.120	
63	0	2.51			0.160			
75	4	-0.25					0.115	
78	0	-6.07					0.020	
88	0	108.59					1.890	
93	1	-1.90		0.088				
97	3	-0.55					0.110	
105	3	-0.67			0.108			
117	1	1.90					0.150	
118	1	1.90						0.150
119	3	-0.55				0.110		
121	3	-0.61					0.109	
122	3	-0.80					0.106	
134	4	-0.06					0.118	
140	0	-3.50			0.062			
141	1	-1.78						0.090
145	3	-0.55					0.110	
154	4	0.00					0.119	
214	3	0.55					0.128	
220	3	0.67			0.130			

Table 15. *--Statistical summary of reported data for standard reference sample N-40 (nonpreserved nutrients)--Continued*

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



0. Other				22c. Color: Cd diazo				
7. Ion chromatography				22h. Color: hydrazine diazo				
22. Colorimetric				40. Selective ion electrode				
N =	4	12	15	42	6	1		
Minimum =	0.104	0.040	0.070	0.080	0.110	0.245		
Maximum =	0.120	0.140	0.736	1.880	0.121			
Median =		0.110	0.114	0.110				
St Dev =		0.016	0.018	0.012				

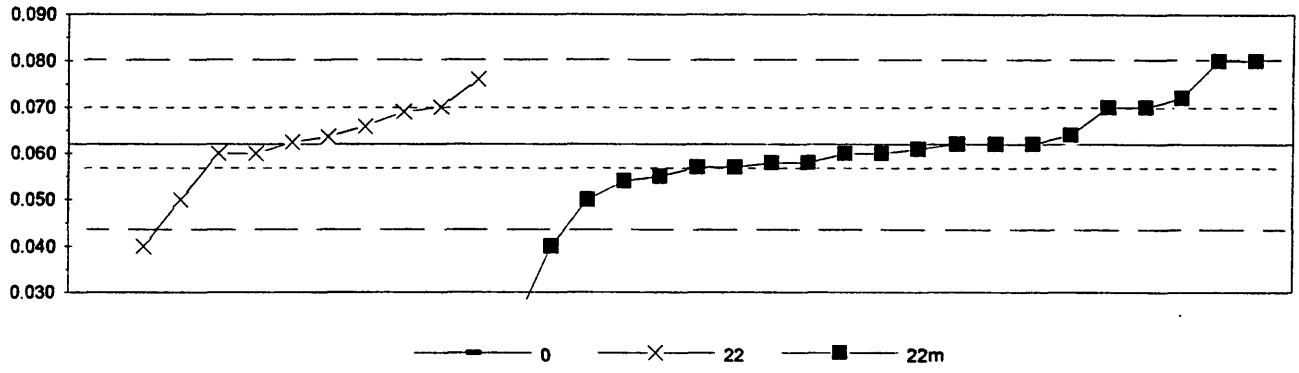
MPV = 0.110
F-pseudosigma = 0.012
N = 80
Hu = 0.121
Hl = 0.104

Lab	Rating	Z-value	0	7	22	22c	22h	40
3	3	0.57			0.117			
5	4	0.25					0.113	
9	3	0.90				0.121		
10	4	0.00				0.110		
12	4	0.00				0.110		
15	0	-2.84			0.075			
16	0	51.18			0.736			
18	3	-0.65				0.102		
19	4	-0.25				0.107		
21	4	0.49					0.116	
23	4	0.33				0.114		
25	3	0.82		0.120				
26	0	-2.45		0.080				
29	4	0.00		0.110				
32	1	1.64		0.130				
33	4	0.00		0.110				
36	2	-1.15			0.096			
38	2	1.14				0.124		
42	2	1.23		0.125				
45	0	3.35				0.151		
46	4	-0.25				0.107		
51	0	2.45		0.140				
52	1	1.72			0.131			
53	4	-0.08				0.109		
55	3	0.82				0.120		
56	3	-0.82				0.100		
58	1	1.64		0.130				
59	4	0.00				0.110		
60	3	0.82				0.120		
63	0	5.72			0.180			
68	3	0.82	0.120					
69	3	-0.82				0.100		
70	3	-0.82				0.100		
72	0	-3.27			0.070			
78	0					< 0.01		
80	0	13.90			0.280			
81	3	0.82			0.120			
83	0	-2.45				0.080		
85	3	0.82				0.120		
87	4	0.00				0.110		
88	0	144.71				1.880		
89	4	-0.49				0.104		
90	3	0.82					0.120	
91	4	0.00					0.110	
94	3	-0.82				0.100		
96	3	0.90					0.121	
97	3	-0.82				0.100		
102	0	3.27			0.150			
104	4	0.16				0.112		
107	4	0.49				0.116		

Lab	Rating	Z-value	0	7	22	22c	22h	40
117	0	3.27				0.150		
118	4	0.00					0.110	
119	4	0.00			0.110			
120	3	-0.82				0.100		
121	4	-0.16				0.108		
122	4	-0.25				0.107		
126	2	-1.31			0.094			
127	1	-2.04				0.085		
133	0	-2.45				0.080		
134	4	0.33				0.114		
136	4	0.48				0.116		
138	3	-0.74				0.101		
142	3	-0.57			0.103			
145	4	0.00				0.110		
146	4	-0.49	0.104					
149	0	-5.72		0.040				
180	4	0.41				0.115		
183	0	11.04						0.245
191	4	-0.49		0.104				
193	4	0.00		0.110				
196	4	-0.08		0.109				
197	1	1.64			0.130			
198	4	0.25	0.113					
200	NR		< 0.20					
202	3	-0.82				0.100		
203	4	-0.08				0.109		
204	2	1.31				0.126		
212	3	0.82	0.120					
214	2	1.31				0.126		
215	4	0.00				0.110		
220	3	0.82			0.120			
221	0	2.70				0.143		

Table 15. *--Statistical summary of reported data for standard reference sample N-40 (preserved nutrients)--Continued*

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



0.	Other
22.	Colorimetric
22m.	Color: phosphomolybdate

	1	10	21
N =			
Minimum =	0.097	0.040	0.022
Maximum =		0.076	0.080
Median =		0.063	0.060
St Dev =		0.010	0.013

MPV = 0.062
F-pseudosigma = 0.009
N = 32
Hu = 0.070
HI = 0.057

Lab	Rating	Z-value	0	22	22m
1	4	-0.49			0.057
7	4	-0.16		0.060	
11	3	0.92		0.070	
13	1	2.00			0.080
15	4	0.10		0.062	
36	4	0.23		0.064	
42	4	0.27			0.064
45	4	0.05			0.062
48	0	-2.32			0.040
52	1	1.56		0.076	
56	4	0.05			0.062
60	2	1.13			0.072
63	4	-0.16		0.060	
68	0	3.83	0.097		
75	4	-0.38			0.058
78	0	-4.26			0.022
89	4	0.05			0.062
90	1	2.00			0.080
97	2	-1.24		0.050	
105	3	0.81		0.069	
114	4	-0.38			0.058
117	3	-0.70			0.055
118	2	-1.24			0.050
119	4	-0.16			0.060
122	4	-0.49			0.057
129	4	-0.05			0.061
134	3	0.92			0.070
140	0	-2.32		0.040	
141	4	-0.16			0.060
145	3	0.92			0.070
154	3	-0.81			0.054
179	NR		< 0.18		
220	4	0.49		0.066	

Table 15. *--Statistical summary of reported data for standard reference sample N-40 (nonpreserved nutrients)--Continued*

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

0. Other
22. Colorimetric
22m. Color: phosphomolybdate

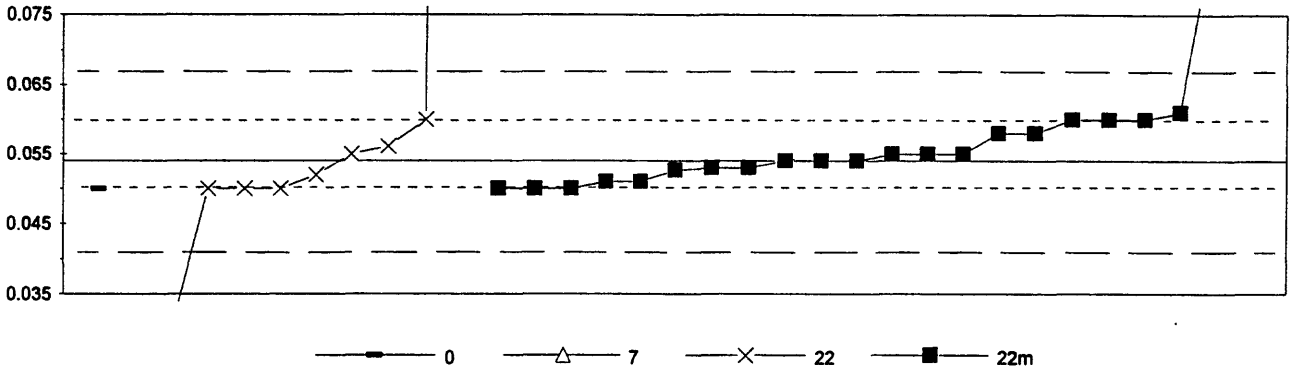
	3	13	42
N =			
Minimum =	0.050	0.020	0.019
Maximum =	0.067	0.070	0.180
Median =		0.059	0.060
St Dev =		0.011	0.008

MPV = 0.060
F-pseudosigma = 0.010
N = 58
Hu = 0.066
HI = 0.053

Lab	Rating	Z-value	0	22	22m
3	3	0.65		0.066	
5	4	0.03			0.060
9	1	1.69			0.076
10	4	0.03			0.060
15	4	0.36		0.063	
18	3	-0.70			0.053
19	2	-1.01			0.050
21	4	0.24			0.062
22	4	-0.07		0.059	
23	4	-0.28			0.057
25	NR		< 0.121		
36	4	-0.12		0.059	
38	4	0.34			0.063
45	4	-0.28			0.057
46	4	0.03			0.060
51	3	-0.90		0.051	
52	3	-0.70		0.053	
55	4	0.03			0.060
59	NR				< 0.1
60	3	0.65			0.066
63	2	-1.01		0.050	
70	NR				< 0.1
72	2	1.07		0.070	
78	0	-4.22			0.019
79	NR				< 0.2
81	0	-3.81		0.023	
85	2	-1.01			0.050
87	3	0.65			0.066
89	4	0.13			0.061
91	0	2.73			0.086
94	3	-0.59			0.054
96	4	0.03			0.060
97	2	1.07		0.070	
102	4	-0.18			0.058
107	4	-0.18			0.058
111	4	0.24			0.062
114	4	0.13			0.061
118	2	-1.01			0.050
119	4	0.03			0.060
120	2	-1.01			0.050
122	3	-0.70			0.053
127	4	-0.44			0.056
129	3	-0.70			0.053
133	2	1.38			0.073
134	2	1.07			0.070
136	4	-0.03			0.059
138	4	-0.28			0.057
142	0	-2.87		0.032	
145	4	0.03			0.060
149	0	-4.12		0.020	
179	NR		< 0.18		
180	2	1.07			0.070
182	0	12.48			0.180
183	4	-0.18			0.058
198	4	-0.38	0.056		
200	2	-1.01	0.050		
202	1	-1.53			0.045
203	4	-0.49			0.055
204	4	0.13			0.061
212	3	0.76	0.067		
213	2	1.07			0.070
220	3	0.65		0.066	
221	3	0.97			0.069

Table 15. *--Statistical summary of reported data for standard reference sample N-40 (preserved nutrients)--Continued*

PO4 as P (Orthophosphate) m g/L



0. Other — 22m. Color: phophomolybdate
7. Ion chromatography
22. Colorimetric

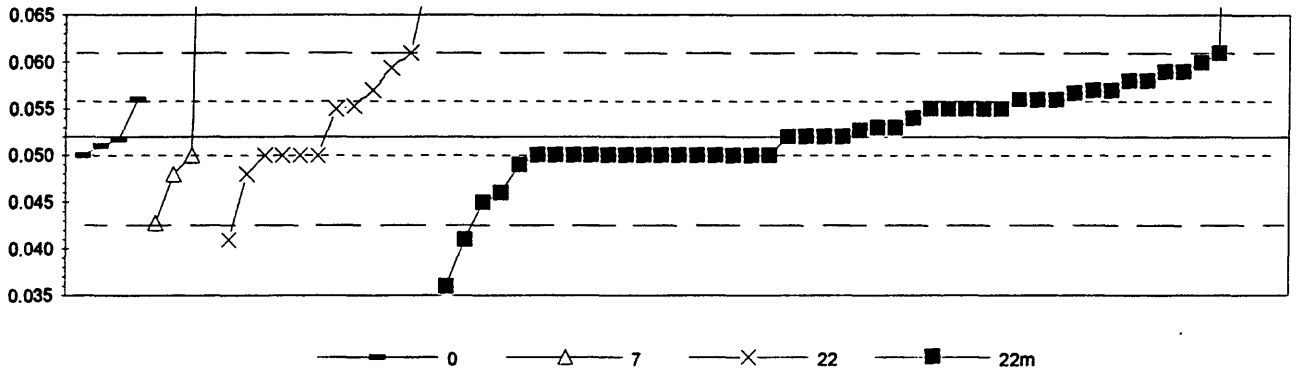
	1	1	9	22
N =				
Minimum =	0.050	0.160	0.030	0.050
Maximum =			0.578	0.323
Median =			0.052	0.054
St Dev =			0.004	0.004

MPV = 0.054
F-pseudosigma = 0.007
N = 33
Hu = 0.060
Hl = 0.051

Lab	Rating	Z-value	0	7	22	22m
1	4	-0.19				0.053
11	3	0.90			0.060	
13	3	0.90				0.060
15	4	0.31			0.056	
29	0	15.89		0.160		
36	0	78.54			0.578	
42	3	0.60				0.058
45	4	0.00				0.054
48	0					< 0.005
52	4	0.15			0.055	
56	4	0.00				0.054
60	2	1.05				0.061
63	3	-0.60			0.050	
75	4	0.15				0.055
78	0	5.40				0.090
88	0	40.32				0.323
89	4	0.15				0.055
90	4	-0.15				0.053
97	3	-0.60			0.050	
105	3	-0.60			0.050	
117	3	-0.60				0.050
118	3	-0.60				0.050
119	3	0.90				0.060
121	4	0.00				0.054
122	4	-0.45				0.051
129	3	0.60				0.058
134	4	0.15				0.055
140	0	-3.60			0.030	
141	3	0.90				0.060
145	3	-0.60				0.050
154	4	-0.45				0.051
179	3	-0.60	0.050			
214	4	-0.15				0.053
220	4	-0.30			0.052	

Table 15. *--Statistical summary of reported data for standard reference sample N-40 (nonpreserved nutrients)--Continued*

PO4 as P (Orthophosphate) m g/L



0. Other — 22m. Color: phosphomolybdate
7. Ion chromatography
22. Colorimetric

	0	7	22	22m
N =	4	4	12	47
Minimum =	0.050	0.043	0.041	0.036
Maximum =	0.056	0.150	0.070	0.400
Median =			0.053	0.053
St Dev =			0.007	0.057

MPV = 0.052
F-pseudosigma = 0.005
N = 67
Hu = 0.056
Hl = 0.050

Lab	Rating	Z-value	0	7	22	22m
3	3	0.64			0.055	
5	3	-0.64				0.049
9	0	-3.40				0.036
10	2	1.06				0.057
15	1	1.57			0.059	
18	4	0.00				0.052
19	4	-0.42				0.050
21	2	1.27				0.058
23	4	-0.42				0.050
25	0	-2.34				0.041
26	NR		< 0.5			
29	0	20.82	0.150			
32	1	-1.95	0.043			
33	4	-0.42	0.050			
36	3	0.70			0.055	
38	3	0.64				0.055
45	4	0.00				0.052
46	4	0.00				0.052
51	4	-0.42			0.050	
52	3	-0.85			0.048	
53	4	0.15				0.053
55	1	1.70				0.060
59	4	-0.42				0.050
60	2	1.49				0.059
63	4	-0.42			0.050	
70	NR					< 0.1
72	0	3.82			0.070	
78	0	16.57				0.130
80	4	-0.42			0.050	
81	0	-2.34			0.041	
83	4	-0.42				0.050
85	4	0.00				0.052
87	2	1.06				0.057
88	0	73.93				0.400
89	3	0.85				0.056
96	4	-0.42				0.050
97	4	-0.42			0.050	
102	4	0.21				0.053
107	2	-1.49				0.045
111	3	0.64				0.055
117	4	-0.42				0.050
118	4	-0.42				0.050
119	4	-0.42				0.050
120	4	-0.42				0.050
121	4	-0.42				0.050
122	2	-1.27				0.046
127	3	0.64				0.055
129	3	0.64				0.055
133	4	-0.42				0.050
134	3	0.85				0.056
136	3	1.00				0.057
138	3	0.85				0.056
142	1	1.91			0.061	
145	4	-0.42				0.050
146	4	-0.06	0.052			
179	3	0.85	0.056			
180	2	1.49				0.059
182	0	37.81				0.230
183	4	0.42				0.054
191	3	-0.85		0.048		
198	4	-0.21	0.051			
200	4	-0.42	0.050			
202	1	1.91				0.061
203	3	0.64				0.055
204	2	1.27				0.058
213	4	-0.42				0.050
214	4	0.21				0.053
220	2	1.06			0.057	
221	4	-0.42				0.050

Table 16. *—Statistical summary of reported data for standard reference sample N-41(nutrients)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

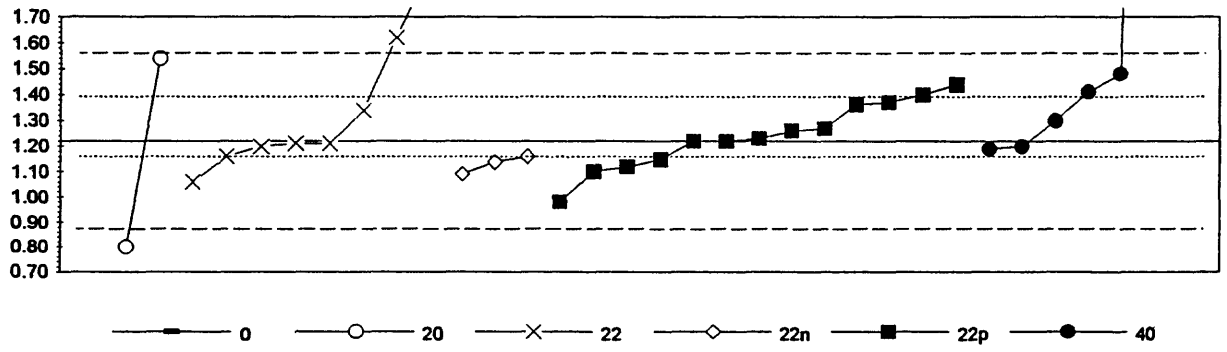
0. Other/Not reported		
4. ICP	=	inductively coupled plasma
7. IC	=	ion chromatography
20. Titrate: colorimetric		
22. Color:	=	colorimetric [color reagent specified]
40. Ion electrode	=	specific ion electrode

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 16. *–Statistical summary of reported data for standard reference water sample N-41 (preserved nutrient) –Continued*

NH3 as N (Ammonia) mg/L



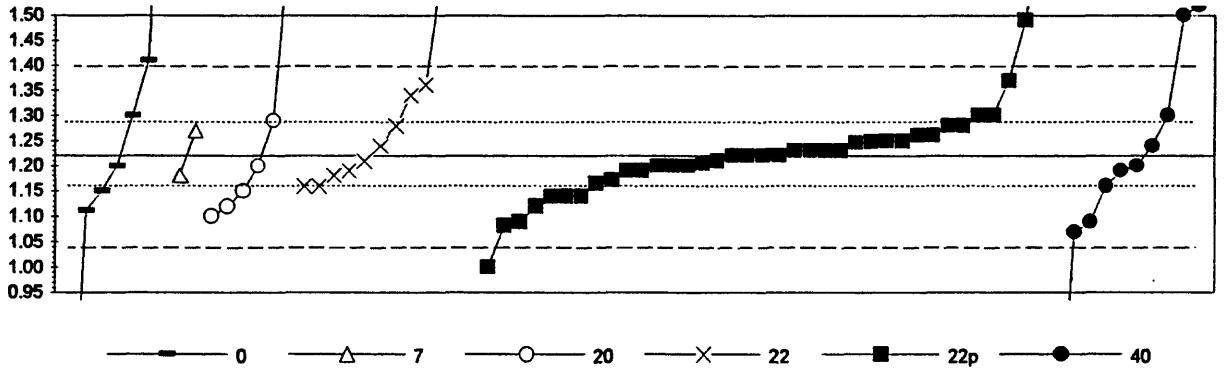
0. Other				22n. Color: Nesslerization				
20. Titrate: colorimetric				22p. Color: phenate				
22. Colorimetric				40. Selective ion electrode				
		N =	<	2	8	3	13	6
		Minimum =		0.80	1.06	1.09	0.98	1.19
		Maximum =		1.54	1.89	1.16	1.44	5.60
		Median =			1.21		1.23	1.36
		St Dev =			0.279		0.132	

MPV =	1.22
F-pseudosigma =	0.170
N =	32
Hu =	1.39
HI =	1.16

Lab	Rating	Z-value	0	20	22	22n	22p	40
1	4	0.00					1.22	
7	4	-0.11			1.20			
11	0	3.93			1.89			
15	4	-0.35			1.16			
36	1	1.53						1.48
48	3	-0.70					1.10	
52	4	0.30					1.27	
60	1	1.88		1.54				
61	3	0.71			1.34			
63	0	-2.46		0.80				
75	2	1.29					1.44	
78	4	0.47						1.30
88	4	-0.47				1.14		
89	4	0.06					1.23	
90	4	0.00					1.22	
93	2	1.06					1.40	
97	3	-0.94			1.06			
105	0	2.35			1.62			
108	4	-0.11						1.20
114	2	1.12						1.41
118	3	-0.58					1.12	
119	4	-0.17						1.19
120	3	0.84					1.36	
122	3	0.88					1.37	
129	3	-0.75				1.09		
133	0	25.69						5.60
134	4	-0.41					1.15	
140	4	-0.06			1.21			
141	4	-0.35				1.16		
145	4	0.24					1.26	
154	2	-1.40					0.98	
179	NR		< 1					
220	4	-0.06			1.21			

Table 16. *—Statistical summary of reported data for standard reference water sample N-41 (nonpreserved nutrient) —Continued*

NH3 as N (Ammonia) mg/L



0. Other
7. Ion chromatography
20. Titrate: colorimetric
22. Colorimetric
22p. Color: phenate
40. Selective ion electrode

	7	2	6	12	37	10
N =						
Minimum =	0.49	1.18	1.10	1.16	1.00	0.55
Maximum =	2.00	1.27	1.67	1.66	1.66	1.52
Median =	1.20	1.23	1.18	1.26	1.22	1.20
St Dev =	0.105			0.076	0.084	0.136

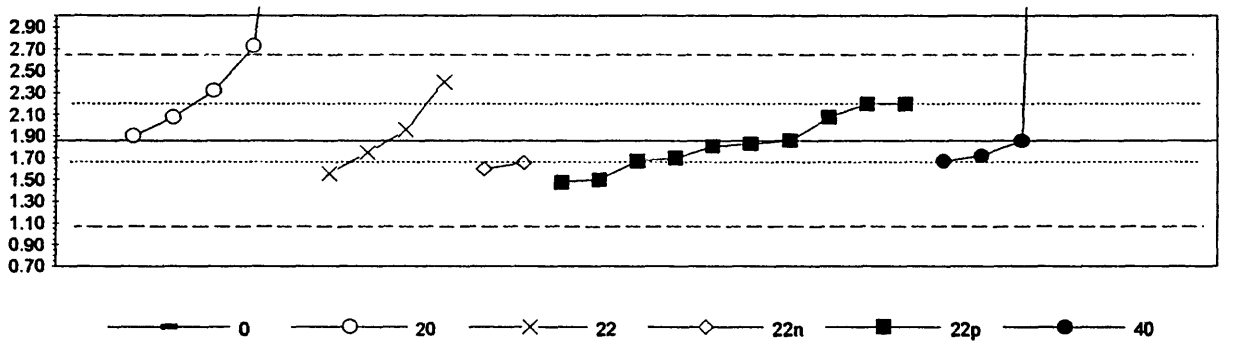
MPV = 1.22
F-pseudosigma = 0.089
N = 74
Hu = 1.28
HI = 1.16

Lab	Rating	Z-value	0	7	20	22	22p	40
3	0	4.61				1.63		
5	0	3.04		22p			1.49	
9	0	4.95		22p			1.66	
10	4	0.22						1.24
11	0	4.95				1.66		
12	3	0.90		22p			1.30	
13	4	0.00		22p			1.22	
15	4	-0.11				1.21		
16	2	-1.12			1.12			
18	4	-0.22		22p			1.20	
19	3	0.90		22p			1.30	
23	3	-0.90		22p			1.14	
25	1	-1.69						1.07
26	3	0.56		1.27				
32	4	-0.45		1.18				
33	1	1.57				1.36		
36	0	3.37						1.52
37	4	0.45		22p			1.26	
38	4	0.30		22p			1.25	
46	3	-0.90		22p			1.14	
52	4	0.45		22p			1.26	
55	4	0.34		22p			1.25	
57	3	-0.79			1.15			
58	2	-1.46						1.09
59	4	0.00		22p			1.22	
60	0	5.06			1.67			
63	2	-1.35			1.10			
68	0	-7.53						0.55
70	4	-0.22		22p			1.20	
72	3	-0.67				1.16		
76	4	-0.34		22p			1.19	
78	3	0.90						1.30
80	2	1.35				1.34		
81	0	4.05				1.58		
83	0	-2.47		22p			1.00	
84	4	0.22				1.24		
85	3	-0.56		22p			1.17	
87	4	0.11		22p			1.23	
88	3	-0.79	1.15					
89	4	0.00		22p			1.22	
91	4	0.34		22p			1.25	
94	4	0.11		22p			1.23	
96	4	-0.34		22p			1.19	
97	3	-0.67				1.16		
102	2	-1.12		22p			1.12	
104	4	0.29		22p			1.25	
111	1	1.69		22p			1.37	
114	0	3.15						1.50
118	2	-1.46		22p			1.09	
119	4	-0.34						1.19

Lab	Rating	Z-value	0	7	20	22	22p	40
122	1	-1.55		22p			1.08	
127	4	0.11		22s			1.23	
128	4	-0.17		22p			1.21	
129	2	-1.21	1.11					
134	3	-0.90		22s			1.14	
136	3	-0.62		22p			1.16	
138	4	0.00		22p			1.22	
142	3	0.67				1.28		
145	4	-0.22		22s			1.20	
149	3	-0.67						1.16
179	0	-2.47	< 1					
180	4	0.11		22p			1.23	
182	0	-8.23	0.49					
183	4	-0.22						1.20
197	4	-0.34				1.19		
198	4	-0.22	1.20					
200	0	2.14	1.41					
202	3	0.67		22p			1.28	
205	3	0.79			1.29			
211	3	0.67		22p			1.28	
212	0	8.77	2.00					
213	4	-0.22			1.20			
215	4	-0.11		22p			1.21	
220	4	-0.45				1.18		
221	3	0.90	1.30					

Table 16. *–Statistical summary of reported data for standard reference water sample N-41 (preserved nutrient) –Continued*

NH3 + Org N as N (Ammonia + Organic N) mg/L



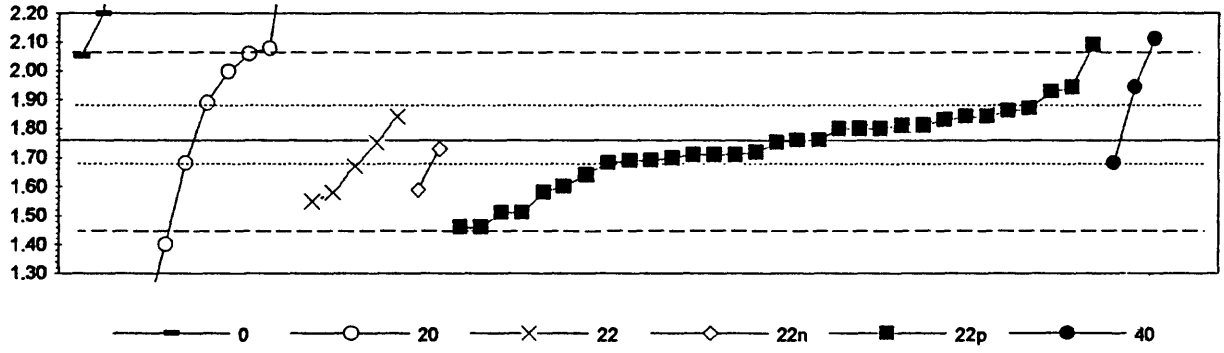
0. Other
20. Titrate: colorimetric
22. Colorimetric
22n. Color: Nesslerization
22p. Color: phenate
40. Selective ion electrode

MPV = 1.86
F-pseudosigma = 0.391
N = 26
Hu = 2.20
Hl = 1.67

		N =	1	5	4	2	10	4
		Minimum =	5.47	1.90	1.56	1.60	1.48	1.67
		Maximum =		5.43	2.40	1.66	2.20	15.10
		Median =		2.32	1.86		1.82	1.79
		St Dev =					0.260	
Lab	Rating	Z-value	0	20	22	22n	22p	40
1	4	-0.48					1.67	
11	4	-0.28			1.75			
15	3	-0.77			1.56			
36	2	1.18		2.32				
45	4	-0.48						1.67
48	3	0.87					2.20	
52	4	-0.41					1.70	
60	3	0.57		2.08				
61	0	2.23		2.73				
63	4	0.10		1.90				
78	4	0.00						1.86
89	4	-0.07					1.83	
90	3	0.57					2.08	
105	4	0.26			1.96			
108	0	9.14		5.43				
118	3	0.87					2.20	
119	4	-0.36						1.72
120	4	0.00					1.86	
129	3	-0.67				1.60		
133	0	33.89						15.10
134	4	-0.13					1.81	
140	2	1.38			2.40			
141	3	-0.51				1.66		
145	3	-0.97					1.48	
154	3	-0.92					1.50	
179	0	9.24	5.47					

Table 16. *—Statistical summary of reported data for standard reference water sample N-41 (nonpreserved nutrient) —Continued*

NH3 + Org N as N (Ammonia + Organic N) mg/L



0. Other				22n. Color: Nesslerization				
20. Titrate: colorimetric				22p. Color: phenate				
22. Colorimetric				40. Selective ion electrode				
N =	3	8	5	2	31	3		
Minimum =	2.05	1.13	1.55	1.59	1.46	1.68		
Maximum =	2.82	2.60	1.84	1.73	2.09	2.11		
Median =	2.20	1.95	1.67		1.75	1.94		
St Dev =		0.266	0.120		0.143			

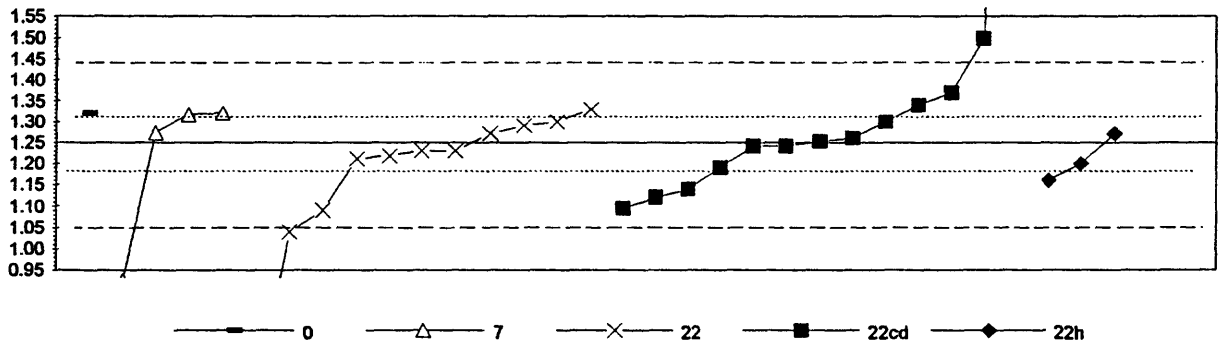
MPV = 1.76
F-pseudosigma = 0.152
N = 52
Hu = 1.88
HI = 1.68

Lab	Rating	Z-value	0	20	22	22n	22p	40
3	3	0.89		1.89				
9	2	1.22					1.94	
10	4	0.03					1.76	
11	3	-0.56			1.67			
12	2	-1.02					1.60	
13	4	0.03					1.76	
15	2	-1.15			1.58			
16	4	-0.49		1.68				
18	4	-0.03					1.75	
23	3	0.56					1.84	
36	0	2.14		2.08				
37	3	0.69					1.86	
38	4	-0.16				1.73		
45	2	1.22						1.94
46	4	-0.43					1.69	
52	3	-0.76					1.64	
55	1	-1.61					1.51	
57	0	5.56		2.60				
58	0	-4.11		1.13				
59	4	-0.36					1.70	
60	1	2.01		2.06				
63	1	1.61		2.00				
70	1	-1.94					1.46	
72	4	-0.03			1.75			
78	0	2.34						2.11
79	4	0.30					1.80	
81	2	-1.35			1.55			
85	4	0.30					1.80	
87	3	0.56					1.84	
89	3	0.76					1.87	
91	4	0.36					1.81	
94	4	-0.30					1.71	
96	4	-0.30					1.71	
102	1	-1.61					1.51	
118	4	0.49					1.83	
119	4	-0.49						1.68
127	4	-0.23					1.72	
128	2	1.14					1.93	
129	2	-1.09				1.59		
134	4	0.30					1.80	
136	4	-0.42					1.69	
138	4	-0.49					1.68	
142	3	0.56			1.84			
145	1	-1.94					1.46	
179	0	7.01	2.82					
180	4	-0.30					1.71	
198	1	1.94	2.05					
202	4	0.36					1.81	
211	2	-1.15					1.58	
213	0	-2.34		1.40				

Lab	Rating	Z-value	0	20	22	22n	22p	40
215	0	2.20					2.09	
221	0	2.93	2.20					

Table 16. *–Statistical summary of reported data for standard reference water sample N-41 (preserved nutrient) –Continued*

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



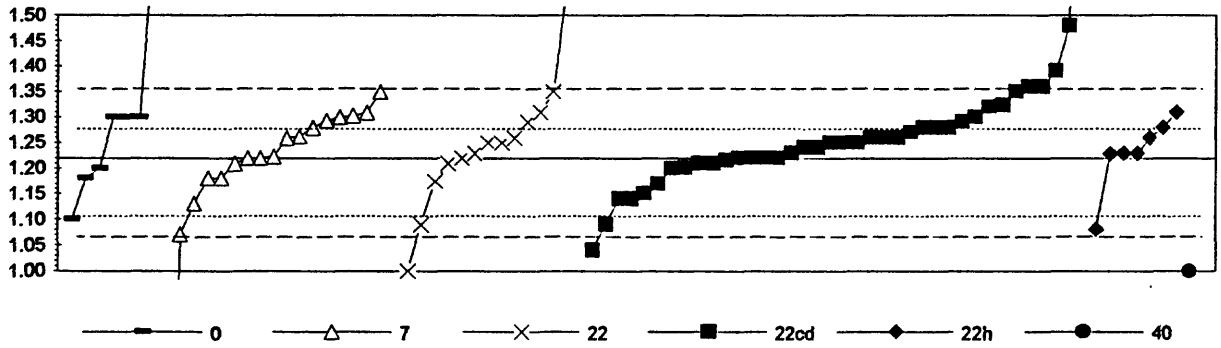
0. Other				22cd. Cd diazotization			
7. Ion chromatography				22h. Color: hydrazine diazo			
22. Colorimetric							
	N =	1	4	11	13	3	
	Minimum =	1.32	0.93	0.65	1.10	1.16	
	Maximum =	1.32	1.32	1.33	2.89	1.27	
	Median =		1.30	1.23	1.25		
	St Dev =			0.092	0.114		

MPV = 1.25
F-pseudosigma = 0.099
N = 32
Hu = 1.31
Hl = 1.18

Lab	Rating	Z-value	0	7	22	22cd	22h
1	4	0.05				1.25	
7	3	0.54			1.30		
11	4	0.23			1.27		
15	0	-2.09			1.04		
29	3	0.74		1.32			
36	3	0.84			1.33		
42	3	0.71		1.32			
43	4	-0.27			1.22		
45	3	0.94				1.34	
48	4	-0.47					1.20
52	4	0.13				1.26	
60	2	-1.08				1.14	
61	1	-1.59			1.09		
63	4	-0.37			1.21		
75	3	0.54				1.30	
78	2	-1.28				1.12	
88	0	16.60				2.89	
93	0	-3.24		0.93			
97	2	1.24				1.37	
105	4	-0.17			1.23		
108	4	-0.17			1.23		
117	0	2.56				1.50	
118	4	0.23					1.27
119	3	0.74	1.32				
122	4	-0.05				1.24	
129	4	0.27		1.27			
134	4	-0.07				1.24	
140	0	-6.01			0.65		
141	3	-0.88					1.16
145	3	-0.58				1.19	
154	1	-1.54				1.10	
220	4	0.43			1.29		

Table 16. *–Statistical summary of reported data for standard reference water sample N-41 (nonpreserved nutrient) –Continued*

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



0. Other				22cd. Cd diazotization			
7. Ion chromatography				22h. Color: hydrazine diazo			
22. Colorimetric				40. Selective ion electrode			
N =	7	19	15	38	7	1	
Minimum =	1.10	0.00	0.89	1.04	1.08	1.00	
Maximum =	1.66	1.35	1.91	2.88	1.31	1.00	
Median =	1.30	1.22	1.25	1.25	1.23		
St Dev =	0.098	0.073	0.096	0.083	0.073		

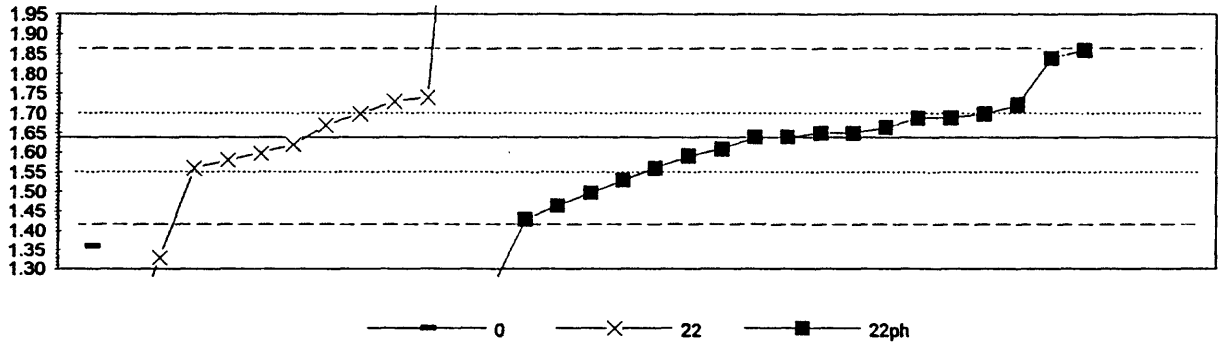
MPV = 1.25
F-pseudosigma = 0.073
N = 85
Hu = 1.30
HI = 1.20

Lab	Rating	Z-value	0	7	22	22cd	22h	40
3	0	-3.41			1.00			
5	4	-0.27					1.23	
9	3	0.68				1.30		
10	4	-0.14				1.24		
11	4	-0.27			1.23			
12	4	0.27				1.27		
13	4	-0.14				1.24		
15	0	-4.88			0.89			
16	0	8.97			1.91			
18	2	-1.50				1.14		
19	4	-0.41				1.22		
23	4	0.14				1.26		
25	4	-0.41		1.22				
26	4	0.41		1.28				
29	3	0.82		1.31				
32	1	-1.64		1.13				
33	3	0.68		1.30				
36	3	0.82			1.31			
37	4	-0.41		1.22				
38	3	0.99				1.32		
42	3	0.59		1.29				
45	2	1.36				1.35		
46	4	-0.41				1.22		
52	4	0.00				1.25		
53	2	1.49				1.36		
55	3	0.55				1.29		
57	0	-2.18			1.09			
58	2	1.36		1.35				
59	4	0.41				1.28		
60	2	-1.50				1.14		
63	3	-0.55			1.21			
68	3	-0.95	1.18					
69	4	0.14				1.26		
70	0	-2.18				1.09		
72	4	0.14			1.26			
76	3	-0.95		1.18				
78	4	-0.41				1.22		
80	2	1.36			1.35			
81	4	0.00			1.25			
83	0	-2.86				1.04		
84	4	-0.41			1.22			
85	4	0.14				1.26		
87	3	0.95				1.32		
88	0	22.21				2.88		
89	4	-0.27				1.23		
90	4	0.14					1.26	
91	0	-2.32					1.08	
94	3	-0.55				1.21		
96	4	0.41					1.28	
97	2	1.50				1.36		

Lab	Rating	Z-value	0	7	22	22cd	22h	40
102	3	-0.68	1.20	0				
104	3	-0.67				1.20		
112	0	-16.68		0.03				
117	1	1.91				1.39		
118	4	-0.27					1.23	
119	3	0.68	1.30	0				
120	3	-0.55				1.21		
122	4	-0.46				1.22		
127	4	0.14		1.26				
128	4	-0.30					1.23	
129	4	-0.37		1.22				
133	0	3.13				1.48		
134	4	0.00				1.25		
136	4	0.00				1.25		
138	2	-1.36				1.15		
142	3	0.55			1.29			
145	3	-0.68				1.20		
146	0	5.59	1.66					
149	0	-2.45		1.07				
180	4	-0.41				1.22		
183	0	-3.43						1.00
191	3	-0.55		1.21				
193	3	-0.95		1.18				
196	3	0.71		1.30				
197	0	4.22			1.56			
198	3	0.68	1.30					
200	1	-2.04	1.10					
202	2	-1.09				1.17		
205	4	0.41				1.28		
208	4	0.16		1.26				
211	3	0.82					1.31	
212	3	0.68	1.30					
215	4	0.41				1.28		
220	4	0.00			1.25			
221	2	-1.02			1.18			

Table 16. *–Statistical summary of reported data for standard reference water sample N-41 (preserved nutrient) –Continued*

total P as P (total Phosphorus) mg/L



0. Other
22. Colorimetric
22ph. Color:phosphomolybdate

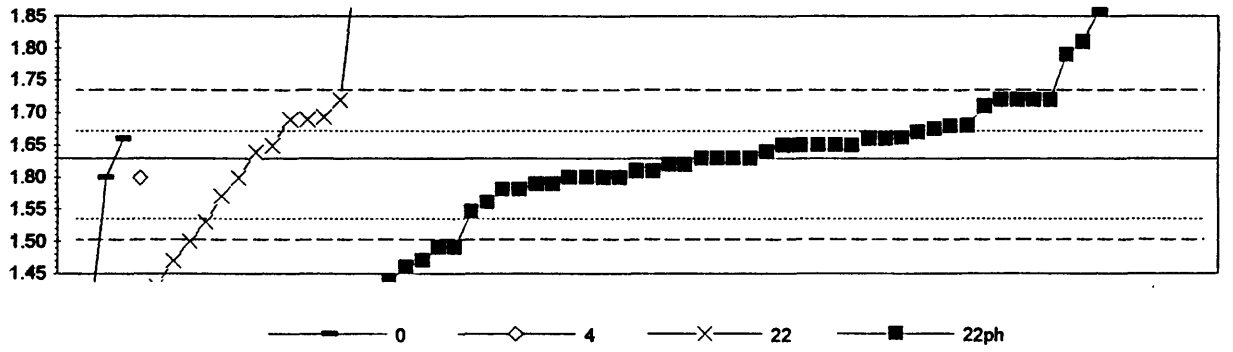
	0	22	22ph
N =	1	12	19
Minimum =	1.36	0.00	1.25
Maximum =		2.75	1.86
Median =		1.61	1.64
St Dev =		0.125	0.114

MPV = 1.64
F-pseudosigma = 0.111
N = 31
Hu = 1.70
Hl = 1.55

Lab	Rating	Z-value	0	22	22ph
1	4	0.22			1.66
7	3	0.81		1.73	
11	0	-2.79		1.33	
15	4	-0.18		1.62	
36	3	-0.54		1.58	
42	0	-3.51			1.25
45	4	-0.27			1.61
48	3	0.54			1.70
52	4	0.27		1.67	
60	1	1.80			1.84
61	0	-4.95		1.09	
63	3	0.54		1.70	
75	4	0.00			1.64
78	3	-0.99			1.53
89	3	0.72			1.72
90	1	1.98			1.86
105	4	-0.36		1.60	
108	0	9.98		2.75	
114	3	-0.72			1.56
117	4	0.45			1.69
118	4	0.09			1.65
119	4	0.09			1.65
122	1	-1.58			1.46
129	2	-1.28			1.50
134	4	0.45			1.69
140	3	-0.72		1.56	
141	4	-0.45			1.59
145	4	0.00			1.64
154	1	-1.89			1.43
179	0	-2.52	1.36	0	
220	3	0.90		1.74	

Table 16. *–Statistical summary of reported data for standard reference water sample N-41 (nonpreserved nutrient) –Continued*

total P as P (total Phosphorus) mg/L



0. Other
4. ICP
20h: Titrate: mercury
22ph. Color:phosphomolybdate

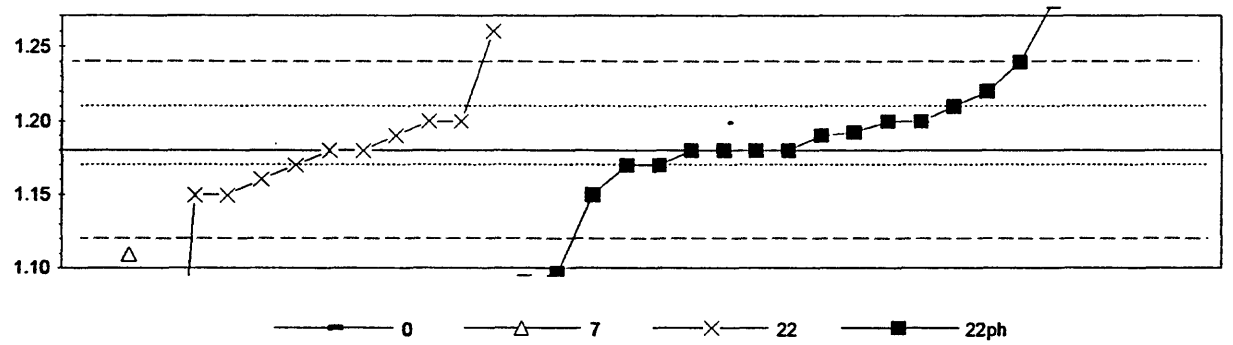
	4	1	14	46
N =				
Minimum =	1.25	1.60	1.43	1.44
Maximum =	1.66		2.10	1.98
Median =	1.49		1.65	1.64
St Dev =			0.098	0.079

MPV = 1.63
F-pseudosigma = 0.067
N = 65
Hu = 1.68
HI = 1.59

Lab	Rating	Z-value	0	4	22	22ph
3	3	0.90			1.69	
5	0	2.40				1.79
9	0	-2.55				1.46
10	4	0.00				1.63
11	0	-2.40			1.47	
12	4	0.30				1.65
13	0	4.80				1.95
15	4	0.15			1.64	
18	4	-0.15				1.62
19	3	-0.60				1.59
22	3	0.94			1.69	
23	4	0.00				1.63
25	4	-0.45		1.80		
36	3	-0.90			1.57	
37	3	0.90			1.69	
38	4	-0.45				1.60
45	4	0.30				1.65
46	4	-0.30				1.61
52	4	0.30			1.65	
55	4	-0.15				1.62
57	0	7.04			2.10	
59	4	-0.45				1.60
60	0	3.45				1.86
63	4	-0.45			1.60	
70	0	-2.10				1.49
72	1	-1.95			1.50	
78	0	2.70				1.81
79	4	-0.45				1.60
81	0	4.80			1.95	
85	3	-0.75				1.58
87	2	1.35				1.72
89	4	0.30				1.65
91	3	0.75				1.68
94	4	0.45				1.66
96	4	0.30				1.65
102	4	0.15				1.64
111	0	5.25				1.98
114	3	-0.75				1.58
117	0	-2.40				1.47
118	4	0.00				1.63
119	4	0.30				1.65
120	4	0.45				1.66
122	0	-2.88				1.44
127	4	0.00				1.63
128	2	-1.26				1.55
129	3	0.67				1.68
133	2	1.20				1.71
134	3	0.75				1.68
136	4	0.46				1.66
138	3	-0.60				1.59
142	0	-3.00			1.43	
145	3	0.60				1.67
149	2	-1.50			1.53	
179	0	-3.75	1.38			
180	4	-0.30				1.61
182	2	1.35				1.72
183	0	-2.10				1.49
198	0	-5.70	1.25			
200	4	0.45	1.66			
202	2	-1.05				1.56
211	4	-0.45				1.60
212	4	-0.45	1.60			
213	2	1.35				1.72
220	2	1.35			1.72	
221	2	1.35				1.72

Table 16. *–Statistical summary of reported data for standard reference water sample N-41 (preserved nutrient) –Continued*

PO4 as P (Orthophosphate) mg/L



0. Other	22ph. Color:phosphomolybdate
7. Ion chromatography	
22. Colorimetric	

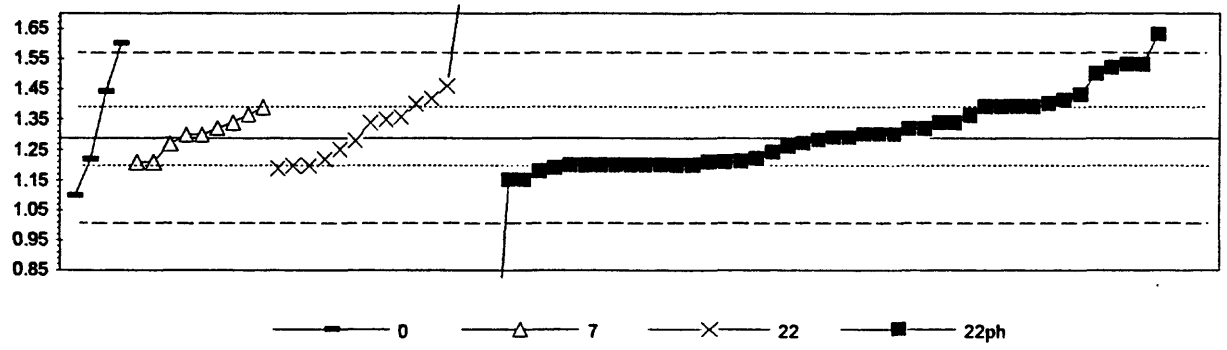
	0	7	22	22ph
N =	1	1	11	19
Minimum =	1.42	1.11	0.84	1.09
Maximum =			1.26	1.30
Median =			1.18	1.19
St Dev =			0.032	0.033

MPV =	1.18
F-pseudosigma =	0.030
N =	32
Hu =	1.21
Hl =	1.17

Lab	Rating	Z-value	0	7	22	22ph
1	4	0.00				1.18
11	3	-0.67			1.16	
15	4	0.00			1.18	
29	0	-2.36		1.11		
36	4	0.34			1.19	
42	4	0.40				1.19
45	2	1.01				1.21
48	4	-0.34				1.17
52	4	-0.34			1.17	
60	0	3.71				1.29
61	0	-11.47			0.84	
63	3	0.67			1.20	
75	3	0.67				1.20
78	0	-3.04				1.09
88	1	2.02				1.24
89	4	0.00				1.18
90	4	0.00				1.18
97	3	0.67			1.20	
105	2	-1.01			1.15	
108	2	-1.01			1.15	
117	0	4.05				1.30
118	3	0.67				1.20
119	2	-1.01				1.15
122	4	0.00				1.18
129	4	-0.34				1.17
134	4	0.34				1.19
140	4	0.00			1.18	
141	2	1.35				1.22
145	0	3.37				1.28
154	0	-2.83				1.10
179	0	8.09	1.42			
220	0	2.70			1.26	

Table 16. *--Statistical summary of reported data for standard reference water sample N-41 (nonpreserved nutrient) --Continued*

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



0. Other
7. Ion chromatography
22. Colorimetric
22ph. Color:phosphomolybdate

	4	9	13	45
N =				
Minimum =	1.10	1.21	1.19	0.08
Maximum =	1.60	1.39	1.83	1.63
Median =	1.33	1.30	1.34	1.28
St Dev =		0.063	0.095	0.118

MPV = 1.29
F-pseudosigma = 0.141
N = 71
Hu = 1.39
HI = 1.20

Lab	Rating	Z-value	0	7	22	22ph
3	4	-0.50			1.22	
5	3	0.71				1.39
9	4	0.07				1.30
10	3	-0.78				1.18
11	3	0.92			1.42	
12	3	0.71				1.39
13	3	-0.57				1.21
15	3	-0.71			1.19	
18	4	0.07				1.30
19	3	-0.99				1.15
25	0	-6.13				0.43
26	4	0.36		1.34		
29	4	0.07		1.30		
32	3	0.71		1.39		
33	3	-0.57		1.21		
36	4	0.36			1.34	
37	3	-0.57		1.21		
38	3	-0.65				1.20
45	1	1.63				1.52
46	4	0.07				1.30
52	4	0.43			1.35	
53	4	0.50				1.36
55	3	-0.64				1.20
57	0	3.83			1.83	
58	1	1.70				1.53
59	3	-0.64				1.20
60	2	1.49				1.50
63	3	-0.64			1.20	
70	3	0.78				1.40
72	3	0.78			1.40	
78	4	-0.07				1.28
80	4	0.50			1.36	
81	2	1.21			1.46	
83	4	0.21				1.32
85	3	-0.64				1.20
87	3	-0.71				1.19
88	4	-0.21				1.26
89	3	-0.64				1.20
96	4	0.00				1.29
97	3	-0.64			1.20	
102	3	-0.99				1.15
111	4	0.21				1.32
117	3	0.99				1.43
118	4	-0.50				1.22
119	3	-0.64				1.20
120	4	0.00				1.29
122	3	0.71				1.39
127	4	-0.14		1.27		
128	4	0.33				1.34
129	4	0.33				1.34
133	0	2.41				1.63
134	3	-0.64				1.20
136	3	-0.56				1.21
138	3	-0.64				1.20
142	4	-0.07			1.28	
145	4	-0.14				1.27
146	4	-0.50	1.22			
179	2	1.07	1.44			
180	3	-0.57				1.21
182	0	-8.59				0.08
183	4	-0.36				1.24
191	4	0.07		1.30		
196	4	0.23		1.32		
197	3	0.54		1.37		
198	2	-1.35	1.10			
202	3	-0.64				1.20
211	1	1.70				1.53
212	0	2.20	1.60			
213	3	0.85				1.41
220	4	-0.28			1.25	
221	3	0.71				1.39

Table 17. *—Statistical summary of reported data for standard reference sample P-21 (low ionic strength)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

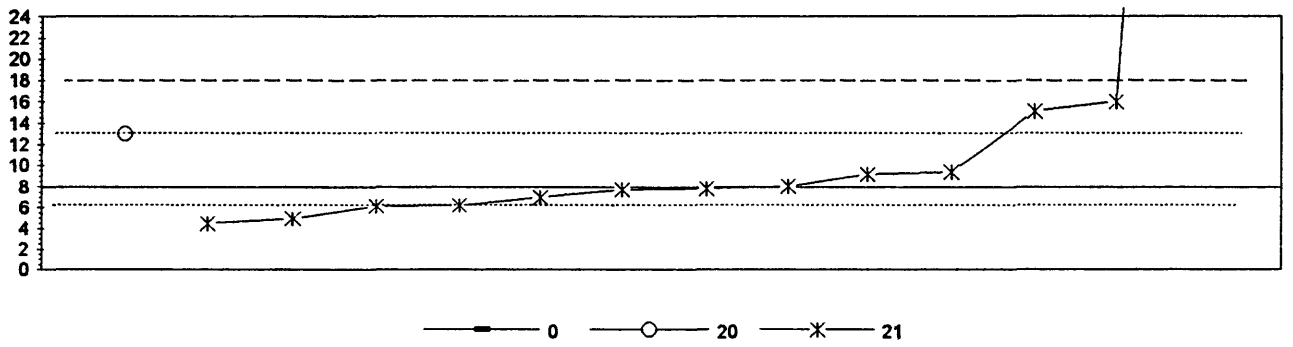
0. Other/Not reported		
1. AA: direct, air	=	atomic absorption: direct,air
2. AA: direct, N2O	=	atomic absorption: direct,nitrous oxide
4. ICP	=	inductively coupled plasma
5. DCP	=	direct current plasma
6. ICP/MS	=	mass spectrometry/inductively coupled plasma
7. IC	=	ion chromatography
20. Titrate: color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

Abbreviations and symbols

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

Table 17. *Statistical summary of reported data for standard reference water sample P-21 (low ionic strength)–Continued*

Acid as CaCO3 (Acidity) mg/L



0. Other	
20. Titrate: colorimetric	
21. Titrate: electrometric	

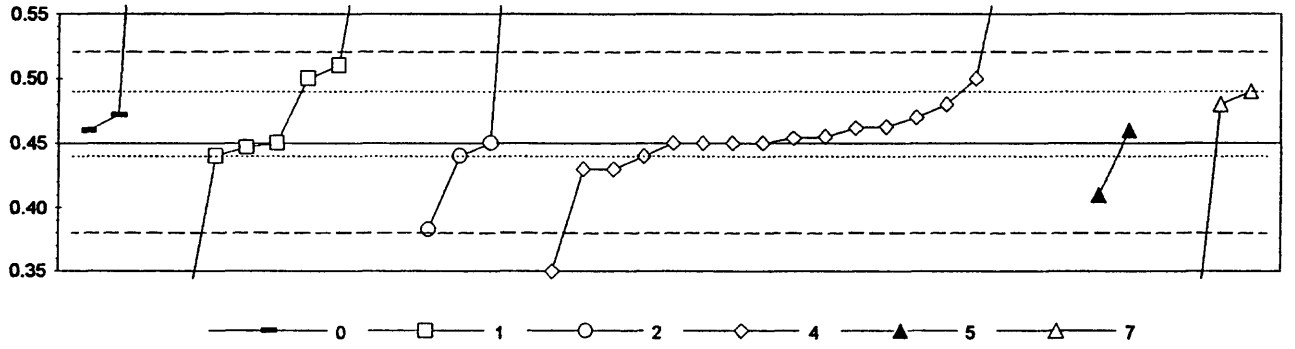
	0	20	21
N =		1	13
Minimum =		13.00	4.50
Maximum =			116.40
Median =			7.82
St Dev =			3.618

MPV =	7.93
F-pseudosigma =	5.019
N =	14
Hu =	13.00
HI =	6.23

Lab	Rating	Z-value	0	20	21
1	4	-0.34			6.23
2	3	-0.60			4.92
3	2	1.43			15.10
5	NR				< 4.5
15	2	1.01		13.00	
32	4	-0.35			6.17
36	4	0.02			8.03
52	4	-0.05			7.68
61	3	-0.68			4.50
63	NR				< 1
78	NR				< 1
89	4	-0.02			7.82
105	4	0.29			9.40
127	4	0.24			9.13
141	1	1.61			16.00
145	4	-0.18			7.00
158	0	21.61			116.40

Table 17. *Statistical summary of reported data for standard reference water sample P-21 (low ionic strength)--Continued*

Ca (Calcium) mg/L



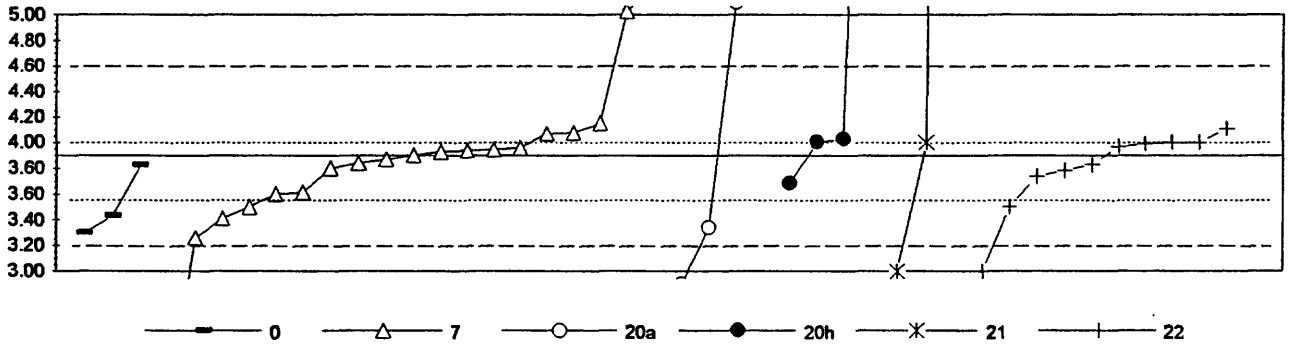
0. Other				4. ICP				
1. AA: Direct air				5. DCP				
2. AA: direct nitrous oxide				7. Ion chromatography				
	N =	3	9	4	17	2	4	
	Minimum =	0.46	0.00	0.38	0.35	0.41	0.13	
	Maximum =	0.92	7.30	0.80	10.95	0.46	0.49	
	Median =	0.47	0.45	0.45	0.45		0.37	
	St Dev =		0.0755		0.0328			

MPV =	0.45
F-pseudosigma =	0.037
N =	38
Hu =	0.49
HI =	0.44

Lab	Rating	Z-value	0	1	2	4	5	7
1	4	-0.12				0.45		
3	4	-0.12				0.45		
5	4	-0.13				0.45		
8	4	-0.12				0.45		
15	3	-0.66				0.43		
23	0	5.27		0.65				
26	3	0.69						0.48
33	4	0.15					0.46	
36	1	-1.93			0.38			
38	4	-0.39			0.44			
39	4	0.47	0.47					
44	4	-0.12		0.45				
46	4	0.23				0.46		
48	2	1.23				0.50		
52	NR					< 0.6		
58	4	-0.20		0.45				
61	4	-0.01				0.45		
63	0	4.20				0.61		
64	4	-0.39				0.44		
78	2	1.50		0.51				
89	0	-4.20		0.30				
93	0	283.17				10.95		
105	4	0.42				0.47		
112	2	-1.20					0.41	
117	0	184.69		7.30				
127	4	0.20				0.46		
134	4	0.01				0.46		
136	0	12.56	0.92					
138	3	0.96						0.49
140	2	1.23		0.50				
141	3	0.69				0.48		
145	3	-0.66				0.43		
158	0	-8.76						0.13
182	0	9.32			0.80			
185	4	-0.12			0.45			
190	0	-5.25						0.26
196	4	-0.39		0.44				
204	0	-2.82				0.35		
212	4	0.15	0.46					

Table 17. *Statistical summary of reported data for standard reference water sample P-21 (low ionic strength)–Continued*

Cl (Chloride) mg/L



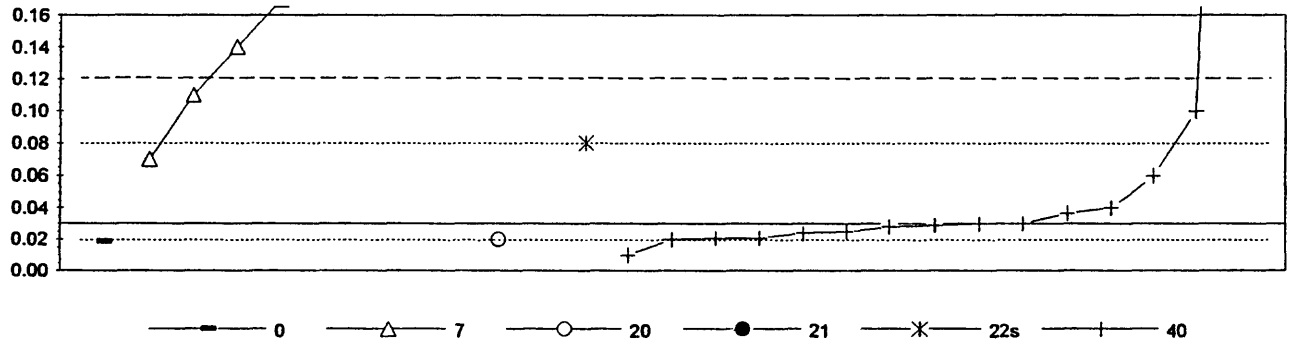
0. Other					20h: Titrate: mercury			
7. Ion chromatography					21. Titrate: electrometric			
20a: Titrate: silver					22. Colorimetric			
		N =	3	19	4	4	3	10
		Minimum =	3.30	1.98	2.90	3.68	3.00	3.00
		Maximum =	3.83	5.21	8.40	10.00	64.00	4.11
		Median =	3.43	3.90	4.22	4.02	4.00	3.90
		St Dev =		0.2558				0.3293

MPV =	3.90
F-pseudosigma =	0.345
N =	43
Hu =	4.02
HI =	3.55

Lab	Rating	Z-value	0	7	20a	20h	21	22
112	0	-5.56		1.98				
203	0	-2.90			2.90			
61	0	-2.61					3.00	
141	0	-2.61						3.00
7	1	-1.85		3.26				
212	1	-1.74	3.30					
117	1	-1.62			3.34			
44	2	-1.42		3.41				
23	2	-1.36	3.43					
15	2	-1.16		3.50				
78	2	-1.16						3.50
197	3	-0.87		3.60				
138	3	-0.84		3.61				
89	3	-0.64				3.68		
127	4	-0.46						3.74
140	4	-0.35						3.78
8	4	-0.29		3.80				
110	4	-0.22	3.83					
3	4	-0.20						3.83
32	4	-0.17		3.84				
64	4	-0.09		3.87				
26	4	0.00		3.90				
145	4	0.09		3.93				
105	4	0.12		3.94				
185	4	0.12		3.94				
33	4	0.17		3.98				
36	4	0.20						3.97
52	4	0.26						3.99
48	4	0.29				4.00		
63	4	0.29						4.00
204	4	0.29					4.00	
46	4	0.29						4.00
58	4	0.38				4.03		
196	4	0.50		4.07				
93	3	0.52		4.08				
1	3	0.61						4.11
134	3	0.72		4.15				
5	0	3.27		5.03				
183	0	3.46			5.10			
158	0	3.80		5.21				
107	0	13.04			8.40			
182	0	17.68				10.00		
39	0	174.17					64.00	

Table 17. *Statistical summary of reported data for standard reference water sample P-21 (low ionic strength)--Continued*

F (Fluoride) mg/L



0. Other	21. Titrate: electrometric	
7. Ion chromatography	22s. Color: SPADNS	
20. Titrate: colorimetric	40. selective ion electrode	

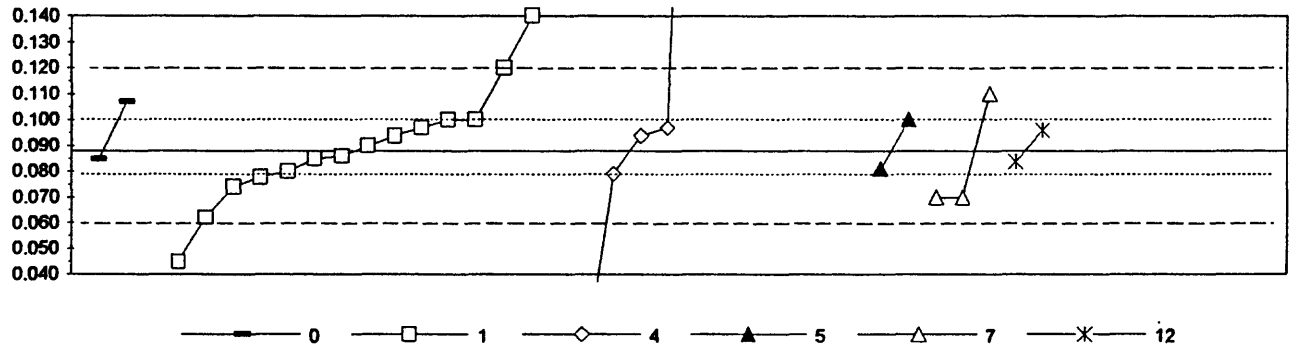
N =	1	4	1	<	1	15
Minimum =	0.02	0.07	0.02		0.08	0.01
Maximum =		0.17				0.71
Median =		0.13				0.03
St Dev =						0.022

MPV =	0.03
F-pseudosigma =	0.044
N =	22
Hu =	0.08
Hl =	0.02

Lab	Rating	Z-value	0	7	20	21	22s	40
1	0	2.52		0.14				
3	4	-0.21						0.02
7	NR			< 0.5				
8	NR							< 0.05
15	4	-0.05						0.03
23	4	0.00						0.03
26	3	0.91		0.07				
32	NR			< 0.02				
33	1	1.83		0.11				
36	4	-0.23			0.02			
39	0	15.64						0.71
46	4	-0.46						0.01
52	NR							< 0.05
58	4	-0.02						0.03
61	4	-0.23						0.02
63	NR							< 0.2
78	3	0.69						0.06
89	4	0.00						0.03
93	4	-0.21						0.02
105	NR			< 0.2				
107	4	-0.11						0.03
117	2	1.14					0.08	
127	4	0.15						0.04
134	NR					< 0.1		
138	4	-0.25	0.02					
140	4	0.23						0.04
141	NR							< 0.1
145	NR			< 0.2				
158	0	3.20		0.17				
183	1	1.60						0.10
190	4	-0.14						0.02

Table 17. *Statistical summary of reported data for standard reference water sample P-21 (low ionic strength)—Continued*

K (Potassium) mg/L



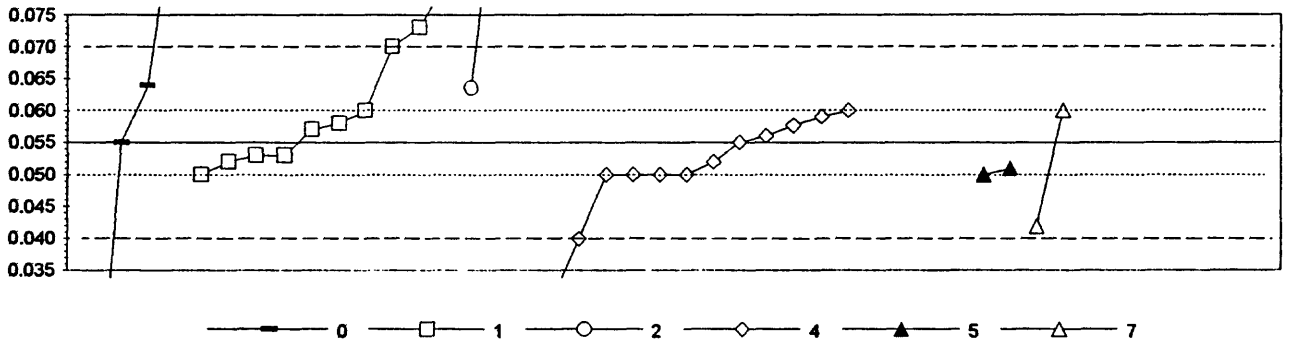
0. Other				5. DCP				
1. AA: Direct air				7. Ion chromatography				
4. ICP				12. Flame emission				
	N =	2	14	5	2	3	2	
	Minimum =	0.085	0.045	0.007	0.081	0.070	0.084	
	Maximum =	0.107	0.140	0.360	0.100	0.110	0.096	
	Median =		0.088	0.094				
	St Dev =		0.0188					

MPV = 0.088
F-pseudosigma = 0.016
N = 28
Hu = 0.100
Hl = 0.079

Lab	Rating	Z-value	0	1	4	5	7	12
1	4	0.38		0.094				
3	0	-4.89		< 0.01				
5	NR				< 1			
8	NR				< 0.5			
15	3	-0.56			0.079			
23	4	-0.13		0.086				
26	2	-1.13					0.070	
33	3	0.75				0.100		
36	4	-0.21	0.085					
38	4	0.13		0.090				
39	NR		< 1					
44	1	2.01		0.120				
46	0	-5.08			0.007			
48	0	17.07			0.360			
52	NR				< 0.2			
61	NR				< 1			
63	NR				< 5			
64	4	-0.50		0.080				
78	3	0.75		0.100				
89	1	-1.63		0.062				
93	4	0.50						0.096
105	4	0.38			0.094			
112	4	-0.44				0.081		
117	3	0.75		0.100				
127	3	0.56		0.097				
134	4	-0.19		0.085				
138	2	1.19	0.107					
140	0	3.26		0.140				
141	3	0.56			0.097			
145	NR				< 0.71			
158	2	-1.13					0.070	
182	0	-2.70		0.045				
185	3	-0.63		0.078				
190	2	1.38					0.110	
196	3	-0.88		0.074				
204	4	-0.25						0.084

Table 17. *Statistical summary of reported data for standard reference water sample P-21 (low ionic strength)--Continued*

Mg (Magnesium) mg/L



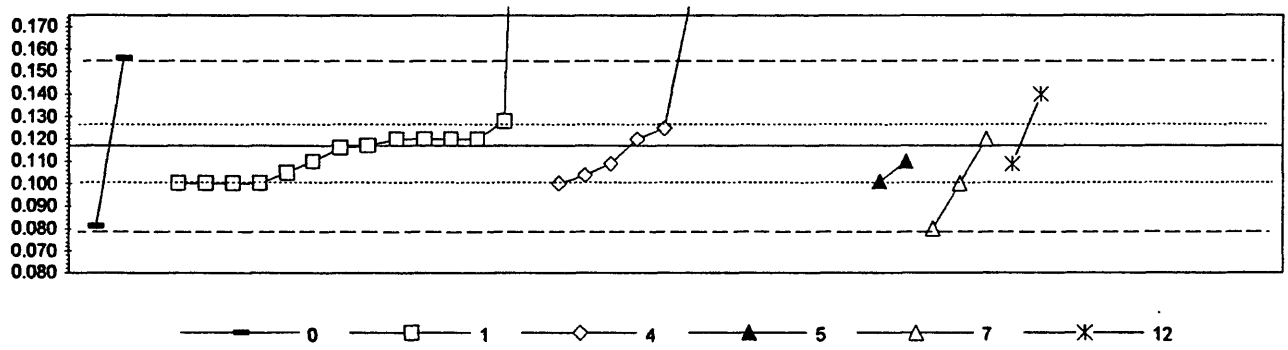
0. Other				4. ICP				
1. AA: Direct air				5. DCP				
2. AA: direct nitrous oxide				7. Ion chromatography				
	N =	4	10	2	13	2	2	
	Minimum =	0.000	0.050	0.064	0.000	0.050	0.042	
	Maximum =	0.093	0.080	0.100	0.060	0.051	0.060	
	Median =	0.060	0.058		0.050			
	St Dev =		0.008		0.006			

MPV = 0.055
F-pseudosigma = 0.007
N = 33
Hu = 0.060
Hl = 0.050

Lab	Rating	Z-value	0	1	2	4	5	7
1	4	0.40		0.058				
3	1	-2.02				0.040		
5	4	0.36				0.058		
8	3	-0.67				0.050		
15	3	0.54				0.059		
23	0	2.43		0.073				
26	3	0.67						0.060
33	3	-0.67					0.050	
36	2	1.16			0.064			
38	4	0.27		0.057				
39	0	5.13	0.093					
44	3	-0.67		0.050				
46	4	-0.40				0.052		
48	0	-3.37				0.030		
52	4	0.13				0.056		
61	NR					< 1		
63	NR					< 0.5		
64	3	-0.67				0.050		
78	0	3.37		0.080				
89	4	-0.27		0.053				
93	0	-7.42				0.000		
105	3	0.67				0.060		
112	3	-0.54					0.051	
117	1	2.02		0.070				
127	NR					< 0.06		
134	3	-0.67				0.050		
136	0	-7.42	0.000					
138	4	0.00	0.055					
140	3	0.67		0.060				
141	4	0.00				0.055		
145	NR					< 0.19		
182	0	6.07			0.100			
185	4	-0.40		0.052				
190	1	-1.75						0.042
196	4	-0.27		0.053				
204	3	-0.67				0.050		
212	2	1.21	0.064					

Table 17. *Statistical summary of reported data for standard reference water sample P-21 (low ionic strength)–Continued*

Na (Sodium) mg/L



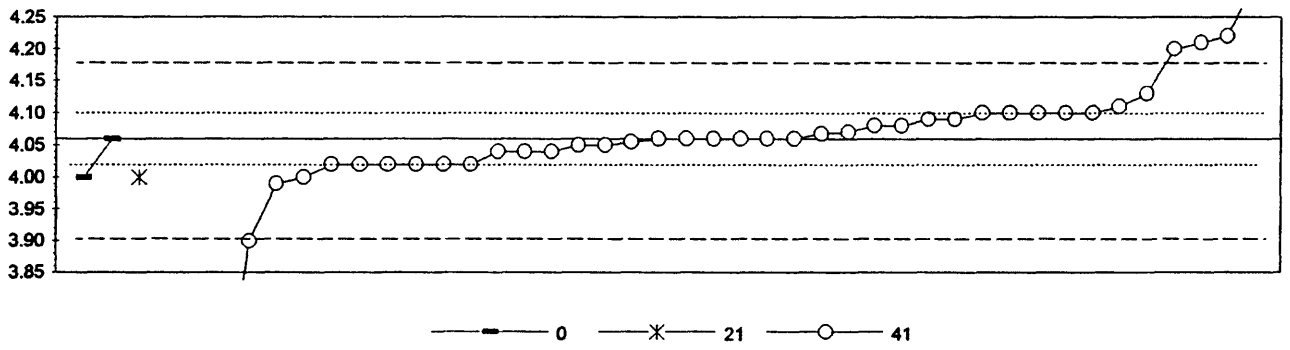
0. Other				5. DCP				
1. AA: direct air				7. Ion chromatography				
4. ICP				12. Flame emission				
		N =	2	14	9	2	3	2
		Minimum =	0.081	0.100	0.100	0.101	0.080	0.109
		Maximum =	0.156	0.500	1.030	0.110	0.120	0.140
		Median =		0.117	0.125			
		St Dev =		0.010	0.031			

MPV = 0.117
F-pseudosigma = 0.019
N = 32
Hu = 0.127
HI = 0.101

Lab	Rating	Z-value	0	1	4	5	7	12
1	3	0.60		0.128				
3	3	-0.86		0.100				
5	0	3.55			0.185			
8	3	-0.86			0.100			
15	0	11.96			0.347			
23	4	-0.34		0.110				
26	4	0.18					0.120	
33	4	-0.34				0.110		
36	1	2.05	0.156					
38	3	-0.86		0.100				
39	1	-1.84	0.081					
44	4	0.18		0.120				
46	3	-0.65			0.104			
48	0	6.41			0.240			
52	NR				< 0.4			
61	NR				< 1			
63	0	47.40			1.030			
64	3	-0.86		0.100				
78	3	-0.86		0.100				
89	3	-0.60		0.105				
93	4	-0.39						0.109
105	4	0.18			0.120			
112	3	-0.80				0.101		
117	4	0.18		0.120				
127	4	-0.39			0.109			
134	4	-0.03		0.116				
138	NR		< 0.2					
140	4	0.18		0.120				
141	4	0.44			0.125			
145	NR				< 0.18			
158	3	-0.86					0.100	
182	0	19.90		0.500				
185	4	0.03		0.117				
190	1	-1.89					0.080	
196	4	0.18		0.120				
204	2	1.22						0.140

Table 17. *Statistical summary of reported data for standard reference water sample P-21 (low ionic strength)–Continued*

pH



0. Other	
21. Titrate: electrometric	
41. Direct reading	

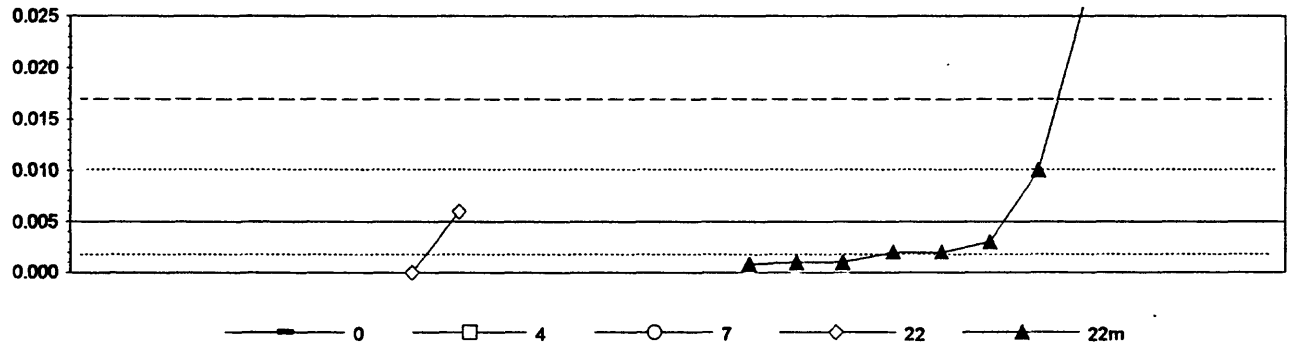
	2	1	43
N =	2	1	43
Minimum =	4.00	4.00	3.22
Maximum =	4.06		8.08
Median =			4.06
St Dev =			0.060

MPV =	4.06
F-pseudosigma =	0.059
N =	46
Hu =	4.10
Hl =	4.02

Lab	Rating	Z-value	0	21	41
1	4	0.13			4.07
2	4	-0.08			4.06
3	4	0.00			4.06
5	2	-1.01		4.00	
7	4	0.00			4.06
8	2	1.18			4.13
15	0	-14.16			3.22
23	3	0.84			4.11
26	0	-2.70			3.90
32	3	0.67			4.10
33	3	0.51			4.09
36	3	-0.67			4.02
38	0	2.36			4.20
39	0	67.79			8.08
46	0	2.53			4.21
48	0	4.05			4.30
52	4	0.17			4.07
58	2	-1.18			3.99
61	0	19.22			5.20
62	3	0.67			4.10
63	3	0.67			4.10
64	4	0.00			4.06
78	4	-0.17			4.05
89	3	0.51			4.09
93	4	0.34			4.08
105	4	0.00			4.06
107	4	-0.34			4.04
110	4	0.00	4.06		
112	4	0.34			4.08
127	3	-0.67			4.02
134	4	0.00			4.06
136	0	-7.76			3.60
138	3	-0.67			4.02
140	3	-0.67			4.02
141	4	-0.17			4.05
145	0	-7.76			3.60
158	4	-0.34			4.04
182	3	0.67			4.10
183	3	-0.67			4.02
185	4	-0.34			4.04
190	2	-1.01			4.00
197	0	2.70			4.22
202	3	-0.67			4.02
203	3	0.67			4.10
204	4	0.00			4.06
212	2	-1.01	4.00		

Table 17. *Statistical summary of reported data for standard reference water sample P-21 (low ionic strength)--Continued*

PO4 as P (orthophosphate) mg/L



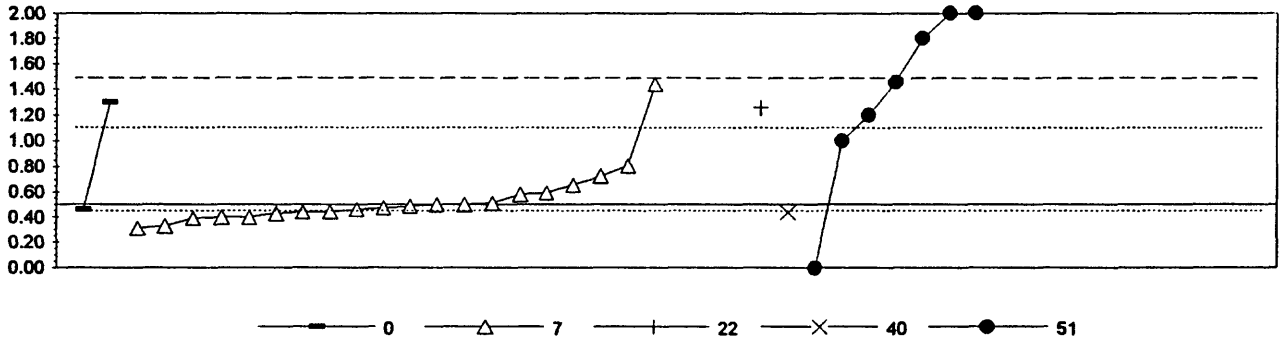
0. Other					22. Colorimetric		
4. ICP					22m. Color: molybdate blue		
7. Ion chromatography							
	N =	<	<	<	2	10	
	Minimum =				0.000	0.001	
	Maximum =				0.006	0.900	
	Median =					0.003	
	St Dev =					0.009	

MPV = 0.005
F-pseudosigma = 0.0059
N = 12
Hu = 0.010
HI = 0.002

Lab	Rating	Z-value	0	4	7	22	22m
1	0	3.71					0.027
3	4	0.17				0.006	
7	NR				< 0.2		
8	NR			< 0.1			
15	NR						< 0.02
23	NR						< 0.01
26	NR				< 0.5		
32	NR				< 0.007		
33	NR				< 0.01		
36	3	-0.84				0.000	
38	3	-0.67					0.001
39	NR		< 0.005				
46	NR						< 0.002
48	0	7.93					0.052
52	NR					< 0.005	
61	NR					< 0.04	
63	NR					< 0.01	
64	3	-0.51					0.002
78	4	-0.34					0.003
89	3	-0.51					0.002
105	NR					< 0.002	
107	NR						< 0.005
117	NR						< 0.001
127	NR						< 0.02
134	NR						< 0.01
136	3	-0.71					0.001
138	NR						< 0.01
140	NR					< .01	
141	NR						< 0.05
145	3	0.84					0.010
182	0	150.92					0.900
202	NR						< 0.005
203	NR						< 0.005
204	3	-0.67					0.001

Table 17. *Statistical summary of reported data for standard reference water sample P-21 (low ionic strength)–Continued*

SO4 (Sulfate) mg/L



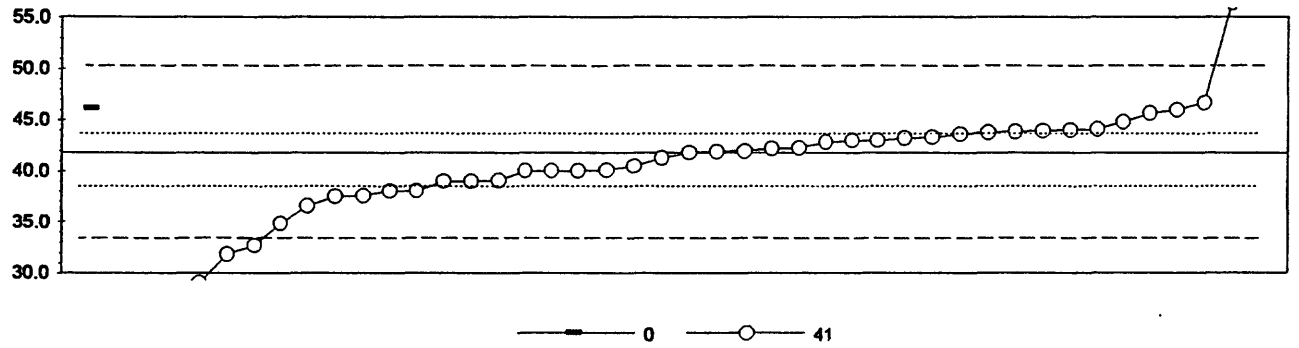
0. Other				40. Selective ion electrode			
7. Ion chromatography				51. Turbidimetric			
22. Colorimetric							
	N =	2	20	1	1	7	
	Minimum =	0.46	0.31	1.26	0.44	0.00	
	Maximum =	1.30	1.44	1.26	0.44	2.00	
	Median =		0.48			1.46	
	St Dev =		0.2452			0.423	

MPV =	0.50
F-pseudosigma =	0.491
N =	31
Hu =	1.10
HI =	0.44

Lab	Rating	Z-value	0	7	22	40	51
1	4	0.01		0.51			
3	1	1.91		1.44			
5	NR			< 5			
7	NR			< 0.5			
8	4	-0.01		0.50			
15	4	0.00		0.50			
23	0	2.64					1.80
26	4	-0.23		0.39			
32	4	-0.15		0.43			
33	4	-0.21		0.40			
36	2	-1.02					0.00
39	4	-0.14				0.44	
44	4	0.18		0.59			
46	4	-0.08		0.46			
48	2	1.01					1.00
52	NR						< 10
61	NR						< 3
63	2	1.42					1.20
64	4	-0.21		0.40			
78	NR						< 1
89	1	1.95					1.46
93	3	0.63		0.81			
105	NR			< 1			
110	4	-0.08	0.46				
112	4	0.16		0.58			
117	NR						< 0.1
127	4	0.32		0.66			
134	4	-0.12		0.44			
138	4	-0.07		0.47			
140	0	3.05					2.00
141	NR						< 10
145	4	-0.35		0.33			
158	4	-0.39		0.31			
182	0	3.05					2.00
185	4	0.45		0.72			
196	4	-0.03		0.49			
197	4	-0.13		0.44			
203	NR						< 1
204	1	1.54			1.26		
212	1	1.62	1.30				

Table 17. *Statistical summary of reported data for standard reference water sample P-21 (low ionic strength)–Continued*

Sp Cond (Specific Conductance) μ S/cm



0. Other
41. Direct reading

	1	42
N =	1	42
Minimum =	46.1	3.4
Maximum =		56.4
Median =		41.6
St Dev =		9.53

MPV = 41.8
F-pseudosigma = 4.23
N = 43
Hu = 43.7
Hl = 38.0

Lab	Rating	Z-value	0	41
1	4	0.28		43.0
2	4	0.03		41.9
3	4	0.12		42.3
5	1	-1.66		34.8
7	3	0.54		44.1
8	4	0.28		43.0
15	2	1.16		46.7
23	4	0.24		42.8
26	4	-0.43		40.0
32	0	-2.15		32.7
33	4	-0.12		41.3
36	3	0.90		45.6
38	3	0.99		46.0
46	3	0.71		44.8
48	4	0.33		43.2
52	3	-0.64		39.1
58	0	-2.34		31.9
61	0	-8.90		4.2
62	4	0.50		43.9
63	4	0.47		43.8
64	3	-0.99		37.6
78	2	-1.25		36.5
89	4	0.00		41.8
93	4	0.43		43.6
105	3	-0.90		38.0
107	4	0.05		42.0
117	2	-1.02		37.5
127	4	-0.40		40.1
134	3	0.52		44.0
136	4	-0.31		40.5
140	4	-0.43		40.0
141	0	-3.03		29.0
145	3	-0.66		39.0
158	4	0.49		43.9
182	0	-4.45		23.0
183	4	-0.43		40.0
185	4	0.09		42.2
190	4	0.36		43.3
197	0	3.46		56.4
202	3	-0.90		38.0
203	0	-9.09		3.4
204	3	-0.66		39.0
212	2	1.02	46.1	

Table 18. *--Statistical summary of reported data for standard reference sample Hg-17 (Mercury)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

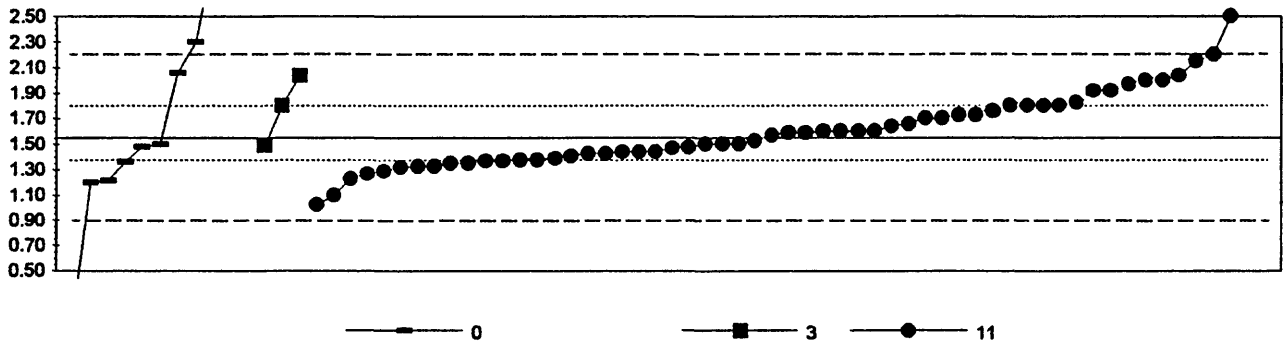
0. Other/Not reported
3. AA: graphite furnace = atomic absorption: graphite furnace
11. AA: cold vapor = atomic absorption: cold vapor

Abbreviations and symbols

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

Table 17. *Statistical summary of reported data for standard reference water sample Hg-17 (mercury)--Continued*

Hg (Mercury) µ g/L



0. Other			11. AA: hydride
1. AA: direct air			
3 AA: graphite furnace			
N =	10	3	56
Minimum =	0.17	1.49	1.02
Maximum =	8.80	2.04	71900
Median =	1.49	1.80	1.58
St Dev =	0.427		0.285

MPV = 1.55
F-pseudosigma = 0.311
N = 70
Hu = 1.80
HI = 1.38

Lab	Rating	Z-value	0	3	11
1	4	-0.16			1.50
3	0	23.29	8.80		
7	3	0.80			1.80
8	2	-1.45			1.10
11	2	-1.09	1.21		
12	4	-0.16			1.50
13	4	-0.35			1.44
15	3	-0.58			1.37
16	0	-4.43	0.17		
18	3	-0.55			1.38
24	2	1.45			2.00
29	0	2.09			2.20
32	4	-0.22	1.48		
34	4	-0.35			1.44
36	3	-0.74	1.32		
39	4	0.16			1.60
42	3	-0.74			1.32
45	3	-0.61	1.36		
46	2	-1.03			1.23
48	3	-0.64			1.35
50	4	0.16			1.80
51	4	-0.35			1.44
52	4	-0.22			1.48
55	3	0.58			1.73
58	4	-0.39			1.43
59	4	-0.39			1.43
60	3	0.80		1.80	
61	1	1.93			2.15
63	2	1.19			1.92
68	4	-0.19		1.49	
69	4	-0.45			1.41
70	4	-0.06			1.53
75	3	-0.51			1.39
79	0	230931			71900
86	0	4.66	3.00		
87	4	0.16			1.60
89	1	1.57		2.04	
96	0	2.41	2.30		
97	3	-0.55			1.38
105	4	0.35			1.66
108	2	1.35			1.97
109	1	-1.70			1.02
117	1	1.57			2.04
118	4	0.48			1.70
119	3	0.80			1.80
120	3	0.90			1.83
122	3	-0.84			1.29
127	3	-0.58			1.37
128	3	0.58			1.73
133	4	0.06			1.57
138	4	0.13			1.59
141	4	-0.26			1.47
142	3	-0.64			1.35
144	1	1.64	2.06		
145	3	-0.71			1.33
146	2	1.19			1.92
149	3	0.67			1.76
158	3	-0.90			1.27
179	2	-1.12	1.20		
180	3	0.80			1.80
182	0	3.05			2.50
194	4	0.29			1.64
198	4	0.13			1.59
202	4	0.16			1.60
210	2	1.45			2.00
211	3	0.80			1.80
213	4	-0.16			1.50
219	4	-0.16	1.50		
220	4	0.48			1.70
221	3	-0.71			1.33

Table 19. *—Statistical summary of reported data for standard reference sampleAMW-3 (acid mine water)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

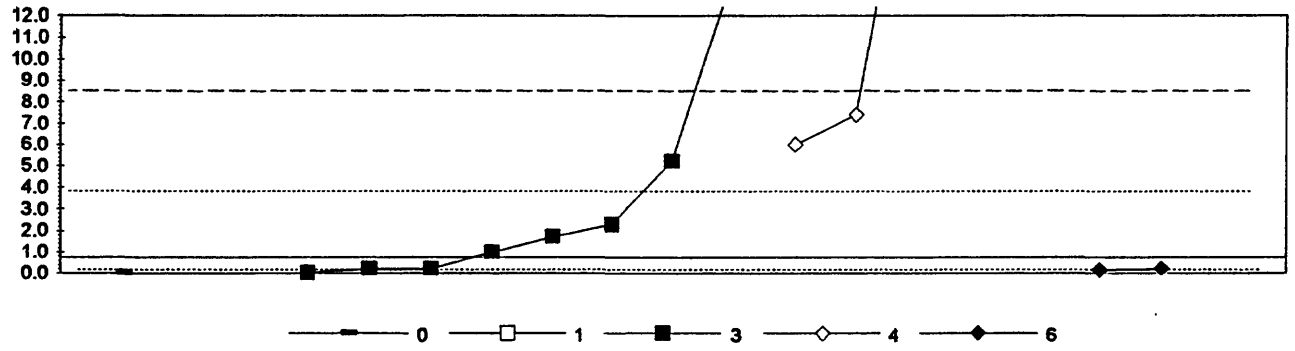
0. Other/Not reported		
1. AA: direct, air	=	atomic absorption: direct,air
2. AA: direct, N2O	=	atomic absorption: direct,nitrous oxide
3. AA: graphite furnace	=	atomic absorption: graphite furnace
4. ICP	=	inductively coupled plasma
5. DCP	=	direct current plasma
6. ICP/MS	=	inductively coupled plasma/mass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

Table 19. *–Statistical summary of reported data for standard reference water sample AMW-3 (acid mine water)–Continued*

Ag (Silver) µ g/L



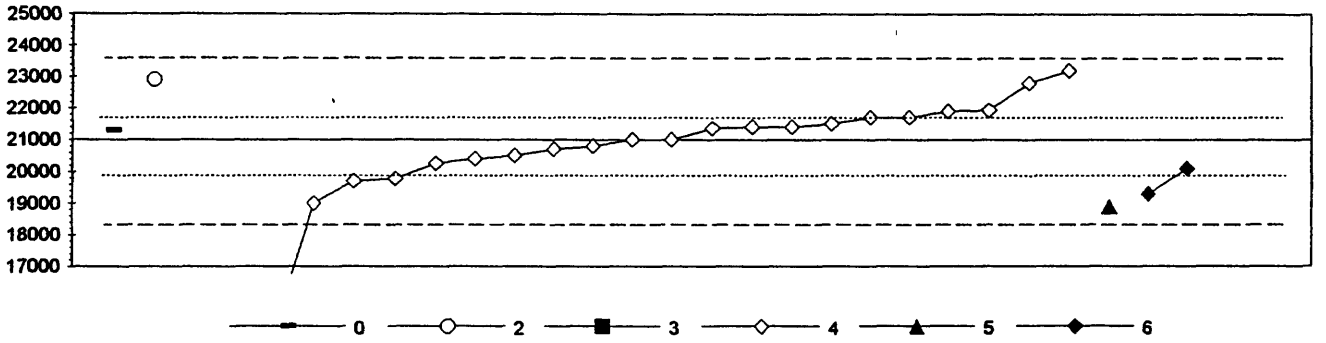
0. Other				4. ICP			
1. AA: Direct air				6. ICP/MS			
3. AA: graphite furnace							
	N =	1	1	8	3	2	
	Minimum =	0.0	21.0	0.0	6.0	0.1	
	Maximum =			14.2	23.0	0.2	
	Median =			1.4			
	St Dev =			4.79			

MPV =	0.8
F-pseudosigma =	3.85
N =	15
Hu =	3.9
HI =	0.2

Lab	Rating	Z-value	0	1	3	4	6
1	NR				< 1		
3	4	0.06			1.0		
7	NR				< 0.2		
8	2	1.36				6.0	
18	NR					< 3	
32	NR						< 0.1
36	4	-0.18			0.0		
48	4	-0.14			0.2		
52	2	1.16			5.2		
58	0	3.49			14.2		
61	1	1.73				7.4	
63	NR				< 0.5		
84	0	5.26		21.0			
85	NR			< 5			
89	4	0.25			1.7		
94	NR					< 5	
105	4	-0.16					0.1
117	4	0.40			2.3		
119	4	-0.14			0.2		
127	NR				< 1		
141	0	5.78				23.0	
194	NR				< 1		
202	4	-0.19	0.0				
210	4	-0.14					0.2

Table 19. *—Statistical summary of reported data for standard reference water sample AMW-3 (acid mine water)—Continued*

Al (Aluminum) µ g/L



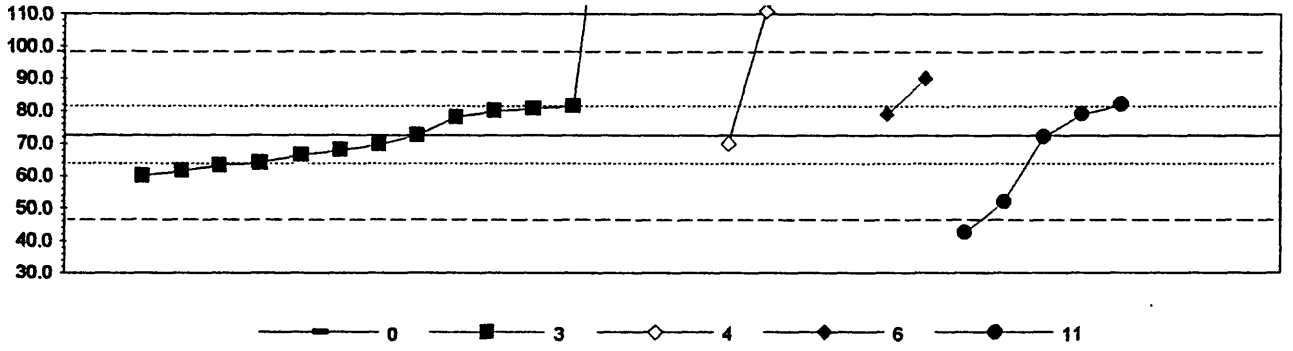
0. Other					4. ICP			
2. AA: direct nitrous oxide					5. DCP			
3. AA: graphite furnace					6. ICP/MS			
		N =	1	1	2	21	1	2
		Minimum =	21300	22900	7940	15000	18910	19300
		Maximum =			48700	23200		20100
		Median =			28320	21000		
		St Dev =				1661		

Lab	Rating	Z-value	0	2	3	4	5	6
1	1	-1.60					18910	
3	4	-0.38				20500		
4	0	-4.58				15000		
7	3	0.53				21700		
8	4	0.38				21500		
11	4	-0.15				20800		
15	2	1.37				22800		
18	3	-0.57				20254		
32	2	-1.30						19300
36	2	1.45		22900				
37	3	-0.69						20100
42	4	0.31				21400		
48	1	1.68				23200		
52	3	-0.99				19700		
58	0	21.16			48700			
59	4	0.00				21000		
61	3	0.71				21935		
63	3	0.53				21700		
85	4	0.31				21400		
89	0	-9.98			7940			
94	3	-0.94				19768		
105	3	0.69				21900		
119	4	0.00				21000		
127	4	-0.46				20400		
141	4	0.27				21354		
194	4	-0.23				20700		
202	4	0.23	21300					
210	1	-1.53				19000		

MPV = 21000
F-pseudosigma = 1309
N = 28
Hu = 21700
HI = 19934

Table 19. *--Statistical summary of reported data for standard reference water sample AMW-3 (acid mine water)--Continued*

As (Arsenic) µ g/L



0. Other
3. AA: graphite furnace
4. ICP
6. ICP/MS
11. AA: hydride

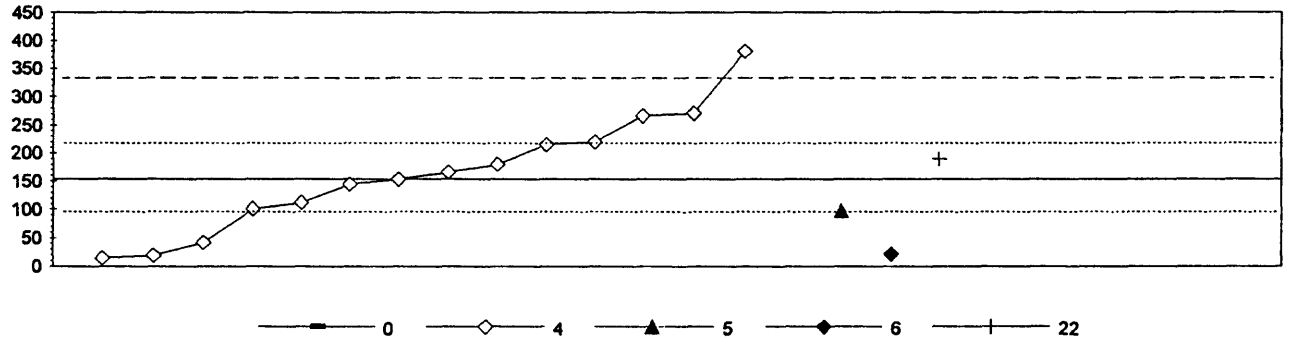
	0	3	4	6	11
N =	1	14	3	2	5
Minimum =	1.5	60.1	70.0	79.0	42.7
Maximum =		241.0	130.0	90.0	82.0
Median =		71.1	111.0	84.5	72.0
St Dev =		7.87			

MPV = 72.5
F-pseudosigma = 12.90
N = 25
Hu = 81.5
Hl = 64.1

Lab	Rating	Z-value	0	3	4	6	11
1	4	0.00		72.5			
3	4	0.43		78.1			
7	0	-5.54		< 1			
8	1	-1.59					52.0
11	0	4.46			130.0		
15	3	-0.71		63.4			
18	4	-0.22		69.7			
32	2	1.36				90.0	
36	4	-0.47		66.5			
48	3	0.64		80.7			
52	3	-0.96		60.1			
58	0	13.06		241.0			
59	4	-0.19			70.0		
61	3	0.70		81.5			
63	3	0.58		80.0			
84	3	0.74					82.0
85	4	-0.04					72.0
69	0	-2.31					42.7
94	4	-0.36		67.9			
105	4	0.50				79.0	
117	0	8.18		178.0			
119	4	0.50					79.0
127	3	-0.65		64.1			
141	0	2.98			111.0		
194	3	-0.85		61.5			
202	0	-5.50	1.5				
210	NR				< 50		

Table 19. *--Statistical summary of reported data for standard reference water sample AMW-3 (acid mine water)--Continued*

B (Boron) μ g/L



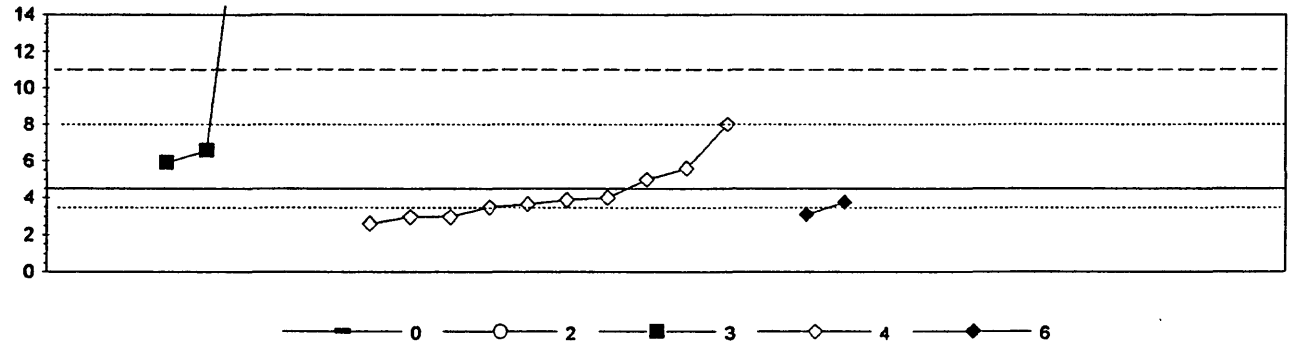
0. Other				6. ICP/MS			
4. ICP				22. Colorimetric			
5. DCP							
		N =	0	14	1	1	1
		Minimum =		15	98	21	190
		Maximum =		380			
		Median =		160			
		St Dev =		86.3			

MPV =	153
F-pseudosigma =	87.5
N =	17
Hu =	216
Hl =	98

Lab	Rating	Z-value	0	4	5	6	22
1	3	-0.63			98		
3	3	-0.61		100			
4	4	0.15		166			
8	NR			< 10			
11	3	0.72		216			
15	4	-0.47		112			
18	2	-1.27		42			
32	1	-1.51				21	
36	4	0.42					190
48	4	0.31		180			
52	NR			< 300			
61	4	0.00		153			
85	2	1.35		271			
94	1	-1.58		15			
116	2	1.29		266			
119	3	0.77		220			
127	1	-1.53		19			
141	4	-0.10		144			
194	0	2.60		380			
210	NR			< 100			

Table 19. *--Statistical summary of reported data for standard reference water sample AMW-3 (acid mine water)--Continued*

Ba (Barium) µ g/L



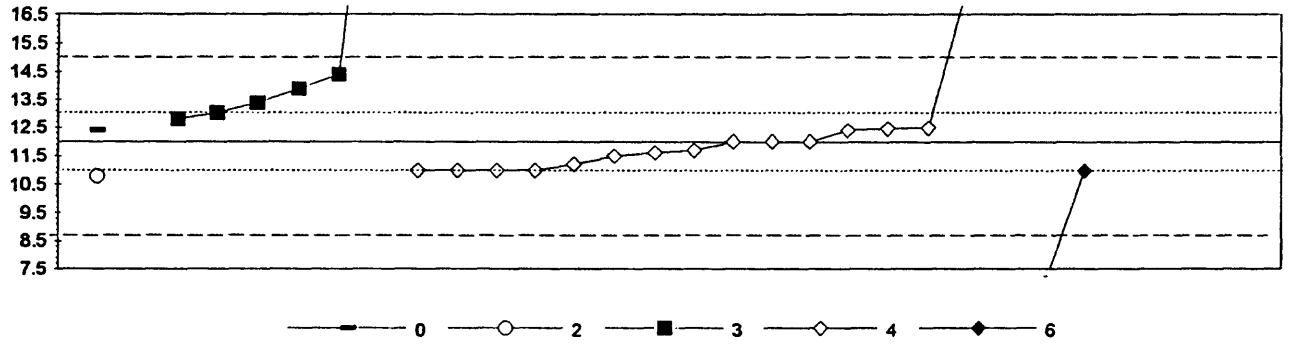
0. Other				4. ICP			
2. AA: direct nitrous oxide				6. ICP/MS			
3. AA: graphite furnace							
	N =		0	2	4	10	2
	Minimum =			140.0	5.9	2.6	3.1
	Maximum =			366.0	140.0	8.0	3.8
	Median =			253.0	15.3	3.8	3.4
	St Dev =					1.61	

MPV =	4.5
F-pseudosigma =	3.34
N =	18
Hu =	8.0
HI =	3.5

Lab	Rating	Z-value	0	2	3	4	6
1	4	-0.30				3.5	
3	4	-0.45				3.0	
4	4	-0.45				3.0	
7	4	0.33				5.6	
8	4	0.15				5.0	
15	NR					< 10	
18	NR					< 5	
32	4	-0.42					3.1
36	0	108.37		366.0			
42	4	-0.22					3.8
48	4	0.42			5.9		
52	NR				< 11		
58	3	0.61			6.6		
59	NR					< 10	
61	3	-0.57				2.6	
63	NR					< 50	
84	0	40.62		140.0			
85	NR					< 5	
89	0	40.62			140.0		
94	4	-0.15				4.0	
105	4	-0.18				3.9	
116	NR					< 1	
117	0	5.85			24.0		
119	2	1.05				8.0	
127	4	-0.25				3.7	
141	NR					< 10	
194	NR					< 100	
210	NR					< 50	

Table 19. *--Statistical summary of reported data for standard reference water sample AMW-3 (acid mine water)--Continued*

Be (Beryllium) μ g/L



0. Other
2. AA: direct nitrous oxide
3. AA: graphite furnace
4. ICP
6. ICP/MS

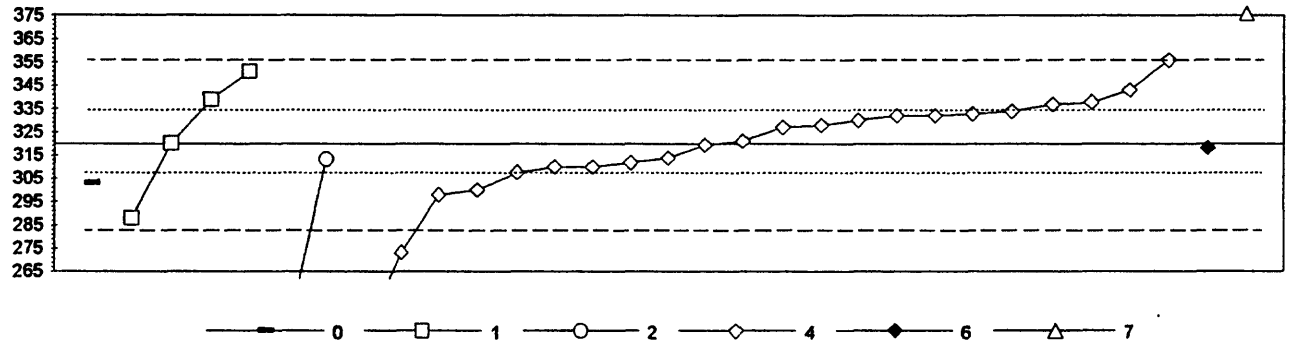
	0	2	3	4	6
N =	1	1	6	16	2
Minimum =	12.4	10.8	12.8	11.0	7.0
Maximum =			26.7	24.0	11.0
Median =			13.7	11.9	9.0
St Dev =			0.66	0.57	

MPV =	12.0
F-pseudosigma =	1.48
N =	26
Hu =	13.0
Hl =	11.0

Lab	Rating	Z-value	0	2	3	4	6
1	4	0.32				12.5	
3	4	0.00				12.0	
7	4	0.34				12.5	
8	3	-0.67				11.0	
11	3	-0.67				11.0	
15	0	3.78				17.6	
18	4	0.00				12.0	
32	3	-0.67					11.0
36	3	-0.81		10.8			
37	0	-3.37					7.0
48	3	0.54			12.8		
52	2	1.28			13.9		
58	0	9.92			26.7		
59	3	-0.67				11.0	
61	4	0.27				12.4	
63	4	0.00				12.0	
85	3	-0.54				11.2	
94	3	-0.67				11.0	
105	4	-0.27				11.6	
117	3	0.94			13.4		
119	1	1.62			14.4		
127	4	-0.20				11.7	
141	4	-0.34				11.5	
194	3	0.67			13.0		
202	4	0.27	12.4				
210	0	8.09				24.0	

Table 19. *—Statistical summary of reported data for standard reference water sample AMW-3 (acid mine water)—Continued*

Ca (Calcium) mg/L



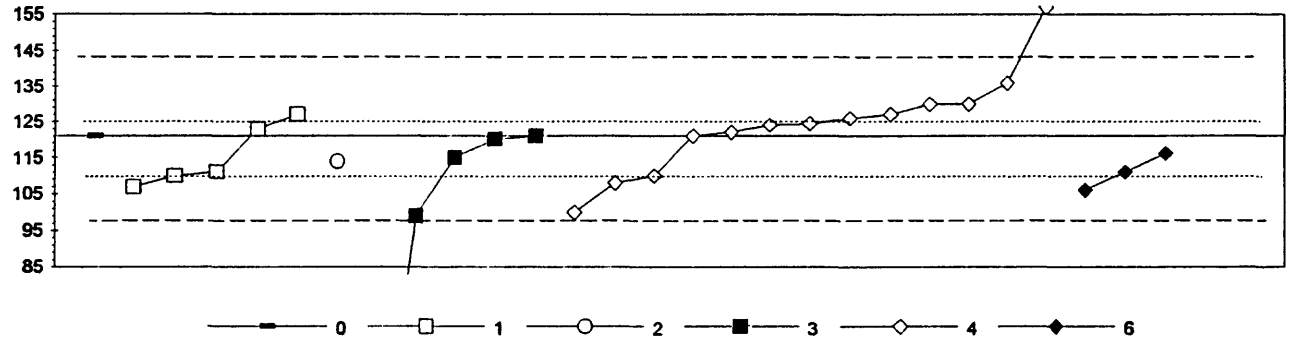
0. Other				4. ICP				
1. AA: Direct air				6. ICP/MS				
2. AA: direct nitrous oxide				7. IC				
		N =	1	4	2	22	1	1
		Minimum =	303	288	239	237	318	376
		Maximum =		351	313	356		
		Median =		330	276	324		
		St Dev =				18.4		

		MPV =	320
		F-pseudosigma =	18.4
		N =	31
		Hu =	334
		HI =	309

Lab	Rating	Z-value	0	1	2	4	6	7
1	4	-0.03				320		
3	1	1.96				356		
4	0	-4.51				237		
7	3	0.98				338		
8	4	0.38				327		
11	3	0.54				330		
15	2	-1.20				298		
18	4	-0.44				312		
32	4	-0.11					318	
36	0	-4.41			239			
37	0	3.05						376
42	3	-0.54				310		
48	0	-2.56				273		
52	3	0.65				332		
58	1	-1.74		288				
59	3	-0.54				310		
61	4	-0.34				314		
63	3	0.71				333		
84	4	-0.38			313			
85	4	0.00		320				
89	2	1.03		339				
94	3	-0.69				307		
105	4	0.05				321		
116	2	1.25				343		
117	1	1.69		351				
119	4	0.44				328		
127	3	0.92				337		
141	3	0.65				332		
194	3	0.76				334		
202	3	-0.92	303					
210	2	-1.09				300		

Table 19. *--Statistical summary of reported data for standard reference water sample AMW-3 (acid mine water)--Continued*

Cd (Cadmium) **µ g/L**



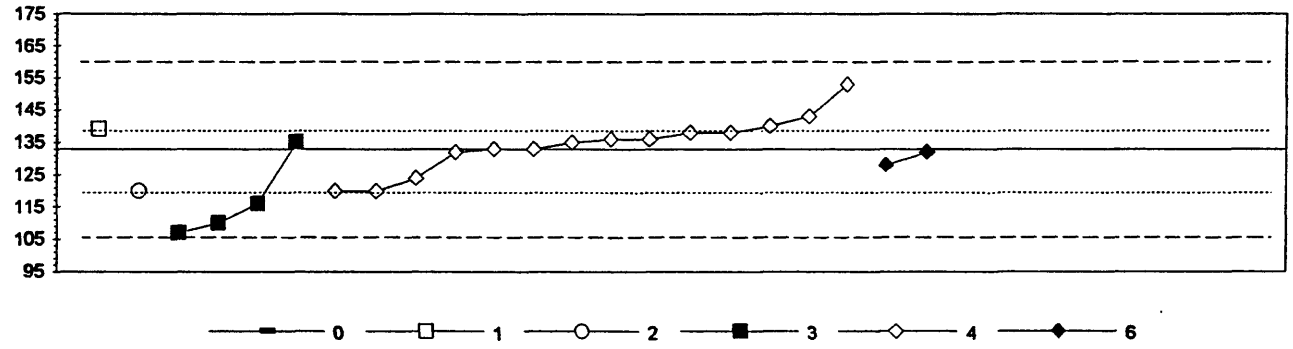
0. Other				3. AA: graphite furnace				
1. AA: Direct air				4. ICP				
2. AA: direct nitrous oxide				6. ICP/MS				
		N =	1	5	1	5	13	3
		Minimum =	121	107	114	23	100	106
		Maximum =		127		121	157	116
		Median =		111		115	124	111
		St Dev =					10.4	

MPV =	121
F-pseudosigma =	11.3
N =	28
Hu =	125
Hi =	110

Lab	Rating	Z-value	0	1	2	3	4	6
1	4	0.35					124	
3	1	-1.91				99		
7	3	0.84					130	
8	4	0.04					121	
11	3	0.58					127	
15	2	1.38					136	
18	4	0.04				121		
32	4	-0.40						116
36	3	-0.58			114			
42	3	-0.84						111
48	0	3.24					157	
52	2	-1.11					108	
58	3	-0.84		111				
59	4	0.31					124	
61	3	0.84					130	
63	4	0.22		123				
84	2	-1.20		107				
85	3	-0.93		110				
89	4	-0.49				115		
94	3	-0.93					110	
105	2	-1.28						106
117	0	-8.70				23		
119	3	0.58		127				
127	4	0.13					122	
141	4	0.49					126	
194	4	-0.04				120		
202	4	0.04	121					
210	1	-1.82					100	

Table 19. *--Statistical summary of reported data for standard reference water sample AMW-3 (acid mine water)--Continued*

Co (Cobalt) µ g/L

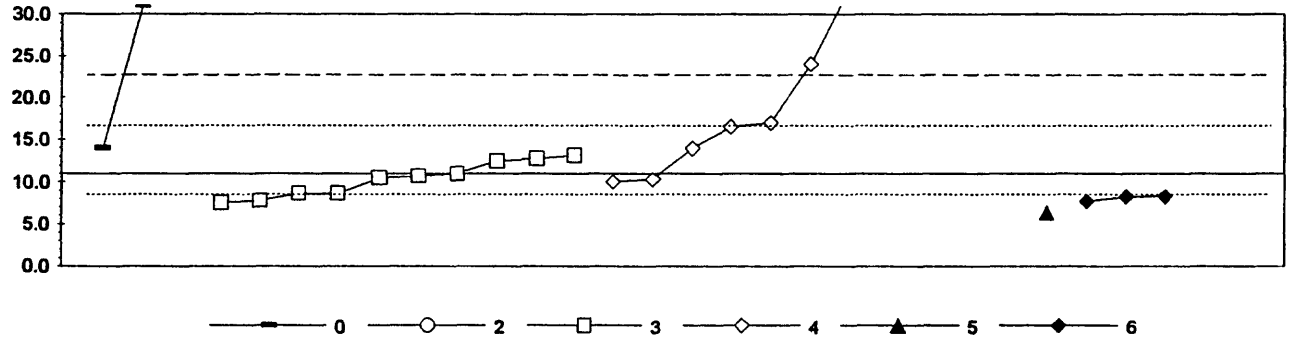


0. Other				3. AA: graphite furnace				
1. AA: Direct air				4. ICP				
2. AA: direct nitrous oxide				6. ICP/MS				
		N =	0	1	1	4	14	2
		Minimum =		139	120	107	120	128
		Maximum =				135	153	132
		Median =				113	136	
		St Dev =					8.8	
Lab	Rating	Z-value	0	1	2	3	4	6
1	1	-1.95				107		
3	3	-0.97					120	
7	3	0.75					143	
8	4	-0.07					132	
11	4	0.00					133	
15	2	-1.27				116		
18	4	0.00					133	
32	4	-0.07						132
36	3	-0.97			120			
42	4	-0.37						128
48	3	0.52					140	
52	4	0.22					136	
58	1	-1.72				110		
61	2	1.50					153	
63	4	0.45		139				
85	4	0.15					135	
89	4	0.15				135		
94	3	-0.67					124	
105	4	0.37					138	
127	4	0.22					136	
141	4	0.37					138	
210	3	-0.97					120	

MPV =	133
F-pseudosigma =	13.3
N =	22
Hu =	138
HI =	120

Table 19. *–Statistical summary of reported data for standard reference water sample AMW-3 (acid mine water)–Continued*

total Cr (Chromium) **µ g/L**



0. Other	4. ICP
2. AA: direct nitrous oxide	5. DCP
3. AA: graphite furnace	6. ICP/MS

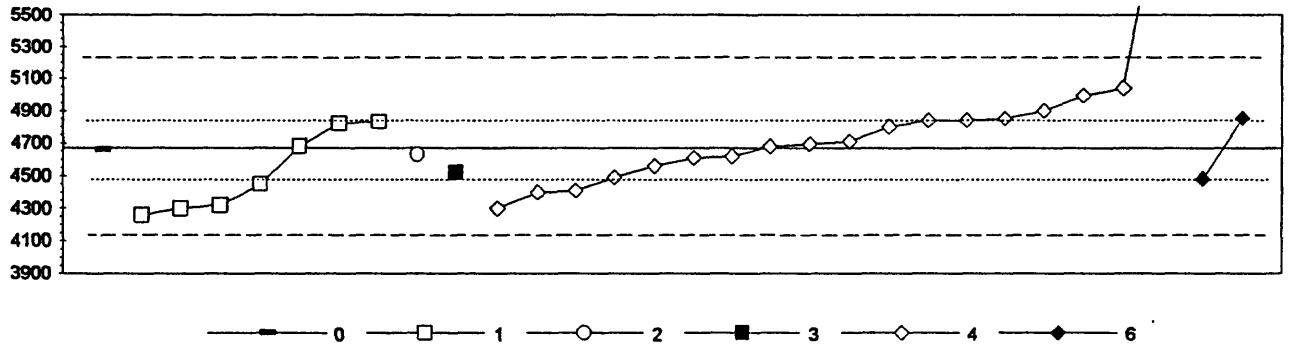
	2	0	10	9	1	3
N =						
Minimum =	14.0		7.6	10.0	6.4	7.7
Maximum =	31.0		13.2	4000		8.3
Median =	22.5		10.6	17.0		8.2
St Dev =			2.12	8.20		

MPV =	11.0
F-pseudosigma =	5.88
N =	25
Hu =	16.5
HI =	8.6

Lab	Rating	Z-value	0	2	3	4	5	6
1	3	-0.78					6.4	
3	4	-0.17				10.0		
4	0	679				4000		
7	NR					< 8		
8	0	3.74				33.0		
15	4	-0.41			8.6			
18	0	2.21				24.0		
32	4	-0.46						8.3
36	4	0.31			12.8			
37	4	-0.48						8.2
48	4	-0.05			10.7			
52	3	-0.56			7.7			
58	4	0.37			13.2			
59	2	1.02				17.0		
61	4	-0.12				10.3		
63	0	3.40	31.0					
84	NR			< 10				
85	NR					< 20		
89	4	0.26			12.5			
94	3	0.51				14.0		
105	3	-0.57						7.7
117	4	-0.09			10.5			
119	4	-0.41			8.6			
127	3	-0.59			7.6			
141	3	0.94				16.5		
194	4	0.00			11.0			
202	3	0.51	14.0					
210	0	78				470		

Table 19. *--Statistical summary of reported data for standard reference water sample AMW-3 (acid mine water)--Continued*

Cu (Copper) µ g/L

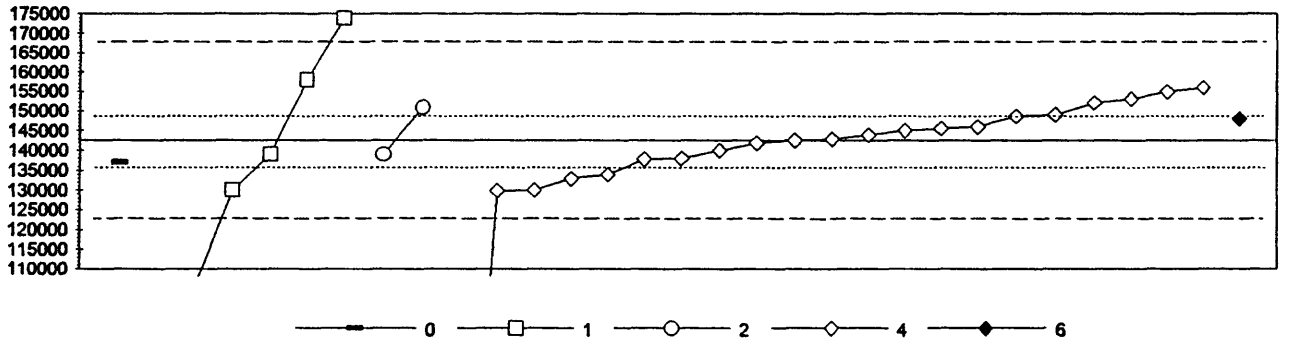


0. Other				3. AA: graphite furnace				
1. AA: Direct air				4. ICP				
2. AA: direct nitrous oxide				6. ICP/MS				
		N =	1	7	1	1	18	2
		Minimum =	4660	4261	4630	4520	4300	4480
		Maximum =		4830			6400	4850
		Median =		4450			4703	4665
		St Dev =		249			213	
Lab	Rating	Z-value	0	1	2	3	4	6
1	3	-0.67					4491	
3	4	0.04					4680	
4	0	6.48					6400	
7	3	0.64					4840	
8	4	-0.22					4610	
11	4	0.15					4710	
15	3	-0.56				4520		
18	4	-0.40					4564	
32	3	-0.71						4480
36	4	-0.15			4630			
37	3	0.67						4850
42	3	0.86					4900	
48	2	1.39					5040	
52	2	-1.39					4300	
58	2	-1.39		4300				
59	4	0.49					4800	
61	2	1.22					4996	
63	3	0.56		4820				
84	3	-0.82		4450				
85	4	0.04		4680				
89	2	-1.31		4320				
94	3	-0.98					4409	
105	3	0.67					4850	
117	1	-1.53		4261				
119	4	-0.19					4620	
127	3	0.64					4840	
141	4	0.09					4695	
194	3	0.60		4830				
202	4	-0.04	4660					
210	2	-1.01					4400	

MPV =	4670
F-pseudosigma =	267
N =	30
Hu =	4840
Hl =	4480

Table 19. *–Statistical summary of reported data for standard reference water sample AMW-3 (acid mine water)–Continued*

Fe (Iron) **µ g/L**



0. Other
1. AA: Direct air
2. AA: direct nitrous oxide
4. ICP
6. ICP/MS

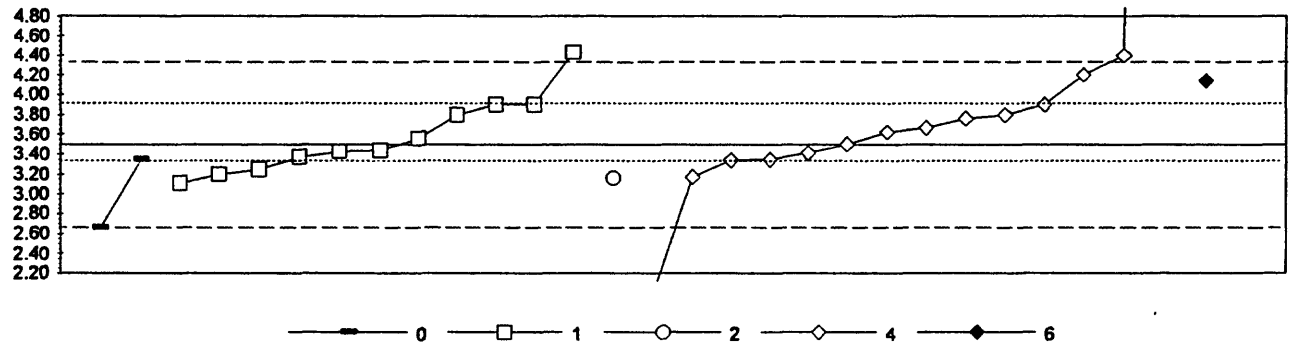
	0	1	2	4	6
N =	1	6	2	21	1
Minimum =	137000	94400	139000	141	148000
Maximum =		174000	151000	156000	
Median =		134475		143000	
St Dev =				7826	

MPV = 142650
F-pseudosigma = 9859
N = 31
Hu = 148800
Hl = 135500

Lab	Rating	Z-value	0	1	2	4	6
1	4	-0.38		138950			
3	4	-0.07				142000	
4	3	-0.98				133000	
7	3	0.64				149000	
8	4	0.04				143000	
11	0	-14.45				141	
15	3	0.95				152000	
18	4	-0.49				137800	
32	3	0.54					148000
36	4	-0.37			139000		
37	0	-4.89		94400			
42	4	0.30				145600	
48	2	1.25				155000	
52	4	0.14				144000	
58	2	-1.28		130000			
59	4	-0.47				138000	
61	4	0.00				142650	
63	0	3.18		174000			
84	3	0.85			151000		
85	4	-0.27				140000	
89	1	1.56		158000			
94	2	-1.29				129940	
105	3	-0.88				134000	
116	2	1.05				153000	
117	0	-3.79		105300			
119	2	1.35				156000	
127	4	0.34				146000	
141	3	0.60				148600	
194	4	0.24				145000	
202	3	-0.57	137000				
210	2	-1.28				130000	

Table 19. *--Statistical summary of reported data for standard reference water sample AMW-3 (acid mine water)--Continued*

K (Potassium) mg/L



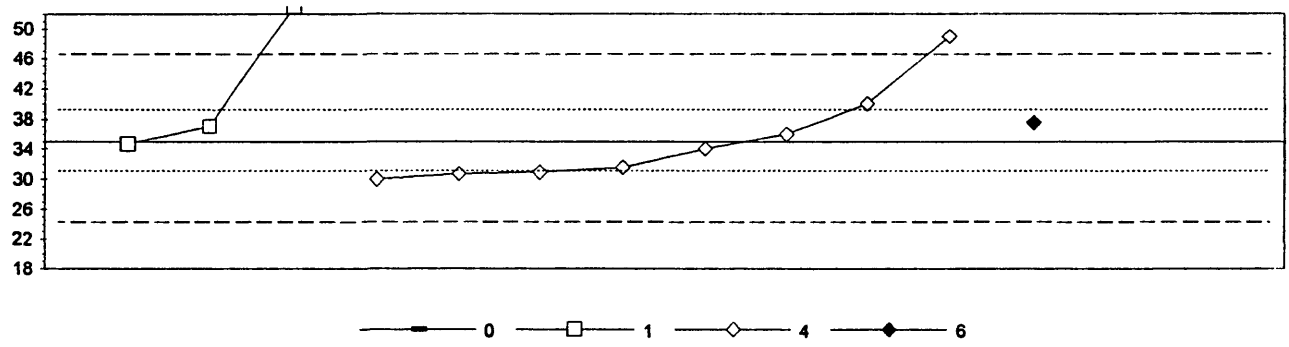
0. Other				4. ICP			
1. AA: Direct air				6. ICP/MS			
2. AA: direct nitrous oxide							
		N =	2	11	1	14	1
		Minimum =	2.66	3.11	3.16	2.00	4.14
		Maximum =	3.35	4.43		4887	
		Median =		3.44		3.65	
		St Dev =		0.392		0.581	

MPV =	3.50
F-pseudosigma =	0.415
N =	29
Hu =	3.90
HI =	3.34

Lab	Rating	Z-value	0	1	2	4	6
1	3	-0.60		3.25			
3	4	-0.31		3.37			
7	1	1.69				4.20	
8	3	0.72				3.80	
11	4	-0.36				3.35	
15	4	0.41				3.67	
18	3	-0.79				3.17	
32	1	1.54					4.14
36	3	-0.82			3.16		
37	4	-0.14		3.44			
42	4	0.00				3.50	
48	3	0.63				3.76	
52	4	-0.22				3.41	
58	4	-0.17		3.43			
59	3	0.96				3.90	
61	0	11764				4887	
63	0	2.17				4.40	
84	3	-0.72		3.20			
85	3	0.96		3.90			
89	4	0.14		3.56			
94	4	-0.39				3.34	
105	4	0.29				3.62	
117	3	-0.94		3.11			
119	3	0.72		3.80			
127	3	0.96		3.90			
141	4	-0.36	3.35				
194	0	2.24		4.43			
202	1	-2.02	2.66				
210	0	-3.61				2.00	

Table 19. *–Statistical summary of reported data for standard reference water sample AMW-3 (acid mine water)–Continued*

Li (Lithium) µ g/L



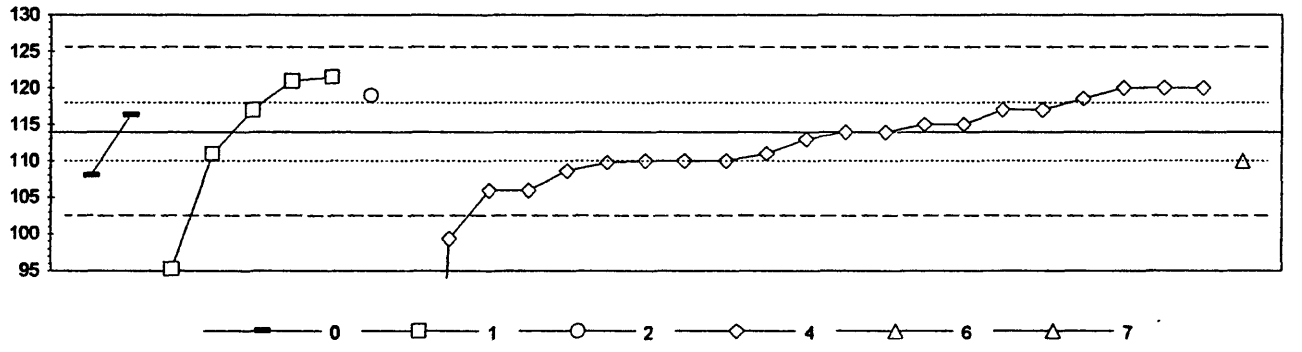
0. Other			6. ICP/MS			
1. AA: Direct air						
4. ICP						
		N =	0	3	8	1
		Minimum =		35	30	38
		Maximum =		53	49	
		Median =		37	33	
		St Dev =			6.5	

MPV =	35
F-pseudosigma =	5.5
N =	12
Hu =	39
HI =	31

Lab	Rating	Z-value	0	1	4	6
1	4	-0.12		35		
3	3	0.84			40	
4	3	-0.79			31	
8	4	-0.24			34	
15	3	-0.84			31	
32	4	0.39				38
42	4	0.12			36	
63	0	3.20		53		
85	4	0.30		37		
105	0	2.47			49	
127	3	-0.68			32	
210	3	-0.97			30	

Table 19. *–Statistical summary of reported data for standard reference water sample AMW-3 (acid mine water)–Continued*

Mg (Magnesium) mg/L



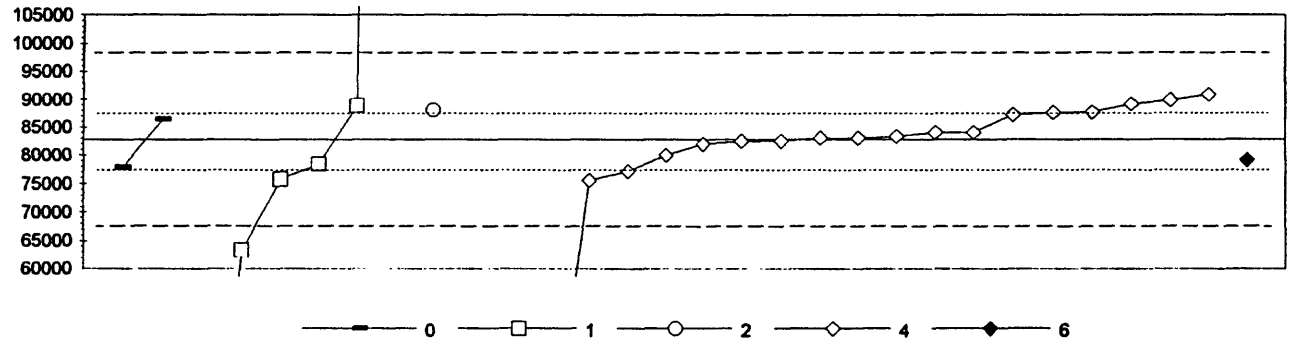
0. Other				4. ICP				
1. AA: Direct air				6. ICP/MS				
2. AA: direct nitrous oxide				7. Ion chromatography				
	N =	2	5	1	21	1	1
	Minimum =	108	95	119	8	110	140
	Maximum =	116	122		120		
	Median =		117		113		
	St Dev =				5.4		

MPV = 114
F-pseudosigma = 5.8
N = 31
Hu = 118
HI = 110

Lab	Rating	Z-value	0	1	2	4	6	7
1	3	-0.93				109		
3	4	0.17				115		
4	2	-1.37				106		
7	2	1.03				120		
8	2	-1.37				106		
11	3	0.52				117		
15	3	0.52				117		
18	3	-0.69				110		
32	3	-0.69					110	
36	3	0.86			119			
37	0	4.47						140
42	3	-0.69				110		
48	0	-2.51				99		
52	4	0.00				114		
58	0	-3.21		95				
59	4	-0.17				113		
61	3	0.77				119		
63	2	1.03				120		
84	3	-0.52		111				
85	3	0.52		117				
89	2	1.20		121				
94	3	-0.72				110		
105	3	-0.69				110		
116	4	0.17				115		
117	2	1.29		122				
119	3	-0.52				111		
127	4	0.00				114		
141	4	0.40	116					
194	2	1.03				120		
202	2	-1.03	108					
210	0	-18.15				8		

Table 19. *—Statistical summary of reported data for standard reference water sample AMW-3 (acid mine water)—Continued*

Mn (Manganese) µ g/L



0. Other				4. ICP			
1. AA: Direct air				6. ICP/MS			
2. AA: direct nitrous oxide							
	N =	2	6	1	20	1	
	Minimum =	77900	86	88000	79	79200	
	Maximum =	86470	807000		90800		
	Median =		77100		83000		
	St Dev =				4226		

MPV = 82800
F-pseudosigma = 7650
N = 30
Hu = 87500
HI = 77180

Lab	Rating	Z-value	0	1	2	4	6
1	4	-0.10				82043	
3	4	0.03				83000	
4	4	0.16				84000	
7	3	0.92				89800	
8	0	-10.81				79	
11	4	-0.04				82500	
15	3	0.64				87700	
18	3	-0.73				77180	
32	4	-0.47					79200
36	3	0.68			88000		
42	4	0.16				84000	
48	0	-7.56				25000	
52	4	-0.03				82600	
58	3	-0.58		78400			
59	4	-0.37				80000	
61	3	0.58				87244	
63	0	-10.81		86			
84	3	-0.92		75800			
85	0	94.67		807000			
89	3	0.80		88900			
94	4	0.07				83328	
105	3	-0.94				75600	
116	3	0.61				87500	
117	0	-2.56		63240			
119	2	1.05				90800	
127	3	0.82				89100	
141	4	0.48	86470				
194	4	0.03				83000	
202	3	-0.64	77900				
210	0	-10.74				630	

Table 19. *–Statistical summary of reported data for standard reference water sample AMW-3 (acid mine water)–Continued*

Mo (Molybdenum) µ g/L

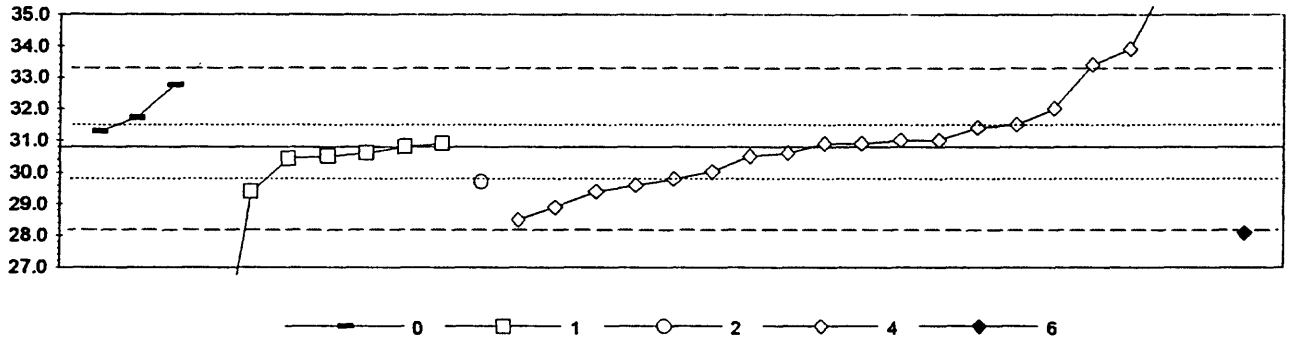
INSUFFICIENT DATA

0. Other				6. ICP/MS		
3. AA: graphite furnace						
4. ICP						
N =			5	2	2	
Minimum =			1.3	11.0	0.8	
Maximum =			6.6	144.0	2.0	
Median =						
St Dev =						
Lab	Rating	Z-value	0	3	4	6
202			< 1.0			
1			< 1			
141			< 10			
94				< 5		
84				< 2		
52				6.6		
36				1.3		
61					< 50	
85					< 50	
15					< 20	
7					< 12	
48					< 10	
3					< 10	
8					< 10	
127					144.0	
210					11.0	
105						2.0
32						0.8

MPV =	
F-pseudosigma =	
N =	6
Hu =	
HI =	

Table 19. *–Statistical summary of reported data for standard reference water sample AMW-3 (acid mine water)–Continued*

Na (Sodium) mg/L



0. Other
1. AA: Direct air
2. AA: direct nitrous oxide
4. ICP
6. ICP/MS

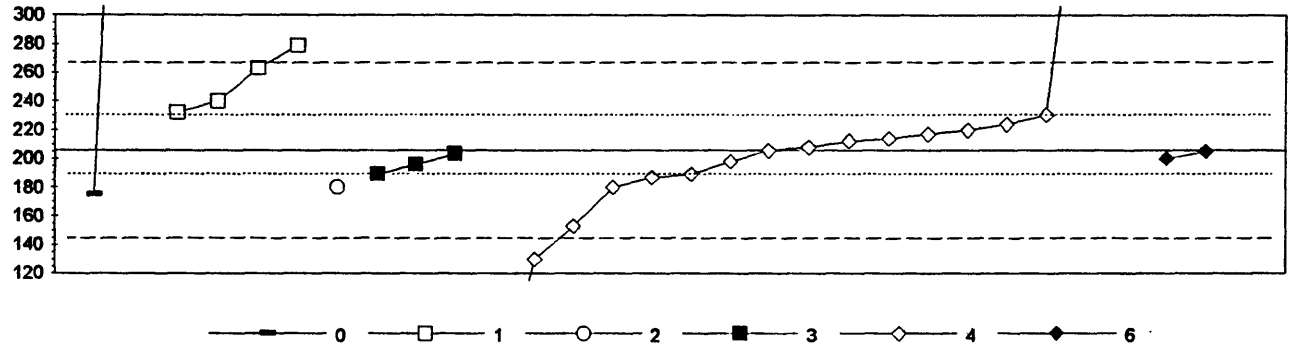
	0	1	2	4	6
N =	3	7	1	19	1
Minimum =	31	23	30	29	28
Maximum =	33	31		311	
Median =		31		31	
St Dev =		0.54		1.43	

MPV = 30.8
F-pseudosigma = 1.26
N = 31
Hu = 31.5
HI = 29.8

Lab	Rating	Z-value	0	1	2	4	6
1	4	0.08		30.9			
3	4	0.16				31.0	
4	1	-1.83				28.5	
7	4	0.48				31.4	
8	4	0.40	31.3				
11	3	0.56				31.5	
15	4	-0.16				30.6	
18	3	-0.79				29.8	
32	0	-2.14					28.1
36	3	-0.87			29.7		
37	4	-0.16		30.6			
42	4	-0.24				30.5	
48	0	4.29				36.2	
52	1	-1.51				28.9	
58	0	-6.59		22.5			
59	3	0.95				32.0	
61	0	222				311.1	
63	0	2.06				33.4	
84	2	-1.11		29.4			
85	4	-0.24		30.5			
89	4	0.00		30.8			
94	3	-0.60				30.0	
105	0	2.46				33.9	
116	4	0.08				30.9	
117	4	-0.29		30.4			
119	3	-0.95				29.6	
127	4	0.08				30.9	
141	3	0.73	31.7				
194	2	-1.11				29.4	
202	1	1.56	32.8				
210	4	0.16				31.0	

Table 19. *–Statistical summary of reported data for standard reference water sample AMW-3 (acid mine water)–Continued*

Ni (Nickel) **µ g/L**



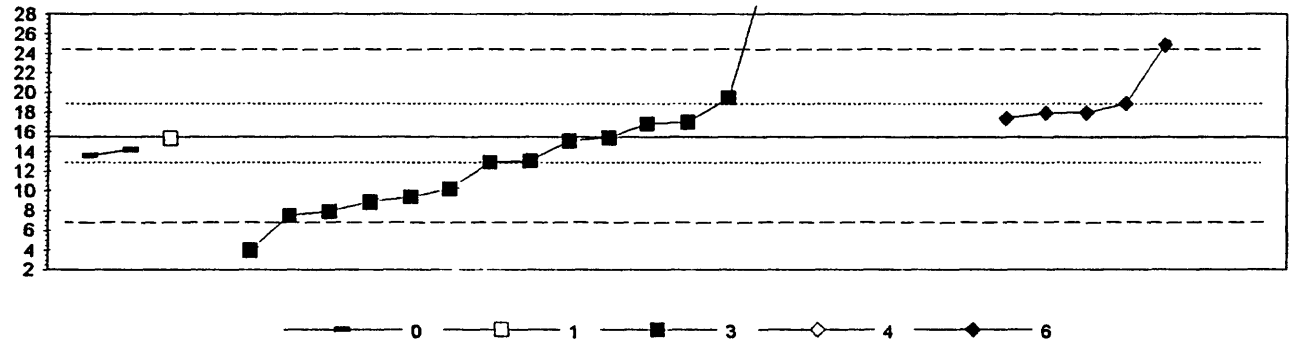
0. Other				3. AA: graphite furnace				
1. AA: Direct air				4. ICP				
2. AA: direct nitrous oxide				6. ICP/MS				
		N =	2	4	1	3	17	2
		Minimum =	175	232	180	189	22	200
		Maximum =	773	279		203	127000	205
		Median =	474	252		196	208	203
		St Dev =					28.2	

MPV =	206
F-pseudosigma =	30.4
N =	29
Hu =	230
HI =	189

Lab	Rating	Z-value	0	1	2	3	4	6
1	4	-0.09				203		
3	4	0.46					220	
4	0	4171.83					127000	
7	4	0.20					212	
8	3	-0.63					187	
11	4	0.07					208	
15	3	-0.56				189		
18	0	-6.05					22	
32	4	-0.20						200
36	3	-0.86			180			
37	4	-0.03						205
42	3	0.59					224	
48	3	0.79					230	
52	3	-0.56					189	
58	3	0.86		232				
59	0	8.03					450	
61	1	-1.74					153	
63	2	1.12		240				
84	1	1.88		263				
85	4	0.00					206	
89	4	-0.33				196		
94	4	-0.26					198	
105	4	0.26					214	
119	0	2.40		279				
127	4	0.36					217	
141	0	18.86	773					
194	3	-0.86					180	
202	2	-1.02	175					
210	0	-2.50					130	

Table 19. *–Statistical summary of reported data for standard reference water sample AMW-3 (acid mine water)–Continued*

Pb (Lead) μ g/L



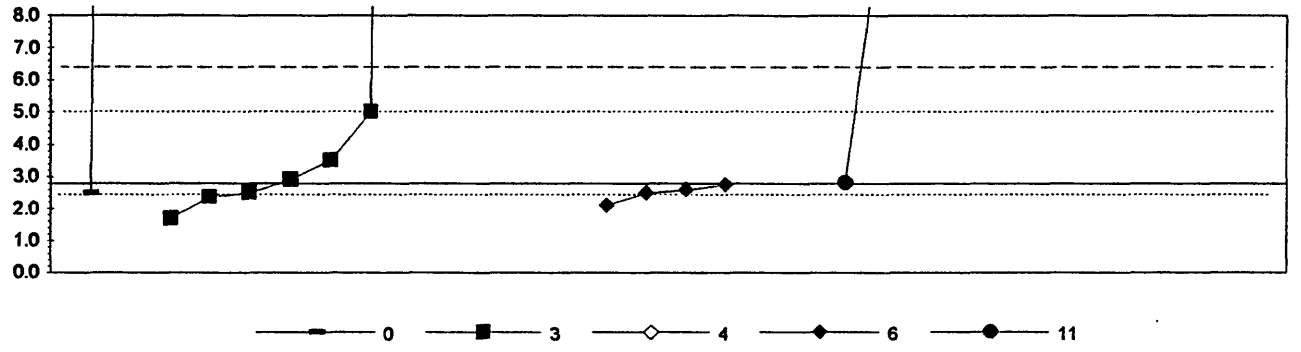
0. Other				4. ICP			
1. AA: Direct air				6. ICP/MS			
3. AA: graphite furnace							
	N =	2	1	14	3	5	
	Minimum =	13.6	15.4	4.0	36.0	17.4	
	Maximum =	14.2		33.7	38.0	24.9	
	Median =			13.0		18.0	
	St Dev =			4.55			

MPV =	15.5
F-pseudosigma =	4.45
N =	25
Hu =	18.9
Hl =	12.9

Lab	Rating	Z-value	0	1	3	4	6
1	2	-1.36			9.4		
3	4	-0.08			15.1		
4	0	5.07				38.0	
7	0	2.12					24.9
8	NR					< 30	
11	0	5.07				38.0	
15	0	-2.58			4.0		
18	3	0.91			19.5		
32	4	0.44					17.4
36	2	-1.18			10.2		
37	3	0.77					18.9
42	3	0.57					18.0
48	3	-0.53			13.1		
52	1	-1.70			7.9		
58	4	-0.01		15.4			
59	0	4.62				36.0	
61	NR					< 50	
63	4	0.35			17.0		
84	NR			< 20			
85	NR			< 50			
89	1	-1.78			7.5		
94	4	0.00			15.5		
105	3	0.55					17.9
117	0	4.10			33.7		
119	4	0.30			16.8		
127	0	-3.25			< 1		
141	4	-0.28	14.2				
194	3	-0.58			12.9		
202	4	-0.42	13.6				
210	2	-1.47			8.9		

Table 19. *--Statistical summary of reported data for standard reference water sample AMW-3 (acid mine water)--Continued*

Sb (Antimony) **µ g/L**



0. Other				6. ICP/MS			
3. AA: graphite furnace				11. AA: hydride			
4. ICP							
	N =	2	7	1	4	2	
	Minimum =	2.5	1.7	664.0	2.1	2.8	
	Maximum =	117.0	135.0		2.8	12.0	
	Median =		2.9		2.5		
	St Dev =		1.1495				

MPV =	2.7
F-pseudosigma =	1.85
N =	16
Hu =	5.0
HI =	2.5

Lab	Rating	Z-value	0	3	4	6	11
1	4	-0.09		2.5			
3	2	1.26		5.0			
7	4	-0.09				2.5	
8	0	5.04					12.0
18	4	0.12		2.9			
32	4	-0.31				2.1	
36	4	0.45		3.5			
42	4	0.04				2.8	
48	NR			< 3			
52	NR			< 6			
61	NR				< 50		
63	NR			< 5			
85	0	357.48			664.0		
94	3	-0.52		1.7			
105	4	-0.04				2.6	
117	0	71.53		135.0			
119	4	0.07					2.8
127	4	-0.16		2.4			
141	0	61.80	117.0				
194	NR			< 5			
202	4	-0.09	2.5				
210	NR			< 5			

Table 19. *–Statistical summary of reported data for standard reference water sample AMW-3 (acid mine water)–Continued*

Se (Selenium) **μ g/L**

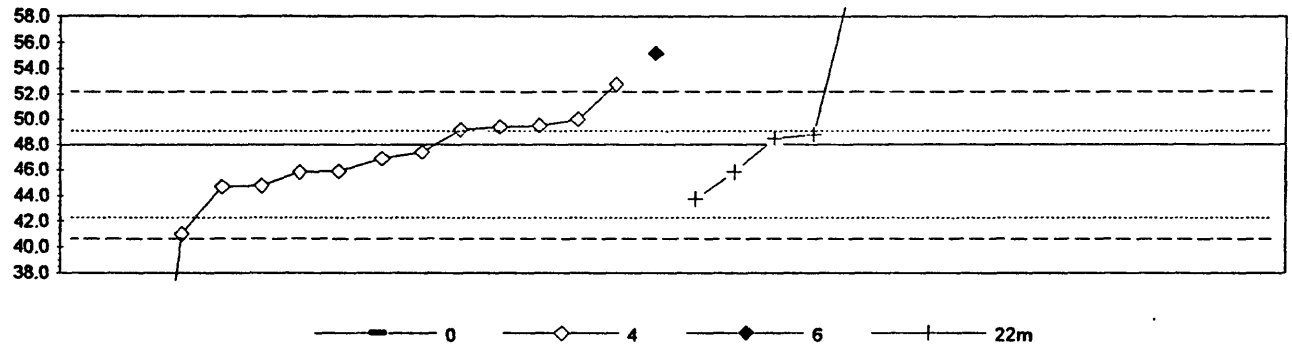
INSUFFICIENT DATA

0. Other				11. AA: hydride		
3. AA: graphite furnace						
6. ICP/MS						
N =		0	4	1	1	
Minimum =			0.1	9.0	20.0	
Maximum =			115.0			
Median =						
St Dev =						
Lab	Rating	Z-value	0	3	6	11
1				< 1		
3				1.3		
7				< 1		
8						< 1
15						< 1
18				0.1		
32					9.0	
36				0.5		
48				< 2		
52						< 5
61				< 5		
63				< 5		
84						20.0
85						< 2
89						< 2
94				< 5		
105				< 2		
117				115.0		
119						< 1
127				< 3		
141			< 2			
194				< 250		
202			< 1			
210				< 5		

MPV =
F-pseudosigma =
N =
Hu =
Hl =

Table 19. *--Statistical summary of reported data for standard reference water sample AMW-3 (acid mine water)--Continued*

SiO2 (Silica) mg/L



0. Other
4. ICP
6. ICP/MS
22m. Color: molydate blue

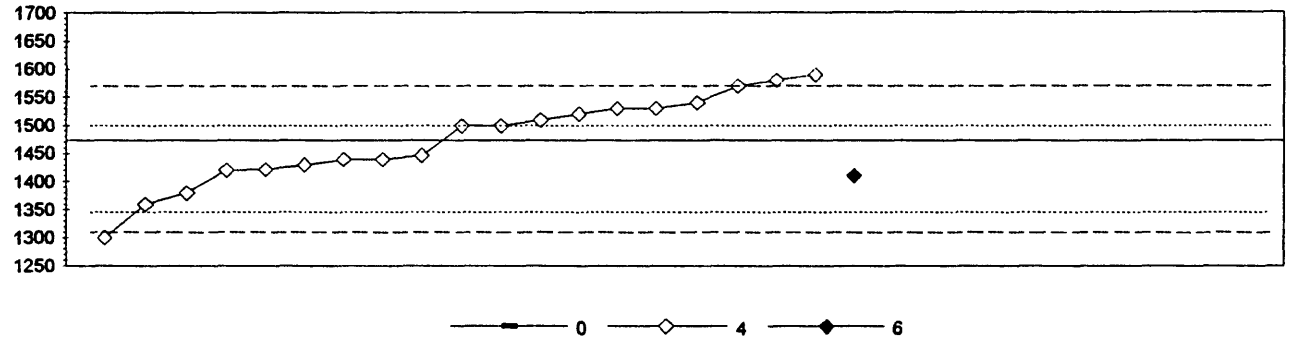
	0	13	1	6
N =				
Minimum =		16.5	55.2	43.7
Maximum =		52.8		136.0
Median =		46.9		48.7
St Dev =		3.13		

MPV = 48.0
F-pseudosigma = 3.31
N = 20
Hu = 49.8
Hl = 45.3

Lab	Rating	Z-value	0	4	6	22m
1	3	-0.96		44.8		
3	4	0.38		49.2		
4	0	-2.10		41.0		
8	4	0.17				48.5
11	2	1.46		52.8		
15	3	-0.98		44.7		
32	0	2.18			55.2	
36	0	26.57				136.0
37	4	0.26				48.8
42	4	0.47		49.5		
52	2	-1.28				43.7
61	3	0.62		50.0		
63	4	0.44		49.4		
84	0	4.06				61.4
89	3	-0.65				45.8
105	3	-0.65		45.8		
116	4	-0.17		47.4		
119	4	-0.32		46.9		
127	3	-0.62		45.9		
141	0	-14.44	< 0.1			
210	0	-9.49		16.5		

Table 19. *–Statistical summary of reported data for standard reference water sample AMW-3 (acid mine water)–Continued*

Sr (Strontium) **µ g/L**



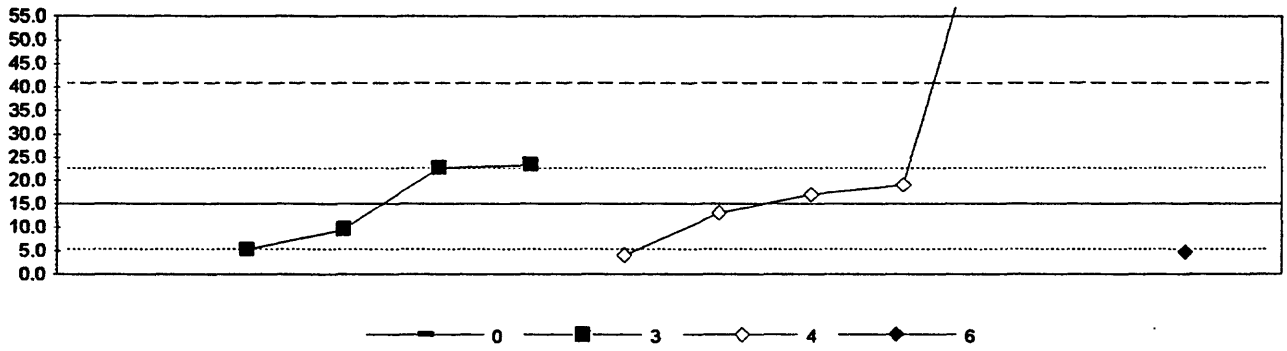
0. Other		
4. ICP		
6. ICP/MS		
N =	19	1
Minimum =	1300	1410
Maximum =	1590	
Median =	1500	
St Dev =	79	

MPV = 1474
F-pseudosigma = 81
N = 20
Hu = 1530
Hl = 1421

Lab	Rating	Z-value	0	4	6
1	3	-0.54		1430	
3	4	-0.41		1440	
4	2	-1.40		1360	
7	2	1.32		1580	
8	2	1.19		1570	
11	3	0.82		1540	
15	4	0.33		1500	
18	4	-0.33		1447	
32	3	-0.79			1410
42	3	0.70		1530	
52	2	-1.16		1380	
59	4	0.33		1500	
63	2	1.44		1590	
85	4	-0.41		1440	
94	3	-0.64		1422	
105	3	0.70		1530	
116	4	0.45		1510	
127	3	0.58		1520	
194	3	-0.66		1420	
210	0	-2.15		1300	

Table 19. *–Statistical summary of reported data for standard reference water sample AMW-3 (acid mine water)–Continued*

V (Vanadium) **µ g/L**



0. Other
3. AA: graphite furnace
4. ICP
6. ICP/MS

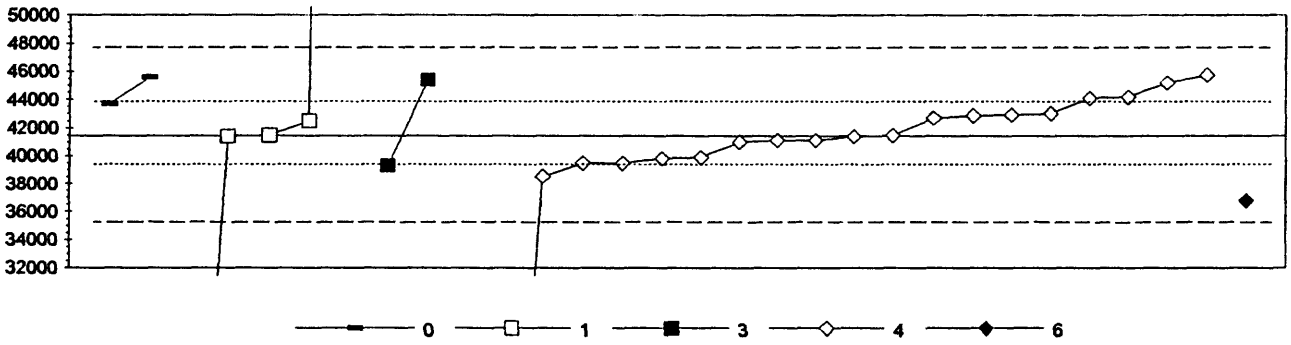
	0	4	5	1
N =				
Minimum =		5.3	4.0	4.6
Maximum =		23.3	90.0	
Median =		16.1	17.0	
St Dev =				

MPV =	15.0
F-pseudosigma =	12.9
N =	10
Hu =	22.7
Hl =	5.3

Lab	Rating	Z-value	0	3	4	6
1	4	0.16			17.0	
3	NR				< 10	
7	NR				< 14	
8	NR				< 5	
15	4	-0.43		9.5		
18	4	0.31			19.0	
32	3	-0.81				4.6
48	0	5.81			90.0	
52	3	0.64		23.3		
58	3	0.59		22.7		
61	NR				< 5	
63	4	-0.16			13.0	
85	NR				< 20	
94	NR				< 5	
105	3	-0.85			4.0	
127	3	-0.75		5.3		
141	NR		< 10			
210	NR				< 50	

Table 19. *–Statistical summary of reported data for standard reference water sample AMW-3 (acid mine water)–Continued*

Zn (Zinc) **µ g/L**



0. Other				4. ICP			
1. AA: Direct air				6. ICP/MS			
3. AA: graphite furnace							
		N =	2	5	2	20	1
		Minimum =	43700	359	39300	45	36800
		Maximum =	45580	392000	45400	45715	
		Median =		41500		41250	
		St Dev =				2077	

MPV = 41450
F-pseudosigma = 3113
N = 30
Hu = 43700
Hl = 39500

Lab	Rating	Z-value	0	1	3	4	6
1	3	-0.52				39833	
3	4	-0.02				41400	
4	4	0.50				43000	
7	2	1.20				45200	
8	3	-0.95				38500	
11	4	-0.11				41100	
15	3	0.88				44200	
18	3	-0.63				39480	
32	2	-1.49					36800
36	3	-0.69			39300		
42	4	0.48				42930	
48	2	1.27			45400		
52	4	0.02				41500	
58	0	113		392000			
59	4	-0.14				41000	
61	2	1.37				45715	
63	0	-13.30				45	
84	4	-0.02		41400			
85	4	0.34		42500			
89	4	0.02		41500			
94	4	-0.49				39920	
105	4	-0.11				41100	
116	4	0.47				42900	
117	0	-13.20		359			
119	3	0.85				44100	
127	4	0.40				42700	
141	2	1.33	45580				
194	3	-0.63				39500	
202	3	0.72	43700				
210	0	-13.27				130	

Table 20. *--Statistical summary of reported data for standard reference sample WW-1 (whole water)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

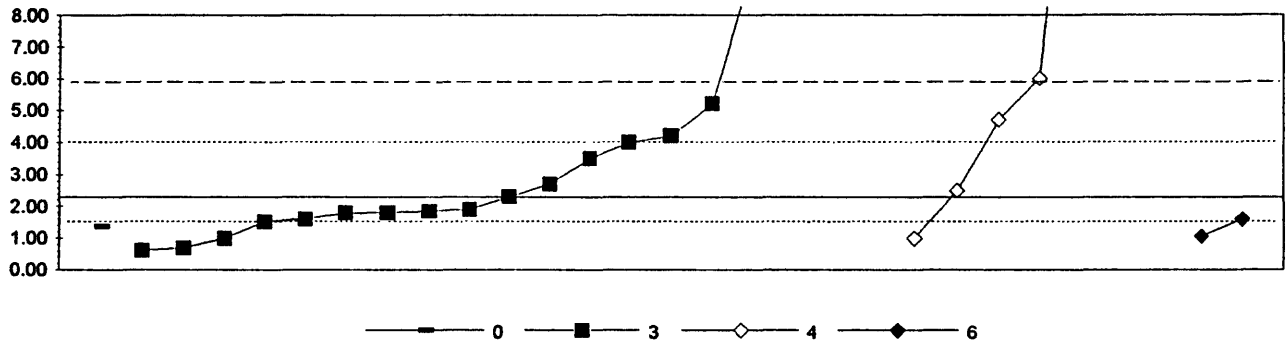
0. Other/Not reported		
1. AA: direct, air	=	atomic absorption: direct,air
2. AA: direct, N2O	=	atomic absorption: direct,nitrous oxide
3. AA: graphite furnace	=	atomic absorption: graphite furnace
4. ICP	=	inductively coupled plasma
5. DCP	=	direct current plasma
6. ICP/MS	=	inductively coupled plasma/mass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

Table 20. *–Statistical summary of reported data for standard reference water sample WW-1 (whole water)–Continued*

Ag (Silver) **µ g/L**



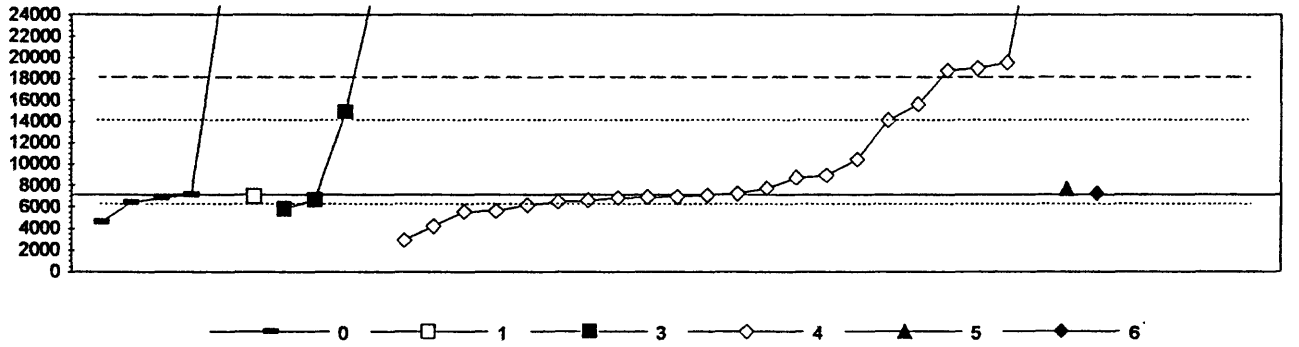
0. Other		6. ICP/MS	
3. AA: graphite furnace			
4. ICP			
N =	1	17	5	2
Minimum =	1.36	0.62	1.00	1.07
Maximum =		24.00	17.70	1.60
Median =		1.90	4.70	
St Dev =		1.351		

MPV = 2.30
F-pseudosigma = 1.830
N = 25
Hu = 4.00
HI = 1.53

Lab	Rating	Z-value	0	3	4	6
1	4	-0.22		1.90		
3	4	-0.27		1.80		
5	NR				< 4	
7	4	0.00		2.30		
8	NR				< 5	
15	0	8.42			17.70	
18	NR				< 5	
23	NR			< 0.2		
25	NR				< 6	
32	3	-0.67				1.07
36	3	-0.92		0.62		
48	3	-0.87		0.70		
52	4	-0.38		1.60		
58	0	3.96		9.55		
61	2	1.31			4.70	
63	0	11.86		24.00		
69	4	-0.25		1.84		
89	4	0.22		2.71		
94	NR				< 5	
97	NR			< 0		
102	3	-0.71			1.00	
105	4	-0.38				1.60
117	2	1.04		4.20		
119	1	1.58		5.20		
120	3	-0.71		1.00		
141	NR				< 10	
142	3	0.66		3.50		
144	3	0.93		4.00		
146	4	0.11			2.50	
180	0	2.02			6.00	
202	3	-0.51	1.36			
204	4	-0.28		1.78		
210	4	-0.42		1.53		

Table 20. *--Statistical summary of reported data for standard reference water sample WW-1 (whole water)--Continued*

Al (Aluminum) **µ g/L**



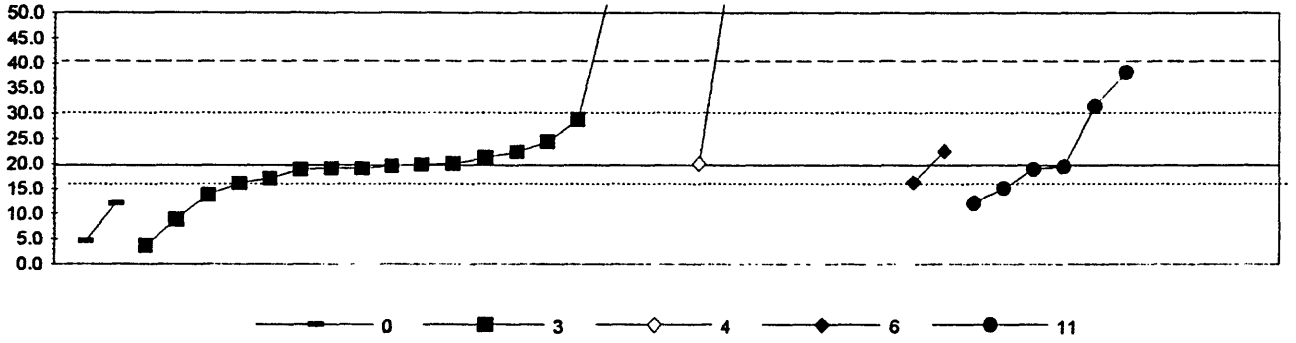
0. Other				4. ICP				
1. AA: Direct air				5. DCP				
3. AA: graphite furnace				6. ICP/MS				
		N =	5	1	4	22	1	1
		Minimum =	4550	7000	5800	2900	7650	7160
		Maximum =	27000		27186	33930		
		Median =	6833		10755	7154		
		St Dev =				5016		

MPV = 7084
F-pseudosigma = 5688
N = 34
Hu = 14101
HI = 6428

Lab	Rating	Z-value	0	1	3	4	5	6
1	4	0.10					7650	
3	4	-0.27				5530		
5	0	4.72				33930		
7	4	-0.04				6860		
8	3	-0.51				4200		
11	3	0.58				10400		
15	4	-0.17				6110		
18	4	0.00				7067		
25	4	0.33				8940		
32	4	0.01						7160
36	4	-0.45	4550					
48	0	2.06				18800		
52	4	0.28				8660		
58	2	1.37			14900			
59	3	-0.74				2900		
61	2	1.23				14101		
63	4	0.11				7700		
68	0	3.50	27000					
69	4	-0.04	6833					
89	4	-0.08			6610			
94	4	-0.26				5616		
97	0	3.53			27186			
102	2	1.50				15610		
105	4	-0.09				6550		
119	4	-0.03				6940		
120	4	-0.01		7000				
141	4	-0.05				6798		
142	4	-0.12				6428		
146	4	0.03				7240		
180	0	2.18				19500		
202	4	-0.13	6350					
204	4	-0.23			5800			
210	0	2.10				19000		
212	4	0.00	7100					

Table 20. *–Statistical summary of reported data for standard reference water sample WW-1 (whole water)–Continued*

As (Arsenic) μ g/L



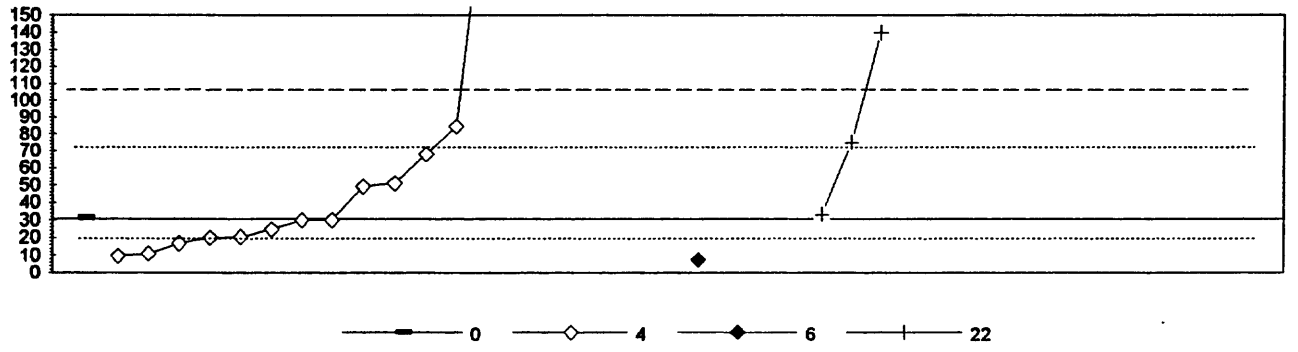
0. Other				6. ICP/MS			
3. AA: graphite furnace				11. AA: hydride			
4. ICP				0. Other			
	N =	2	18	4	2	6	
	Minimum =	4.7	3.7	20.0	16.3	12.1	
	Maximum =	12.0	88.0	183.7	22.5	38.1	
	Median =		19.7	83.5	19.4	19.2	
	St Dev =		10.66			10.11	

MPV =	19.7
F-pseudosigma =	10.30
N =	32
Hu =	30.1
HI =	16.2

Lab	Rating	Z-value	0	3	4	6	11
1	3	-0.74					12.1
3	4	0.45		24.3			
5	0	15.92			183.7		
7	1	-1.55		3.7			
8	4	-0.46					15.0
15	4	-0.35		16.1			
18	4	-0.06		19.1			
23	2	-1.05		8.9			
25	NR				< 50		
32	4	0.27				22.5	
36	3	-0.57		13.8			
48	4	0.01		19.8			
52	4	-0.01		19.6			
58	0	3.32		53.9			
59	4	0.03			20.0		
61	4	0.25		22.3			
63	4	0.03		20.0			
69	4	-0.07		19.0			
89	4	-0.03					19.4
94	4	-0.26		17.0			
97	1	1.79					38.1
102	0	3.81			59.0		
105	4	-0.33				16.3	
117	0	5.27		74.0			
119	4	-0.07					19.0
120	2	1.15					31.5
141	NR				< 50		
142	4	0.15		21.3			
144	0	6.63		88.0			
146	3	0.87		28.7			
180	0	8.57			108.0		
202	2	-1.46	4.7				
204	4	-0.06		19.1			
210	NR				< 50		
212	3	-0.75	12.0				

Table 20. *—Statistical summary of reported data for standard reference water sample WW-1 (whole water)—Continued*

B (Boron) **µ g/L**



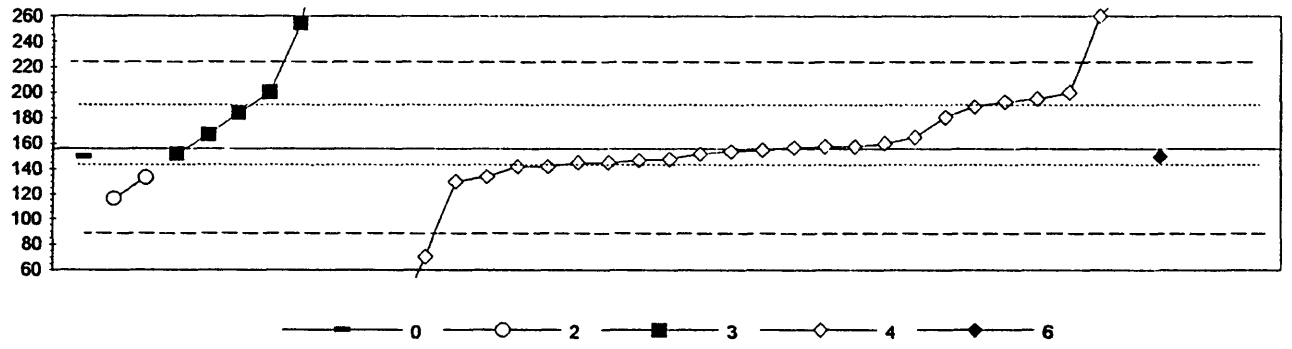
	0. Other	4. ICP	6. ICP/MS	22. Colorimetric
N =	1	14	1	3
Minimum =	31	10	7	33
Maximum =		300		140
Median =		27		75
St Dev =		24		

MPV = 31
F-pseudosigma = 38
N = 19
Hu = 72
HI = 20

Lab	Rating	Z-value	0	4	6	22
1	3	-0.56		10		
3	4	-0.30		20		
5	4	0.48		49		
8	NR			< 10		
11	4	-0.03		30		
15	0	5.54		242		
18	4	-0.38		17		
23	2	1.15				75
25	NR			< 23		
32	3	-0.64			7	
36	4	0.04				33
48	NR			< 10		
52	NR			< 300		
61	2	1.40		85		
63	3	0.97		68		
68	0	7.07		300		
94	3	-0.53		11		
119	3	0.52		51		
129	0	2.86				140
142	4	-0.03		30		
146	4	-0.17		25		
180	4	-0.29		20		
210	NR			< 100		
212	4	0.00	31			

Table 20. *–Statistical summary of reported data for standard reference water sample WW-1 (whole water)–Continued*

Ba (Barium) **µ g/L**



0. Other
2. AA: direct nitrous oxide
3. AA: graphite furnace
4. ICP
6. ICP/MS

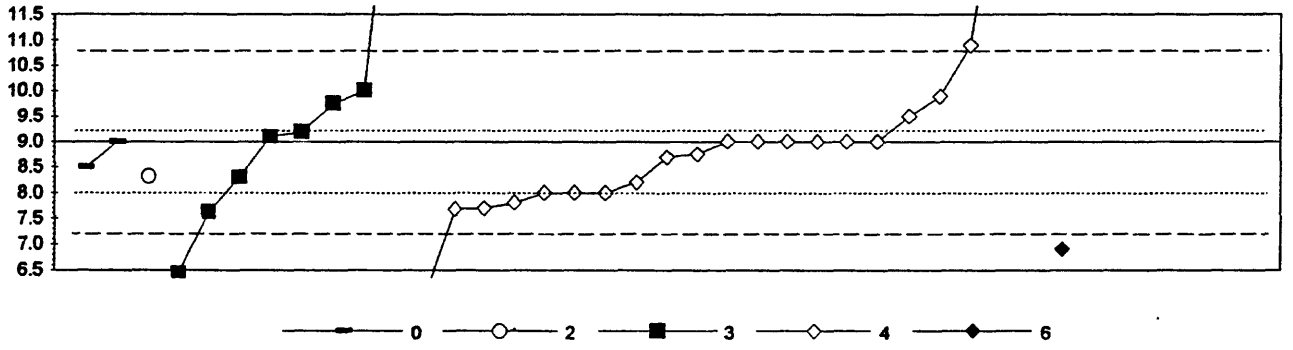
	1	2	7	25	1
N =					
Minimum =	150	116	152	13	150
Maximum =		133	820	287	
Median =			200	155	
St Dev =			39	35	

MPV =	156
F-pseudosigma =	34
N =	36
Hu =	191
HI =	145

Lab	Rating	Z-value	0	2	3	4	6
1	4	-0.32				145	
3	3	-0.65				134	
5	0	3.84				287	
7	4	-0.12				152	
8	4	-0.41				142	
11	4	0.06				158	
15	4	-0.32				145	
18	4	-0.26				147	
23	2	-1.17		116			
25	4	0.26				165	
32	4	-0.18					150
36	3	-0.67		133			
46	3	0.97				189	
48	4	-0.12			152		
52	4	0.03				157	
58	2	1.29			200		
59	3	-0.76				130	
61	2	1.14				195	
63	4	0.12				160	
68	0	3.05				260	
69	3	0.82			184		
89	0	19.47			820		
94	4	-0.41				142	
97	0	2.87			254		
102	2	1.09				193	
105	4	-0.03				155	
117	0	6.48			377		
119	4	-0.23				148	
120	4	0.32			167		
141	4	0.06				158	
142	4	-0.06				154	
146	0	-4.19				13	
180	3	0.73				181	
204	0	-2.50				71	
210	2	1.29				200	
212	4	-0.18	150				

Table 20. *—Statistical summary of reported data for standard reference water sample WW-1 (whole water)—Continued*

Be (Beryllium) **µ g/L**



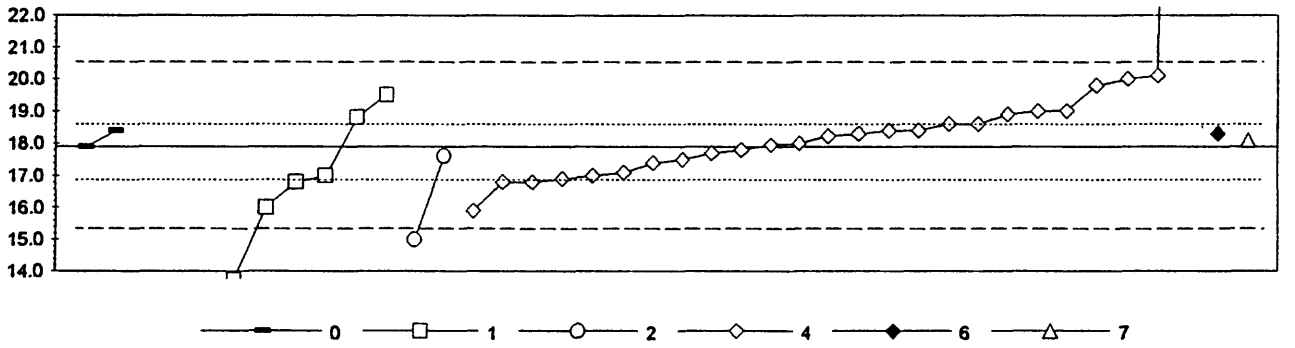
0. Other				4. ICP			
2. AA: direct nitrous oxide				6. ICP/MS			
3. AA: graphite furnace							
	N =	2	1	8	21	1	
	Minimum =	8.5	8.3	6.4	6.0	6.9	
	Maximum =	9.0		15.5	15.0		
	Median =			9.2	9.0		
	St Dev =			2.70	2.14		

MPV =	9.0
F-pseudosigma =	0.89
N =	33
Hu =	9.2
Hl =	8.0

Lab	Rating	Z-value	0	2	3	4	6
1	4	-0.27				8.8	
3	2	-1.12				8.0	
5	0	2.13				10.9	
7	4	0.00				9.0	
8	2	-1.12				8.0	
11	4	0.00				9.0	
15	0	6.52				14.8	
18	2	-1.12				8.0	
25	3	-0.90				8.2	
32	0	-2.36					6.9
36	3	-0.76		8.3			
46	2	1.01				9.9	
48	4	0.22			9.2		
52	0	-2.89			6.4		
58	0	7.30			15.5		
59	4	0.00				9.0	
61	3	0.56				9.5	
63	4	0.00				9.0	
68	4	0.11			9.1		
69	1	-1.55			7.6		
94	4	0.00				9.0	
97	3	0.84			9.8		
102	0	-3.37				6.0	
105	4	-0.34				8.7	
119	2	1.12			10.0		
120	3	-0.79			8.3		
141	4	0.00				9.0	
142	2	-1.48				7.7	
146	2	-1.46				7.7	
180	2	-1.35				7.8	
202	4	0.00	9.0				
210	0	6.74				15.0	
212	3	-0.56	8.5				

Table 20. *--Statistical summary of reported data for standard reference water sample WW-1 (whole water)--Continued*

Ca (Calcium) mg/L



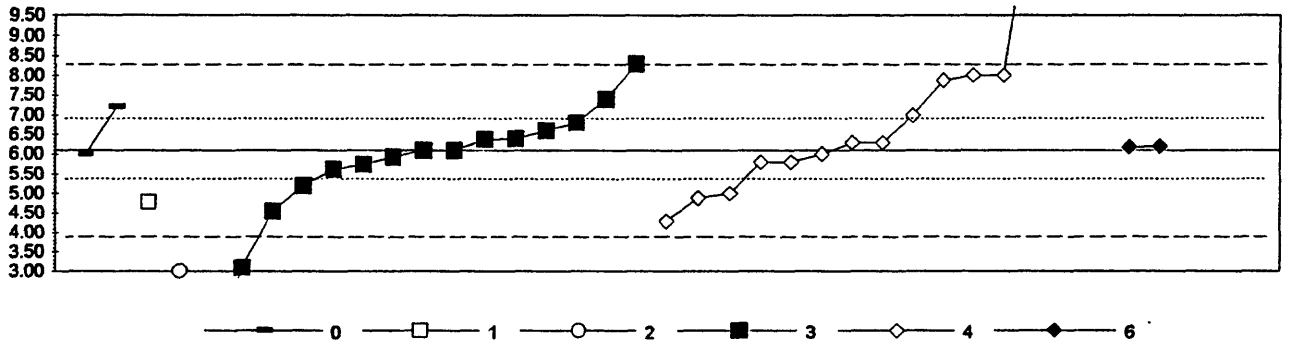
0. Other
1. AA: Direct air
2. AA: direct nitrous oxide
4. ICP
6. ICP/MS
7. Ion chromatography

MPV = 17.9
F-pseudosigma = 1.30
N = 40
Hu = 18.6
HI = 16.9

			0	1	2	4	6	7
		N =	2	9	2	25	1	1
		Minimum =	17.9	5.8	15.0	15.9	18.3	18.1
		Maximum =	18.4	19.5	17.6	18729		
		Median =		16.0		18.2		
		St Dev =		2.06		1.07		
Lab	Rating	Z-value	0	1	2	4	6	7
1	3	-0.87		16.8				
3	3	-0.87				16.8		
5	3	0.83				19.0		
7	3	0.52				18.6		
8	3	0.52				18.6		
11	4	0.36				18.4		
15	3	0.82				19.0		
18	4	-0.41				17.4		
23	4	-0.25			17.6			
25	3	0.75				18.9		
30	3	-0.72		17.0				
32	4	0.29					18.3	
36	0	-2.26			15.0			
46	2	1.44				19.8		
48	1	1.67				20.1		
52	4	-0.18				17.7		
58	0	-9.39		5.8				
59	4	0.05				18.0		
61	0	14424				18729		
63	4	0.36				18.4		
68	1	1.60				20.0		
89	3	0.67		18.8				
94	4	0.23				18.2		
97	0	-4.03		12.7				
102	4	0.29				18.3		
105	3	-0.79				16.9		
117	0	-3.24		13.7				
119	3	-0.64				17.1		
120	0	-3.95		12.8				
129	2	-1.49		16.0				
140	2	1.23		19.5				
141	4	-0.10				17.8		
142	4	0.02				18.0		
146	1	-1.56				15.9		
180	3	-0.87				16.8		
190	4	0.13						18.1
202	4	-0.02	17.9					
204	4	-0.33				17.5		
210	3	-0.72				17.0		
212	4	0.36	18.4					

Table 20. *–Statistical summary of reported data for standard reference water sample WW-1 (whole water)–Continued*

Cd (Cadmium) **µ g/L**



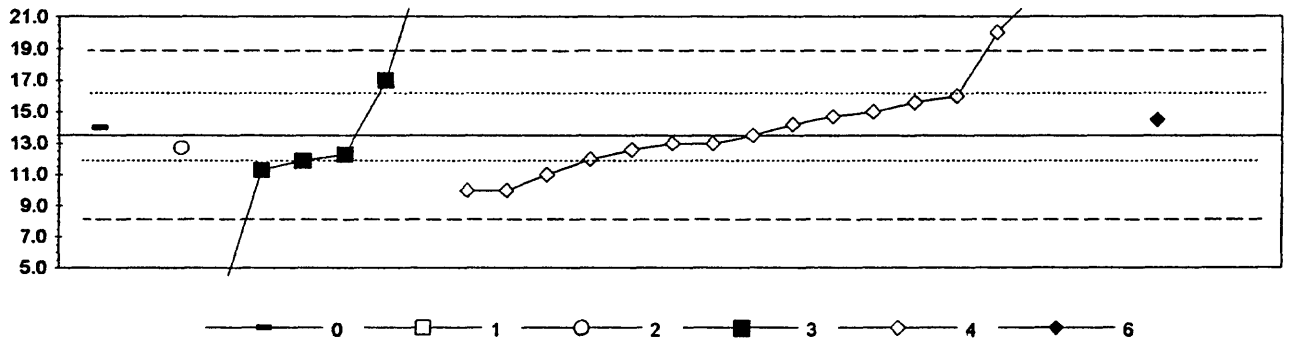
0. Other				3. AA: graphite furnace				
1. AA: Direct air				4. ICP				
2. AA: direct nitrous oxide				6. ICP/MS				
		N =	2	1	1	15	14	2
		Minimum =	6.00	4.80	3.02	0.48	4.30	6.18
		Maximum =	7.20			8.30	28.50	6.20
		Median =				6.10	6.30	6.19
		St Dev =				1.2384	1.2447	

MPV = 6.10
F-pseudosigma = 1.105
N = 35
Hu = 6.90
HI = 5.41

Lab	Rating	Z-value	0	1	2	3	4	6
1	4	0.00				6.10		
3	3	-0.81				5.20		
5	1	1.62					7.89	
7	2	1.18				7.40		
8	3	0.81					7.00	
11	4	-0.09					6.00	
15	NR						< 10	
18	2	-1.10					4.89	
23	4	-0.43				5.62		
25	1	1.72					8.00	
32	4	0.09						6.20
36	0	-2.79			3.02			
48	4	0.27				6.40		
52	0	-5.09				0.48		
58	1	1.99				8.30		
59	1	1.72					8.00	
61	1	-1.63					4.30	
63	0	-2.72				3.10		
68	0	20.28					28.50	
69	4	-0.14				5.94		
89	4	0.25				6.38		
94	4	0.18					6.30	
97	4	-0.33				5.74		
102	3	-1.00					5.00	
105	4	0.07						6.18
119	4	0.45				6.60		
120	3	0.63				6.80		
140	2	-1.18		4.80				
141	4	0.18					6.30	
142	4	0.00				6.10		
146	4	-0.27					5.80	
180	4	-0.27					5.80	
202	4	-0.09	6.00					
204	2	-1.40				4.55		
210	0	6.25					13.00	
212	3	1.00	7.20					

Table 20. *–Statistical summary of reported data for standard reference water sample WW-1 (whole water)–Continued*

Co (Cobalt) µ g/L



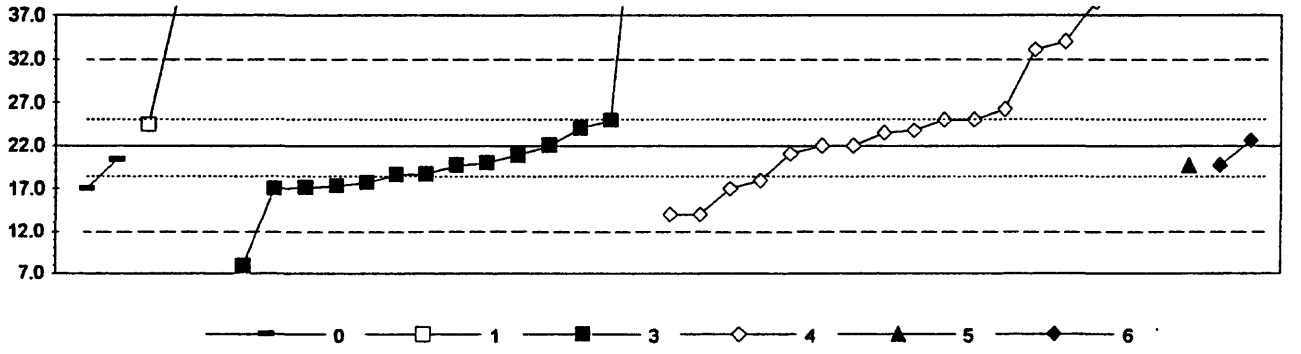
0. Other				3. AA: graphite furnace				
1. AA: Direct air				4. ICP				
2. AA: direct nitrous oxide				6. ICP/MS				
	N =	1	1	1	6	15	1	
	Minimum =	14.0	30.0	12.7	3.3	10.0	14.5	
	Maximum =				25.1	22.5		
	Median =				12.1	13.5		
	St Dev =				2.62	2.65		

MPV =	13.5							
F-pseudosigma =	2.67							
N =	25							
Hu =	15.6							
HI =	12.0							

Lab	Rating	Z-value	0	1	2	3	4	6
1	3	-0.60				11.9		
3	2	-1.31					10.0	
5	0	3.39					22.5	
7	4	0.45					14.7	
8	2	-1.31					10.0	
11	4	-0.19					13.0	
15	3	-0.82				11.3		
18	3	0.94					16.0	
25	3	0.56					15.0	
32	4	0.37						14.5
36	4	-0.30			12.7			
48	NR						< 50	
52	0	4.35				25.1		
58	4	-0.45				12.3		
61	4	0.26					14.2	
63	0	6.18		30.0				
68	0	2.44					20.0	
89	2	1.31				17.0		
94	4	-0.19					13.0	
97	0	-3.81				3.3		
102	3	-0.94					11.0	
105	4	-0.34					12.6	
141	3	-0.56					12.0	
146	4	0.00					13.5	
180	3	0.79					15.6	
210	NR						< 50	
212	4	0.19	14.0					

Table 20. *--Statistical summary of reported data for standard reference water sample WW-1 (whole water)--Continued*

Cr (total Chromium) **µ g/L**



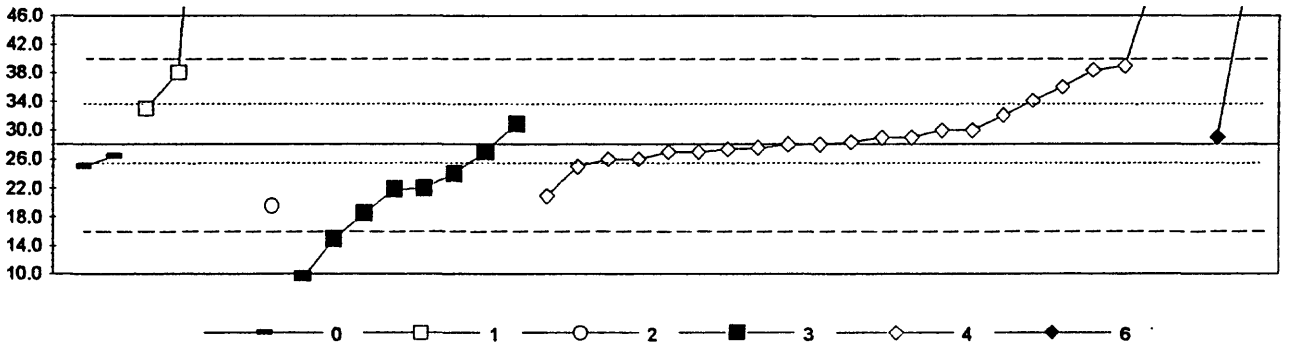
0. Other				4. ICP				
1. AA: Direct air				5. DCP				
3. AA: graphite furnace				6. ICP/MS				
	N =	2	3	14	17	1	2	
	Minimum =	17.0	24.5	7.9	14.0	19.8	19.7	
	Maximum =	20.4	68.0	60.0	110.0			
	Median =			19.2	23.8			
	St Dev =			4.18	6.02			

MPV =	22.0
F-pseudosigma =	4.97
N =	39
Hu =	25.0
Hl =	18.3

Lab	Rating	Z-value	0	1	3	4	5	6
1	4	-0.45					19.8	
3	1	-1.61				14.0		
5	0	4.94				46.6		
7	4	0.30				23.5		
8	2	-1.01				17.0		
11	3	0.60				25.0		
15	4	-0.46			19.7			
18	4	0.00				22.0		
23	0	-2.84			7.9			
25	4	0.00				22.0		
32	4	0.12						22.6
36	3	-0.95			17.3			
46	0	3.34				38.6		
48	3	-0.68			18.6			
52	3	0.58			24.9			
58	4	0.00			22.0			
59	1	-1.61				14.0		
61	3	0.87				26.3		
63	2	-1.01			17.0			
68	0	2.42				34.0		
69	4	-0.40			20.0			
89	4	0.40			24.0			
94	3	-0.81				18.0		
97	0	7.65			60.0			
102	3	0.60				25.0		
105	4	-0.46						19.7
117	4	0.50		24.5				
119	4	-0.22			20.9			
120	3	-0.66			18.7			
140	0	3.72		40.5				
141	4	0.36				23.8		
142	3	-0.99			17.1			
144	0	9.26		68.0				
146	4	-0.18				21.1		
180	0	2.23				33.1		
202	2	-1.01	17.0					
204	3	-0.87			17.7			
210	0	17.72				110.0		
212	4	-0.32	20.4					

Table 20. *--Statistical summary of reported data for standard reference water sample WW-1 (whole water)--Continued*

Cu (Copper) µ g/L

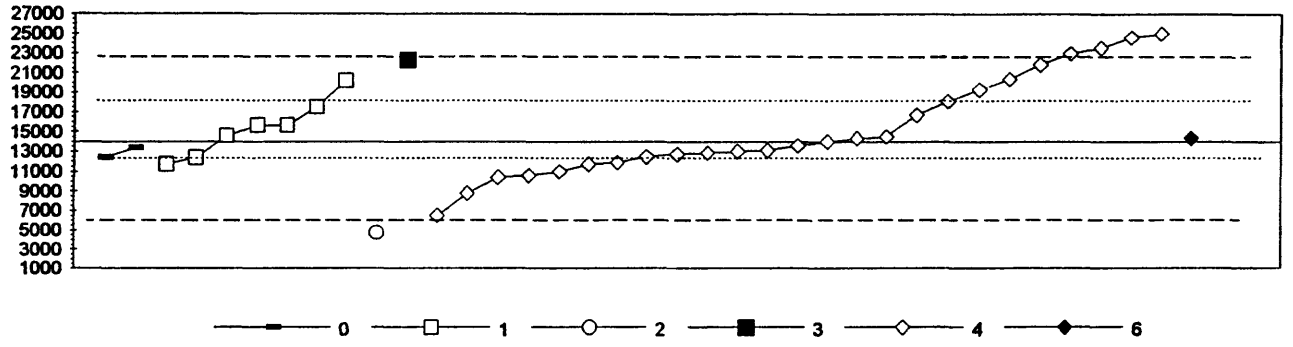


0. Other				3. AA: graphite furnace				
1. AA: Direct air				4. ICP				
2. AA: direct nitrous oxide				6. ICP/MS				
		N =	2	4	1	8	22	2
		Minimum =	25.0	33.0	19.6	9.3	20.9	29.0
		Maximum =	26.4	112.0		30.9	88.0	52.9
		Median =		71.6		21.9	28.7	
		St Dev =				5.28	4.51	
Lab	Rating	Z-value	0	1	2	3	4	6
1	4	-0.13					27.3	
3	0	10.04					88.0	
5	0	4.12					52.7	
7	4	0.00					28.1	
8	4	-0.18					27.0	
11	4	-0.02					28.0	
15	0	-3.15				9.3		
18	4	-0.18					27.0	
23	1	-1.61				18.5		
25	4	-0.35					26.0	
32	4	0.15						29.0
36	2	-1.42			19.6			
46	1	1.73					38.4	
48	4	0.32					30.0	
52	4	0.15					29.0	
58	4	-0.18				27.0		
59	4	0.32					30.0	
61	1	1.83					39.0	
63	3	0.82		33.0				
68	2	1.32					36.0	
69	3	-0.69				24.0		
89	0	-2.21				14.9		
94	3	-0.52					25.0	
97	4	0.47				30.9		
102	3	0.65					32.0	
105	4	0.15					29.0	
117	0	12.89		105.0				
119	4	-0.35					26.0	
120	2	-1.06				21.8		
140	1	1.68		38.1				
141	4	0.03					28.3	
142	2	-1.21					20.9	
144	0	14.06		112.0				
146	4	-0.10					27.5	
180	2	1.01					34.1	
202	3	-0.52	25.0					
204	2	-1.04				21.9		
210	0	4.16						52.9
212	4	-0.28	26.4					

MPV =	28.1
F-pseudosigma =	5.97
N =	39
Hu =	33.6
Hl =	25.5

Table 20. *--Statistical summary of reported data for standard reference water sample WW-1 (whole water)--Continued*

Fe (Iron) **µ g/L**



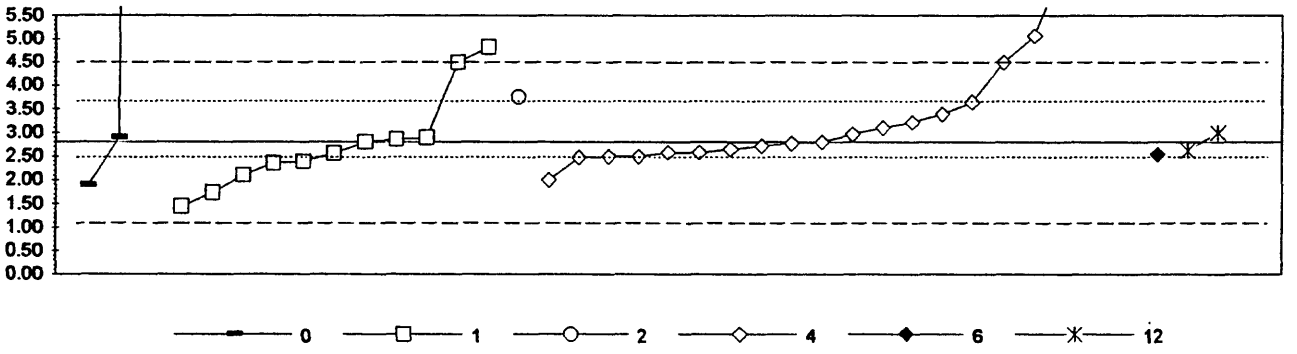
0. Other				3. AA: graphite furnace				
1. AA: Direct air				4. ICP				
2. AA: direct nitrous oxide				6. ICP/MS				
	N =	2	7	1	1	25	1	
	Minimum =	12400	11700	4720	22360	6500	14400	
	Maximum =	13400	20238			25000		
	Median =		15590			13573		
	St Dev =		2923.4			5205.1		

MPV = 14000
F-pseudosigma = 4233
N = 37
Hu = 18100
Hl = 12390

Lab	Rating	Z-value	0	1	2	3	4	6
1	4	-0.30					12730	
3	3	-0.85					10400	
5	0	2.51					24640	
7	4	-0.26					12900	
8	2	-1.23					8800	
11	3	0.64					16700	
15	4	-0.35					12500	
18	4	-0.10					13573	
25	4	0.12					14500	
32	4	0.09						14400
36	0	-2.19			4720			
46	0	2.27					23600	
48	1	1.87					21900	
52	4	0.07					14300	
58	3	-0.54		11700				
59	1	-1.77					6500	
61	2	1.26					19324	
63	3	0.83		17500				
68	0	2.60					25000	
69	4	-0.38		12390				
89	4	0.14		14600				
94	3	-0.81					10580	
97	1	1.98				22360		
102	2	1.50					20360	
105	3	-0.54					11700	
117	4	0.38		15590				
119	4	0.00					14000	
120	4	0.38		15600				
140	2	1.47		20238				
141	4	-0.20					13140	
142	4	-0.50					11870	
146	4	-0.24					13000	
180	3	0.97					18100	
202	4	-0.38	12400					
204	3	-0.71					11000	
210	0	2.13					23000	
212	4	-0.14	13400					

Table 20. *--Statistical summary of reported data for standard reference water sample WW-1 (whole water)--Continued*

K (Potassium) mg/L



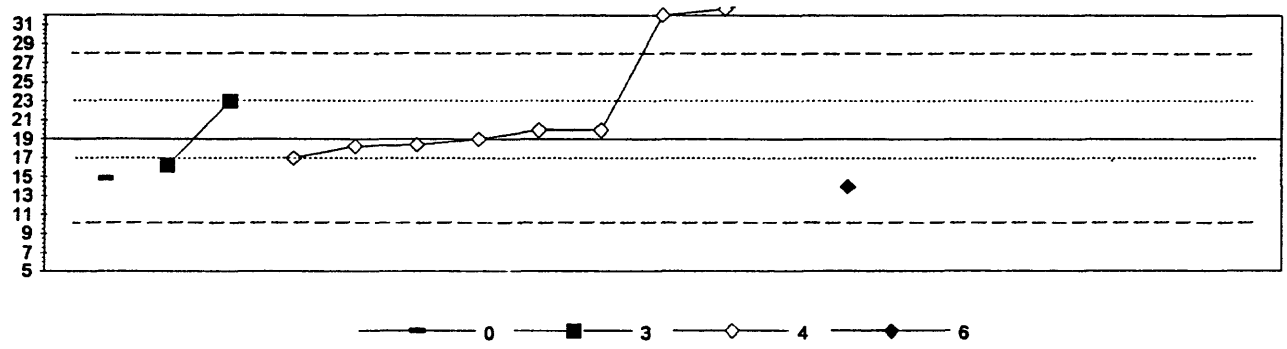
0. Other				4. ICP				
1. AA: Direct air				6. ICP/MS				
2. AA: direct nitrous oxide				12. Flame emission				
	N =	3	11	1	20	1	2	
	Minimum =	1.89	1.44	3.76	2.00	2.52	2.62	
	Maximum =	265.00	4.82		4623		3.00	
	Median =		2.57		2.89			
	St Dev =		1.042		0.773			

MPV =	2.80
F-pseudosigma =	0.852
N =	38
Hu =	3.65
HI =	2.50

Lab	Rating	Z-value	0	1	2	4	6	12
1	4	-0.27		2.57				
3	4	-0.48		2.39				
5	0	8.37				9.93		
7	4	0.49				3.22		
8	4	-0.35				2.50		
15	4	-0.18				2.65		
18	4	0.00				2.80		
23	2	-1.24		1.74				
25	3	1.00				3.65		
32	4	-0.33					2.52	
36	2	1.13			3.76			
48	0	2.65				5.06		
52	4	0.20				2.97		
58	3	-0.52		2.36				
59	3	-0.94				2.00		
61	0	5420				4623		
63	3	0.70				3.40		
68	0	4.57				6.70		
69	4	0.23						3.00
89	4	0.09		2.88				
94	4	-0.09				2.72		
97	1	-1.60		1.44				
102	1	1.99				4.50		
105	4	-0.26				2.58		
117	0	2.37		4.82				
119	4	0.00		2.80				
120	4	0.07		2.86				
129	3	-0.82		2.10				
140	1	1.99		4.50				
141	4	-0.35				2.50		
142	4	-0.26				2.58		
146	4	-0.39				2.47		
180	4	-0.04				2.77		
190	2	-1.07	1.89					
202	0	308	265					
204	4	-0.21						2.62
210	4	0.35				3.10		
212	4	0.12	2.90					

Table 20. *–Statistical summary of reported data for standard reference water sample WW-1 (whole water)–Continued*

Li (Lithium) µ g/L



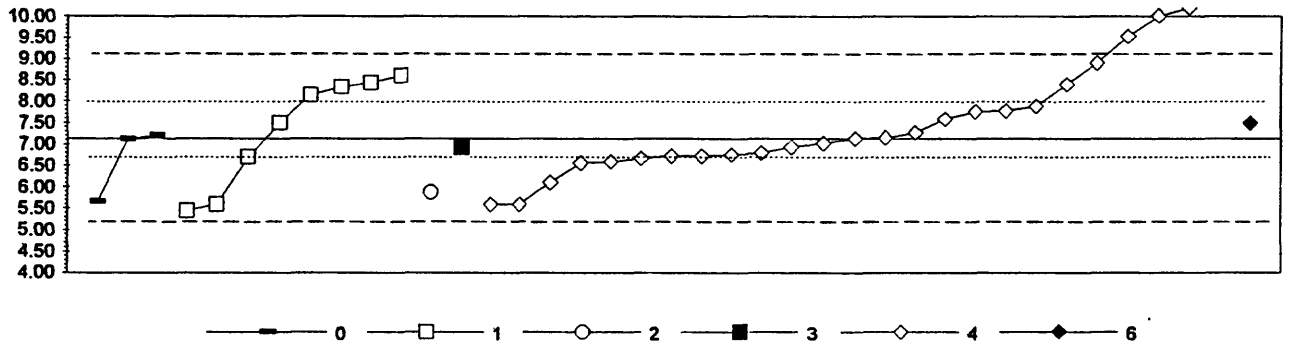
0. Other			6. ICP/MS			
3. AA: graphite furnace						
4. ICP						
	N =	1	2	9	1	
	Minimum =	15	16	17	14	
	Maximum =		23	34		
	Median =			20		
	St Dev =			5.1		

MPV =	19
F-pseudosigma =	4.4
N =	13
Hu =	23
HI =	17

Lab	Rating	Z-value	0	3	4	6
1	4	-0.13			18	
3	4	0.22			20	
5	0	3.39			34	
8	4	-0.45			17	
15	0	3.08			33	
25	4	0.00			19	
32	2	-1.12				14
63	3	0.90		23		
68	0	2.92			32	
105	4	-0.16			18	
142	3	-0.62		16		
210	4	0.22			20	
212	3	-0.94	15			

Table 20. *--Statistical summary of reported data for standard reference water sample WW-1 (whole water)--Continued*

Mg (Magnesium) mg/L



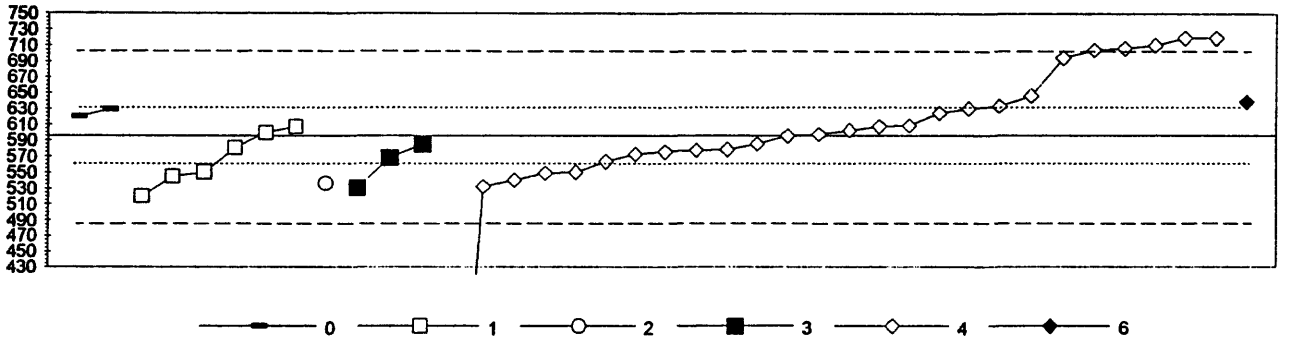
0. Other				3. AA: graphite furnace				
1. AA: Direct air				4. ICP				
2. AA: direct nitrous oxide				6. ICP/MS				
	N =	3	8	1	1	25	1	
	Minimum =	5.65	5.44	5.86	6.93	5.60	7.47	
	Maximum =	7.20	8.60			8339		
	Median =		7.83			7		
	St Dev =		1.283			1.236		

MPV =	7.13							
F-pseudosigma =	0.990							
N =	39							
Hu =	8.02							
Hl =	6.68							

Lab	Rating	Z-value	0	1	2	3	4	6
1	4	-0.37					6.76	
3	3	-0.58					6.56	
5	0	3.11					10.21	
7	4	0.01					7.14	
8	1	-1.55					5.60	
11	3	0.64					7.76	
15	3	0.66					7.78	
18	4	-0.33					6.80	
23	1	-1.71		5.44				
25	4	0.46					7.59	
30	4	-0.44		6.69				
32	4	0.34						7.47
36	2	-1.28			5.86			
48	0	2.42					9.52	
52	4	0.00					7.13	
58	1	-1.55		5.60				
59	1	-1.55					5.60	
61	0	8419					8339	
63	4	0.14					7.27	
68	0	2.90					10.00	
89	4	0.37		7.50				
94	4	-0.40					6.73	
97	2	1.32		8.44				
102	1	1.79					8.90	
105	3	-0.55					6.59	
117	2	1.03		8.15				
119	4	-0.40					6.73	
120	4	-0.20				6.93		
129	2	1.49		8.60				
140	2	1.21		8.33				
141	4	-0.19					6.94	
142	4	-0.11					7.02	
146	2	-1.03					6.11	
180	3	0.76					7.88	
190	2	-1.50	5.65					
202	4	-0.02	7.11					
204	4	-0.46					6.67	
210	2	1.28					8.40	
212	4	0.07	7.20					

Table 20. *—Statistical summary of reported data for standard reference water sample WW-1 (whole water)—Continued*

Mn (Manganese) **µ g/L**



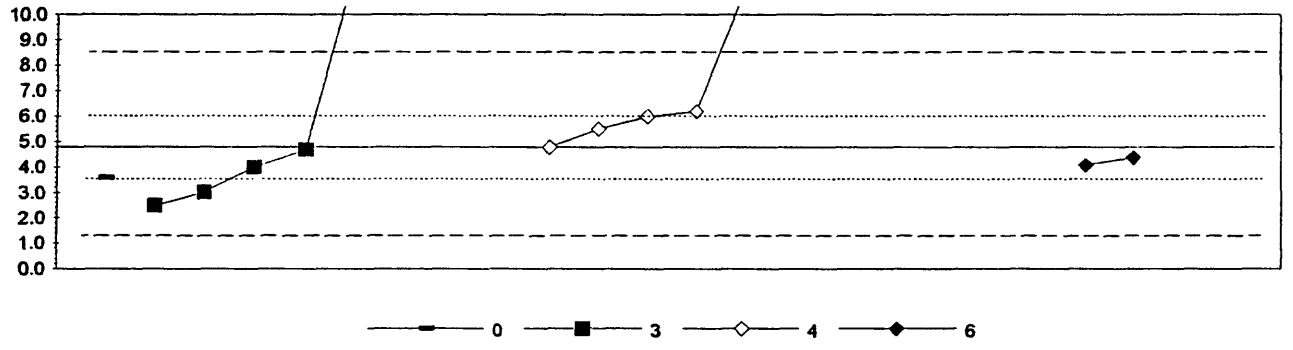
0. Other				3. AA: graphite furnace				
1. AA: Direct air				4. ICP				
2. AA: direct nitrous oxide				6. ICP/MS				
		N =	2	6	1	3	26	1
		Minimum =	620	520	536	531	6	639
		Maximum =	629	607		584	720	
		Median =		565			600	
		St Dev =		34			60	

MPV =	595
F-pseudosigma =	54
N =	39
Hu =	630
HI =	557

Lab	Rating	Z-value	0	1	2	3	4	6
1	4	-0.19					585	
3	4	-0.43					572	
5	0	2.31					720	
7	3	0.94					646	
8	4	-0.37					575	
11	4	-0.31					578	
15	1	2.03					705	
18	0	-10.88					6	
23	2	-1.18				531		
25	4	0.22					607	
32	3	0.81						639
36	2	-1.09			536			
46	1	1.85					695	
48	0	2.31					720	
52	4	0.24					608	
58	3	-0.92		545				
59	2	-1.02					540	
61	0	2.07					707	
63	3	0.70					633	
68	0	2.13					710	
69	4	-0.28		580				
89	4	0.22		607				
94	4	0.00					595	
97	4	-0.50				568		
102	2	-1.16					532	
105	3	-0.59					563	
117	4	0.07		599				
119	4	0.13					602	
120	4	-0.20				584		
129	2	-1.39		520				
140	3	-0.83		550				
141	3	0.54					624	
142	4	0.04					597	
146	3	-0.85					549	
180	4	-0.33					577	
202	3	0.63	629					
204	3	-0.83					550	
210	3	0.65					630	
212	4	0.46	620					

Table 20. *–Statistical summary of reported data for standard reference water sample WW-1 (whole water)–Continued*

Mo (Molybdenum) μ g/L



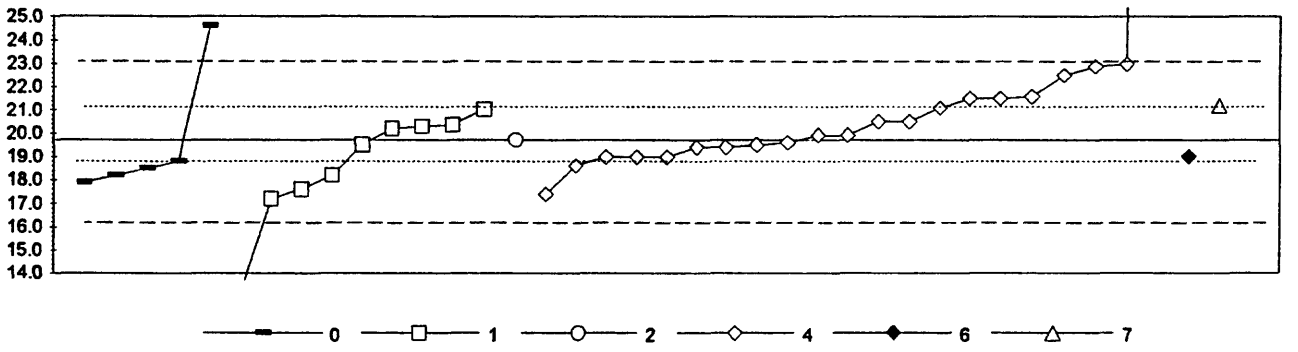
0. Other				6. ICP/MS		
3. AA: graphite furnace						
4. ICP						
	N =		1	6	6	2
	Minimum =		3.6	2.5	4.8	4.1
	Maximum =			13.0	12.0	4.4
	Median =			4.0	6.1	
	St Dev =			4.69	3.09	

MPV =	4.9
F-pseudosigma =	1.78
N =	15
Hu =	6.0
Hl =	3.6

Lab	Rating	Z-value	0	3	4	6
1	4	-0.11		4.7		
3	NR				< 10	
5	NR				< 10	
7	3	0.62			6.0	
8	NR				< 5	
11	0	3.99			12.0	
15	2	-1.05		3.0		
32	4	-0.28				4.4
36	2	-1.36		2.5		
48	NR				< 10	
52	NR			< 5		
61	3	0.73			6.2	
94	NR			< 5		
97	0	3.99		12.0		
105	4	-0.45				4.1
120	0	4.55		13.0		
141	NR				< 10	
142	3	-0.51		4.0		
146	4	0.34			5.5	
180	4	-0.06			4.8	
202	3	-0.73	3.6			
210	0	3.43			11.0	

Table 20. *--Statistical summary of reported data for standard reference water sample WW-1 (whole water)--Continued*

Na (Sodium) mg/L



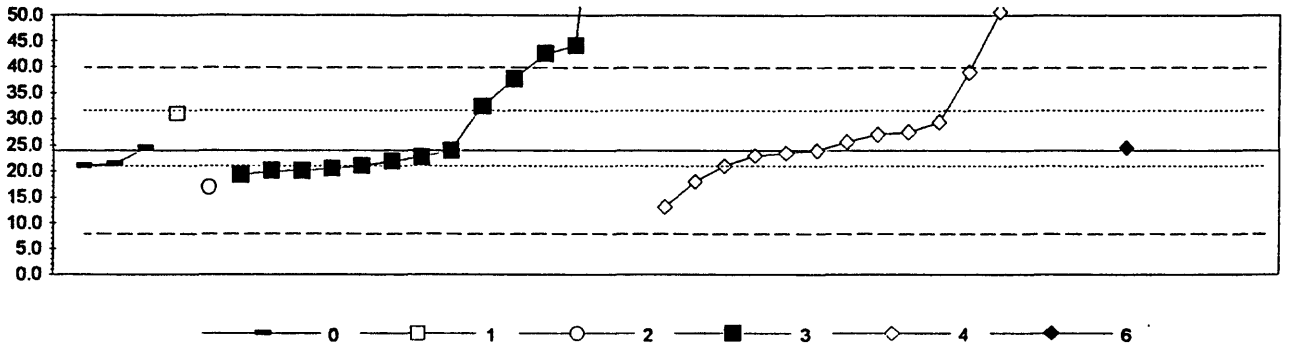
	0. Other			4. ICP				
	1. AA: Direct air			6. ICP/MS				
	2. AA: direct nitrous oxide			7. Ion chromatography				
	N =	5	9	1	21	1	1
	Minimum =	17.9	13.1	19.7	17.4	19.0	21.2
	Maximum =	24.6	21.0		21566		
	Median =	18.5	19.5		19.9		
	St Dev =		2.47		1.52		

Lab	Rating	Z-value	0	1	2	4	6	7
1	2	-1.20		17.6				
3	3	-0.62				18.6		
5	1	1.68				22.5		
7	4	0.15				19.9		
8	4	-0.03				19.6		
18	4	-0.50	18.8					
23	2	-1.44		17.2				
25	4	0.50				20.5		
32	4	-0.38					19.0	
36	4	0.03			19.7			
46	2	1.09				21.5		
48	1	1.91				22.9		
52	4	-0.38				19.0		
58	0	-3.84		13.1				
59	4	-0.38				19.0		
61	0	12637				21566		
63	2	1.14				21.6		
68	1	1.96				23.0		
69	3	-0.85	18.2					
89	4	0.32		20.2				
94	3	0.85				21.1		
97	3	-0.85		18.2				
102	4	0.50				20.5		
105	2	1.09				21.5		
117	3	0.81		21.0				
119	4	-0.15				19.4		
120	4	0.42		20.4				
129	4	0.38		20.3				
140	4	-0.08		19.5				
141	4	-0.10				19.5		
142	4	-0.15				19.4		
146	2	-1.32				17.4		
180	4	0.15				19.9		
190	3	0.91						21.2
202	0	2.90	24.6					
204	3	-0.67	18.5					
210	4	-0.38				19.0		
212	2	-1.03	17.9					

MPV =	19.7
F-pseudosigma =	1.70
N =	38
Hu =	21.1
HI =	18.8

Table 20. *--Statistical summary of reported data for standard reference water sample WW-1 (whole water)--Continued*

Ni (Nickel) **µ g/L**

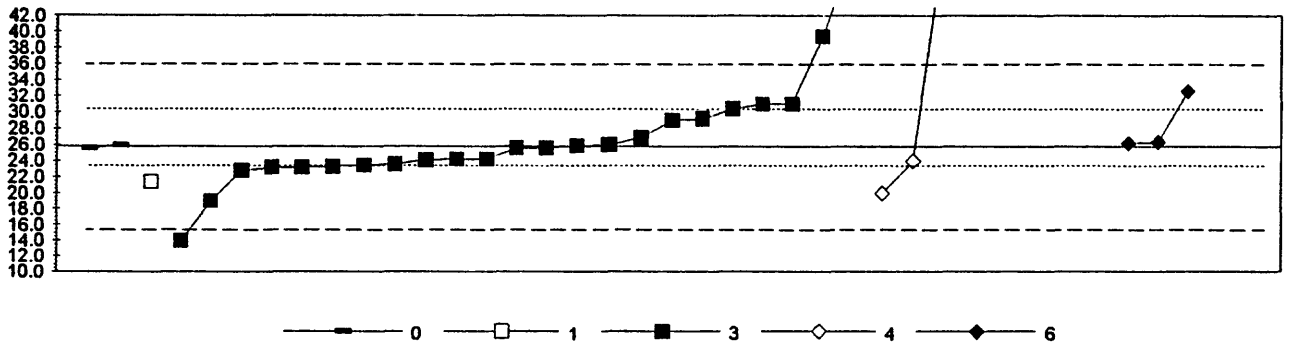


0. Other				3. AA: graphite furnace				
1. AA: Direct air				4. ICP				
2. AA: direct nitrous oxide				6. ICP/MS				
		N =	3	1	1	13	13	1
		Minimum =	21.0	31.0	16.9	19.2	13.0	24.5
		Maximum =	24.5			102.0	130.0	
		Median =				22.7	25.6	
		St Dev =				9.37	6.64	
Lab	Rating	Z-value	0	1	2	3	4	6
1	4	-0.16				22.7		
3	NR						< 40	
5	4	0.20					25.6	
7	3	0.68					29.4	
8	2	-1.39					13.0	
15	3	-0.61				19.2		
18	4	0.06	24.5					
23	NR					< 20		
25	NR						< 49	
32	4	0.06						24.5
36	3	-0.90			16.9			
48	1	1.73				37.7		
52	2	1.06				32.4		
58	4	-0.49				20.1		
59	3	-0.76					18.0	
61	0	3.37					50.7	
63	4	0.00				24.0		
68	1	1.89					39.0	
69	4	-0.50				20.0		
89	0	2.33				42.5		
94	4	-0.13					23.0	
97	0	2.53				44.1		
102	4	-0.38					21.0	
105	4	0.00					24.0	
119	4	-0.45				20.4		
120	4	-0.38				21.0		
140	3	0.88		31.0				
141	4	0.44					27.5	
142	4	-0.26				21.9		
144	0	9.83				102.0		
146	4	-0.06					23.5	
180	4	0.39					27.1	
202	4	-0.38	21.0					
210	0	13.36					130.0	
212	4	-0.34	21.3					

MPV =	24.0
F-pseudosigma =	7.93
N =	32
Hu =	31.7
HI =	21.0

Table 20. *–Statistical summary of reported data for standard reference water sample WW-1 (whole water)–Continued*

Pb (Lead) **µ g/L**



0. Other
1. AA: Direct air
3. AA: graphite furnace
4. ICP
6. ICP/MS

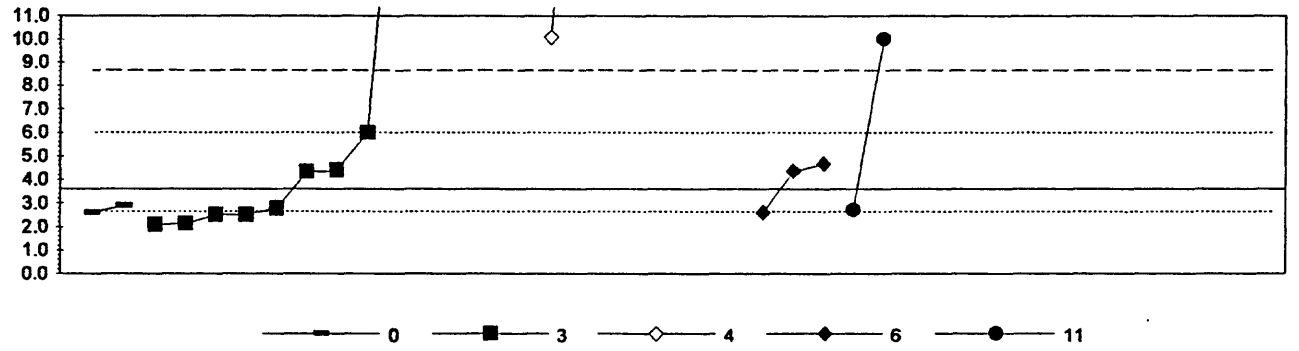
	0	1	3	4	6
N =	2	1	23	5	3
Minimum =	25.6	21.4	13.9	20.0	26.2
Maximum =	26.0		50.1	86.7	32.6
Median =			25.6	52.9	
St Dev =			4.98		

MPV = 25.8
F-pseudosigma = 5.11
N = 34
Hu = 30.4
HI = 23.5

Lab	Rating	Z-value	0	1	3	4	6
1	4	0.03			25.9		
3	2	1.03			31.0		
5	0	11.92				86.7	
7	2	1.34					32.6
8	NR					< 30	
15	4	-0.42			23.6		
18	4	-0.50			23.2		
23	0	-2.32			13.9		
25	NR					< 71	
32	4	0.13					26.4
36	4	-0.30			24.2		
46	0	5.33				53.0	
48	4	-0.50			23.2		
52	3	0.67			29.2		
58	3	0.64			29.0		
59	4	-0.34				24.0	
61	NR					< 50	
63	2	-1.32			19.0		
68	2	1.03			31.0		
69	4	-0.32			24.1		
89	4	-0.30			24.2		
94	3	-0.58			22.8		
97	3	0.91			30.4		
102	2	-1.12				20.0	
105	4	0.09					26.2
117	0	4.76			50.1		
119	4	-0.03			25.6		
120	4	-0.48			23.3		
140	3	-0.85		21.4			
141	4	0.22			26.9		
142	4	-0.44			23.5		
146	4	-0.03			25.6		
180	0	5.31				52.9	
202	4	-0.03	25.6				
204	4	0.05			26.0		
210	0	2.69			39.5		
212	4	0.05	26.0				

Table 20. *–Statistical summary of reported data for standard reference water sample WW-1 (whole water)–Continued*

Sb (Antimony) **µ g/L**



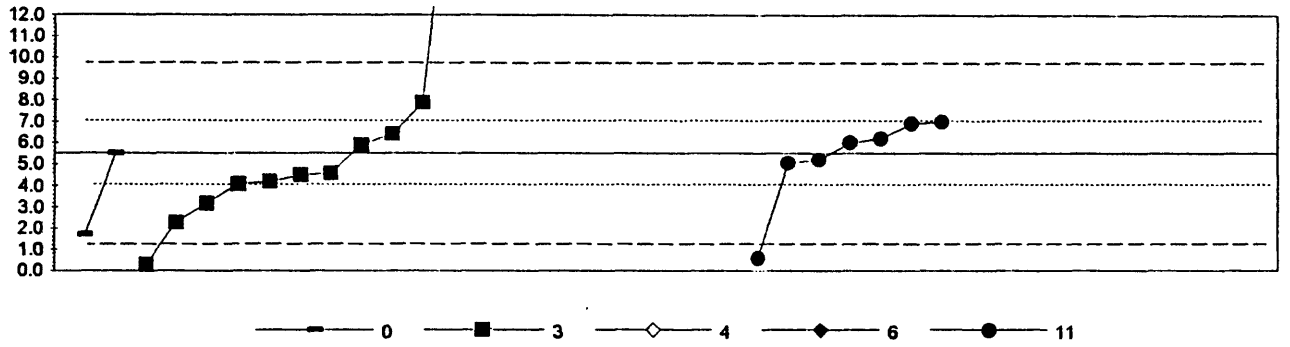
	0. Other	3. AA: graphite furnace	4. ICP	6. ICP/MS	11. AA: hydride
N =	2	9	2	3	2
Minimum =	2.6	2.1	10.1	2.6	2.7
Maximum =	2.9	22.0	26.6	4.7	10.0
Median =		2.8			
St Dev =		1.41			

MPV =	3.6
F-pseudosigma =	2.52
N =	18
Hu =	6.0
HI =	2.6

Lab	Rating	Z-value	0	3	4	6	11
1	4	-0.44		2.5			
3	3	0.95		6.0			
5	NR				< 50		
7	4	-0.40				2.6	
8	0	2.53					10.0
18	4	0.28		4.3			
25	NR				< 51		
32	4	0.29				4.4	
36	3	-0.59		2.1			
48	NR			< 3			
52	NR			< 6			
61	NR				< 50		
63	NR			<5			
94	4	-0.32		2.8			
97	4	0.31		4.4			
102	NR				< 1		
105	4	0.42				4.7	
117	0	7.29		22.0			
119	4	-0.36					2.7
120	4	-0.44		2.5			
141	NR				< 20		
142	3	-0.60		2.1			
146	0	2.57			10.1		
180	0	9.12			26.6		
202	4	-0.40	2.6				
210	NR			< 5			
212	4	-0.28	2.9				

Table 20. *—Statistical summary of reported data for standard reference water sample WW-1 (whole water)—Continued*

Se (Selenium) **µ g/L**



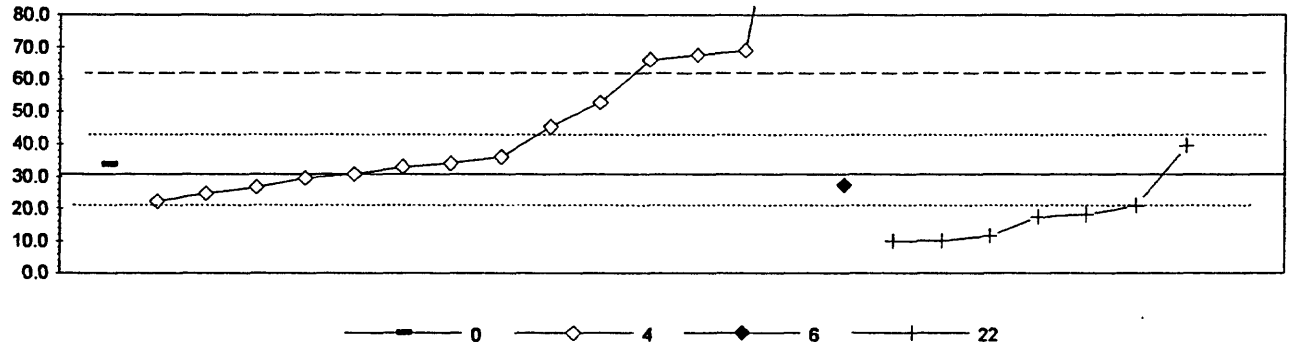
0. Other				6. ICP/MS			
3. AA: graphite furnace				11. AA: hydride			
4. ICP							
	N =	2	12	2	0	7	
	Minimum =	1.7	0.3	24.9	0.0	0.6	
	Maximum =	5.5	31.0	192.1	0.0	7.0	
	Median =		4.5			6.0	
	St Dev =		2.14			2.21	

MPV =	5.5
F-pseudosigma =	2.08
N =	23
Hu =	7.0
Hl =	4.1

Lab	Rating	Z-value	0	3	4	6	11
1	4	-0.14					5.2
3	2	-1.10		3.2			
5	0	89.58			192.1		
7	0	-2.16		< 1			
8	3	0.72					7.0
15	4	-0.21					5.1
18	0	-2.50		0.3			
25	NR				< 129		
32	NR					< 10	
36	4	-0.44		4.6			
48	3	-0.67		4.1			
52	NR						< 5
61	4	0.19		5.9			
63	NR			< 5			
69	2	1.15		7.9			
89	NR						< 2
94	1	-1.54		2.3			
97	0	-2.37					0.6
102	NR				< 5		
105	3	-0.63		4.2			
117	0	12.24		31.0			
119	4	0.24					6.0
120	3	0.67					6.9
141	4	0.34					6.2
144	0	7.44		21.0			
146	4	-0.48		4.5			
180	0	9.31			24.9		
202	4	0.00	5.5				
204	4	0.43		6.4			
210	NR			< 5			
212	1	-1.82	1.7				

Table 20. *–Statistical summary of reported data for standard reference water sample WW-1 (whole water)–Continued*

SiO2 (Silica) mg/L



0. Other	22. Colorimetric
4. ICP	
6. ICP/MS	

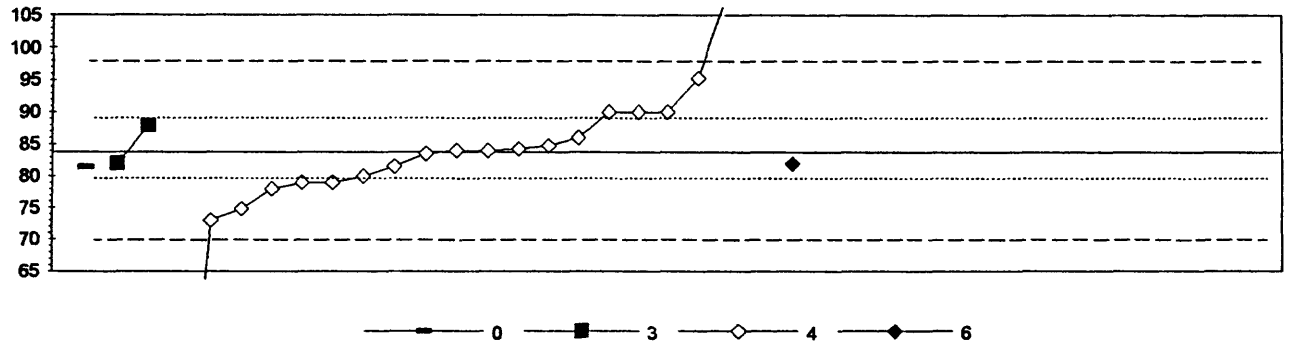
N =	1	14	1	7
Minimum =	33.7	22.3	27.3	10.1
Maximum =		149.6		39.5
Median =		35.1		17.5
St Dev =		17.00		10.28

MPV =	30.8
F-pseudosigma =	15.42
N =	23
Hu =	42.4
HI =	21.6

Lab	Rating	Z-value	0	4	6	22
1	4	0.21		34.1		
3	4	-0.26		26.7		
5	0	7.71		149.6		
8	3	-0.64				20.9
11	2	1.43		52.8		
15	4	-0.40		24.6		
25	3	0.94		45.3		
32	4	-0.22			27.3	
36	3	-0.81				18.2
52	2	-1.34				10.1
61	0	2.48		69.0		
63	4	0.35		36.2		
89	3	0.57				39.5
97	2	-1.24				11.6
102	0	2.29		66.0		
105	4	-0.08		29.5		
119	4	0.14		32.9		
129	3	-0.86				17.5
140	2	-1.33				10.2
141	NR					< 0.1
142	4	0.00		30.8		
146	0	2.39		67.6		
210	3	-0.55		22.3		
212	4	0.19	33.7			

Table 20. *—Statistical summary of reported data for standard reference water sample WW-1 (whole water)—Continued*

Sr (Strontium) **µ g/L**



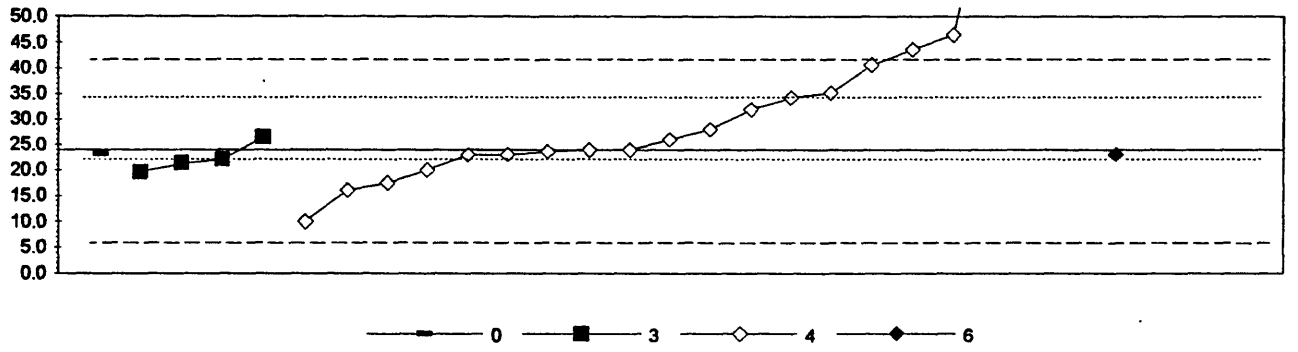
0. Other				6. ICP/MS		
3. AA: graphite furnace						
4. ICP						
	N =	1	2	20	1	
	Minimum =	82	82	20	82	
	Maximum =		88	122		
	Median =			84		
	St Dev =			5.9		

MPV =	84
F-pseudosigma =	7.0
N =	24
Hu =	89
Hl =	80

Lab	Rating	Z-value	0	3	4	6
1	3	-0.84			78	
3	1	-1.54			73	
5	0	5.47			122	
7	4	0.14			85	
8	4	0.03			84	
11	3	0.89			90	
15	4	0.07			84	
18	3	-0.69			79	
25	3	0.89			90	
32	4	-0.26				82
46	1	1.64			95	
52	4	-0.03			84	
59	3	-0.69			79	
63	4	0.31			86	
68	0	3.74			110	
94	3	-0.54			80	
97	3	0.59		88		
102	3	0.89			90	
105	4	0.03			84	
141	4	-0.26		82		
142	4	-0.31			82	
146	2	-1.28			75	
210	0	-9.11			20	
212	4	-0.33	82			

Table 20. *–Statistical summary of reported data for standard reference water sample WW-1 (whole water)–Continued*

V (Vanadium) **µ g/L**



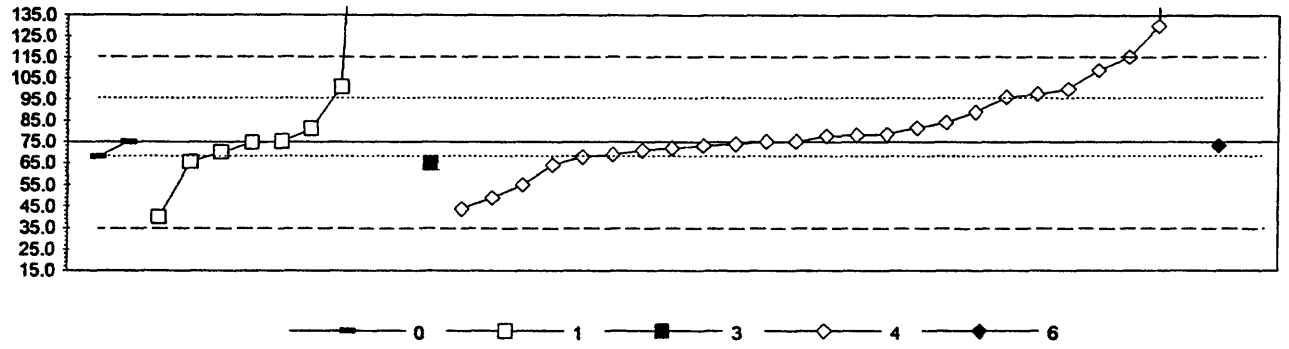
0. Other		6. ICP/MS	
3. AA: graphite furnace			
4. ICP			
N =	1	4	19	1
Minimum =	23.1	19.5	10.0	23.0
Maximum =		26.5	120.0	
Median =		21.7	26.0	
St Dev =			10.01	

MPV = 24.0
F-pseudosigma = 9.04
N = 25
Hu = 34.3
HI = 22.1

Lab	Rating	Z-value	0	3	4	6
1	4	-0.05			23.6	
3	3	-0.88			16.0	
5	0	6.42			82.1	
7	2	1.14			34.3	
8	1	-1.55			10.0	
11	4	0.22			26.0	
15	4	0.28		26.5		
18	4	0.00			24.0	
25	4	0.00			24.0	
32	4	-0.11				23.0
46	1	1.85			40.7	
48	0	10.62			120.0	
52	4	-0.31		21.2		
58	4	-0.21		22.1		
61	2	1.24			35.2	
63	4	-0.11			23.0	
68	4	0.44			28.0	
94	4	-0.44			20.0	
102	3	0.88			32.0	
105	3	-0.72			17.5	
141	4	-0.11			23.0	
142	4	-0.50		19.5		
146	0	2.17			43.6	
180	0	2.50			46.6	
210	NR				< 50	
212	4	-0.10	23.1			

Table 20. *--Statistical summary of reported data for standard reference water sample WW-1 (whole water)--Continued*

Zn (Zinc) µ g/L



0. Other
1. AA: Direct air
3. AA: graphite furnace
4. ICP
6. ICP/MS

	0	1	3	4	6
N =	2	9	1	25	1
Minimum =	68.0	40.0	65.0	43.8	73.0
Maximum =	75.0	38160		450.0	
Median =		75.0		77.6	
St Dev =		18.30		20.19	

MPV = 75.0
F-pseudosigma = 20.09
N = 38
Hu = 96.1
Hl = 69.0

Lab	Rating	Z-value	0	1	3	4	6
1	4	-0.01		74.7			
3	4	-0.10				73.0	
5	1	2.01				115.4	
7	4	0.13				77.6	
8	3	-1.00				55.0	
11	4	0.15				78.0	
15	0	18.67				450.0	
18	3	-0.55				64.0	
23	1	-1.74		40.0			
25	3	0.70				89.0	
32	4	-0.10					73.0
46	1	1.69				109.0	
48	2	1.24				100.0	
52	4	-0.35				67.9	
58	4	-0.47		65.5			
59	2	-1.29				49.0	
61	2	1.12				97.6	
63	4	0.00				75.0	
68	4	-0.05				74.0	
69	4	-0.25		70.0			
89	2	1.29		101.0			
94	4	-0.30				69.0	
97	4	0.00		75.0			
102	4	-0.20				71.0	
105	4	0.32				81.4	
117	0	1896		38160			
119	4	0.00				75.0	
120	4	-0.50			65.0		
140	4	0.30		81.1			
141	4	0.17				78.5	
142	4	-0.15				72.0	
144	0	13.69		350.0			
146	2	1.05				96.1	
180	4	0.45				84.0	
202	4	-0.35	68.0				
204	1	-1.55				43.8	
210	0	2.74				130.0	
212	4	0.00	75.0				

Table 21. *--Most probable values for constituents and properties in standard reference samples distributed in October 1993*

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

T-127 (trace constituents)

Analyte	MPV		F-pseudosigma	Analyte	MPV		F-pseudosigma
Ag	2.71	µ g/L	0.489	Li	24.0	µ g/L	2.22
Al	85.0	µ g/L	15.49	Mg	2.00	m g/L	0.107
As	4.40	µ g/L	0.741	Mn	5.43	µ g/L	0.741
B	42.8	µ g/L	5.93	Mo	1.25	µ g/L	5.404
Ba	20.6	µ g/L	2.37	Na	65.1	m g/L	1.26
Be	14.0	µ g/L	1.25	Ni	9.00	µ g/L	2.632
Ca	8.80	m g/L	0.448	Pb	3.25	µ g/L	0.890
Cd	8.34	µ g/L	1.227	Sb	5.15	µ g/L	1.583
Co	11.6	µ g/L	1.48	Se	7.38	µ g/L	1.386
Cr	11.5	µ g/L	1.48	SiO2	9.63	m g/L	0.586
Cu	42.0	µ g/L	2.97	Sr	51.1	µ g/L	2.97
Fe	135	µ g/L	11.7	V	10.2	µ g/L	1.28
K	1.07	m g/L	0.163	Zn	32.9	µ g/L	3.63

M-128 (major constituents)

Analyte	MPV		F-pseudosigma	Analyte	MPV		F-pseudosigma
Alkalinity	168	m g/L	3.4	Na	126	m g/L	5.0
B	285	µ g/L	21.5	total P	1.390	m g/L	0.067
Ca	78.9	m g/L	3.92	pH	8.29		0.111
Cl	98.2	m g/L	2.56	SiO2	10.8	m g/L	0.82
DSRD	689	m g/L	19.3	SO4	206	m g/L	7.9
F	1.18	m g/L	0.096	Sp Cond	1076	µ S/cm	35.2
K	9.44	m g/L	0.675	Sr	705	µ g/L	42.3
Mg	17.4	m g/L	0.74	V	2.6	µ g/L	1.85

N-40 (preserved nutrient)

Analyte	MPV		F-pseudosigma
NH3 as N	0.035	m g/L	0.030
NH3+OrgN as N	0.270	m g/L	0.220
NO3+NO2 as N	0.119	m g/L	0.016
total P as P	0.062	m g/L	0.009
PO4 as P	0.054	m g/L	0.007

N-40 (nonpreserved nutrient)

Analyte	MPV		F-pseudosigma
NH3 as N	0.024	m g/L	0.027
NH3+OrgN as N	0.118	m g/L	0.098
NO3+NO2 as N	0.110	m g/L	0.012
total P as P	0.060	m g/L	0.010
PO4 as P	0.052	m g/L	0.005

N-41 (preserved nutrient)

Analyte	MPV		F-pseudosigma
NH3 as N	1.22	m g/L	0.170
NH3+OrgN as N	1.86	m g/L	0.391
NO3+NO2 as N	1.25	m g/L	0.099
total P as P	1.64	m g/L	0.111
PO4 as P	1.18	m g/L	0.030

N-41 (nonpreserved nutrient)

Analyte	MPV		F-pseudosigma
NH3 as N	1.22	m g/L	0.089
NH3+OrgN as N	1.76	m g/L	0.152
NO3+NO2 as N	1.25	m g/L	0.073
total P as P	1.63	m g/L	0.067
PO4 as P	1.29	m g/L	0.141

P-21 (low ionic strength)

Analyte	MPV		F-pseudosigma	Analyte	MPV		F-pseudosigma
Acidity	7.93	m g/L	5.019	Na	0.117	m g/L	0.019
Ca	0.45	m g/L	0.037	pH	4.06		0.059
Cl	3.90	m g/L	0.345	PO4 as P	0.005	m g/L	0.0059
F	0.03	m g/L	0.044	SO4	0.50	m g/L	0.491
K	0.088	m g/L	0.016	Sp Cond	41.80	m S/cm	4.23
Mg	0.055	m g/L	0.007				

Hg-17 (mercury)

Analyte	MPV		F-pseudosigma
Hg	1.55	m g/L	0.311

Table 21. *–Most probable values for constituents and properties in standard reference samples distributed in October 1993 – Continued*

AMW-3 (acid mine water)

Analyte	MPV		F-pseudosigma	Analyte	MPV		F-pseudosigma
Ag	0.80	µ g/L	3.85	Li	35	µ g/L	5.5
Al	21000	µ g/L	1309	Mg	114	m g/L	5.8
As	72.5	µ g/L	12.90	Mn	82800	µ g/L	7650
B	153	µ g/L	87.5	Mo	insufficient data		
Ba	4.5	µ g/L	3.34	Na	30.8	m g/L	1.26
Be	12.0	µ g/L	1.48	Ni	206	µ g/L	30.4
Ca	320	m g/L	18.4	Pb	15.5	µ g/L	4.45
Cd	121	µ g/L	11.3	Sb	2.7	µ g/L	1.85
Co	133	µ g/L	13.3	Se	insufficient data		
Cr	11.0	µ g/L	5.88	SiO2	48.0	m g/L	3.31
Cu	4670	µ g/L	267	Sr	1474	µ g/L	81
Fe	142650	µ g/L	9859	V	15.0	µ g/L	12.9
K	3.50	m g/L	0.415	Zn	41450	µ g/L	3113

WW-1 (whole water)

Analyte	MPV		F-pseudosigma	Analyte	MPV		F-pseudosigma
Ag	2.30	µ g/L	1.830	Li	19	µ g/L	4.4
Al	7084	µ g/L	5688	Mg	7.13	m g/L	0.990
As	19.7	µ g/L	10.30	Mn	595	µ g/L	54
B	31	µ g/L	38	Mo	4.9	µ g/L	1.78
Ba	156	µ g/L	34	Na	19.7	m g/L	1.70
Be	9.0	µ g/L	0.89	Ni	24.0	µ g/L	7.93
Ca	17.9	m g/L	1.30	Pb	25.8	µ g/L	5.11
Cd	6.10	µ g/L	1.105	Sb	3.6	µ g/L	2.52
Co	13.5	µ g/L	2.67	Se	5.50	µ g/L	2.08
Cr	22.0	µ g/L	4.97	SiO2	30.8	m g/L	15.42
Cu	28.1	µ g/L	5.97	Sr	84	µ g/L	7.0
Fe	14000	µ g/L	4233	V	24.0	µ g/L	9.04
K	2.80	m g/L	0.852	Zn	75.0	µ g/L	20.09