RESULTS OF THE U.S. GEOLOGICAL SURVEY'S ANALYTICAL EVALUATION PROGRAM FOR STANDARD REFERENCE SAMPLES: T-153 (TRACE CONSTITUENTS), M-146 (MAJOR CONSTITUENTS), N-57 (NUTRIENT CONSTITUENTS), N-58 (NUTRIENT CONSTITUENTS), P-30 (LOW IONIC STRENGTH CONSTITUENTS), GWT-3 (GROUND-WATER TRACE CONSTITUENTS), GWM-3 (GROUND-WATER MAJOR CONSTITUENTS), AND Hg-26 (MERCURY) DISTRIBUTED IN APRIL 1998

By Jerry W. Farrar

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DEPARTMENT OF THE INTERIOR

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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-153 (trace constituents), M-146 (major constituents), N-57 (nutrient constituents), N-58 (nutrient constituents), P-30 (low ionic strength constituents), GWT-3 (ground-water trace constituents), GWM-3 (ground-water major constituents), and Hg-26 (mercury) -- which were distributed in April 1998 to 159 laboratories enrolled in the U.S. Geological Survey sponsored interlaboratory testing program Analytical data that were received from 136 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 analytical evaluation program semiannually. This program provides a variety of standard reference samples (SRSs) 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.

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 first analytical evaluation program. 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) evaluate the accuracy and precision of analytical methods.

A total of 235 USGS and non-USGS laboratories are enrolled in the program, which can currently provide nine different types of SRSs:

1. Trace constituents.
2. Major constituents.
3. Nutrient constituents.
4. Low ionic strength constituents.
5. Mercury.
6. Whole water (water with suspended sediment).
7. Acid mine water constituents.
8. Ground-water trace constituents.
9. Ground-water major constituents.

Though this is not a laboratory certification program, participation in this continuing quality assurance program is mandatory for all laboratories providing water-quality data for USGS sponsored reports or storage in the USGS national data bases. Federal, State, Municipal, and University laboratories can participate even though they do not provide data to the USGS. SRS results can be used to alert participating laboratories of possible deficiencies in their analytical operations and provide reference materials for laboratory quality-control programs. Participating laboratories are identified only by a confidential laboratory code number.

A library of SRSs, from previous evaluations, is available. USGS offices and participating laboratories can request these SRSs for further testing, continuing quality assurance, and quality-control programs by contacting:

U.S. Geological Survey
Branch of Quality Systems
Denver Federal Center, Bldg. 53
P. O. Box 25046 MS 401
Denver, Colorado 80225-0046
(303) 236-1870

PURPOSE AND SCOPE

This report summarizes the analytical results submitted by 136 of the 159 laboratories that requested and were shipped SRSs for the July 1998 evaluation (table 1). Not all SRSs are requested or necessarily analyzed by all the laboratories; nor do all laboratories enrolled in the program participate in each evaluation. Analytical results for the following, which were mailed the week of April 7, 1998, are presented in this report.

T-153	Trace constituents	P-30	Low ionic strength constituents
M-146	Major constituents	GWT-3	Ground-water trace constituents
N-57	Nutrient constituents	GWM-3	Ground-water major constituents
N-58	Nutrient constituents	Hg-26	Mercury

The USGS requested that analytical results be returned by May 18, 1998 for evaluation and preparation of this report. Laboratories that are providing analytical services to USGS offices are requested to analyze the appropriate SRSs for the same analytes requested by the USGS offices. All laboratories are requested to include the analytical methods used to determine the concentration of each analyte. When analytical method information was provided, it has been included in tables 13 - 20.

Table 1.-*Laboratory participants in the analyses of standard reference samples distributed in April 1998*

State	City	Participating Laboratory
Alabama	Tuscaloosa	Geological Survey of Alabama
Arizona	Yuma	Burns and Roe Services Corporation
Arkansas	Arkadelphia	Ouachita Baptist University, Department of Biology
	Fayetteville	University of Arkansas, Arkansas Water Resources Center
	Little Rock	Arkansas Department of Pollution Control and Ecology
California	Davis	University of California, Davis, Division of Environmental Studies
	Los Angeles	Metropolitan Water District, Water Quality Laboratory
	Martinez	Central Contra Costa Sanitary District
	Menlo Park	U.S. Geological Survey, Branch of Regional Research, Western Region
	Oakland	East Bay Municipal Utility District
	Perris	Eastern Municipal Water District
	San Diego	U.S. Geological Survey, Water Resources Division
	Santa Fe Springs	West Coast Analytical Service, Inc.
	Tahoe City	Tahoe Research Group
	West Sacramento	California Department of Water Resources
	West Sacramento	Quanterra Environmental Services
Colorado	Alamosa	Bureau of Reclamation
	Arvada	Quanterra Environmental Services
	Arvada	U.S. Geological Survey, National Water Quality Laboratory
	Aurora	Core Laboratories, Inc.
	Boulder	U.S. Geological Survey, Branch of Regional Research, Central Region
	Colorado Springs	City of Colorado Springs, Environmental Quality Laboratory
	Denver	Bureau of Reclamation
	Denver	Denver Water Department
	Denver	Metro Wastewater Reclamation
	Denver	U.S.Geological Survey, Earth Science Investment Program
	Fort Collins	City of Fort Collins - Water Quality
	Fort Collins	Colorado State University – Soil Testing Laboratory
	Fort Collins	U.S. Department of Agriculture, Forest Service
	Greeley	Central Colorado Water Conservatory District
	Loveland	Northern Colorado Water Conservation
	Northglenn	Northglenn Waste Water Treatment Plant
	Pueblo	City of Pueblo Waste Water Treatment Plant
	Westminster	City of Westminster, Semper Water Treatment Plant
	Wheat Ridge	Enzyme Laboratories Inc.
Delaware	Dover	Delaware Department of Natural Resources
Florida	Brooksville	Southwest Florida Water Management District
	Ocala	U.S. Geological Survey Water Resources Division, Quality Water Service Unit
	Orlando	Post, Bucklye, Schuh, and Jernigan, Inc.
	Ormond Beach	Environmental Laboratory
	Tallahassee	City of Tallahassee, Water Quality Division
	Tallahassee	Florida Department of Environmental Protection
	Tallahassee	Savannah Laboratories and Environmental Services
	Tampa	Hillsborough County Environmental Protection Commission
	West Palm Beach	South Florida Water Management District
Georgia	Athens	University of Georgia
	Atlanta	Georgia Department of Natural Resources, Environmental Protection Division
	Atlanta	U.S. Geological Survey, Water Resources Division
	Stone Mountain	Dekalb County Public Works Department
Hawaii	Honolulu	University of Hawaii, SOEST Analytical Services
Idaho	Boise	U.S. Bureau of Reclamation, Pacific Northwest Regional Lab
	Pocatello	Idaho State University, Department of Chemistry
Illinois	Champaign	Illinois Department of Natural Resources, Waste Management and Research Center
	Champaign	Illinois Environmental Protection Agency

Table 1-*Laboratory participants in the analyses of standard reference samples distributed in April 1998 --continued*

State	City	Participating Laboratory
Iowa	Des Moines	University of Iowa Hygienic Laboratory, Des Moines Branch
Kansas	Lawrence	Kansas Geological Survey
	Topeka	City of Topeka, Water Pollution Control Division
	Wichita	City of Wichita, Water and Sewer Department
Kentucky	Frankfort	Kentucky State University, Division of Environmental Studies
	Lexington	Kentucky Geological Survey
	Louisville	Metropolitan Sewer District
Maryland	Baltimore	Maryland Department of Health and Mental Hygiene
Maine	Orono	University of Maine, Environmental Chemistry Laboratory
Michigan	Detroit	Detroit Water and Sewerage Department, Analytical Laboratory
Minnesota	Minneapolis	University of Minnesota, Department of Geology and Geophysics
	St. Paul	Metropolitan Council Environmental Services
	St. Paul	University of Minnesota, Department of Soil Science
Missouri	Columbia	University of Missouri
	Jefferson City	Missouri Department of Health
Montana	Butte	Montana Bureau of Mines & Geology
	Helena	State of Montana, Laboratory Services Bureau
	Jefferson City	Montana Tunnels Laboratory
Nebraska	McCook	Olsen Laboratory
New Mexico	Albuquerque	City of Albuquerque
Nevada	Reno	Desert Research Institute
	Sparks	American Assay Laboratories Environmental
New York	Brewster	New York City Department of Environmental Protection, Brewster Laboratory
	Buffalo	Erie County Public Health Laboratory
	Grahamsville	New York City Department of Environmental Protection, Grahamsville Laboratory
	Hauppauge	Suffolk County Water Authority Laboratory
	Hempstead	Nassau County Department of Health
	Milbrook	Institute of Ecosystem Studies
	North Babylon	EcoTest Laboratories
	Rochester	Monroe County Department of Health
	Shokan	New York City Department of Environmental Protection, Ben Nessin Laboratory
	Syracuse	Onondaga County Department of Drainage and Sanitation
	Syracuse	State University of New York, College of Environmental Science and Forestry
	Troy	U.S. Geological Survey, Water Resources Division
	Valhalla	New York City Department of Environmental Protection, Kensico Laboratory
	Wantagh	Cedar Creek Special Projects Laboratory
	Yorktown	New York City Department of Environmental Protection, Croton Gatehouse Lab
North Carolina	Chapel Hill	City of Durham Water Resources Department
	Charlotte	Mecklenburg County Department of Environmental Protection
	Rocky Mount	Tar River Regional Wastewater Treatment Facility
North Dakota	Bismarck	North Dakota Department of Health, East Laboratory
	Bismarck	North Dakota State Water Commission
	Bismarck	U.S. Bureau of Reclamation
Ohio	Cincinnati	U.S. Environmental Protection Agency
	Cuyahoga Heights	Northeast Ohio Regional Sewer District
	Valley City	Medina County Sanitary Engineering
	Wooster	Ohio State University, Ohio Agricultural Research and Developmental Center
Oklahoma	Norman	Oklahoma Geological Survey
	Oklahoma City	Oklahoma Department of Environmental Quality
Oregon	Hillsboro	Unified Sewerage Agency of Washington County
Pennsylvania	Mechanicsburg	Chemical Solutions LTD
	Somerset	Geochemical Testing, Energy Center, Inc.

Table 1. *-Laboratory participants in the analyses of standard reference samples distributed in April 1998 --continued*

State	City	Participating Laboratory
South Carolina	Columbia	Columbia Analytical Laboratories
South Dakota	Brookings	Northern Great Plains Water Resources Research Center
	Brookings	South Dakota State University, Water Resources Institute
Tennessee	Knoxville	University of Tennessee, Department of Forestry, Wildlife, and Fisheries
Texas	Austin	Lower Colorado River Authority, Environmental Laboratories Services
	College Station	Texas A & M, Department of Oceanography
	College Station	Albion International
	Seguin	Guadalupe-Blanco River Authority
Vermont	Waterbury	Vermont Agency of Natural Resources, Department of Environmental Conservation
Virginia	Chesapeake	City of Chesapeake Water Treatment Plant
	Manassas	Occoquan Watershed Monitoring Laboratory
	Richmond	Commonwealth of Virginia, Division of Consolidated Laboratory Services
Washington	Richland	Battelle Pacific NW
	Seattle	Brooks-Rand, Ltd., Environmental Research and Development
	Seattle	Frontier Geosciences
Wisconsin	Madison	Madison Department of Public Health
	Middleton	U.S.Geological Survey, Wisconsin District Mercury Laboratory
	Milwaukee	Milwaukee Metropolitan Sewerage District
Wyoming	Laramie	Wyoming Department of Agriculture

European Laboratory

Location		Participating Laboratory
Norway	Oslo	Norwegian Institute for Water Research

Middle East Laboratories

Location	Participating Laboratory
Gaza	Birzeit University – Gaza
	Ministry of Agriculture Laboratory
Israel	Geological Survey of Israel Laboratory
	Israeli Hydrologic Service Laboratory
	Israeli National Public Health Laboratory – Tel Aviv
	Mekorot Water Company, Central Laboratory
	Water Resources Research Center, Institute for Desert Research
Jordan	Water Authority of Jordan, Central Laboratory
West Bank	Al-Quds University, College of Science and Technology, Water Research Center
	Bethlehem University, Center for Environmental & Occupational Health Sciences

PREPARATION OF STANDARD REFERENCE SAMPLES

All of the SRSs used in this evaluation were prepared by USGS personnel located in Lakewood, Colorado, and were analyzed for analyte concentrations and physical property values prior to mailing. A library of these SRSs is maintained and can be requested by participating laboratories and USGS offices for use in their quality-control programs.

Trace constituents sample T-153 was prepared using tapwater collected from the Denver Federal Center in Lakewood, Colorado. The water was pumped through 0.45-, 0.2-, and 0.1-micron (μm) filters, in series, into a 1200-liter (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 1.3 with nitric acid and chlorinated to 5 parts per million (ppm) free chlorine with sodium hypochlorite. The trace constituent concentrations were adjusted by adding reagent grade chemicals. 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 polypropylene and fluorinated ethylene propylene bottles used were acid leached, deionized-water rinsed, and autoclave sterilized.

Major constituents sample M-146 was prepared using water collected from Clear Creek near Idaho Springs, Colorado. The water was pumped through 0.45- 0.2- and 0.1-μm filters, in series, into a 1200-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 24 hours prior to bottling. The major constituent concentrations were adjusted by adding reagent grade chemicals during bottling; the sample was pumped through an ultraviolet sterilizer and a 0.1-μm filter. The polypropylene bottles used were acid leached, deionized-water rinsed, and autoclave sterilized.

Nutrient constituents sample N-57 was prepared using deionized water. These samples were prepared the week prior to the mailing for this SRS evaluation. The water was pumped through 0.45-, 0.2-, and 0.1-μm filters, in series, into a 25-L polypropylene drum and continuously circulated and passed through a 0.1-μm filter for 24 hours. The desired nutrient concentrations were obtained by adding reagent-grade chemicals. The sample was continuously circulated for 24 hours prior to being bottled. During bottling, the sample was pumped through an ultraviolet sterilizer and a 0.1-μm filter. The 30-milliliter (mL) glass vials used were new, amber, acid leached, deionized-water rinsed, and autoclave sterilized.

Nutrient constituents sample N-58 was prepared using water collected from the Fall River near Idaho Springs, Colorado. These samples were prepared the week prior to the mailing for this SRS evaluation. The water was pumped through 0.45- 0.2- and 0.1-μm filters, in series, into a 200-L polypropylene drum and continuously circulated and passed through a 0.1-μm filter for 24 hours. The desired nutrient concentrations were obtained by adding reagent-grade chemicals. The sample was continuously circulated for 24 hours prior to being bottled. During bottling, the sample was pumped through an ultraviolet sterilizer and a 0.1-μm filter. The 250-mL polyethylene bottles used were new, amber, acid leached, deionized-water rinsed, and autoclave sterilized.

Low ionic strength constituents sample P-30 was prepared in a 400-L polypropylene drum using snowmelt collected from Genesee Park near Idaho Springs, Colorado. The water was pumped into the drum through 0.45- 0.2- 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 24 hours while being circulated through a 0.1-μm filter and an ultraviolet sterilizer. 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, and deionized-water rinsed.

Ground-water major constituents sample GWM-3 was prepared using water collected from a monitoring well completed in alluvial deposits and located in Pueblo County, Colorado. The water was pumped through 0.45-, 0.2-, and 0.1-μm filters, in series, into a 600-L polypropylene drum. The water was chlorinated to 5-ppm free chlorine with sodium hypochlorite. 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.

Ground-water trace constituents sample GWT-3 was prepared using water collected from a monitoring well completed in alluvial deposits and located in Pueblo County, Colorado. The water was pumped through 0.45-, 0.2-, and 0.1-μm filters, in series, into a 600-L polypropylene drum. The water was acidified to a pH of about 1.0 with nitric acid. During bottling the sample was pumped through an ultraviolet sterilizer and a 0.1-μm filter. The 1000-mL fluorinated ethylene propylene bottles used were acid leached, deionized-water rinsed, and autoclave sterilized.

Mercury sample Hg-26 was prepared using water collected from the Fall River near Idaho Springs, Colorado. The sample was prepared in a 200-L polypropylene drum. The river water was pumped into this drum through 0.45-, 0.2-, and 0.1-μm filters in series. The water was continuously circulated and passed through a 0.1-μm filter and ultraviolet sterilizer for 48 hours. Nitric acid (5-percent, by volume) and dichromate compound (0.05-percent, by weight) 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 250-mL glass bottles and tetrafluoroethylene fluorocarbon resin caps used were new, acid leached, and deionized-water rinsed.

LABORATORY ANALYSES

The participating laboratories were asked to determine constituents that are summarized in table 2. The number of analytes varied from 28 in T-153 (trace constituents) to 1 in Hg-26 (mercury).

Table 2. *-Constituents determined in standard reference samples distributed in April 1998*

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

Constituent or property		Units	T-153	M-146	N-57	N-58	P-30	GWT-3	GWM-3	Hg-26
Acidity	Acidity as $CaCO_3$	mg/L					X			
Alk	Alkalinity as $CaCO_3$	mg/L		X					X	
Ag	Silver	µg/L	X					X		
Al	Aluminum	µg/L	X					X		
As	Arsenic	µg/L	X					X		
B	Boron	µg/L	X	X			X	X		
Ba	Barium	µg/L	X					X		
Be	Beryllium	µg/L	X					X		
Ca	Calcium	mg/L	X	X			X	X	X	
Cd	Cadmium	µg/L	X					X		
Cl	Chloride	mg/L		X			X		X	
Co	Cobalt	µg/L	X					X		
Cr	Chromium	µg/L	X					X		
Cu	Copper	µg/L	X					X		
DSRD	Dissolved solids	mg/L		X					X	
F	Fluoride	mg/L		X			X		X	
Fe	Iron	µg/L	X					X		
Hg	Mercury	µg/L								X
K	Potassium	mg/L	X	X			X	X	X	
Li	Lithium	µg/L	X					X		
Mg	Magnesium	mg/L	X	X			X	X	X	
Mn	Manganese	µg/L	X					X		
Mo	Molybdenum	µg/L	X					X		
Na	Sodium	mg/L	X	X			X	X	X	
NH_3 as N	Ammonia	mg/L			X	X				
NH_3+Org N as N	Ammonia + Organic N	mg/L			X	X				
Ni	Nickel	µg/L	X					X		
NO_3+NO_2 as N	Nitrate + Nitrite	mg/L			X	X				
Pb	Lead	µg/L	X					X		
pH		unit		X			X			
PO_4 as P	Orthophosphate	mg/L			X	X	X			
total P as P	Phosphorus	mg/L		X	X	X			X	
Sb	Antimony	µg/L	X					X		
Se	Selenium	µg/L	X					X		
SiO_2	Silica	mg/L	X	X				X	X	
SO_4	Sulfate	mg/L		X			X		X	
Sp Cond	Specific conductance	µS/cm		X			X		X	
Sr	Strontium	µg/L	X	X				X		
Tl	Thallium	µg/L	X							
U	Uranium	µg/L	X							
V	Vanadium	µg/L	X	X				X		
Zn	Zinc	µg/L	X					X		

Laboratories were requested to identify the method used for each constituent 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 plasma
5	Direct current plasma
6	Inductively coupled plasma/mass spectrometry
7	Ion chromatography
8	Atomic absorption: cold vapor
9	Atomic fluoresence
10	Atomic absorption: extraction [*specify chelating agents*]
11	Atomic absorption: hydride [*specify reducing agent*]
12	Flame emission
20	Titration: colorimetric [*specify color reagent*]
21	Titration: electrometric [*specify reducing or oxidizing agent/color reagent*]
22	Colorimetric: [*specify reducing or oxidizing agent/color reagent*]
40	Ion selective electrode
41	Electrometric [*pH and specific conductance*]
50	Gravimetric: [*specify filtration, evaporation,and so forth*]
51	Turbidimetric

Participating laboratories were also asked to identify the method used, such as those references listed next, to further define the methods.

1. American Public Health Association, American Water Works Association, and Water Environment Federation, 1995, Standard methods for the examination of water and wastewater (19th ed.): Washington, D.C., American Public Health Association, variable pagination.

2. American Society for Testing and Materials, 1995, Annual book of ASTM standards: Philadelphia, v. 11.0, 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 (3rd 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 laboratory intercomparison, laboratory performance ratings, based on the analyses reported for each SRS, are included in tables 4 through 20 in this report. For each SRS, averages of all the analyte ratings and the number of analyte values reported are given for each participating laboratory. In some cases, laboratory reported values in tables 4 - 20 might have been reformatted in terms of significant figures to meet publication criteria. For example, a reported value of 15 may have been changed to 15.0 or a value of 102.86 may have been changed to 102.9 in these tables. However, the actual reported values by all the laboratories were used to calculate the statistical results and performance ratings presented in the report.

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 (Marginal)	1.51 to 2.00
0 (Unsatisfactory)	Greater than 2.00

Overall laboratory performance ratings greater than 2.4 are considered satisfactory. Ratings between 2.0 and 2.39 are considered marginal and that less than 2.0 are considered unsatisfactory. Ratings are based on the relative performance of laboratories on specific samples and should be reviewed and evaluated on a case-by-case basis for each laboratory considering such factors as methods used and data needs of specific USGS projects using the laboratory data.

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 outliers do not influence the median, 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 analyses, 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 analyses by a given method, usually 7, the F-pseudosigma for that analytical method is reported in the block of data listed for each analyte.

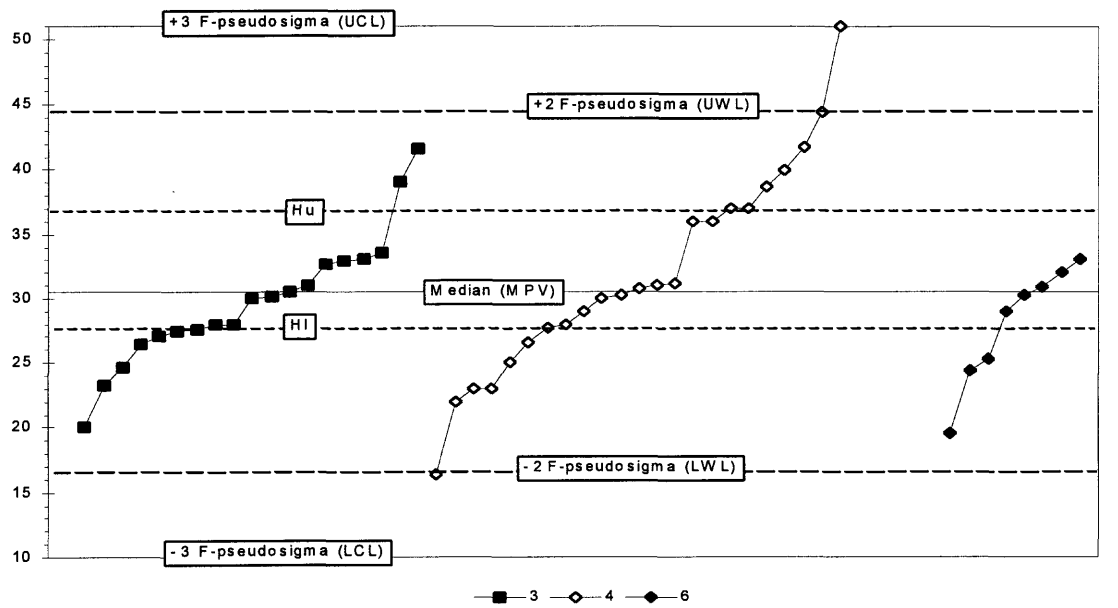
The median value is considered the MPV. The median (midpoint) divides the ordered data into halves and is designated the MPV. The hinges include the middle 50-percent of the data and are the mid-values of the upper and lower halves of the data. The hinges are similar to quartiles, but are not mathematically equivalent. The range of data between the upper hinge (Hu) and the lower hinge (Hl) and the hinge spread (H-spr), is used to calculate the F-pseudosigma, the laboratory performance rating, the upper warning level (UWL), 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 $2 \times 0.6745 = 1.349\sigma$. This relation allows the calculation of the F-pseudosigma = (H-spr)/1.349. 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 as shown in the graphical plot. Reported values are 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.

In some cases, if the F-pseudosigma is less than five percent of the MPV, the rating criterion is five percent of the MPV. All rating criterion values are denoted in the statistical summary tables by double asterisks (**).

The term "insufficient data" is included in some of the tables and is used when the number of analyses is less than 7 or the calculated F-pseudosigma is greater than the MPV.

In some cases the f-psuedosigma is equal to or greater than the MPV. This results in an MPV = insufficient data. An estimated MPV may be calculated from the available data for a single analytical method, this estimated concentration is denoted by MPV = Estimated. Estimated values are not used to rate laboratories.



NOTE: vertical scale is the concentration value of the individual analyte in appropriate units (see table 2). Horizontal scale is the laboratory reported values separated by method (different symbols) and plotted by increasing values. Numbers next to each symbol at the bottom of the figure are analytical method codes that are described in table 3.

Figure 1. -Statistical parameters shown on reported-data graphs in tables 13 - 20

REFERENCE

Hoaglin, D.C., Mosteller, F., and Tukey, J.W., Eds. 1983, Understanding robust and exploratory data analysis: New York, NY, John Wiley, Inc., p. 38-41.

Table 4. *Overall laboratory performance ratings for standard reference samples distributed in April 1998*

(SRS, standard reference sample; Lab, laboratory number; OWR, overall weighted rating for all sample types; OLR, overall laboratory rating for reported values of a sample type; V/105, number of reported values of 105 total possible values from all sample types; V/28,V/16,V/5,V/5,V/11,V/26,V13 and V/1 are number of reported values possible for T-153, M-146, N-57, N-58, P-30, GWT-3, GWM-3 and Hg-26 respectively; NR, not rated.)

	SRS =		T-153		M-146		N-57		N-58		P-30		GWT-3		GWM-3		Hg-26
Lab	OWR	V/105	OLR	V/28	OLR	V/16	OLR	V/5	OLR	V/5	OLR	V/11	OLR	V/26	OLR	V/13	OLR
1	3.5	94	3.7	25	3.7	15	2.4	5	3.0	5	3.7	10	3.3	21	3.6	12	2
2	3.9	8									3.9	8					
3	1.7	51	1.5	24	2.0	15	1.8	4			2.0	7					2
5	3.0	68	3.1	24	3.3	15					3.0	7	2.9	21			0
10	3.7	31	3.3	8	3.9	12	3.8	5	4.0	5							2
11	2.8	67	2.6	16	2.4	14	3.6	5	3.8	5	3.7	3	2.8	12	2.3	11	3
12	2.3	10					1.4	5	3.2	5							
13	2.5	68	2.5	20	2.0	13	3.0	4	3.3	4			2.2	15	2.8	11	4
16	2.5	86	2.5	22	2.9	15	2.0	5	2.2	5	1.4	9	2.8	17	2.3	12	4
18	3.1	49	3.4	21	3.1	10	3.2	5	2.8	5					2.3	7	4
19	3.1	27	3.0	9	3.2	10	3.8	4	2.5	4							
21	2.8	6	2.0	1			3.0	5									
22	3.0	2					3.0	1	3.0	1							
23	2.2	72	1.7	19	2.6	13	2.0	4	3.4	5	3.0	5	1.0	16	3.2	10	
24	3.4	52	3.6	16	3.8	12							2.8	13	3.5	11	
25	2.7	73	2.8	15	2.4	14	3.6	5	2.6	5	3.3	8	2.4	15	2.6	11	
26	3.1	36	3.1	15	3.4	5					1.5	2	3.1	10	4.0	3	3
28	3.1	39	3.1	12	3.1	7			1.0	4			3.4	11	3.8	5	
30.1	3.3	59	3.3	22	3.1	9					3.3	3	3.4	19	3.5	6	
30.2	2.3	14	2.3	4	3.0	3							1.8	4	2.3	3	
32	3.3	72	3.4	24	2.9	15							3.2	21	3.7	12	
33	3.3	55	2.7	10	3.7	11	3.3	3	3.3	3	3.7	9	2.7	10	3.7	9	
34.0	1.8	10	1.8	4	4.0	1					0.0	1	1.3	3			3
34.2	1.0	1															1
36	2.7	76	2.7	20	2.8	13	3.8	5	2.4	5	3.1	7	1.9	14	2.9	11	3
39	3.3	4					3.3	4									
40	2.9	37	3.0	22	2.9	15											
42	3.0	42	3.1	23	2.9	14	4.0	1	1.0	1					2.0	3	
43	3.7	34	3.9	7	3.5	11							3.7	6	3.8	10	
45	2.8	52	2.6	11	3.7	10	2.0	5	1.6	5			2.5	11	3.6	9	3
48	2.3	85	3.0	22	1.8	13	1.2	5	1.4	5	1.8	9	2.9	19	2.0	11	2
50	3.4	38	3.4	24	3.5	13											0
51	3.2	25	3.8	4	2.8	10	3.4	5	3.8	5							0
53	2.8	4					2.0	2	3.5	2							
57	1.8	20			2.0	15	1.0	5									
59	3.0	68	2.8	16	3.3	12	3.6	5	2.8	5	3.2	6	2.3	12	3.5	11	3
64	3.5	42	3.4	5	3.8	9	2.0	3	2.7	3	3.9	9	3.4	5	3.5	8	
68	1.9	40	1.3	21	2.3	13							4.0	2	2.0	3	4
69	3.1	54	3.2	17	2.9	11	4.0	1	4.0	1			2.8	13	3.3	10	4
70	3.2	42	3.6	18	2.9	13	2.6	5	2.6	5							4
76	3.6	34	3.5	10	4.0	7	4.0	2	4.0	2			3.6	7	3.2	6	
81	2.6	67	2.3	12	3.0	14	3.2	5	3.4	5	2.7	7	1.9	12	3.0	11	0
83	3.0	45	3.0	12	3.1	8					2.4	5	3.2	12	3.3	8	
84	2.1	17	2.2	5	3.0	6	1.0	3	1.0	3							
85	3.3	42	3.1	10	3.2	12							3.5	8	3.4	12	
86	3.2	12			3.2	12											
87	1.8	28	1.4	17	2.1	10											4
89	2.7	78	2.4	20	2.6	13	3.6	5	4.0	5	2.7	9	2.4	14	3.3	11	0
90	0.5	11			1.2	5	0.0	3	0.0	3							
91	2.9	10	3.5	2			2.8	4	2.8	4							
96	2.8	32	2.8	12	3.3	7					2.0	3	2.9	9			1
97	3.2	53	2.7	15	3.3	8	3.8	5	3.4	5			3.3	12	3.3	7	4
100	2.3	75	3.3	24	3.2	14	2.0	3	1.0	4			0.6	18	1.9	11	4
107	2.8	24	2.1	14	3.3	4			4.0	4	3.5	2					
108	2.3	6					1.3	3	3.3	3							
109	3.0	46	2.9	12	3.5	11							2.4	12	3.1	10	4
110	3.5	10	3.0	4							3.8	6					
111	3.3	6					2.7	3	4.0	3							
113	3.3	78	3.6	19	3.3	13	3.8	4	3.6	5	3.0	8	3.2	17	3.2	11	3
114	1.9	20	1.7	7	2.3	7	2.0	3	1.0	3							
118	2.4	17	2.1	10	2.8	6											2
121	3.7	23	3.9	7	4.0	5							3.1	7	4.0	4	
126	1.9	17	1.8	9					2.0	1			2.0	7			
127	3.1	56	3.0	23	3.5	14	2.0	4	3.3	4	3.3	10					4
129	3.3	10					3.4	5	3.2	5							
131	1.9	29	2.2	18	1.4	11											
133	2.7	36	2.5	10	3.0	4	2.2	5	2.7	3			2.7	10	3.3	3	4
134	3.7	93	3.9	24	3.7	15	2.8	5	3.4	5	3.5	10	3.7	21	4.0	12	3
138	3.4	88	3.5	22	3.5	15	3.6	5	3.4	5	2.1	9	3.7	19	3.5	12	4
140	2.8	70	3.1	15	2.5	11	1.4	5	3.2	5	2.5	10	3.1	14	3.0	10	

Table 4. *Overall laboratory performance ratings for standard reference samples distributed in April 1998--Continued*

(SRS, standard reference sample; Lab, laboratory number; OWR, overall weighted rating for all sample types; OLR, overall laboratory rating for reported values of a sample type; V/105, number of reported values of 105 total possible values from all sample types; V/28,V/16,V/5,V/5,V/11,V/26,V13 and V/1 are number of reported values possible for T-153, M-146, N-57, N-58, P-30, GWT-3, GWM-3 and Hg-26 respectively; NR, not rated.)

		SRS =	T-153		M-146		N-57		N-58		P-30		GWT-3		GWM-3		Hg-26
Lab	OWR	V/105	OLR	V/28	OLR	V/16	OLR	V/5	OLR	V/5	OLR	V/11	OLR	V/26	OLR	V/13	OLR
141.1	2.4	88	2.4	23	2.3	13	2.4	5	3.4	5	3.0	10	1.8	20	2.6	11	0
141.2	2.3	6			2.7	3									2.0	3	
142	3.3	83	3.1	26	3.6	14	3.2	5	3.6	5			3.0	21	3.9	11	3
144	2.6	14	2.6	13													2
145	3.0	72	3.3	17	3.1	12	2.2	5	3.0	5	2.3	7	3.3	15	2.7	10	4
146	2.6	63	3.0	16	2.6	12	1.8	5	2.4	5	1.0	4	3.5	11	2.0	9	4
147	3.4	23	3.6	18	3.8	4											0
149	3.1	25	2.6	14	3.7	10											4
151	3.1	34	3.2	18									3.1	16			
154	2.3	42	2.5	21	1.4	12	2.8	4	3.5	4							4
158	2.7	43	2.5	17	3.3	7	3.0	5	3.4	5	0.5	4			3.0	4	4
180	3.0	72	2.9	18	3.0	12	3.8	4	3.4	5	2.6	10	3.2	14	3.0	9	
183	2.2	25	2.9	9	1.8	5	2.0	4	0.8	4	3.3	3					
190	2.5	74	2.4	16	2.6	12	3.2	5	1.6	5	2.8	9	2.3	16	2.4	11	
191	3.4	57	3.2	21	3.6	8	3.0	2	3.5	2			3.4	17	3.6	7	
193	3.1	21	3.1	14	1.5	2	4.0	2	4.0	2							4
198	2.3	20	2.2	19													4
203	2.7	35	3.4	9	3.0	10	1.8	4	2.0	4	2.4	8					
204	3.3	31	3.2	18	3.3	6			3.4	5	4.0	2					
205	2.5	2							2.5	2							
208	1.8	10			2.3	3	0.0	2	3.0	2					1.7	3	
209	2.7	17	2.7	3	2.3	3	3.3	3	1.3	3	3.4	5					
212	3.5	64	3.8	17	3.7	13	1.0	4	3.4	5			3.6	14	3.5	10	3
213	2.6	15	1.6	8	3.7	3	3.5	2	4.0	2							
215	2.4	75	2.3	18	1.9	12	2.4	5	3.6	5	2.4	8	2.2	16	2.9	10	4
217	2.4	36	2.3	22	2.9	13											0
218	1.9	15	2.4	7	1.4	8											
220	2.8	58	2.8	17	2.8	8	2.0	5	1.4	5	1.5	2	3.5	13	3.1	7	4
221	2.8	44	3.1	15	3.0	4	1.8	5	0.8	5			3.5	14			4
224	2.5	59	1.4	11	3.2	10	3.6	5	4.0	5	3.0	10	1.0	9	2.9	9	
227	2.7	27	3.0	16	2.4	11											
228	3.4	8									3.4	8					
230	2.9	9			2.9	9											
234	3.3	82	3.4	25	3.5	15	2.3	4	2.0	4			3.5	21	3.4	12	2
235	2.7	33	2.7	17									2.7	15			3
236	2.7	71	2.5	23	3.1	15							2.5	21	2.7	12	
240	2.6	91	2.9	23	1.7	15	2.0	5	1.0	5	2.4	11	3.1	20	3.3	12	
241	2.8	85	3.1	21	2.8	13	3.0	5	3.4	5	1.6	10	2.9	19	2.8	11	3
243	3.1	12			4.0	2	2.8	5	2.3	3	4.0	2					
244	3.8	5			3.7	3					4.0	2					
245	2.4	15			2.4	14											2
247	1.6	68	1.4	23			1.2	5	2.0	5	2.6	5	1.1	18	2.1	11	4
249	1.6	40	1.9	15	1.0	10							1.6	15			
254	3.1	46	3.2	17	3.1	8							3.1	13	2.9	8	
255	3.1	78	3.3	19	2.9	14	2.2	5	3.4	5	2.8	4	3.3	18	2.8	12	4
256	2.3	56	1.9	19	2.6	12							2.2	16	3.2	9	NR
258	1.9	22	1.8	4	2.0	8							2.0	3	1.7	7	
259	3.7	65	3.8	20	3.5	13							3.8	19	3.9	12	2
262	2.7	19			2.5	10									3.0	9	
265	3.3	70	3.2	25	3.2	12							3.5	22	3.1	10	3
268	1.9	28	1.6	5	1.8	10							2.3	4	1.9	9	
270	3.1	12			2.7	7									3.6	5	
273	2.0	45	2.3	18	2.7	14							0.7	13			
274	1.3	44	0.7	12	1.7	11							1.6	11	1.3	10	
277	1.5	42	1.7	13	1.9	9							0.7	12	1.8	8	
283	2.5	81	2.5	25	2.9	15					1.0	8	3.0	20	2.0	12	0
284	1.2	82	1.3	22	0.6	14	0.0	3	0.8	5	2.3	7	1.3	19	1.2	11	2
287	2.0	55	2.3	14	2.3	10					1.2	9	1.7	13	2.2	9	
289	2.8	72	2.9	22	2.7	11					3.0	10	2.2	19	3.4	9	3
291	0.3	3			1.0	1	0.0	1	0.0	1							
292	2.6	63	2.5	17	3.1	11	2.0	4	2.0	4			2.4	16	2.9	10	2
296	2.8	58	3.1	25	2.3	7							2.9	21	1.8	5	
297	1.6	10					1.6	5	1.6	5							
298	3.0	1															3
300	1.7	35			1.3	8							2.3	21	0.0	6	
304	3.3	32	3.5	17									3.3	14			0
306	1.6	19	0.9	7	2.7	3	1.8	4	1.8	5							
307	2.3	24	2.3	14	2.1	7			2.3	3							

Table 5. *Laboratory performance ratings for standard reference sample T-153 (trace constituents)*

(MPV, most probable value; µg/L, micrograms per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/28, number of reported values of 28 possible values; RV, reported value; <, less than.)

Rating	Absolute Z-value	Rating	Absolute Z-value
4 (Excellent)	0.00 - 0.50	1 (Marginal)	1.51 - 2.00
3 (Good)	0.51 - 1.00	0 (Unsatisfactory)	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)		Ca (Calcium)	
			MPV =	6.24	µg/L	35.0	µg/L	0.50	µg/L	99.4	µg/L	184	µg/L	insuff. data		27.5	mg/L
			F-pseudosigma =	0.74		5.1		0.24		7.4		8				1.0	
Lab	OLR	V/28		RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	3.7	25		6.23	4	32.5	4	< 1	NR	97.1	4	190	3	< 1	NR	27.6	4
3	1.5	24		7.00	2	18.0	0	< 10	NR	104.0	3	198	1	< 1	NR	29.9	1
5	3.1	24		5.00	1	37.0	4	1.89	0	100.0	4	183	4	< 0.5	NR	27.0	4
10	3.3	8						< 1	NR								
11	2.6	16								87.0	1	182	4			27.6	4
13	2.5	20		5.92	4			< 5	NR			192	2	< 4	NR	30.1	1
16	2.5	22		5.10	1	33.3	4			94.3	3	176	3			27.9	4
18	3.4	21		6.40	4	< 100	NR	< 2	NR	98.0	4	180	4	< 1	NR	27.5	4
19	3.0	9										184	4				
21	2.0	1															
23	1.7	19		7.56	1	96.0	0	< 10	NR	200.0	0	114	0	5.00	NR	26.0	2
24	3.6	16								98.8	4	186	4			27.3	4
25	2.8	15								101.0	4	188	3			28.4	3
26	3.1	15		6.27	4			< 0.7	NR	87.2	1	189	3				
28	3.1	12								97.8	4	177	3			26.8	3
30.1	3.3	22		6.10	4	31.0	3	0.27	3	104.0	3	183	4	< 0.1	NR	26.8	3
30.2	2.3	4														25.3	1
32	3.4	24		6.10	4	34.5	4			101.0	4	181	4			26.8	3
33	2.7	10				70.0	0					196	1			27.5	4
34	1.8	4		6.68	3												
36	2.7	20		< 10	NR	< 100	NR	< 5	NR	83.0	0	174	2	< 1	NR	25.7	2
40	3.0	22		6.00	4	40.0	3			97.0	4	181	4			26.0	2
42	3.1	23		5.59	3	31.6	3	< 2	NR	98.5	4	191	3	< 2	NR	28.8	3
43	3.9	7														28.0	4
45	2.6	11						1.0000	3							27.2	4
48	3.0	22		6.20	4	34.6	4	0.50	4	93.0	3	173	2	< 0.04	NR	30.8	0
50	3.4	24		6.10	4	32.7	4	< 1	NR	95.5	3	190	3	< 1	NR	27.6	4
51	3.8	4														27.4	4
59	2.8	16														28.2	3
64	3.4	5														27.0	4
68	1.3	21		3.50	0	45.4	1	< 0.95	NR	22.3	0	19	0	0.0003	NR	28.8	3
69	3.2	17		5.93	4	35.0	4	< 5	NR			179	3	< 2	NR	26.9	4
70	3.6	18		< 10	NR	< 100	NR	< 10	NR			186	4	< 2	NR	28.8	3
76	3.5	10				36.7	4			107.5	2	188	3			27.1	4
81	2.3	12				< 104	NR	< 2	NR			175	2	< 1	NR	26.8	3
83	3.0	12										181	4			27.1	4
84	2.2	5														27.3	4
85	3.1	10		10.00	0					100.0	4	184	4			26.8	3
87	1.4	17		12.00	0							190	3			25.2	1
89	2.4	20		6.37	4	41.9	2	< 2	NR			164	0	< 2	NR	26.0	2
91	3.5	2															
96	2.8	12		6.50	4			< 1	NR			210	0	< 10	NR		
97	2.7	15		5.85	3	32.9	4					188	3				
100	3.3	24		6.25	4	34.8	4	< 2	NR	102.0	4	182	4	< 1	NR	26.9	4
107	2.1	14		6.30	4	28.7	2	< 5	NR			194	2			30.3	0
109	2.9	12						0.45	4							27.8	4
110	3.0	4				32.8	4									27.0	4
113	3.6	19		6.50	4	31.3	3	< 1.5	NR			181	4	< 0.1	NR	27.7	4
114	1.7	7		11.00	0												
118	2.1	10		6.10	4			< 4	NR								
121	3.9	7										185	4			27.9	4
126	1.8	9		4.40	0												
127	3.0	23		6.41	4	< 30	NR	< 2	NR	94.0	3	181	4	< 0.4	NR	27.6	4
131	2.2	18		10.00	0					108.0	2	182	4	< 1	NR	26.0	2
133	2.5	10		< 6	NR			< 5	NR			184	4	< 1	NR	26.7	3
134	3.9	24		6.07	4	36.5	4	< 1	NR	101.1	4	185	4	< 0.5	NR	27.4	4
138	3.5	22		5.85	3	35.6	4	< 2	NR	104.0	3	188	3	< 0.02	NR	27.9	4
140	3.1	15		7.00	2							194	2			28.5	3
141	2.4	23		11.70	0	61.1	0	0.61	4	107.0	2	174	2	0.09	NR	25.6	2
142	3.1	26		6.49	4	37.5	4	0.70	3	100.0	4	189	3	< 1	NR	27.7	4

Table 5. *Laboratory performance ratings for standard reference sample T-153 (trace constituents)--Continued*

(MPV, most probable value; µg/L, micrograms par liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/28, number of raported values of 28 possibla values; RV, reported value; <, less than.)

Rating	Absolute Z-valua	Rating	Absoluta Z-value
4 (Excellent)	0.00 - 0.50	1 (Marginal)	1.51 - 2.00
3 (Good)	0.51 - 1.00	0 (Unsatisfactory)	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)		Ca (Calcium)	
			MPV =	6.24	µg/L	35.0	µg/L	0.50	µg/L	99.4	µg/L	184	µg/L	insuff. data		27.5	mg/L
			F-pseudosigma =	0.74		5.1		0.24		7.4		8				1.0	
Lab	OLR	V/28		RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
144	2.6	13		5.90	4			< 2	NR					< 0.06	NR	25.0	1
145	3.3	17				< 180	NR	< 39	NR	104.0	3	189	3	< 2	NR	27.9	4
146	3.0	16		< 10	NR	< 200	NR	< 10	NR			192	2	< 4	NR	26.7	3
147	3.6	18				32.5	4	< 0.09	NR			182	4	< 0.09	NR		
149	2.6	14			4	30.0	3	< 1	NR			180	4	< 0.5	NR	27.7	4
151	3.2	18		6.20	2	32.5	4	0.45	4			181	4				
154	2.5	21		5.48		24.7	1			100.0	4	177	3			25.8	2
158	2.5	17			3	37.6	3			96.9	4	178	3			29.4	2
180	2.9	18		6.67	4	38.6	3	< 49.4	NR	127.0	0	187	4	0.50	NR	28.2	3
183	2.9	9		6.49	1												
190	2.4	16		7.46		33.3	4	0.13	2							26.4	3
191	3.2	21			4	34.8	4	0.37	3	78.0	0					27.4	4
193	3.1	14		6.10	3			< 5	NR					< 1	NR	27.2	4
198	2.2	19		5.82		41.8	2	< 10	NR			199	1	< 1	NR	28.7	3
203	3.4	9			4											27.0	4
204	3.2	18		6.20		32.0	3	0.70	3			189	3	< 0.1	NR	26.9	4
209	2.7	3			4												
212	3.8	17		6.00	1	< 100	NR	< 5	NR	< 100	NR	180	4	< 1	NR	27.9	4
213	1.6	8		7.60	0			< 1	NR					< 0.2	NR		
215	2.3	18		9.60	4					96.0	4	190	3			27.8	4
217	2.3	22		6.30	0					113.0	1	198	1	0.43	NR	28.6	3
218	2.4	7		139.10												27.5	4
220	2.8	17			0					103.3	3	188	3			27.7	4
221	3.1	15		8.11		34.4	4	0.50	4							27.5	4
224	1.4	11										157	0			26.1	2
227	3.0	16			4							196	1			31.5	0
234	3.4	25		6.24	3	32.4	3	0.50	4	104.0	3	179	3	< 1	NR	27.2	4
235	2.7	17		6.65	2	35.9	4			94.2	3	199	1	0.15	NR		
236	2.5	23		7.00	3	70.0	0	17.00	0	94.0	3	183	4	0.00	NR	26.9	4
240	2.9	23		5.74	4	29.4	2	< 10	NR	97.7	4	179	3	< 25	NR	26.5	3
241	3.1	21		6.20	NR	29.9	3	0.36	3			181	4			24.8	1
247	1.4	23		< 10	2	< 10	0	< 50	NR	60.0	0	178	3	< 10	NR	26.4	3
249	1.9	15		5.20		53.3	0	1.70	0								
254	3.2	17			4	37.8	3			89.2	2					28.3	3
255	3.3	19		6.22	NR	44.5	1	< 2	NR	105.0	3	192	2	< 0.2	NR	27.9	4
256	1.9	19		< 10		15.0	0			< 10	0	175	2	< 10	NR	27.5	4
258	1.8	4			4					80.4	0					28.3	3
259	3.8	20		6.00	4	40.0	3			101.2	4	184	4			27.9	4
265	3.2	25		6.20		35.0	4	0.30	3	100.0	4	185	4	< 0.1	NR	27.8	4
268	1.6	5			3											23.7	0
273	2.3	18		6.90		36.5	4			38.0	0	190	3			27.4	4
274	0.7	12			2											18.8	0
277	1.7	13		7.00	1							168	1			28.5	3
283	2.5	25		4.90	0	168.0	0	< 1	NR	102.0	4	183	4	< 1	NR	28.2	3
284	1.3	22		60.00		40.0	3	1.00	1			36	0	0.00	NR	21.0	0
287	2.3	14			2	29.2	2									28.8	3
289	2.9	22		7.00	2	38.0	3	< 0.5	NR	106.0	3	192	2	< 0.5	NR	28.2	3
292	2.5	17		7.00	4	28.0	2	< 3	NR			193	2	< 1	NR	29.0	2
296	3.1	25		6.10	4	41.0	2	0.42	4	88.0	1	174	2	< 0.1	NR	28.0	4
304	3.5	17		6.20	NR	38.0	3	0.55	4			173	2			29.0	2
306	0.9	7		< 10	0												
307	2.3	14		4.65				0.18	2							65.0	0

Table 5. *Laboratory performance ratings for standard reference sample T-153 (trace constituents)–Continued*

(MPV, most probable value; µg/L, micrograms per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/28, number of reported values of 28 possible values; RV, reported value; <, less than.)

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

Analyte =	Cd (Cadmium)		Co (Cobalt)		Cr (Chromium)		Cu (Copper)		Fe (Iron)		K (Potassium)		Li (Lithium)	
MPV =	16.0	µg/L	insuff. data		14.9	µg/L	24.0	µg/L	75.0	µg/L	1.60	mg/L	53.4	µg/L
F-pseudosigma =	1.1				1.1		1.5		5.9		0.11		3.6	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	16.0	4	< 1	NR	14.9	4	23.7	4	74.7	4	1.54	3	54.6	4
3	17.3	2	< 5	NR	23.0	0	27.0	1	83.0	2	1.70	3	68.0	0
5	16.0	4	< 3	NR	14.9	4	24.6	4	77.0	4	1.74	2	51.4	3
10	15.2	3			15.9	3	23.0	3	77.0	4				
11	16.4	4					24.4	4			1.42	1	41.0	0
13	14.0	1	< 10	NR	15.6	3	21.9	2	67.6	2	1.61	4		
16	15.7	4			15.8	3	23.1	3	72.7	4	1.77	1	59.3	1
18	16.0	4	< 5	NR	14.0	3	25.0	3	73.0	4	1.68	3		
19	17.8	1			13.5	2	25.7	2	75.6	4				
21									82.0	2				
23	15.7	4			14.4	4	24.4	4	73.6	4	1.32	0		
24	16.1	4							76.2	4	1.38	1		
25	16.0	4					23.0	3	60.0	0	1.68	3	54.0	4
26	14.6	2			15.7	3	25.0	3	75.0	4			57.4	2
28	13.8	1					22.3	2	68.3	2	1.53	3		
30.1	17.0	3	< 0.1	NR	15.0	4	24.0	4	< 200	NR			48.9	2
30.2									171.0	0				
32	15.8	4			15.1	4	24.4	4			1.66	3	56.0	3
33									80.0	3	1.62	4		
34	17.2	2												
36	15.0	3			14.3	3	23.0	3	70.0	3	1.60	4		
40	15.0	3					19.0	0	75.0	4	1.58	4		
42	16.8	3	< 2	NR	14.6	4	23.7	4	76.9	4	1.66	4		
43									77.0	4	1.50	3		
45							29.0	0	65.0	1	1.58	4		
48	16.2	4	< 0.02	NR	14.7	4	23.2	3	74.0	4	1.67	3		
50	16.0	4	< 1	NR	15.0	4	23.4	4	67.8	2	1.52	3	52.5	4
51											1.56	4		
59	16.3	4			14.5	4	22.5	2	152.0	0	1.48	2		
64											1.63	4		
68	13.1	0	< 4	NR	12.8	1	23.0	3	76.0	4	1.62	4	77.0	0
69	15.1	3			15.8	3	< 50	NR	94.0	0	1.64	4	55.0	4
70	18.0	1	< 50	NR	14.6	4	25.4	3	76.0	4	1.65	4		
76					16.4	2								
81	16.0	4			15.0	4	3.0	0	66.0	1	1.87	0		
83	14.0	1			13.0	1	24.0	4	72.0	3				
84														
85							24.0	4			1.62	4		
87	18.0	1			36.0	0	25.0	3	89.0	0	1.24	0		
89	15.6	4	< 10	NR	14.8	4	23.0	3	80.1	3	1.44	2		
91									75.0	4				
96	15.5	4			14.1	3	23.5	4	82.0	2				
97					17.3	0	24.5	4	82.6	2				
100	15.8	4	< 5	NR	14.0	3	23.8	4	72.6	4	1.58	4	52.8	4
107	16.0	4					27.4	0	106.0	0	1.60	4		
109									85.0	1	1.57	4	53.4	4
110														
113	15.9	4			14.3	3	24.5	4	74.7	4	1.67	3		
114	16.0	4			19.0	0	21.0	1						
118	16.7	3			17.0	1	25.7	2						
121														
126	18.0	1			< 10	0	27.0	1	100.0	0				
127	17.0	3	< 0.8	NR	15.0	4	22.9	3	74.1	4	1.69	3	55.2	4
131	15.0	3	< 10	NR	< 30	NR			59.8	0	1.60	4	59.9	1
133	18.3	0					26.8	1	79.5	3				
134	15.4	3	< 1	NR	14.5	4	24.0	4	73.1	4	1.62	4	53.2	4
138	15.8	4	< 0.1	NR	14.6	4	24.9	3	71.9	3	1.58	4		
140	16.0	4			17.0	1	27.0	1	76.0	4	1.55	4		
141	15.6	4	0.35	NR	16.6	1	24.8	3	126.0	0	1.37	0		
142	16.8	3	0.040	NR	13.9	3	21.5	1	75.0	4	1.51	3	50.8	3

Table 5. *Laboratory performance ratings for standard reference sample T-153 (trace constituents)--Continued*

(MPV, most probable value; µg/L, micrograms per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/28, number of reported values of 28 possible values; RV, reported value; <, less then.)

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

Analyte =	Cd (Cadmium)		Co (Cobalt)		Cr (Chromium)		Cu (Copper)		Fe (Iron)		K (Potassium)		Li (Lithium)	
MPV =	16.0	µg/L	insuff. data		14.9	µg/L	24.0	µg/L	75.0	µg/L	1.60	mg/L	53.4	µg/L
F-pseudosigma =	1.1				1.1		1.5		5.9		0.11		3.6	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
144	14.7	2			15.3	4	23.2	3	71.5	3				
145	17.0	3	< 12	NR	< 15	NR	< 28	NR	74.0	4	1.44	2	51.0	3
146	15.9	4	< 10	NR	14.2	3	< 25	NR	77.0	4	1.64	4		
147	16.0	4	< 0.004	NR	14.5	4	22.8	3					52.3	4
149					16.0	3					1.60	4		
151	16.4	4			14.1	3	22.7	3	55.4	0			51.5	3
154	14.7	2			14.8	4	18.0	0	74.5	4	2.10	0		
158	9.3	0	1.7	NR	13.4	2	21.9	2	68.7	2	1.00	0		
180	17.6	2	< 5.48	NR	14.5	4	27.1	0	74.3	4	1.47	2		
163	13.9	1			14.2	3					1.60	4		
190	17.5	2			13.5	2	24.0	4	76.5	4	1.53	3		
191	17.5	2	0.10	NR	14.9	4	24.1	4			1.59	4		
193	14.9	3			14.5	4	25.5	2			1.66	3		
198	17.3	2	19.3	NR	16.8	1	26.4	1	79.9	3	1.65	4		
203							25.0	3	80.0	3	1.60	4		
204	15.5	4			13.9	3	24.1	4	44.5	0	1.66	3		
209											1.17	0		
212	16.0	4	< 1	NR	15.0	4	24.0	4	< 100	NR	< 5	NR		
213	14.0	1	< 1	NR	16.6	1	32.0	0	60.0	0				
215	7.6	0			17.4	0	22.0	2	78.0	3				
217	17.1	3			17.4	0	25.7	2					56.2	3
218									70.0	3	2.18	0		
220	15.9	4					23.7	4	71.7	3			52.2	4
221	15.5	4	0.5	NR	15.4	4	24.0	4			1.56	4		
224	12.7	0					40.3	0	62.9	0	1.66	3		
227	15.4	3			14.7	4	23.6	4	74.9	4	1.53	3		
234	14.8	2	0.3	NR	14.9	4	23.5	4	72.6	4	1.53	3	53.9	4
235	14.1	1			14.3	3	22.9	3						
236	15.0	3	< 9	NR	13.0	1	22.0	2	72.0	3	1.51	3	51.0	3
240	16.1	4	< 20	NR	11.2	0	23.7	4	74.8	4	1.57	4		
241	16.6	3			14.6	4	23.5	4	126.0	0	1.50	3		
247	20.0	0	< 10	NR	13.0	1	32.0	0	51.0	0	1.55	4	62.0	0
249	15.7	4			15.0	4	23.8	4	82.0	2	2.00	0		
254	16.6	3					23.1	3	75.8	4	1.39	1	56.7	3
255	15.4	3	1.72	NR	14.4	4	26.4	1	75.1	4	1.62	4		
256	17.0	3	< 10	NR			12.0	0	67.0	2	1.32	0	40.0	0
258														
259	16.0	4			15.2	4	24.3	4	76.0	4	1.60	4		
265	16.5	4	< 0.05	NR	18.2	0	24.5	4	82.0	2	1.65	4	57.0	2
268											2.08	0		
273	17.9	1			12.5	0	11.6	0	74.5	4	1.48	2	51.0	3
274	17.0	3					18.8	0	68.8	2	1.85	0		
277	14.8	2			15.5	3	25.3	3	67.0	2	1.20	0		
283	15.9	4	< 5	NR	11.1	0	27.8	0	76.5	4	1.68	3	5.5	0
284	16.0	4	3.75	NR	16.0	3	24.0	4	61.2	0	1.86	0		
287	17.5	2			16.7	1	24.9	3	73.0	4	2.41	0		
289	16.0	4	0.07	NR	16.0	3	25.0	3					54.0	4
292	14.8	2			15.0	4	26.0	2	77.0	4	1.50	3		
296	15.8	4	0.07	NR	14.3	3	22.7	3	122.0	0	1.12	0	53.0	4
304	16.3	4			14.2	3	22.8	3			1.65	4		
306	15.0	3			92.8	0	21.8	2						
307	15.9	4			15.8	3	24.0	4	80.0	3				

Table 5. *Laboratory performance ratings for standard reference sample T-153 (trace constituents)--Continued*

(MPV, most probable value; µg/L, micrograms per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/28, number of reported values of 28 possible values; RV, reported value; <, less than.)

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

Analyte =	Mg (Magnesium)		Mn (Manganese)		Mo (Molybdenum)		Na (Sodium)		Ni (Nickel)		Pb (Lead)		Sb (Antimony)	
MPV =	8.72	mg/L	74.5	µg/L	154	µg/L	28.7	mg/L	32.2	µg/L	46.2	µg/L	25.7	µg/L
F-pseudosigma =	0.30		3.3		8		1.0		2.1		3.0		2.5	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	8.59	4	72.5	3	155	4	28.6	4	31.2	4	46.4	4	27.6	3
3	9.40	1	82.0	0	161	3	27.1	2	37.0	0	58.0	0	25.0	4
5	8.43	3	74.7	4	163	2	28.8	4	37.8	0	40.8	1	24.0	3
10			80.0	2							44.3	3		
11	8.68	4	76.0	4	154	4	26.7	2	35.1	2	47.5	4	25.6	4
13	9.43	1	78.7	2	163	2	28.9	4	32.8	4	46.6	4	23.2	3
16	8.63	4	71.7	3	155	4	28.0	4	28.6	1	58.0	0	32.1	0
18	8.59	4	75.0	4	77	0	28.2	4	32.0	4	45.0	4	23.3	3
19			76.2	4					32.0	4	45.8	4		
21														
23	8.83	4	81.6	1	160	3	15.5	0	29.6	2	51.0	1	29.0	2
24	8.66	4	75.6	4	159	3	28.3	4	32.5	4	46.1	4		
25	8.91	4	76.0	4			29.9	3	26.0	0				
26			75.7	4	160	3			31.0	3	49.4	2		
28	8.90	4					28.0	4	30.7	3				
30.1	8.71	4	73.0	4	163	2	31.9	0	32.0	4	45.0	4		
30.2	8.80	4					29.3	4						
32	9.30	2	76.0	4	163	2	28.7	4	33.5	3	46.0	4	23.6	3
33	8.94	4	80.0	2			28.6	4						
34											40.3	1		
36	8.10	2	69.4	2	143	2	25.7	0	31.5	4	43.0	2	25.0	4
40	8.76	4	72.0	3	150	4	28.6	4	30.0	2	47.0	4	25.0	4
42	8.82	4	75.8	4	160	3	26.7	2	33.3	3	49.9	2	27.5	3
43	8.60	4	76.0	4			28.0	4						
45	9.13	3	76.0	4			29.4	3			42.8	2		
48	9.43	1	68.0	1	160	3	30.4	2	31.8	4	47.3	4	26.2	4
50	8.81	4	72.0	3	160	3	28.5	4	31.6	4	44.6	3	26.8	4
51	8.82	4					27.6	3						
59	8.73	4	69.0	2			29.5	3	31.1	3	48.8	3	25.0	4
64	8.48	3					28.6	4						
68	8.99	3	79.5	2	129	0	30.8	2	29.7	2	56.4	0		
69	8.39	3	71.0	3			27.8	3	< 50	NR	44.0	3	23.3	3
70	8.79	4	75.1	4	150	4	29.1	4	< 50	NR	48.5	3	25.0	4
76	8.85	4	75.6	4					32.4	4	46.2	4	26.9	4
81	8.68	4	69.0	2			29.1	4			44.0	3		
83	8.58	4	73.0	4			28.8	4	30.0	2				
84	8.60	4	58.8	0			29.5	3			37.8	0		
85	8.49	3					28.1	4						
87	8.28	2	72.0	3	189	0	28.2	4	22.0	0	49.0	3		
89	8.73	4	71.3	3			28.8	4	34.3	2	46.3	4	22.7	2
91			76.7	3										
96			80.0	2					32.9	4	100.4	0	27.8	3
97			76.6	3	146	3	28.6	4	37.8	0	49.6	2	24.0	3
100	8.86	4	72.5	3	149	3	29.0	4	37.1	0	49.8	2	28.5	2
107	8.60	4	50.0	0			27.2	2			38.4	0		
109	8.67	4	74.5	4	136	0	28.6	4			37.2	0		
110	8.60	4												
113	8.98	3	74.4	4			29.2	4	31.1	3	47.7	4	26.8	4
114									28.0	1	48.0	3		
118			76.3	3			60.0	0	30.2	3	52.0	1		
121	8.80	4	77.0	3			28.5	4						
126			77.0	3					30.2	3	47.1	4		
127	8.54	4	71.4	3	165	2	29.8	3	30.2	3	48.3	3	22.2	2
131	8.60	4	66.9	0	153	4	28.0	4			35.0	0		
133	8.50	4							18.7	0	48.3	3		
134	8.65	4	76.0	4	155	4	29.6	3	32.2	4	45.5	4	25.3	4
138	8.75	4	75.2	4	154	4	28.8	4	34.5	2	47.2	4	25.7	4
140	8.80	4	73.0	4			28.6	4	34.0	3	46.0	4		
141	8.19	2	71.0	3	144	2	27.1	2	32.0	4	47.4	4	27.0	3
142	8.70	4	73.0	4	160	3	27.4	3	29.1	2	44.1	3	29.4	2

Table 5. *Laboratory performance ratings for standard reference sample T-153 (trace constituents)--Continued*

(MPV, most probable value; µg/L, micrograms per liter; mg/L, milligrams per liter; Lab, leboratory number; OLR, overall laboratory rating for all reported values; V/28, number of reported values of 28 possible values; RV, reported value; <, less than.)

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

Analyte =	Mg (Magnesium)		Mn (Manganese)		Mo (Molybdenum)		Na (Sodium)		Ni (Nickel)		Pb (Lead)		Sb (Antimony)	
MPV =	8.72	mg/L	74.5	µg/L	154	µg/L	28.7	mg/L	32.2	µg/L	46.2	µg/L	25.7	µg/L
F-pseudosigma =	0.30		3.3		8		1.0		2.1		3.0		2.5	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
144	8.40	3							33.2	4	44.3	3	20.1	0
145	8.68	4	75.0	4	158	4	28.3	4	33.0	4	< 84	NR		
146	8.71	4	77.3	3	159	3	27.8	3	33.5	3	45.7	4	23.3	3
147	8.90	4	72.0	3	149	3			30.4	3	47.9	3	25.8	4
149	8.50	4					29.0	4	38.0	0	4.0	0	21.0	1
151			70.0	2	160	3			30.8	3	44.3	3	26.9	4
154	8.30	3	70.8	3	153	4	27.5	3	30.4	3	45.9	4	23.7	3
158	8.80	4	73.5	4			26.6	2	31.7	4	32.5	0		
180	8.88	4	76.5	3	158	4	29.4	3	32.1	4	37.2	0	< 46.1	NR
183	8.67	4					28.7	4	31.2	4	47.8	3		
190	8.02	1	84.5	0			28.0	4	34.8	2	44.0	3		
191	8.94	4	76.0	4			29.2	4	32.6	4	45.5	4		
193	8.40	3					27.8	3	32.6	4	50.6	2	25.4	4
198	8.93	4	82.6	0	167	1	29.9	3	32.5	4	48.1	3	28.2	3
203	8.24	2	76.0	4			27.5	3						
204	8.74	4	71.8	3			28.7	4	31.6	4	45.5	4	30.6	1
209							28.8	4						
212	8.80	4	73.0	4			28.4	4	32.0	4	47.0	4	26.0	4
213									32.2	4	48.2	3		
215	8.90	4	76.0	4	154	4	29.7	3	39.0	0	51.0	1	22.0	2
217	8.94	4	79.4	2	167	1	28.8	4	44.4	0	43.0	2	26.0	4
218	9.11	3	78.9	2			31.1	1						
220	8.60	4	72.1	3	152	4	28.4	4	51.0	0				
221	8.31	3	77.0	3	15	0	29.4	3	32.4	4	43.7	3		
224	8.45	3	59.1	0			27.7	3			85.3	0		
227	9.12	3	75.3	4			28.2	4	33.2	4	41.1	1		
234	8.62	4	72.9	4	144	2	28.5	4	33.3	3	46.9	4	27.8	3
235	8.33	3	6.3	0	156	4			32.7	4	45.4	4	28.6	2
236	8.72	4	72.0	3	144	2	28.3	4	33.0	4	47.0	4	7.0	0
240	8.40	3	73.6	4	152	4	27.3	3	33.9	3	48.8	3	21.9	1
241	8.30	3	73.1	4	155	4	28.5	4	32.0	4	42.0	2	27.8	3
247	8.44	3	74.0	4	142	2	27.5	3	36.0	1	< 50	NR	23.0	2
249			50.0	0	155	4	31.6	0	30.2	3	41.6	1		
254	9.03	3	73.0	4			30.2	2	33.1	4				
255	8.82	4	77.2	3	154	4	29.1	4	32.1	4	47.5	4	29.4	2
256	8.42	3	70.0	2	149	3	28.4	4	< 30	NR	45.0	4	27.0	3
258	10.59	0												
259	8.90	4	76.7	3	161	3	28.7	4	32.9	4	45.3	4		
265	9.00	3	76.0	4	148	3	29.5	3	34.0	3	47.0	4	26.0	4
268	8.20	2					29.6	3						
273	8.96	3	75.2	4			28.8	4	37.3	0	46.2	4		
274	17.66	0	31.8	0			33.3	0			31.0	0		
277	8.50	4	63.2	0			22.4	0	30.4	3				
283	9.14	3	82.7	0	149	3	29.3	4	33.3	3	49.2	3	25.2	4
284	8.00	1	68.8	1	17	0	31.1	1	28.0	1	45.0	4	27.0	3
287	8.97	3	77.0	3			30.4	2	34.0	3	42.7	2		
289	9.61	0	74.0	4	159	3	31.1	1	34.0	3	47.0	4	43.0	0
292	8.00	1	78.0	3	154	4	27.4	3	39.0	0			27.0	3
296	9.10	3	72.4	3	152	4	29.4	3	30.8	3	44.1	3	25.2	4
304			71.0	3	152	4			32.0	4	46.5	4	25.6	4
306									45.8	0	59.7	0		
307	9.00	3	70.0	2	16	0	30.0	3	31.0	3	42.4	2		

Table 5. *Laboratory performance ratings for standard reference sample T-153 (trace constituents)--Continued*

(MPV, most probable value; µg/L, micrograms per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/28, number of reported values of 28 possible values; RV, reported value; <, less than.)

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

Analyte =	Se (Selenium)		SiO_2 (Silica)		Sr (Strontium)		Tl (Thallium)		U (Uranium)		V (Vanadium)		Zn (Zinc)	
MPV =	9.00	µg/L	5.79	mg/L	311	µg/L	20.4	µg/L	6.90	µg/L	19.0	µg/L	72.6	µg/L
F-pseudosigma =	1.33		0.22		13		1.9		0.44		1.0		5.1	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	8.60	4	5.59	3	313	4	22.1	3	7.11	4	18.7	4	78.1	2
3	7.00	2	6.10	2	323	3	22.0	3			22.0	0	86.0	0
5	7.92	3	5.86	4	312	4					19.0	4	73.0	4
10	9.00	4											75.0	4
11					255	0	15.7	0						
13	6.90	1	6.02	3			20.5	4			11.7	0	76.4	3
16			2.54	0	299	3					18.1	3	76.7	3
18	9.90	3			300	3	23.1	2			19.0	4	74.0	4
19													67.4	2
21														
23	15.00	0											62.6	1
24			5.92	4	318	4					17.7	2	72.7	4
25			2.61	0	326	3							73.0	4
26	9.15	4									19.4	4	72.9	4
28					310	4					19.1	4		
30.1	10.00	3			305	4	19.0	3	6.90	4	19.0	4	72.0	4
30.2														
32	9.20	4	5.90	4	321	4	21.1	4	7.70	1	19.6	3	66.0	2
33			5.28	1	320	4								
34	6.94	1												
36	9.00	4	5.71	4			18.8	3			19.2	4	65.5	2
40	7.00	2	5.61	3	299	3	28.0	0			17.0	1	70.0	3
42	11.20	1	5.75	4	320	4	22.3	2			18.8	4	80.6	1
43			5.90	4										
45	7.58	2											76.0	3
48	8.90	4					19.3	3			16.9	1	68.0	3
50	9.00	4	5.66	4	314	4	19.9	4			21.5	0	66.0	2
51														
59	9.98	3	6.10	2			21.7	3					78.6	2
64			5.50	2										
68	< 1.3	NR			31	0	17.5	1			15.1	0	81.0	1
69	8.70	4					21.4	3					70.0	3
70	9.25	4	5.77	4	312	4	18.8	3			< 50	NR	74.0	4
76														
81	6.20	0												
83			5.60	3									66.0	2
84														
85	11.00	2											69.0	3
87	900	0	5.85	4									58.0	0
89	5.44	0	6.05	3			< 10	0			24.6	0	81.9	1
91														
96	9.02	4											76.0	3
97	8.36	4	5.56	3			22.6	2						
100	9.02	4	5.71	4	307	4	22.8	2			19.0	4	91.6	0
107	8.90	4											72.8	4
109	7.33	2			312	4								
110			7.71	0										
113	8.11	3			292	3	20.0	4					73.1	4
114													69.0	3
118			5.80	4									90.8	0
121			5.80	4	319	4								
126													73.0	4
127	7.53	2	5.40	2	603	0	21.0	4	< 200	NR	18.3	3	66.3	2
131	41.00	0	5.80	4	300	3					21.0	1	73.6	4
133	8.60	4											75.5	3
134	8.03	3	5.80	4	307	4	20.7	4			18.8	4	73.3	4
138	8.90	4			317	4	26.4	0			19.1	4	72.7	4
140			5.61	3									72.0	4
141	8.00	3			317	4	20.4	4			19.4	4	65.9	2
142	11.00	2	6.02	3	317	4	20.9	4	7.50	2	19.0	4	64.8	1

Table 5. *Laboratory performance ratings for standard reference sample T-153 (trace constituents)--Continued*

(MPV, most probable value; µg/L, micrograms per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/28, number of reported values of 28 possible values; RV, reported value; <, less than.)

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

Analyte =	Se (Selenium)		SiO_2 (Silica)		Sr (Strontium)		Tl (Thallium)		U (Uranium)		V (Vanadium)		Zn (Zinc)	
MPV =	9.00	µg/L	5.79	mg/L	311	µg/L	20.4	µg/L	6.90	µg/L	19.0	µg/L	72.6	µg/L
F-pseudosigma =	1.33		0.22		13		1.9		0.44		1.0		5.1	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
144	8.30	3					16.5	1					68.0	3
145			5.90	4	312	4	< 15	0			20.0	3	77.0	3
146	< 10	NR					24.2	1			17.2	1	69.4	3
147			5.85	4	294	3	20.1	4	7.32	3	18.3	3	70.4	4
149	8.00	3					22.0	3	3.20	0				
151	9.60	4			311	4	19.3	3					71.8	4
154	8.80	4			372	0	20.3	4			23.1	0	64.2	1
158											19.2	4	71.0	4
180	< 70	NR					< 47.6	NR			19.0	4	72.6	4
183											20.2	2		
190	8.61	4	2.50	0									63.3	1
191	10.90	2	5.84	4	301	4	20.3	4	7.40	2	19.7	3	89.8	0
193	8.90	4					14.5	0					71.0	4
198	8.89	4					17.1	1			< 10	0	79.2	2
203			5.80	4										
204	8.00	3					20.0	4					68.8	3
209														
212	9.20	4	5.90	4			21.0	4			19.0	4	73.0	4
213							20.9	4						
215	16.50	0	14.24	0									72.0	4
217	9.00	4	5.90	4	316	4	17.0	1	6.10	1	20.3	2	72.6	4
218					317	4								
220	8.60	4			284	0					22.6	0	69.5	3
221	9.68	3											236.0	0
224													71.3	4
227	10.90	2									18.5	4	68.9	3
234	9.29	4	5.69	4	304	4	17.0	1			18.7	4	66.2	2
235	10.60	2			322	3	21.7	3					71.5	4
236	< 20	NR	4.33	0	304	4					16.0	0	68.0	3
240	1.29	0	5.70	4	315	4	22.4	2			4.9	0	70.5	4
241	10.40	2	5.60	3			19.9	4			18.8	4	74.9	4
247	68.00	0	6.48	0	294	3	61.0	0			27.0	0	67.0	2
249	3.20	0	6.10	2									75.0	4
254			5.83	4	321	4			6.66	3			71.6	4
255	8.92	4					< 18.6	NR			19.3	4	74.2	4
256			5.00	0	292	3					18.0	3	44.0	0
258														
259	10.40	2	5.70	4	309	4							71.6	4
265	9.50	4	5.30	1	312	4	19.3	3	7.50	2	19.0	4	73.0	4
268														
273			5.60	3	300	3							56.6	0
274			5.26	1									12.6	0
277													60.8	0
283	8.80	4	5.72	4	299	3	19.9	4	6.80	4	21.4	0	78.8	2
284	12.00	0	6.64	0	114	0	2.0	0			280.0	0	79.0	2
287													80.0	2
289	10.00	3			297	3	20.0	4	6.90	4	19.0	4	74.0	4
292	10.00	3											7.6	0
296	8.40	4			307	4	19.7	4	6.90	4	18.3	3	72.6	4
304	10.00	3					21.0	4			19.0	4	72.0	4
306													81.7	1
307	11.70	1											78.0	2

Table 6. *Laboratory performance ratings for standard reference sample M-146 (major constituents)*

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

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

			Analyte =	Alkalinity		B (Boron)		Ca (Calcium)		Cl (Chloride)		DSRD (Dissolved Solids)	
			MPV =	56.7 mg/L		13.9 µg/L		26.3 mg/L		46.1 mg/L		242 mg/L	
			F-pseudosigma =	2.5		2.3		1.1		3.8		12	
Lab	OLR	V/16		RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	3.7	15		57.8	4	14.2	4	26.8	4	44.0	3	248	3
3	2.0	15		60.0	3	13.0	4	29.3	0	47.4	4	50	0
5	3.3	15		59.4	3	14.0	4	25.5	3	47.5	4	265	1
10	3.9	12		57.6	4			26.0	4	45.1	4	242	4
11	2.4	14		55.4	3			26.3	4	48.0	4	268	0
13	2.0	13		45.4	0			27.5	2	43.8	3	248	3
16	2.9	15		91.0	0	12.1	3	26.1	4	46.6	4	253	3
18	3.1	10				< 50	NR	26.3	4	53.7	1		
19	3.2	10		57.0	4			26.3	4	42.5	3	241	4
23	2.6	13		56.0	3			23.9	0	37.5	0	236	3
24	3.8	12		58.8	4			26.2	4	45.4	4		
25	2.4	14		64.0	0			27.4	2	44.9	4	232	3
26	3.4	5		55.0	3							249	3
28	3.1	7				14.3	4	26.0	4				
30.1	3.1	9				13.0	4	25.2	2	46.9	4		
30.2	3.0	3						27.2	3				
32	2.9	15		60.3	3	12.7	3	25.0	2	45.4	4	229	2
33	3.7	11		57.6	4			25.8	4	44.8	4		
34	4.0	1											
36	2.8	13		58.0	4	< 50	NR	24.5	1	47.0	4	268	0
40	2.9	15		57.9	4	6.0	0	25.3	3	52.2	1	234	3
42	2.9	14		56.8	4	10.1	1	27.0	3	49.0	3		
43	3.5	11		58.0	4			27.0	3	41.0	2	244	4
45	3.7	10		56.6	4			25.8	4	50.5	2	240	4
48	1.8	13		46.0	0	12.4	3	29.4	0	42.0	2	252	3
50	3.5	13		55.2	3	12.4	3	25.8	4	45.1	4	236	3
51	2.8	10		56.0	3			23.9	0	55.3	0	252	3
57	2.0	15		60.0	3	20.4	0	27.4	2	41.0	2	240	4
59	3.3	12		55.7	3			26.8	4	46.9	4	252	3
64	3.8	9						25.6	3	45.1	4		
68	2.3	13		90.5	0	101.0	0	26.0	4	52.3	1		
69	2.9	11		59.4	3			25.6	3	46.0	4	192	0
70	2.9	13		58.4	4			27.8	2	54.0	0	252	3
76	4.0	7				13.9	4	25.8	4			239	4
81	3.0	14		54.7	2			26.0	4	41.6	2	282	0
83	3.1	8		57.3	4			25.8	4	38.9	1		
84	3.0	6		56.9	4			23.2	0				
85	3.2	12		55.8	3	< 20	NR	25.5	3	48.5	3	240	4
86	3.2	12		55.8	3	<20	NR	25.5	3	48.5	3	240	4
87	2.1	10		59.9	3			24.2	1	51.0	2		
89	2.6	13		59.1	3			23.9	0	44.3	4	232	3
90	1.2	5		52.8	1			60.9	0			220	1
96	3.3	7		58.5	4					50.8	2	241	4
97	3.3	8		60.5	2					52.5	1	237	4
100	3.2	14		57.4	4	< 40	NR	25.9	4	49.4	3	208	0
107	3.3	4		56.6	4					41.5	2		
109	3.5	11		60.2	3			26.1	4	42.4	3	241	4
113	3.3	13		58.1	4			26.7	4	44.3	4	236	3
114	2.3	7		60.6	2					42.7	3	271	0
118	2.8	6		57.0	4							240	4
121	4.0	5						26.5	4				
127	3.5	14		59.0	4	< 15	NR	26.0	4	47.0	4	247	4
131	1.4	11				21.2	0	18.6	0	40.4	2		
133	3.0	4		57.5	4			25.6	3				
134	3.7	15		59.9	3	12.6	3	26.5	4	45.1	4	257	2
138	3.5	15		59.3	3	14.0	4	26.3	4	45.4	4	278	0
140	2.5	11						29.0	0	49.7	3	262	1
141.1	2.3	13		59.6	3	25.6	0	25.2	2	42.7	3	242	4
141.2	2.7	3								44.8	4		
142	3.6	14		60.0	3	< 30	NR	26.3	4	44.8	4	253	3

Table 6. *Laboratory performance ratings for standard reference sample M-146 (major constituents)--Continued*

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

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

			Analyte =	Alkalinity		B (Boron)		Ca (Calcium)		Cl (Chloride)		DSRD (Dissolved Solids)	
			MPV =	56.7 mg/L		13.9 µg/L		26.3 mg/L		46.1 mg/L		242 mg/L	
			F-pseudosigma =	2.5		2.3		1.1		3.8		12	
Lab	OLR	V/16		RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
145	3.1	12		42.0	0	< 23	NR	26.7	4	46.4	4		
146	2.6	12		59.8	3			26.6	4	51.2	2	229	2
147	3.8	4						26.8	4				
149	3.7	10		56.0	3			26.4	4	45.8	4	242	4
154	1.4	12		50.0	0			24.5	1	48.3	3	221	1
158	3.3	7		53.5	2					49.1	3	240	4
180	3.0	12		55.0	3	47.9	0	26.6	4	47.3	4		
183	1.8	5		70.0	0			27.2	3				
190	2.6	12		56.7	4			25.4	3	47.1	4	222	1
191	3.6	8						26.1	4	47.3	4		
193	1.5	2		59.4	3								
203	3.0	10		58.7	4			25.4	3	40.9	2		
204	3.3	6		58.7	4					42.4	3		
208	2.3	3								47.3	4		
209	2.3	3											
212	3.7	13		57.1	4	< 100	NR	26.4	4	46.8	4	238	4
213	3.7	3		57.0	4					43.7	3		
215	1.9	12		58.0	4	15.0	4	27.4	2			283	0
217	2.9	13		58.1	4			27.4	2	43.9	3	241	4
218	1.4	8		52.2	1			28.2	1				
220	2.8	8		58.2	4			26.7	4	49.5	3		
221	3.0	4						28.1	1				
224	3.2	10		58.0	4			25.3	3	47.5	4	240	4
227	2.4	11		57.5	4			30.1	0	43.6	3	249	3
230	2.9	9		57.1	4			26.7	4	48.8	3		
234	3.5	15		59.5	3	14.8	4	26.0	4	43.7	3	242	4
236	3.1	15		58.9	4	14.0	4	25.4	3	52.7	1	265	1
240	1.7	15		53.1	1	10.0	1	20.2	0	45.5	4	297	0
241	2.8	13		57.0	4			23.4	0	46.0	4	239	4
243	4.0	2											
244	3.7	3		60.0	3								
247	2.4	14		59.0	4	< 50	NR	< 0.5	0	46.1	4	249	3
249	1.0	10		44.4	0			28.2	1	58.4	0		
254	3.1	8						27.1	3	46.5	4		
255	2.9	14		59.9	3	13.2	4	26.8	4	51.6	2	252	3
256	2.6	12		56.0	3	< 10	NR	26.5	4	42.6	3		
258	2.0	8		52.1	1	3.9	0	26.8	4	53.9	1		
259	3.5	13		55.0	3			26.9	3	44.0	3	253	3
262	2.5	10		56.7	4			27.6	2	48.5	3		
265	3.2	12		148.0	0	15.5	3	26.6	4	45.7	4		
268	1.8	10		67.5	0			16.6	0	49.3	3	266	1
270	2.7	7		57.8	4			30.0	0	52.6	1		
273	2.7	14		55.4	3	24.2	0	26.0	4	41.8	2	338	0
274	1.7	11		60.0	3			18.2	0	43.0	3		
277	1.9	9		59.5	3			25.2	2	41.3	2		
283	2.9	15		57.0	4	12.7	3	26.9	3	49.8	3	252	3
284	0.6	14		45.0	0			17.0	0	63.3	0	236	3
287	2.3	10		59.0	4			26.4	4	53.0	1		
289	2.7	11						26.0	4	46.0	4		
291	1.0	1											
292	3.1	11		57.0	4			28.0	1	45.6	4	229	2
296	2.3	7				11.5	2	25.5	3				
300	1.3	8				17.0	2	32.4	0	74.8	0		
306	2.7	3		57.0	4								
307	2.1	7		56.0	3			64.0	0	40.5	2		

Table 6. *Laboratory performance ratings for standard reference sample M-146 (major constituents)--Continued*

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

Rating	Absolute Z-value	Rating	Absolute Z-value
4 (Excellent)	0.00 - 0.50	1 (Marginal)	1.51 - 2.00
3 (Good)	0.51 - 1.00	0 (Unsatisfactory)	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 =	1.07 mg/L		2.93 mg/L		7.01 mg/L		45.0 mg/L		mg/L	
F-pseudosigma =	0.06		0.20		0.24		1.8			
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	1.06	4	2.69	2	7.01	4	44.6	4	0.003	NR
3	1.10	4	3.00	4	8.0	0	49.7	0	< 0.01	NR
5	1.03	3	2.68	2	6.71	2	44.9	4		
10	1.11	3	2.92	4	7.08	4	45.0	4		
11	0.94	0	2.78	3	6.96	4	41.9	1		
13	1.10	4	3.06	3	3.39	0	49.1	0	< 0.05	NR
16	1.05	4	3.12	3	6.88	3	43.6	3	0.017	NR
18	1.30	0	2.94	4	6.93	4	44.6	4	0.003	NR
19			2.58	1	7.00	4	42.2	1		
23	0.96	1	3.12	3	7.01	4	45.5	4	< 0.01	NR
24	1.12	3	2.73	3	6.99	4	45.2	4		
25	1.08	4	3.21	2	7.33	2	49.6	0	0.060	NR
26										
28			2.93	4	7.33	2	43.1	2		
30.1					6.93	4	48.9	0		
30.2					6.9	4	42.5	2		
32	0.98	1	3.06	3	7.4	1	44.5	4		
33			2.88	4	7.05	4	44.7	4		
34										
36	1.06	4	2.85	4	6.45	0	41.7	1	0.024	NR
40	1.07	4	3.09	3	6.95	4	45.9	3		
42	1.01	2	3.03	4	7.12	4	41.8	1		
43			2.80	3	7.0	4	45.0	4		
45	1.10	4	2.88	4	7.17	3	44.5	4		
48	1.15	2	3.03	4	7.63	0	48.1	1	0.010	NR
50	1.08	4	2.62	1	7.07	4	45.1	4		
51			2.90	4	7.20	3	45.0	4		
57	0.98	1	3.30	1	7.7	0	50.0	0	0.080	NR
59	1.10	4	2.71	2	7.22	3	46.5	3	0.010	NR
64			2.97	4	6.99	4	46.3	3		
68			2.90	4	7.1	4	43.7	3	0.012	NR
69	1.06	4	3.03	4	6.75	2	43.8	3		
70	1.06	4	2.92	4	7.16	3	46.3	3	< 0.1	NR
76	1.10	4			6.953	4				
81	1.08	4	3.14	2	7.00	4	46.0	3	< 0.005	NR
83	1.10	4			6.74	2	44.1	3		
84					6.98	4	47.1	2		
85	1.00	2	2.79	3	6.87	3	44.0	3		
86	1.00	2	2.79	3	6.87	3	44.0	3		
87			2.64	2	6.8	3	44.4	4	0.010	NR
89	1.20	0	2.88	4	7.12	4	44.0	3	< 0.005	NR
90										
96	1.08	4								
97	1.08	4					44.1	3	0.080	NR
100	1.10	4	2.94	4	7.25	3	46.4	3		
107	1.08	4								
109	1.15	2	2.89	4	7.00	4	44.6	4		
113	1.04	3	2.98	4	7.34	2	47.4	2	0.004	NR
114	0.92	0							< 0.01	NR
118							41.4	1	< 0.01	NR
121					7.0	4	45.2	4		
127	1.04	3	3.11	3	6.87	3	45.2	4	< 0.02	NR
131	1.14	2	3.10	3	4.8	0	34.0	0	< 0.2	NR
133					6.62	1			< 0.003	NR
134	1.08	4	3.00	4	7.11	4	45.8	4	0.004	NR
138	1.00	2	2.89	4	6.97	4	45.5	4	< 0.004	NR
140	1.12	3	2.88	4	7.0	4	46.0	3	< 0.01	NR
141.1	1.08	4	2.56	1	6.51	1	40.5	0	0.015	NR
141.2	0.98	1								
142	1.08	4	2.92	4	7.02	4	44.6	4	0.028	NR

Table 6. *Laboratory performance ratings for standard reference sample M-146 (major constituents)--Continued*

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

Rating	Absolute Z-value	Rating	Absolute Z-value
4 (Excellent)	0.00 - 0.50	1 (Marginal)	1.51 - 2.00
3 (Good)	0.51 - 1.00	0 (Unsatisfactory)	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 =	1.07 mg/L		2.93 mg/L		7.01 mg/L		45.0 mg/L		mg/L	
F-pseudosigma =	0.06		0.20		0.24		1.8			
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
145	1.33	0	2.70	2	7.01	4	45.1	4	0.020	NR
146	1.16	2	3.17	2	7.37	2	46.7	3	< 0.100	NR
147					7.2	3				
149	1.06	4	2.90	4	7.0	4	44.0	3	0.003	NR
154			4.07	0	6.64	1	42.0	1		
158	1.03	3							0.022	NR
180	1.18	1	2.87	4	7.08	4	45.8	4	< 0.025	NR
183										
190	0.97	1	2.69	2	6.54	1	45.0	4	0.020	NR
191			3.00	4	7.16	3	45.3	4	0.120	NR
193										
203			2.93	4	6.73	2	44.8	4	0.008	NR
204										
208	< 0.3	0								
209			2.20	0			44.0	3		
212	1.20	0	< 5	NR	7.1	4	45.4	4	< 0.05	NR
213									< 0.02	NR
215	1.06	4			7.5	1	48.5	1	0.020	NR
217	0.75	0			7.21	3	45.6	4		
218			3.34	0	7.788	0	51.6	0		
220					7.1	4	45.5	4		
221			2.99	4	6.94	4	46.7	3		
224			2.70	2	7.01	4	45.3	4	0.007	NR
227	1.04	3	2.73	3	7.45	1	36.8	0	< 0.014	NR
230	1.12	3	3.01	4	6.65	2	48.0	1		
234	1.02	3	2.79	3	6.85	3	45.3	4	0.002	NR
236	1.10	4	3.13	3	7.02	4	44.3	4	0.030	NR
240	1.06	4	2.36	0	5.54	0	34.0	0	0.030	NR
241	1.02	3	2.70	2	6.8	3	43.9	3	0.001	NR
243									< 0.02	NR
244										
247	0.97	1	3.07	3	7.65	0	48.1	1	< 0.1	NR
249	1.26	0	3.48	0			47.9	1	0.060	NR
254			2.80	3	7.34	2	47.5	2		
255	1.16	2	3.00	4	7.14	3	46.5	3	< 0.5	NR
256			4.07	0	6.82	3	45.0	4	0.100	NR
258					7.49	1				
259	1.10	4	3.10	3	7.2	3	45.0	4	0.010	NR
262	1.03	3	2.97	4	8.4	0	41.3	0		
265	1.02	3	3.00	4	7.2	3	46.4	3		
268			2.95	4	6.2	0	42.0	1		
270			2.80	3			44.0	3		
273	1.00	2	3.00	4	7.22	3	45.6	4		
274	0.00	0	3.27	1	5.48	0	50.0	0	0.038	NR
277	1.20	0	2.70	2	7.0	4	40.1	0		
283	0.81	0	2.95	4	7.29	2	42.9	2	0.080	NR
284	1.00	2	3.32	1	6	0	51.6	0	< 0.1	NR
287	1.17	1	3.85	0	7.26	2	45.3	4	< 0.1	NR
289	1.08	4	2.41	0	7.09	4	44.0	3	6.500	NR
291										
292	1.05	4	2.90	4	6.5	0	43.4	3	0.020	NR
296			2.60	1	6.9	4	42.9	2		
300			3.79	0	9.636	0	63.0	0		
306									0.038	NR
307					7	4	46.7	3		

Table 6. *Laboratory performance ratings for standard reference sample M-146 (major constituents)--Continued*

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

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

Analyte =	pH		SiO_2 (Silica)		SO_4 (Sulfate)		Sp Cond		Sr (Strontium)		V (Vanadium)	
MPV =	8.08		9.36 mg/L		69.0 mg/L		423 µS/cm		216 µg/L		32.6 µg/L	
F-pseudosigma =	0.19		0.50		3.3		8		7		1.7	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	8.08	4	9.16	4	68.0	4	427	4	218	4	33.1	4
3	8.26	4	10.40	0	59.8	0	425	4	224	3	37.0	0
5	8.08	4	9.35	4	69.1	4	425	4	214	4	31.9	4
10	8.23	4	9.50	4	69.4	4	423	4				
11	8.02	4	6.50	0	73.0	2	424	4	178	0	32.6	4
13	7.75	3	10.50	0	68.8	4	430	4			28.6	0
16	7.94	4	4.05	0	70.5	4	422	4	210	3	30.6	2
18			9.08	3	67.7	4			208	3	32.0	4
19	8.19	4			72.1	3	421	4				
23	8.12	4			64.4	2	422	4	222	3	31.3	3
24	8.15	4	9.83	3	67.9	4	420	4	219	4		
25	8.32	3	4.34	0	68.9	4	427	4	234	1	32.0	4
26	7.76	3					425	4			32.9	4
28									219	4	30.1	2
30.1	8.11	4			70.8	3			209	3	32.0	4
30.2												
32	8.2	4	9.70	3	69.9	4	421	4	232	1	32.5	4
33	8.16	4	8.45	1	69.1	4	423	4	218	4		
34	8.19	4										
36	8.02	4	9.38	4	70.0	4	416	4			31.5	3
40	8.24	4	8.59	1	66.6	3	424	4	205	3	32.0	4
42	7.63	2	9.36	4	65.0	2	428	4	220	4	33.5	3
43	7.92	4	9.80	3	66.0	3	421	4				
45	8.22	4			68.9	4						
48	7.60	2			49.0	0	427	4			30.0	2
50	7.9	4	9.11	4	69.7	4	425	4				
51	7.91	4			71.1	3	418	4				
57	7.9	4	9.40	4	16.0	0	420	4	216	4	36.0	1
59	7.99	4	9.70	3	72.5	2	418	4				
64	8.21	4	9.37	4	68.5	4	426	4				
68	8.09	4	9.01	3	69.4	4	494	0	210	3	28.5	0
69	8.07	4			68.8	4	390	1				
70	7.94	4	9.33	4	65.3	2	388	1	219	4	< 50	NR
76	8.070	4					419	4				
81	8.08	4	9.37	4	67.0	3	430	4	207	3	34.0	3
83			8.94	3	68.8	4						
84	8.04	4					415	4				
85	8.19	4	9.80	3	66.9	3	417	4				
86	8.19	4	9.80	3	66.9	3	417	4				
87	7.65	2	9.29	4	62.0	0	293	0				
89	8.19	4	9.82	3	66.9	3	411	3			40.9	0
90	8.15	4					371	0				
96	8.18	4			74.0	1	433	4				
97	8.23	4	9.25	4			428	4				
100	8.06	4	9.64	3	73.3	2	426	4	215	4	34.0	3
107			9.78	3								
109	8.07	4			66.7	3	422	4				
113	7.85	3	9.57	4	68.5	4	413	4	203	2		
114	8.05	4			70.8	3	421	4				
118	7.6	2	9.34	4			400	2				
121			9.35	4					219	4		
127	8.25	4	8.67	2	71.6	3	425	4	209	3	33.2	4
131			4.70	0	63.8	1			216	4	34.0	3
133	8.2	4										
134	8.127	4	9.57	4	69.4	4	423	4	215	4	32.1	4
138	8.11	4	9.71	3	69.5	4	416	4	220	4	32.2	4
140	7.86	3	9.25	4	73.0	2	363	0				
141.1	8.13	4			65.5	2	427	4			30.2	2
141.2					67.2	3						
142	8.1	4	10.00	2	67.9	4	427	4	216	4	34.0	3

Table 6. *Laboratory performance ratings for standard reference sample M-146 (major constituents)--Continued*

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

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

Analyte =	pH		SiO_2 (Silica)		SO_4 (Sulfate)		Sp Cond		Sr (Strontium)		V (Vanadium)	
MPV =	8.08		9.36 mg/L		69.0 mg/L		423 µS/cm		216 µg/L		32.6 µg/L	
F-pseudosigma =	0.19		0.50		3.3		8		7		1.7	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
145			9.54	4	71.5	3	413	4	217	4	32.0	4
146	8.12	4			79.8	0	418	4			34.2	3
147			9.61	4					211	4		
149					72.2	3	426	4				
154	8.05	4			65.1	2	430	4	262	0	357.0	0
158	7.86	3			69.4	4	425	4				
180	8.1	4			70.1	4	445	2			34.4	2
183	7.67	2			78.5	0	424	4				
190	8.11	4	4.20	0	68.6	4	405	3				
191			9.86	2	69.0	4			214	4		
193							6	0				
203	8.20	4	9.50	4	44.5	0	441	3				
204	8.12	4	9.04	3	66.7	3	411	3				
208					71.7	3						
209	8.11	4										
212	8.2	4	9.60	4	70.6	4	426	4	220	4	33.0	4
213	8.13	4										
215	8.10	4	6.80	0	79.0	0	434	3			45.0	0
217	8.0	4	9.57	4	0.2	0	404	3	214	4	34.1	3
218	8.26	4					407	3	229	2		
220					73.7	2			178	0	35.5	1
221												
224	7.75	3			70.1	4	325	0				
227	7.37	1			68.5	4	419	4				
230	8.25	4			74.6	1						
234	8.24	4	9.22	4	66.4	3	428	4	213	4	30.4	2
236	8.06	4	7.01	0	71.4	3	417	4	211	4	33.0	4
240	8.07	4	7.25	0	70.4	4	416	4	218	4	11.2	0
241	8.18	4	8.80	2	70.0	4	368	0			34.0	3
243	8.27	4					422	4				
244	8.22	4					416	4				
247	8.23	4	9.44	4	73.6	2	430	4	221	4	28.0	0
249	7.49	2	10.20	1	62.6	1	430	4				
254			9.60	4	69.3	4			226	3		
255	8.03	4	6.62	0	57.7	0	425	4			33.0	4
256	7.95	4	8.28	0	61.0	0	426	4	200	2	32.0	4
258	7.74	3			70.1	4	396	2				
259	8.0	4	9.40	4	72.0	3	431	4	215	4		
262	7.72	3			65.6	2	426	4				
265			9.30	4	65.5	2			220	4	33.0	4
268	7.62	2			68.2	4	440	3				
270	8.00	4					430	4				
273	8.123	4	9.13	4	77.4	0	426	4	220	4		
274	7.80	3	8.39	1	69.9	4	431	4				
277	8.13	4			78.1	0						
283	8.17	4	9.60	4	71.1	3	419	4	197	1	31.7	4
284	7.6	2	10.90	0	< 5	0	560	0	84	0	200.0	0
287	7.99	4			66.0	3	346	0				
289	7.92	4	7.80	0	68.0	4	411	3	253	0		
291	7.38	1										
292	8.02	4			68.8	4	424	4				
296									601	0	32.1	4
300									221	4	31.7	4
306	8.17	4					380	0				
307	8.3	3			78.0	0						

Table 7. *Laboratory performance ratings for standard reference sample N-57 (nutrient constituents)*

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

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

			Analyte =	NH_3 as N (Ammonia)		NH_3 + Org N as N (Ammonia + Organic N)		NO_3 + NO_2 as N (Nitrate + Nitrite)		total P as P (total Phosphorus)		PO_4 as P (Orthophosphate as P)	
			MPV =	0.210 mg/L		0.285 mg/L		0.220 mg/L		0.201 mg/L		0.195 mg/L	
			F-pseudosigma =	0.018		0.150		0.021		0.013		0.007	
Lab	OLR	V/5		RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	2.4	5		0.199	3	0.186	3	0.198	2	0.216	2	0.208	2
3	1.8	4		0.411	0	< 1	NR	0.116	0	0.200	4	0.200	3
10	3.8	5		0.210	4	0.230	4	0.220	4	0.213	3	0.193	4
11	3.6	5		0.220	3	0.250	4	0.200	3	0.199	4	0.192	4
12	1.4	5		0.400	0	0.500	2	0.210	4	0.230	0	0.180	1
13	3.0	4		0.210	4			0.220	4	0.200	4	0.170	0
16	2.0	5		0.103	0	0.168	3	0.229	4	0.227	1	0.209	2
18	3.2	5		0.257	0	0.350	4	0.215	4	0.199	4	0.198	4
19	3.8	4		0.210	4			0.230	4	0.200	4	0.200	3
21	3.0	5		0.200	3	0.246	4	0.318	0	0.207	4	0.198	4
22	3.0	1								0.212	3		
23	2.0	4		0.188	2			0.220	4	0.182	2	0.020	0
25	3.6	5		0.220	3	0.220	4	0.222	4	0.210	3	0.199	4
33	3.3	3		0.200	3			0.220	4			0.200	3
36	3.8	5		0.217	4	0.282	4	0.240	3	0.195	4	0.195	4
39	3.3	4		0.187	2			0.211	4	0.213	3	0.193	4
42	4.0	1						0.220	4				
45	2.0	5		0.367	0	0.439	2	0.311	0	0.200	4	0.194	4
48	1.2	5		1.390	0	0.420	3	0.270	0	0.280	0	0.200	3
51	3.4	5		0.220	3	0.260	4	0.230	4	0.191	3	0.188	3
53	2.0	2						0.160	0			0.191	4
57	1.0	5		0.170	0	1.300	0	1.300	0	0.220	2	0.200	3
59	3.6	5		0.220	3	0.300	4	0.210	4	0.200	4	0.190	3
64	2.0	3		0.200	3			0.460	0			0.200	3
69	4.0	1						0.230	4				
70	2.6	5		0.210	4	0.200	3	0.200	3	0.310	0	0.190	3
76	4.0	2		0.206	4					0.206	4		
81	3.2	5		0.212	4	0.378	3	0.226	4	0.196	4	0.178	1
84	1.0	3		0.200	3			0.346	0			0.330	0
89	3.6	5		0.208	4	0.237	4	0.231	3	0.208	3	0.199	4
90	0.0	3		0.565	0	0.786	0	0.994	0				
91	2.8	4		0.180	1	0.210	4	0.190	2	0.200	4		
97	3.8	5		0.215	4	0.240	4	0.220	4	0.190	3	0.199	4
100	2.0	3		0.200	3	0.400	3	< 0.05	0			< 0.5	NR
108	1.3	3		0.250	0			0.210	4	0.250	0		
111	2.7	3		0.192	2			0.189	2			0.196	4
113	3.8	4		0.202	4	< 0.5	NR	0.226	4	0.193	3	0.192	4
114	2.0	3		0.200	3			0.480	0	0.190	3		
127	2.0	4		0.198	3			0.261	1	0.204	4	< 0.08	0
129	3.4	5		0.187	2	0.286	4	0.215	4	0.195	4	0.190	3
133	2.2	5		0.030	0	0.060	2	0.220	4	0.200	4	0.180	1
134	2.8	5		0.222	3	0.210	4	0.217	4	0.230	0	0.187	3
138	3.6	5		0.209	4	0.239	4	0.207	3	0.202	4	0.187	3
140	1.4	5		0.140	0	0.200	3	0.217	4	0.250	0	0.160	0
141	2.4	5		0.211	4	0.390	3	0.210	4	0.130	0	0.213	1
142	3.2	5		0.200	3	0.334	4	0.214	4	0.189	3	0.185	2
145	2.2	5		0.260	0	0.140	3	0.210	4	0.180	1	0.190	3
146	1.8	5		0.208	4	0.318	4	0.255	1	0.235	0	0.172	0
154	2.8	4		0.230	2			0.180	1	0.196	4	0.194	4
158	3.0	5		0.181	1	0.218	4	0.221	4	0.182	2	0.191	4
180	3.8	4		0.215	4			0.207	3	0.205	4	0.198	4
183	2.0	4		0.850	0			0.350	0	0.200	4	0.195	4
190	3.2	5		0.211	4	0.530	1	0.210	4	0.188	3	0.196	4
191	3.0	2						0.205	3			0.200	3
193	4.0	2						0.210	4	0.203	4		
203	1.8	4		0.220	3			0.260	1	0.240	0	0.200	3
208	0.0	2						0.560	0			0.500	0
209	3.3	3		0.212	4	0.431	3	0.237	3				
212	1.0	4		0.140	0	< 0.5	NR	0.130	0	0.180	1	0.200	3
213	3.5	2		< 1	NR	< 1	NR			0.200	4	0.190	3

Table 7. *Laboratory performance ratings for standard reference sample N-57 (nutrient constituents)--Continued*

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

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

			Analyte =	NH_3 as N (Ammonia)		NH_3 + Org N as N (Ammonia + Organic N)		$NO_3 + NO_2$ as N (Nitrate + Nitrite)		total P as P (total Phosphorus)		PO_4 as P (Orthophosphate as P)	
			MPV =	0.210 mg/L		0.285 mg/L		0.220 mg/L		0.201 mg/L		0.195 mg/L	
			F-pseudosigma =	0.018		0.150		0.021		0.013		0.007	
Lab	OLR	V/5		RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
215	2.4	5		0.280	0	0.450	2	0.210	4	0.210	3	0.200	3
220	2.0	5		0.253	0	0.285	4	0.385	0	0.219	2	0.193	4
221	1.8	5		0.387	0	0.448	2	0.200	3	0.256	0	0.198	4
224	3.6	5		0.225	3	0.363	3	0.220	4	0.203	4	0.194	4
234	2.3	4		0.180	1			0.232	3	0.207	4	0.178	1
240	2.0	5		0.210	4	0.138	3	0.467	0	0.209	3	0.243	0
241	3.0	5		0.181	1	0.460	2	0.212	4	0.207	4	0.193	4
243	2.8	5		0.198	3	0.270	4	0.220	4	0.180	1	0.181	2
247	1.2	5		0.170	0	0.450	2	0.184	1	0.190	3	0.266	0
255	2.2	5		0.210	4	1.780	0	0.224	4	0.114	0	0.200	3
284	0.0	3		< 0.1	0			0.370	0	0.290	0		
291	0.0	1						0.600	0				
292	2.0	4		0.150	0			0.220	4	0.195	4	0.220	0
297	1.6	5		0.285	0	0.226	4	0.175	0	0.204	4	0.216	0
306	1.8	4		0.269	0	< 0.4	NR	0.202	3	0.197	4	0.235	0

Table 8. *Laboratory performance ratings for standard reference sample N-58 (nutrient constituents)*

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

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

			Analyte =	NH_3 as N (Ammonia)		NH_3 + Org N as N (Ammonia + Organic N)		NO_3 + NO_2 as N (Nitrate + Nitrite)		total P as P (total Phosphorus)		PO_4 as P (Orthophosphate as P)	
			MPV =	0.620 mg/L		0.910 mg/L		1.01 mg/L		0.766 mg/L		0.693 mg/L	
			F-pseudosigma =	0.044		0.141		0.07		0.030		0.024	
Lab	OLR	V/5		RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	3.0	5		0.640	4	0.855	4	0.94	2	0.787	3	0.737	2
10	4.0	5		0.620	4	0.910	4	1.02	4	0.766	4	0.682	4
11	3.8	5		0.620	4	0.980	4	1.04	4	0.767	4	0.673	3
12	3.2	5		0.300	0	0.900	4	1.01	4	0.770	4	0.680	4
13	3.3	4		0.670	2			1.03	4	0.790	3	0.680	4
16	2.2	5		0.637	4	0.800	3	0.95	3	0.874	0	0.748	1
18	2.8	5		0.527	0	1.100	2	0.99	4	0.756	4	0.679	4
19	2.5	4		0.580	3			1.08	2	0.740	3	0.650	2
22	3.0	1								0.801	3		
23	3.4	5		0.590	3	0.810	3	1.01	4	0.770	4	0.670	3
25	2.6	5		0.770	0	0.770	3	1.07	3	0.800	3	0.693	4
28	1.0	4		0.749	0			1.17	0	0.900	0	0.687	4
33	3.3	3		0.610	4			0.99	4			0.740	2
36	2.4	5		0.605	4	1.067	2	1.11	1	0.755	4	0.755	1
42	1.0	1						0.91	1				
45	1.6	5		0.705	1	0.996	3	1.39	0	0.763	4	0.784	0
48	1.4	5		1.280	0	0.680	1	1.26	0	0.750	4	0.740	2
51	3.8	5		0.620	4	0.940	4	1.00	4	0.746	3	0.710	4
53	3.5	2						1.05	3			0.682	4
59	2.8	5		0.650	3	1.000	3	1.00	4	0.700	1	0.670	3
64	2.7	3		0.620	4			1.76	0			0.700	4
69	4.0	1						1.04	4				
70	2.6	5		0.590	3	0.840	4	0.92	2	0.860	0	0.680	4
76	4.0	2		0.622	4					0.768	4		
81	3.4	5		0.604	4	0.812	3	0.99	4	0.719	2	0.676	4
84	1.0	3		0.510	0			1.08	2			0.760	1
89	4.0	5		0.610	4	0.863	4	1.00	4	0.770	4	0.683	4
90	0.0	3		0.227	0	0.203	0	0.21	0				
91	2.8	4		0.540	1	0.910	4	0.93	2	0.770	4		
97	3.4	5		0.644	3	0.910	4	1.07	3	0.790	3	0.696	4
100	1.0	4		0.800	0	1.900	0	1.19	0			0.700	4
107	4.0	4		0.605	4			1.00	4	0.770	4	0.678	4
108	3.3	3		0.590	3			0.98	4	0.790	3		
111	4.0	3		0.637	4			0.98	4			0.695	4
113	3.6	5		0.604	4	1.110	2	1.02	4	0.765	4	0.683	4
114	1.0	3		0.550	1			2.10	0	0.720	2		
126	2.0	1						0.94	2				
127	3.3	4		0.547	1			0.98	4	0.750	4	0.689	4
129	3.2	5		0.588	3	1.094	2	1.00	4	0.761	4	0.664	3
133	2.7	3						1.30	0	0.760	4	0.680	4
134	3.4	5		0.674	2	0.795	3	0.98	4	0.757	4	0.702	4
138	3.4	5		0.596	3	0.887	4	1.00	4	0.753	4	0.656	2
140	3.2	5		0.500	0	0.910	4	1.03	4	0.750	4	0.680	4
141	3.4	5		0.671	2	0.900	4	1.03	4	0.738	3	0.698	4
142	3.6	5		0.593	3	0.960	4	1.02	4	0.753	4	0.714	3
145	3.0	5		0.660	3	0.830	3	0.93	2	0.730	3	0.710	4
146	2.4	5		0.611	4	0.870	4	1.12	1	0.790	3	0.622	0
154	3.5	4		0.650	3			1.00	4	0.745	3	0.686	4
158	3.4	5		0.570	2	0.974	4	1.04	4	0.738	3	0.694	4
180	3.4	5		0.633	4	0.885	4	1.01	4	0.803	3	0.654	2
183	0.8	4		1.100	0			0.81	0	0.856	0	0.727	3
190	1.6	5		0.630	4	2.000	0	0.96	3	0.655	0	0.757	1
191	3.5	2						1.00	4			0.720	3
193	4.0	2						1.02	4	0.760	4		
203	2.0	4		0.580	3			1.20	0	0.840	1	0.710	4
204	3.4	5		0.603	4	0.800	3	1.01	4	0.788	3	0.661	3
205	2.5	2		0.691	1			0.98	4				
208	3.0	2						1.04	4			0.740	2
209	1.3	3		0.626	4	1.276	0	1.15	0				
212	3.4	5		0.580	3	0.850	4	1.10	2	0.770	4	0.690	4

Table 8. *Laboratory performance ratings for standard reference sample N-58 (nutrient constituents)--Continued*

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

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

			Analyte =	NH_3 as N (Ammonia)		NH_3 + Org N as N (Ammonia + Organic N)		NO_3 + NO_2 as N (Nitrate + Nitrite)		total P as P (total Phosphorus)		PO_4 as P (Orthophosphate as P)	
			MPV =	0.620 mg/L		0.910 mg/L		1.01 mg/L		0.766 mg/L		0.693 mg/L	
			F-pseudosigma =	0.044		0.141		0.07		0.030		0.024	
Lab	OLR	V/5		RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
213	4.0	2		< 1	NR	< 1	NR			0.750	4	0.680	4
215	3.6	5		0.650	3	1.020	3	0.98	4	0.780	4	0.700	4
220	1.4	5		0.589	3	0.635	1	1.17	0	0.892	0	0.712	3
221	0.8	5		0.732	0	1.230	0	1.05	3	0.833	1	0.609	0
224	4.0	5		0.623	4	0.950	4	1.00	4	0.779	4	0.696	4
234	2.0	4		0.526	0			1.04	4	0.750	4	0.568	0
240	1.0	5		0.690	1	0.559	0	1.57	0	0.850	0	0.709	4
241	3.4	5		0.594	3	0.980	4	0.96	3	0.791	3	0.684	4
243	2.3	3		0.593	3			1.02	4	0.680	0		
247	2.0	5		0.760	0	1.210	0	0.94	2	0.780	4	0.689	4
255	3.4	5		0.620	4	0.827	3	1.00	4	0.724	3	0.711	3
284	0.8	5		0.520	0	3.070	0	1.65	0	0.830	1	0.660	3
291	0.0	1						1.60	0				
292	2.0	4		0.600	4			0.94	2	0.721	2	0.810	0
297	1.6	5		0.646	3	0.895	4	0.82	0	0.708	1	0.830	0
306	1.8	5		0.648	3	1.720	0	1.01	4	0.715	2	0.893	0
307	2.3	3		0.650	3			1.00	4			0.790	0

Table 9. *Laboratory performance ratings for standard reference sample P-30 (low ionic strength constituents)*

(MPV, most probable value; mg/L, milligrams per liter; µs/cm, microseimens per centimeter at 25 ° C; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/11, number of reported values of 11 possible values; RV, reported value; <, less than.)

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

			Analyte =	Acidity as $CaCO_3$		Ca (Calcium)		Cl (Chloride)		F (Fluoride)		K (Potassium)		Mg (Magnesium)	
			MPV =	2.88 mg/L		0.13 mg/L		0.23 mg/L		0.206 mg/L		0.140 mg/L		0.027 mg/L	
			F-pseudosigma =	1.80		0.04		0.08		0.025		0.043		0.019	
Lab	OLR	V/11		RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	3.7	10				0.13	4	0.18	3	0.230	3	0.136	4	0.023	4
2	3.9	8				0.11	3	0.20	4	0.198	4	0.140	4	0.021	4
3	2.0	7		< 10	NR	0.19	2	0.59	0	0.210	4	< 1	NR	0.150	0
5	3.0	7				0.13	4	< 0.17	NR	0.220	3	< 1	NR	< 0.03	NR
11	3.7	3													
16	1.4	9		14.40	0	0.28	0	1.10	0	0.196	4	0.210	1	< 0.1	NR
23	3.0	5				< 0.2	NR	< 1	NR	0.200	4	1.140	0	< 0.2	NR
25	3.3	8				0.13	4	0.23	4	0.180	2			0.036	3
26	1.5	2													
30.1	3.3	3						0.20	4						
33	3.7	9				0.12	4	0.18	3			0.120	4	0.020	4
34	0.0	1													
36	3.1	7		2.00	4	< 0.5	NR	0.23	4	0.193	3	< 0.5	NR	< 0.5	NR
48	1.8	9				0.15	4	< 1	NR	0.290	0	0.186	2	0.046	2
59	3.2	6		1.01	2			0.31	3	0.210	4				
64	3.9	9				0.12	4	0.20	4			0.130	4	0.020	4
81	2.7	7		2.70	4	0.12	4	< 1	NR	0.227	3	0.129	4	< 0.118	NR
83	2.4	5				0.12	4			0.240	2			< 0.035	NR
89	2.7	9		4.30	3	< 0.3	NR	0.25	4	0.185	3	0.140	4	< 0.01	NR
96	2.0	3						< 2	NR						
107	3.5	2													
110	3.8	6				0.14	4	0.22	4					0.040	3
113	3.0	8				< 0.2	NR	0.18	3	0.184	3	0.170	3	< 0.1	NR
127	3.3	10		3.71	4	0.12	4	0.21	4	0.176	2	0.108	3	< 0.07	NR
134	3.5	10				0.13	4	0.22	4	0.210	4	0.154	4	0.022	4
138	2.1	9				0.23	0	0.25	4	0.142	0	0.140	4	0.031	4
140	2.5	10				0.10	3	0.27	4	0.214	4	0.162	3	0.022	4
141.1	3.0	10		4.35	3	0.17	3	0.20	4	0.226	3	0.058	1	0.021	4
145	2.3	7				0.31	0	0.20	4	0.180	2	< 0.7	NR	< 0.19	NR
146	1.0	4		< 10	NR	< 0.5	NR	< 1	NR	0.240	2	< 1	NR	< 0.5	NR
158	0.5	4						0.78	0	0.460	0				
180	2.6	10				0.17	3	0.34	2	0.206	4	0.713	0	0.044	3
183	3.3	3													
190	2.8	9				0.18	2	0.19	4	0.140	0	0.120	4	0.050	2
203	2.4	8				0.13	4	< 2	NR			0.160	4	0.020	4
204	4.0	2						< 1	NR						
209	3.4	5						0.20	4			0.106	3		
215	2.4	8		< 2	NR	0.17	3	1.00	0	0.202	4			0.060	1
220	1.5	2						0.38	1						
224	3.0	10		3.06	4	0.13	4	0.29	3			0.150	4	0.030	4
228.1	3.4	8		< 0.1	NR	0.25	0	0.24	4			0.116	3	0.030	4
228.2	3.4	8		< 0.1	NR	0.05	1	0.23	4			0.117	3	0.010	3
240	2.4	11		2.06	4	0.13	4	0.24	4	0.240	2	0.140	4	0.007	2
241	1.6	10				0.80	0	0.20	4	0.200	4	1.600	0	0.300	0
243	4.0	2													
244	4.0	2													
247	2.6	5		10.00	0	< 0.5	NR	< 1.5	NR	0.160	1	< 1	NR	< 0.5	NR
255	2.8	4				0.14	4	< 5	NR	0.252	1	< 0.098	NR	< 0.088	NR
283	1.0	8		1.80	3	< 0.5	NR	0.98	0	0.200	4	0.384	0	< 0.1	NR
284	2.3	7		0.25	2	0.10	3	< 5	NR	0.200	4	0.146	4	0.100	0
287	1.2	9				0.18	2	1.55	0	0.276	0	0.700	0	0.020	4
289	3.0	10				0.14	4	0.30	3	0.210	4	0.110	3	0.020	4

Table 9. *Laboratory performance ratings for standard reference sample P-30 (low ionic strength constituents)--Continued*

(MPV, most probable value; mg/L, milligrams per liter; µs/cm, microseimens per centimeter at 25 ° C; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/11, number of reported values of 11 possible values; RV, reported value; <, less than.)

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

Analyte =	Na (Sodium)		pH		PO_4 as P		SO_4 (Sulfate)		Specific Conductance	
MPV =	0.34 mg/L		5.35		0.084		0.400 mg/L		6.0	µS/cm
F-pseudosigma =	0.04		0.31		0.007		0.259		0.8	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	0.32	3	5.47	4	0.084	4	0.369	4	6.4	4
2	0.35	4	5.41	4			0.406	4		
3	< 1	NR	5.39	4	0.692	0	< 10	NR	6.0	4
5	0.31	3	4.91	1	0.089	3	0.320	4	6.5	3
11			5.25	4	0.079	3			6.0	4
16	< 3	NR	5.86	1	0.089	3	7.500	0	6.3	4
23	0.35	4	5.18	3	< 0.1	NR	< 2	NR	5.6	4
25	0.36	4	5.43	4	0.079	3	< 5	NR	7.0	2
26			4.63	0					6.6	3
30.1			5.66	2			0.340	4		
33	0.31	3	5.31	4	0.080	3	0.350	4	5.6	4
34			4.80	0						
36	< 0.5	NR	6.30	0	0.084	4	0.350	4	5.5	3
48	0.41	1	5.30	4	0.190	0	1.000	0	5.4	3
59			5.58	3			0.580	3	6.2	4
64	0.31	3	5.26	4	0.086	4	0.350	4	6.1	4
81	< 0.326	NR	5.15	3	0.060	0	< 5	NR	7.3	1
83	0.31	3			0.531	0	0.610	3		
89	0.24	0	5.07	2	0.081	4	0.760	2	6.9	2
96			5.53	3	0.079	3	< 1	NR	57.6	0
107			5.43	4					6.8	3
110			5.40	4			0.409	4	6.0	4
113	0.30	2	5.35	4	0.091	3	0.403	4	5.1	2
127	0.35	4	5.17	3	0.098	1	0.303	4	5.8	4
134	0.38	2	5.33	4	0.070	1	0.350	4	5.9	4
138	0.42	0	5.91	0	0.088	3	0.363	4	< 10	NR
140	0.34	4	6.00	0	0.080	3	2.000	0	4.0	0
141.1	0.35	4	5.44	4	0.108	0	< 5	NR	5.9	4
145	0.29	2			0.070	1	0.330	4	5.2	3
146	< 0.5	NR	5.03	2	0.112	0	< 5	NR	8.6	0
158					0.076	2	1.458	0		
180	0.39	2	5.40	4	0.087	4	0.374	4	11.0	0
183			5.03	2	0.084	4			5.8	4
190	0.32	3			0.084	4	0.250	3	6.5	3
203	0.27	1	5.56	3	0.080	3	1.500	0	29.1	0
204			5.29	4					6.0	4
209	0.29	2	5.37	4			0.418	4		
215	0.34	4	5.50	3	0.100	0			6.0	4
220							0.700	2		
224	0.35	4	4.31	0	0.088	3	0.400	4	4.1	0
228.1	0.34	4	5.30	4			0.309	4	5.6	4
228.2	0.35	4	5.30	4			0.310	4	5.6	4
240	0.16	0	6.17	0	0.060	0	0.320	4	5.0	2
241	0.50	0	5.23	4	0.066	0	0.351	4	3.7	0
243			5.47	4					6.3	4
244			5.32	4					5.8	4
247	< 0.5	NR	5.36	4	0.087	4	< 1.5	NR	5.6	4
255	< 0.574	NR	5.17	3	< 0.5	NR	< 30	NR	5.3	3
283	0.58	0	5.85	1	< 0.2	NR	1.030	0	10.1	0
284	0.00	NR	5.20	3	< 0.1	NR	< 5	NR	9.5	0
287	0.40	1	4.98	2	< 0.1	NR	2.600	0	6.9	2
289	0.29	2	5.42	4	0.063	0	0.400	4	5.1	2

Table 10. *Laboratory performance ratings for standard reference sample GWT-3 (ground-water trace constituents)*

(MPV, most probable value; µg/L, micrograms par 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
4 (Excellent)
3 (Good)
2 (Satisfactory)

			Analyte =	Ag (Silver)		Al (Aluminum)		As (Arsenic)		B (Boron)		Ba (Barium)		Be (Beryllium)	
			MPV =	insuff. data		31.4	µg/L	0.93	µg/L	71.0	µg/L	25.3	µg/L	15.4	µg/L
			F-pseudosigma =			6.4		0.75		7.0		1.4		0.8	
Lab	OLR	V/26		RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	3.3	21		< 1	NR	27.9	3	< 1	NR	69.5	4	26.6	3	14.8	3
5	2.9	21		< 0.5	NR	34.8	3	2.30	1	72.7	4	26.1	3	15.6	4
11	2.8	12										25.3	4	15.7	4
13	2.2	15		2.88	NR			< 5	NR			25.3	4	15.9	3
16	2.8	17				28.4	4			65.7	3	24.5	3	15.2	4
23	1.0	16		0.42	NR	65.0	0	< 10	NR	210.0	0	20.0	0	20.0	0
24	2.8	13								75.4	3	26.9	2		
25	2.4	15				37.0	3			80.0	2	26.0	4	15.0	3
26	3.1	10		< 0.2	NR			< 0.7	NR			26.7	3	15.7	4
28	3.4	11								67.8	4	25.3	4		
30.1	3.4	19		< 0.1	NR	26.5	3	0.62	4	70.0	4	25.0	4	16.0	3
30.2	1.8	4													
32	3.2	21				29.8	4	0.80	4	71.0	4	23.8	2	16.2	2
33	2.7	10				70.0	0					26.0	4		
34	1.3	3		< 0.5	NR										
36	1.9	14		< 10	NR	< 100	NR	< 5	NR	57.0	1	23.0	1	13.9	1
43	3.7	6													
45	2.5	11						1.00	4						
48	2.9	19		< 0.6	NR	29.0	4	0.70	4	66.0	3	23.8	2	14.7	3
59	2.3	12												14.0	1
64	3.4	5													
68	4.0	2													
69	2.8	13		< 2	NR	30.0	4	< 5	NR			31.0	0	15.3	4
76	3.6	7				33.3	4			77.1	3	26.1	3		
81	1.9	12				< 104	NR	< 2	NR			21.0	0	31.0	0
83	3.2	12										25.0	4	15.0	3
85	3.5	8		< 5	NR					80.0	2	25.0	4		
89	2.4	14		< 2	NR	34.5	4	< 2	NR			< 50	NR	17.6	0
96	2.9	9		< 1	NR			< 1	NR			< 100	NR	16.7	1
97	3.3	12				31.2	4					25.0	4		
100	0.6	18		< 2	NR	< 10	0	< 2	NR	62.8	2	20.5	0	< 1	0
109	2.4	12						0.67	4						
113	3.2	17		< 0.5	NR	28.4	4	< 1.5	NR			23.9	3	14.9	3
121	3.1	7										26.0	4		
126	2.0	7		0.40	NR										
133	2.7	10		< 6	NR			< 5	NR			24.7	4	15.7	4
134	3.7	21		< 1	NR	34.5	4	< 1	NR	71.2	4	25.0	4	15.0	4
138	3.7	19		< 0.05	NR	30.6	4	< 2	NR	75.6	3	25.8	4	15.5	4
140	3.1	14		2.00	NR							56.8	0		
141	1.8	20		5.60	NR	54.7	0	0.82	4	82.4	1	23.0	1	14.1	1
142	3.0	21		0.74	NR	29.3	4	1.25	4	69.9	4	26.8	2	16.1	3
145	3.3	15				< 179	NR	< 39	NR	82.0	1	25.0	4	15.0	3
146	3.5	11		< 10	NR	< 200	NR	< 10	NR			25.7	4	16.1	3
151	3.1	16		0.43	NR	29.1	4	0.93	4			25.0	4	15.2	4
180	3.2	14		< 3.7	NR	32.3	4	< 49.4	NR	101.0	0	25.9	4	14.9	3
190	2.3	16		0.04	NR	31.6	4	0.05	2						
191	3.4	17				28.3	4	0.83	4	48.0	0				
212	3.6	14		< 1	NR	< 100	NR	< 5	NR	< 100	NR	25.0	4	15.0	3
215	2.2	16								70.0	4	28.0	1	15.0	3
220	3.5	13								73.2	4	26.1	3	15.3	4
221	3.5	14		2.12	NR	29.5	4	0.92	4						
224	1.0	9													
234	3.5	21		0.30	NR	27.4	3	0.40	3	73.0	4	25.2	4	15.5	4
235	2.7	15		0.10	NR	30.4	4			61.1	2	29.3	0	15.4	4
236	2.5	21		< 6	NR	56.0	0	19.00	0	68.0	4	25.0	4	15.0	3
240	3.1	20		1.28	NR	26.7	3	13.60	0	72.7	4	24.1	3	13.4	0
241	2.9	19		0.05	NR	28.0	3	0.73	4			25.6	4	12.0	0
247	1.1	18		< 10	NR	< 10	0	< 50	NR	< 50	0	34.0	0	27.0	0
249	1.6	15		0.09	NR	53.4	0	2.20	1						
254	3.1	13				32.7	4			50.5	0				

Table 10. *Laboratory performance ratings for standard reference sample GWT-3 (ground-water trace constituents)--Continued*

(MPV, most probable value; µg/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
4 (Excellent)
3 (Good)
2 (Satisfactory)

			Analyte =	Ag (Silver)		Al (Aluminum)		As (Arsenic)		B (Boron)		Ba (Barium)		Be (Beryllium)	
			MPV =	insuff. data		31.4	µg/L	0.93	µg/L	71.0	µg/L	25.3	µg/L	15.4	µg/L
			F-pseudosigma =			6.4		0.75		7.0		1.4		0.8	
Lab	OLR	V/26		RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
255	3.3	18		0.09	NR	42.4	1	< 2	NR	73.6	4	26.6	3	15.6	4
256	2.2	16		<10	NR	< 10	0			< 10	0	26.0	4	15.0	3
258	2.0	3								62.7	2				
259	3.8	19				34.5	4			72.5	4	24.8	4		
265	3.5	22		0.04	NR	30.0	4	0.65	4	66.0	3	25.5	4	15.6	4
268	2.3	4													
273	0.7	13				11.8	0			40.5	0	20.8	0		
274	1.6	11													
277	0.7	12		2.20	NR							28.2	0		
283	3.0	20		< 1	NR	188.0	0	2.10	1	72.4	4	23.3	2	16.2	2
284	1.3	19		0.00	NR	39.0	2	3.00	0			418.0	0	17.0	0
287	1.7	13				21.0	1								
289	2.2	19		< 1	NR	37.0	3	0.60	4	85.0	1	27.0	2	17.0	0
292	2.4	16		< 3	NR	24.0	2	< 3	NR			28.0	1	15.0	3
296	2.9	21		0.23	NR	34.2	4	0.97	4	68.0	4	23.7	2	15.3	4
300	2.3	21		0.10	NR	37.0	3	1.30	4	71.0	4	28.4	0	16.0	3
304	3.3	14		0.09	NR	32.0	4	1.10	4			25.0	4	17.3	0

Table 10. *Laboratory performance ratings for standard reference sample GWT-3 (ground-water trace constituents)--Continued*

(MPV, most probable value; µg/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 (Marginal)	1.51 - 2.00
3 (Good)	0.51 - 1.00	0 (Unsatisfactory)	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 =	35.9	mg/L	45.7	µg/L	insuff. Data		1.90	µg/L	4.18	µg/L	57.2	µg/L	1.03	mg/L
F-pseudosigma =	1.2		2.3				0.59		1.14		5.5		0.14	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	36.0	4	44.3	3	< 1	NR	1.90	4	3.71	4	55.4	4	0.89	3
5	35.3	4	46.3	4	< 3	NR	< 4	NR	3.54	3	57.9	4	1.38	0
11	36.7	4	46.6	4									1.21	2
13	38.4	2	37.5	0	< 10	NR	2.88	1	< 5	NR	41.7	0	0.87	2
16	35.8	4	43.3	2							53.6	3	1.19	2
23	31.7	0	42.1	1			< 4	NR	< 5	NR	83.0	0	1.01	4
24	35.9	4	45.7	4							60.8	3	0.70	0
25	37.8	2	47.0	3							59.0	4		
26			44.4	3			2.66	2			56.3	4		
28	35.1	4	37.7	0					3.90	4	47.0	1	0.96	4
30.1	34.3	3	46.0	4	< 0.1	NR	2.10	4	3.50	3	< 200	NR		
30.2	29.0	0									171.0	0		
32	35.5	4	45.0	4			1.60	3	4.30	4			1.04	4
33	36.3	4									60.0	3	1.05	4
34			47.7	3										
36	33.0	1	42.0	1			< 10	NR	< 10	NR	48.0	1	1.19	2
43	36.0	4									58.0	4	0.95	3
45	35.9	4							7.00	0	67.0	1	1.04	4
48	38.1	2	45.0	4	< 0.02	NR	2.00	4	6.20	1	57.0	4	1.04	4
59	36.2	4	45.3	4							145.0	0	0.86	2
64	38.3	2											1.05	4
68	36.6	4												
69	35.7	4	43.5	3			< 5	NR	< 50	NR	73.0	0	1.05	4
76	36.2	4												
81	34.9	3	45.0	4			2.00	4	3.00	2	47.0	1	1.44	0
83	35.7	4	43.0	2					3.00	2	55.0	4		
85	34.9	3							< 5	NR			1.02	4
89	34.0	2	42.9	2	< 10	NR	< 10	NR	< 10	NR	53.3	3	0.86	2
96			47.9	3			2.76	2	3.45	3	55.0	4		
97							2.14	4	3.80	4	58.0	4		
100	28.5	0	< 5	0	< 5	NR	< 10	NR	< 5	NR	< 5	0	< 1	NR
109	35.9	4									73.7	0	1.20	2
113	36.5	4	45.2	4			1.37	3	4.93	3	55.0	4	1.51	0
121	36.5	4												
126			47.1	3			< 10	NR	6.00	1	90.0	0		
133	34.5	3	47.8	3					< 5	NR	61.0	3		
134	35.1	4	44.4	3	< 1	NR	1.42	3	3.50	3	54.6	4	1.00	4
138	36.5	4	45.4	4	0.11	NR	1.60	3	4.20	4	51.9	3	1.01	4
140	35.5	4	46.0	4			2.00	4	8.00	0	46.0	1	1.03	4
141	30.3	0	43.2	2	0.53	NR	3.80	0	4.20	4	89.6	0	0.90	3
142	35.7	4	45.9	4	0.04	NR	0.94	1	4.35	4	57.0	4	< 1	NR
145	36.5	4	47.0	3	< 12	NR	< 14	NR	< 26	NR	56.0	4	0.89	3
146	35.2	4	46.9	3	< 10	NR	< 10	NR	< 25	NR	59.3	4	1.09	4
151			46.9	3			1.60	3	5.40	2	35.1	0		
180	36.4	4	46.1	4	< 5.48	NR	< 3.59	NR	5.37	2	47.8	1	1.05	4
190	38.1	2	48.2	2			2.29	3	3.95	4	60.1	3	1.06	4
191	35.7	4	45.5	4	0.11	NR	1.60	3	5.19	3			0.92	3
212	36.3	4	46.0	4	< 1	NR	1.80	4	3.80	4	< 100	NR	< 5	NR
215	36.6	4	46.0	4			2.50	2	6.40	1	60.0	3		
220	36.7	4	46.8	4					3.50	3	56.0	4		
221	36.2	4	46.0	4	0.50	NR	1.95	4	4.52	4			1.08	4
224	33.3	2	35.6	0					24.70	0	45.8	0	0.80	1
234	36.1	4	42.0	1	< 1	NR	1.26	2	4.68	4	55.0	4	0.90	3
235			39.3	0			1.57	3	3.48	3				
236	35.1	4	44.0	3	< 9	NR	< 5	NR	3.00	2	55.0	4	0.87	2
240	36.1	4	47.3	3	0.21	NR	< 10	NR	4.75	4	68.1	1	1.03	4
241	33.5	2	47.8	3			1.93	4	3.82	4	131.0	0	0.90	3
247	34.0	2	53.0	0	< 10	NR	< 10	NR	13.00	0	38.0	0	0.97	4
249			51.0	0			1.68	4	2.70	2	69.0	0	150.00	0
254	36.6	4	48.9	2							56.4	4	0.79	1

Table 10. *Laboratory performance ratings for standard reference sample GWT-3 (ground-water trace constituents)--Continued*

(MPV, most probable value; µg/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 (Marginal)	1.51 - 2.00
3 (Good)	0.51 - 1.00	0 (Unsatisfactory)	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 =	35.9	mg/L	45.7	µg/L	insuff. Data		1.90	µg/L	4.18	µg/L	57.2	µg/L	1.03	mg/L
F-pseudosigma =	1.2		2.3				0.59		1.14		5.5		0.14	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
255	36.6	4	46.1	4	1.47	NR	1.19	2	4.18	4	57.4	4	1.06	4
256	36.4	4	45.0	4	< 10	NR			< 10	NR	51.0	2	0.81	2
258	38.8	1												
259	35.9	4	46.0	4			1.50	3	3.40	3	59.5	4	1.10	3
265	36.7	4	46.6	4	< 0.05	NR	1.50	3	4.30	4	63.5	2	1.10	3
268	22.7	0											0.97	4
273	28.5	0	1.0	0			1.80	4	3.85	4			0.78	1
274	30.3	0	20.8	0					3.12	3	60.4	3	1.07	4
277	55.4	0	39.2	0			4.80	0	8.40	0	48.1	1	1.20	2
283	35.6	4	45.0	4	< 5	NR	< 5	NR	< 10	NR	53.8	3	0.99	4
284	26.0	0	42.0	1	3.12	NR	3.00	1	4.00	4	36.3	0	1.51	0
287	35.0	3	53.8	0			3.62	0	5.59	2	61.0	3	2.47	0
289	36.5	4	46.0	4	0.07	NR	1.00	1	4.70	4				
292	37.0	3	46.0	4			2.00	4	4.00	4	60.0	3	1.00	4
296	37.4	3	45.0	4	0.07	NR	1.30	2	3.90	4	130.0	0	0.45	0
300	40.9	0	48.5	2	0.17	NR	6.80	0	4.50	4	282.0	0	1.20	2
304	37.0	3	44.7	4			1.36	3	3.44	3			0.93	3

Table 10. *Laboratory performance ratings for standard reference sample GWT-3 (ground-water trace constituents)--Continued*

(MPV, most probable value; µg/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 (Marginal)	1.51 - 2.00
3 (Good)	0.51 - 1.00	0 (Unsatisfactory)	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 =	33.9	µg/L	12.5	mg/L	5.55	µg/L	7.00	µg/L	136	mg/L	36.6	µg/L	31.4	µg/L
F-pseudosigma =	1.9		0.5		0.67		0.84		5		3.0		2.3	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	35.0	3	12.3	4	5.30	4	6.23	3	132	3	33.2	2	32.5	4
5	32.2	3	12.0	3	5.77	4	12.50	0	137	4	42.4	1	31.5	4
11			12.5	4					126	2	39.5	3	31.7	4
13			13.1	3	2.80	0	< 20	NR	133	4	32.9	2	34.8	2
16	29.7	0	12.3	4	5.20	3	5.90	2	134	4	33.5	2		
23			11.7	2	5.55	4	10.00	0	75	0	38.0	4	38.0	0
24			12.4	4	6.10	3			139	4	39.5	3		
25	34.0	4	12.9	3	7.00	0			145	2	37.0	4		
26	37.7	1									34.2	3	33.4	3
28			12.7	4					136	4	37.2	4		
30.1	32.0	3	12.4	4	5.10	3	7.10	4	143	3	35.0	3	29.0	2
30.2			13.0	3					136	4				
32	35.0	3	13.2	2	5.60	4	7.20	4	140	3	39.0	3	31.4	4
33			12.2	4	10.00	0			138	4				
34													27.4	1
36			11.3	1	< 5	NR	< 10	NR	142	3	35.2	4	28.1	2
43			12.0	3	< 10	NR			134	4				
45			13.0	3	8.00	0			137	4			28.9	2
48			13.3	2	5.10	3	7.20	4	147	1	35.0	3	33.6	3
59			12.9	3					144	2	32.0	1	35.3	1
64			12.8	4					140	3				
68			12.7	4										
69	< 50	NR	12.1	3	< 20	NR			136	4	53.0	0	33.6	3
76			12.6	4							36.3	4	33.6	3
81			12.1	3	< 5	NR			135	4			28.0	2
83			12.2	4	4.80	2			135	4	41.0	2		
85			12.3	4					133	4				
89			12.7	4	4.90	3			130	3	39.6	2	23.5	0
96					< 20	NR					35.7	4	31.2	4
97					6.15	3	6.02	2	139	4	42.0	1	33.2	3
100	25.9	0	10.2	0	< 1	0	31.10	0	112	0	< 5	0	34.9	2
109	34.3	4	12.7	4	16.21	0	4.70	0	134	4			27.6	1
113			12.9	3	5.47	4			141	3	35.0	3	32.1	4
121			12.5	4	8.00	0			131	3				
126					4.00	0					35.2	4	31.2	4
133			12.0	3							30.3	0	38.6	0
134	33.6	4	12.1	3	5.59	4	6.74	4	136	4	36.5	4	31.0	4
138			12.5	4	5.60	4	6.60	4	136	4	38.7	3	32.8	3
140			12.7	4	5.00	3			138	4	36.0	4	31.0	4
141			11.1	0	6.20	3	6.00	2	123	1	32.9	2	31.0	4
142	32.7	3	12.1	3	4.00	0	7.29	4	134	4	31.3	1	31.4	4
145	32.0	3	12.4	4	5.00	3	< 11	NR	136	4	39.0	3	< 84	NR
146			12.6	4	< 10	NR	< 10	NR	146	2	39.2	3	32.4	4
151	32.7	3			5.00	3	6.80	4			32.9	2	29.8	3
180			12.6	4	6.13	3	6.97	4	137	4	< 31.2	NR	< 36.3	NR
190			10.5	0	1.06	0			28	0	38.4	3	30.9	4
191			12.8	4	5.23	4			134	4	35.1	3	30.6	4
212			12.6	4	5.50	4			136	4	35.0	3	33.0	3
215			12.9	3	6.50	2			140	3	45.0	0	44.0	0
220			12.3	4					134	4	60.0	0		
221			12.4	4	5.87	4	6.70	4			36.3	4	27.3	1
224			12.0	3					140	3			21.4	0
234	33.7	4	12.4	4	5.81	4			142	3	36.6	4	31.6	4
235			11.6	2	5.08	3	7.45	3			37.7	4	29.5	3
236	35.0	3	12.5	4	5.00	3	4.00	0	131	3	39.0	3	29.0	2
240			12.6	4	5.77	4	5.97	2	135	4	38.9	3	32.1	4
241			12.4	4	5.20	3	7.05	4	152	0	37.1	4	30.0	3
247	43.0	0	12.0	3	< 10	NR	47.00	0	130	3	43.0	0	< 50	NR
249					12.50	0	7.36	4	157	0	34.0	3	31.3	4
254	34.6	4	12.8	3					141	3	36.6	4		

Table 10. *Laboratory performance ratings for standard reference sample GWT-3 (ground-water trace constituents)--Continued*

(MPV, most probable value; µg/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 then.)

Reting	Absolute Z-value	Rating	Absolute Z-value
4 (Excellent)	0.00 - 0.50	1 (Marginal)	1.51 - 2.00
3 (Good)	0.51 - 1.00	0 (Unsatisfactory)	greeter than 2.00
2 (Satisfactory)	1.01 - 1.50	NR (Not Reted)	

Analyte =	Li (Lithium)		Mg (Magnesium)		Mn (Manganese)		Mo (Molybdenum)		Na (Sodium)		Ni (Nickel)		Pb (Lead)	
MPV =	33.9	µg/L	12.5	mg/L	5.55	µg/L	7.00	µg/L	136	mg/L	36.6	µg/L	31.4	µg/L
F-pseudosigma =	1.9		0.5		0.67		0.84		5		3.0		2.3	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
255			12.8	4	5.58	4	7.22	4	142	3	33.8	3	33.1	3
256	40.0	0	12.1	3	< 10	NR	< 10	NR	137	4	33.0	2	56.0	0
258			13.0	3										
259			12.5	4	5.50	4	7.00	4	139	4	36.8	4	31.0	4
265	42.0	0	12.7	4	5.80	4	7.00	4	133	4	38.0	4	30.5	4
268			11.5	1					134	4				
273	27.0	0	10.2	0					111	0				
274			19.1	0	5.68	4			145	2			21.1	0
277			11.5	1	4.60	2			122	0	32.9	2		
283	32.9	4	12.4	4	5.64	4	7.20	4	146	2	35.8	4	33.0	3
284			12.0	3	13.10	0			71	0	33.0	2	31.0	4
287			13.0	3	3.00	0			140	3	40.0	2	27.8	1
289	37.0	1	14.3	0	5.90	3	8.00	2	150	0	39.0	3	32.0	4
292			12.0	3	6.00	3	< 5	0	13	0	44.0	0		
296	33.3	4	13.0	3	5.10	3	6.10	2	97	0	35.3	4	30.2	3
300	35.0	3	15.6	0	5.45	4	7.72	3	173	0	37.8	4	34.0	2
304					5.00	3	6.50	3			38.0	4	31.5	4

Table 10. *Laboratory performance ratings for standard reference sample GWT-3 (ground-water trace constituents)--Continued*

(MPV, most probable value; µg/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 (Marginal)	1.51 - 2.00
3 (Good)	0.51 - 1.00	0 (Unsatisfactory)	greater than 2.00
2 (Satisfactory)	1.01 - 1.50	NR (Not Rated)	

Analyte =	Sb (Antimony)		Se (Selenium)		SiO_2 (Silica)		Sr (Strontium)		V (Vanadium)		Zn (Zinc)	
MPV =	insuff. data		12.4	µg/L	22.9	mg/L	551	µg/L	insuff. data		227	µg/L
F-pseudosigma =			2.8		2.0		24				12	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	< 1	NR	11.1	4	22.5	4	567	3	1.15	NR	204	1
5	< 20	NR	4.1	0	23.8	4	564	4	< 4	NR	234	3
11					16.5	0	458	0			237	3
13	< 5	NR	9.2	2	23.3	4			< 20	NR	233	4
16					10.1	0	545	4			227	4
23	10.00	NR	20.0	0							207	1
24					24.3	3	607	0			239	3
25					10.7	0	599	1			246	1
26			12.6	4							229	4
28							564	4	3.80	NR		
30.1			15.0	3			547	4	1.10	NR	218	3
30.2												
32	0.20	NR	12.6	4	24.4	3	580	2	0.90	NR	207	1
33					20.8	2	586	2				
34			6.3	0								
36	< 10	NR	11.0	3	21.0	3			< 10	NR	217	3
43					23.0	4						
45			9.9	3							242	2
48	0.30	NR	12.8	4					0.80	NR	199	0
59			14.2	3	24.4	3					233	4
64					22.9	4						
68												
69	< 5	NR	11.9	4							219	3
76												
81			5.3	0								
83					22.8	4					219	3
85			14.0	3							228	4
89	< 2	NR	7.2	1	23.4	4			4.14	NR	221	4
96	19.10	NR	8.3	2							239	3
97			10.6	3	22.7	4						
100	< 2	NR	12.0	4	18.7	1	448	0	< 5	NR	244	2
109			10.3	3			535	3				
113	< 2.2	NR	11.0	3			521	2			228	4
121					22.5	4	568	3				
126											240	2
133			13.0	4							236	3
134	< 1	NR	9.1	2	22.7	4	549	4	< 1	NR	235	3
138	< 0.2	NR	12.6	4			578	3	1.00	NR	227	4
140					22.9	4					228	4
141	0.55	NR	11.4	4			567	3	1.65	NR	196	0
142	0.07	NR	15.8	2	23.7	4	551	4	0.76	NR	181	0
145					23.6	4	566	3	< 18	NR	236	3
146	< 20	NR	< 10	NR					< 10	NR	230	4
151	0.30	NR	13.3	4			564	4			214	2
180	< 46.1	NR	< 70.0	NR					< 8.07	NR	227	4
190			10.6	3	10.2	0					218	3
191			15.0	3	23.1	4	559	4	1.07	NR	243	2
212	< 1	NR	14.0	3	24.3	3			< 5	NR	220	3
215			9.2	2	17.2	0			22.00	NR	238	3
220			12.3	4			545	4			219	3
221			11.4	4							74	0
224											196	0
234	420.00	NR	10.5	3	23.0	4	563	4	< 1	NR	217	3
235	0.33	NR	13.4	4			605	1			233	4
236	15.00	NR	27.0	0	17.2	0	541	4	< 7	NR	221	4
240	1.20	NR	13.3	4	23.9	3	575	3	< 50	NR	225	4
241	0.31	NR	14.1	3	21.8	3			1.50	NR	230	4
247	16.00	NR	62.0	0	26.2	1	532	3	< 10	NR	222	4
249			3.7	0	25.0	2					229	4
254					23.3	4	575	3			226	4

Table 10. *Laboratory performance ratings for standard reference sample GWT-3 (ground-water trace constituents)--Continued*

(MPV, most probable value; µg/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 (Marginal)	1.51 - 2.00
3 (Good)	0.51 - 1.00	0 (Unsatisfactory)	greater than 2.00
2 (Satisfactory)	1.01 - 1.50	NR (Not Rated)	

Analyte =	Sb (Antimony)		Se (Selenium)		SiO_2 (Silica)		Sr (Strontium)		V (Vanadium)		Zn (Zinc)	
MPV =	insuff. data		12.4	µg/L	22.9	mg/L	551	µg/L	insuff. data		227	µg/L
F-pseudosigma =			2.8		2.0		24				12	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
255	< 7.7	NR	9.5	2					1.20	NR	234	3
256	< 10	NR			21.0	3	535	3	< 10	NR	205	1
258												
259			12.0	4	22.2	4	546	4			229	4
265	0.30	NR	15.3	2	23.1	4	550	4	1.40	NR	222	4
268												
273					16.9	0	422	0				
274					20.6	2					16	0
277											180	0
283	< 1	NR	12.5	4	22.5	4	518	2	< 20	NR	247	1
284	1.00	NR	15.0	3	26.0	1	368	0	730.00	NR	235	3
287											228	4
289	6.00	NR	14.0	3			586	2	< 1	NR	247	1
292	< 3	NR	10.0	3							241	2
296	0.30	NR	12.7	4			533	3	0.88	NR	218	3
300	0.43	NR	14.1	3			551	4	3.95	NR	216	3
304	0.27	NR	13.0	4					1.00	NR		

Table 11. *Laboratory performance ratings for standard reference sample GWM-3 (ground-water major constituents)*

(MPV, most probable value; µg/L, micrograms per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/13, number of reported values of 13 possible values; RV, reported value; <, less than.)

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

			Analyte =	Alkalinity (as $CaCO_3$)		B (Boron)		Ca (Calcium)		Cl (Chloride)		DSRD (Dissolved Solids)		F (Fluoride)	
			MPV =	144	mg/L	53.1	µg/L	28.7	mg/L	36.9	mg/L	438	mg/L	0.67	mg/L
			F-pseudosigma =	5		4.4		1.0		1.9		13		0.05	
Lab	OLR	V/13		RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	3.6	12		147	4	49.6	3	29.1	4	35.1	3	446	3	0.72	3
11	2.3	11		138	3			28.9	4	38.0	3	472	0	0.58	1
13	2.8	11		136	2			29.9	3	35.7	3	388	0	0.65	4
16	2.3	12		138	3	50.6	3	28.8	4	36.7	4	483	0	0.65	4
18	2.3	7				< 50	NR	26.3	1	42.3	0			0.74	2
23	3.2	10		140	3			27.7	3	39.5	2	422	2	0.68	4
24	3.5	11		146	4	55.6	3	28.9	4	36.1	4			0.69	4
25	2.6	11		144	4			30.1	3	36.1	4	426	3	0.67	4
26	4.0	3		144	4							437	4		
28	3.8	5				52.8	4	28.9	4						
30.1	3.5	6				57.0	3	27.2	2	36.7	4				
30.2	2.3	3						23.4	0						
32	3.7	12		150	3	53.0	4	28.1	4	35.2	3	434	4	0.60	2
33	3.7	9		146	4			28.4	4	36.1	4				
36	2.9	11		143	4	< 50	NR	26.7	2	37.0	4	496	0	0.65	4
42	2.0	3								38.2	3			0.52	0
43	3.8	10		145	4			30.0	3	36.0	4	436	4		
45	3.6	9		141	4			28.4	4	38.4	3	436	4	0.71	3
48	2.0	11		119	0	50.0	3	31.0	1	34.0	2	420	2	0.81	0
59	3.5	11		143	4			29.1	4	36.9	4	433	4	0.69	4
64	3.5	8						28.3	4	36.8	4				
68	2.0	3		153	2					41.0	0				
69	3.3	10		146	4			28.1	4	38.0	3	387	0	0.65	4
76	3.2	6				60.3	1	28.3	4			435	4	0.59	2
81	3.0	11		143	4			28.6	4	33.1	1	394	0	0.68	4
83	3.3	8		150	3			28.1	4	33.6	1			0.70	3
85	3.4	12		148	3	60.0	1	27.4	3	37.2	4	439	4	0.66	4
89	3.3	11		146	4			26.2	1	36.1	4	439	4	0.71	3
97	3.3	7		151	2					39.5	2	426	3	0.66	4
100	1.9	11		147	4	81.5	0	34.9	0	38.7	3	432	4	0.70	3
109	3.1	10		152	2			28.9	4	35.6	3	446	3	0.74	2
113	3.2	11		140	3			29.2	4	34.3	2	430	3	0.66	4
121	4.0	4						29.0	4						
133	3.3	3		143	4			28.0	4						
134	4.0	12		146	4	54.0	4	29.0	4	36.1	4	441	4	0.68	4
138	3.5	12		149	3	56.4	3	28.9	4	36.3	4	461	1	0.64	3
140	3.0	10						30.5	2	38.3	3	445	3	0.69	4
141.1	2.6	11		147	4	38.7	0	26.1	1	33.4	1	435	4	0.66	4
141.2	2.0	3								35.8	3			0.49	0
142	3.9	11		146	4	52.5	4	28.5	4	37.2	4	444	4	0.71	3
145	2.7	10		125	0	64.0	0	29.6	3	36.5	4			1.01	0
146	2.0	9		145	4			29.4	3	44.1	0	416	1	0.74	2
158	3.0	4								38.8	3	439	4	0.61	2
180	3.0	9		139	3	85.1	0	29.3	4	36.4	4			0.75	1
190	2.4	11		139	3			27.3	3	37.7	4	408	0	0.48	0
191	3.6	7						28.6	4	35.9	3				
208	1.7	3								37.8	4			< 0.3	0
212	3.5	10		142	4	< 100	NR	28.6	4	36.5	4	429	3	0.79	0
215	2.9	10		143	4	54.0	4	29.7	3			444	4	0.67	4
220	3.1	7		143	4	54.1	4	29.1	4	40.0	1				
224	2.9	9		144	4			28.6	4	37.9	3	442	4		
234	3.4	12		150	3	51.3	4	28.4	4	34.5	2	440	4	0.61	2
236	2.7	12		147	4	49.0	3	27.8	3	40.3	1	465	0	0.66	4
240	3.3	12		135	2	53.1	4	28.6	4	36.6	4	500	0	0.70	3
241	2.8	11		145	4			25.5	0	34.8	2	437	4	0.64	3
247	2.1	11		145	4	< 50	NR	36.8	0	37.0	4	445	3	0.61	2
254	2.9	8				41.0	0	29.5	3	36.9	4				
255	2.8	12		148	3	56.3	3	29.4	3	38.2	3	451	2	0.78	0
256	3.2	9		140	3	< 10	NR	29.2	4	36.2	4				
258	1.7	7		141	4	38.5	0	31.3	1	41.8	0				

Table 11. *Laboratory performance ratings for standard reference sample GWM-3 (ground-water major constituents)--Continued*

(MPV, most probable valua; µg/L, micrograms per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reportad values; V/13, number of reported values of 13 possible values; RV, reported value; <, less than.)

Rating	Absolute Z-value	Rating	Absolute Z-valua
4 (Excellent)	0.00 - 0.50	1 (Marginal)	1.51 - 2.00
3 (Good)	0.51 - 1.00	0 (Unsatisfactory)	graater than 2.00
2 (Satisfactory)	1.01 - 1.50	NR (Not Rated)	

			Analyte =	Alkalinity (as $CaCO_3$)		B (Boron)		Ca (Calcium)		Cl (Chloride)		DSRD (Dissolved Solids)		F (Fluoride)	
			MPV =	144	mg/L	53.1	µg/L	28.7	mg/L	36.9	mg/L	438	mg/L	0.67	mg/L
			F-pseudosigma =	5		4.4		1.0		1.9		13		0.05	
Lab	OLR	V/13		RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
259	3.9	12		142	4	53.0	4	28.6	4	36.0	4	447	3	0.69	4
262	3.0	9		143	4			30.4	2	38.0	3			0.65	4
265	3.1	10		82	0	50.5	3	29.0	4	38.6	3			0.67	4
268	1.9	9		145	4			15.6	0	39.2	2	475	0		
270	3.6	5		150	3					37.1	4				
274	1.3	10		155	2			20.9	0	40.6	1			0.46	0
277	1.8	8		152	2			28.4	4	32.0	0			0.56	0
283	2.0	12		140	3	54.0	4	30.9	1	41.1	0	376	0	0.54	0
284	1.2	11		139	3			21.0	0	47.9	0	443	4	0.90	0
287	2.2	9		138	3			29.1	4	39.0	2			0.77	1
289	3.4	9						28.5	4	36.0	4			0.67	4
292	2.9	10		142	4			29.7	3	35.0	3	428	3	0.80	0
296	1.8	5				45.0	1	28.3	4						
300	0.0	6				71.0	0	35.6	0	62.6	0				

Table 11. *Laboratory performance ratings for standard reference sample GWM-3 (ground-water major constituents)--Continued*

(MPV, most probable value; µg/L, micrograms per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/13, number of reported values of 13 possible values; RV, reported value; <, less than.)

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

Analyte =	K (Potassium)		Mg (Magnesium)		Na (Sodium)		total Phosphorus as P		SiO_2 (Silica)		SO_4 (Sulfate)		Sp Cond (Specific Conductance)	
MPV =	0.87	mg/L	9.90	mg/L	110	mg/L	insuff. data		18.1	mg/L	140	mg/L	705	µS/cm
F-pseudosigma =	0.13		0.34		3				1.5		4		13	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	0.77	3	9.83	4	108	4	0.008	NR	17.7	4	139	4	711	4
11	0.97	3	9.66	4	100	1			12.6	0	131	2	717	4
13	0.78	3	10.40	2	115	3	< 0.05	NR	19.0	3	140	4	712	4
16	1.07	1	9.58	3	107	3	0.028	NR	7.8	0	117	0	728	3
18	< 1	NR	9.80	4	107	3	0.006	NR	17.6	4	130	2		
23	0.81	4	9.82	4	112	4	< 0.01	NR			149	2	703	4
24	0.57	0	9.93	4	111	4			19.3	3	138	4	710	4
25	1.48	0	10.20	3	118	2	0.050	NR	8.5	0	139	4	741	2
26													707	4
28	0.87	4	10.30	3	113	4								
30.1			9.78	4	110	4					142	4		
30.2			10.00	4	105	3								
32	0.83	4	9.80	4	108	4			17.6	4	142	4	710	4
33	0.86	4	9.67	4	106	3			16.3	2	140	4	700	4
36	1.02	2	9.05	1	110	4	0.062	NR	18.1	4	141	4	695	3
42											133	3		
43	0.86	4	9.90	4	110	4			19.0	3	138	4	702	4
45	0.89	4	10.40	2	112	4					141	4		
48	0.89	4	10.60	2	116	3	0.010	NR			130	2	713	3
59	0.77	3	10.20	3	111	4	0.010	NR	19.0	3	153	1	700	4
64	0.91	4	9.74	4	113	4			18.1	4	141	4	7048	0
68											138	4		
69	0.88	4	9.61	3	108	4					141	4	670	3
76			9.76	4									700	4
81	1.25	0	9.90	4	110	4	< 0.005	NR	18.1	4	140	4	704	4
83			9.48	3	107	4			17.5	4	138	4		
85	0.87	4	9.76	4	105	3			19.2	3	139	4	704	4
89	0.70	2	9.76	4	107	4	0.013	NR	19.3	3	138	4	677	3
97					110	4	0.080	NR	17.9	4			707	4
100	< 1	NR	12.50	0	135	0			23.2	0	146	3	705	4
109	1.00	2	10.00	4	108	4					134	3	700	4
113	1.06	2	10.40	2	114	3	0.010	NR	18.6	4	141	4	692	4
121			9.68	4	108	4			17.8	4				
133			9.33	2			0.008	NR						
134	0.87	4	9.89	4	111	4	0.009	NR	18.3	4	141	4	706	4
138	0.84	4	9.77	4	108	4	0.010	NR	18.7	4	142	4	695	4
140	0.88	4	9.90	4	109	4	< 0.01	NR	18.0	4	149	2	603	0
141.1	0.79	3	9.21	2	102	2	0.015	NR			140	4	712	4
141.2											136	3		
142	< 1	NR	9.83	4	110	4	0.082	NR	18.5	4	138	4	712	4
145	< 0.8	NR	9.96	4	110	4	0.030	NR	18.6	4	143	4	691	4
146	< 1	NR	10.30	3	148	0	< 0.1	NR			149	2	679	3
158							0.026	NR			144	3		
180	< 0.713	NR	9.99	4	111	4	< 0.025	NR			142	4	735	3
190	0.77	3	9.28	2	109	4	0.050	NR	7.9	0	139	4	680	3
191	0.76	3	10.11	4	109	4	< 0.01	NR	19.1	3	140	4		
208											151	1		
212	< 5	NR	9.80	4	109	4	< 0.05	NR	18.6	4	137	4	698	4
215			10.30	3	114	3	0.025	NR	13.5	0	156	0	713	4
220			9.90	4	108	4	0.028	NR			154	1		
224	0.71	2	10.07	4	119	1	0.045	NR			141	4	540	0
234	0.75	3	9.64	3	111	4	0.005	NR	17.7	4	139	4	716	4
236	0.81	4	9.88	4	107	4	0.030	NR	13.6	0	151	1	695	4
240	0.92	4	10.10	4	106	3	0.040	NR	17.7	4	144	3	700	4
241	0.80	3	9.80	4	111	4	0.010	NR	16.9	3	141	4	628	0
247	1.26	0	12.90	0	139	0	< 0.1	NR	18.9	3	136	3	719	4
254	0.70	2	10.20	3	114	3			18.4	4	141	4		
255	0.79	3	10.00	4	111	4	< 0.5	NR	13.2	0	140	4	714	4
256	0.67	2	9.70	4	110	4	0.120	NR	16.3	2	130	2	720	4
258			9.96	4							157	0	679	3

Table 11. *Laboratory performance ratings for standard reference sample GWM-3 (ground-water major constituents)--Continued*

(MPV, most probable value; µg/L, micrograms per liter; mg/L, milligrams per liter; Lab, laboratory number; OLR, overall laboratory rating for all reported values; V/13, number of reported values of 13 possible values; RV, reported value; <, less than.)

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

Analyte =	K (Potassium)		Mg (Magnesium)		Na (Sodium)		total Phosphorus as P		SiO_2 (Silica)		SO_4 (Sulfate)		Sp Cond (Specific Conductance)	
MPV =	0.87	mg/L	9.90	mg/L	110	mg/L	insuff. data		18.1	mg/L	140	mg/L	705	µS/cm
F-pseudosigma =	0.13		0.34		3				1.5		4		13	
Lab	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
259	0.90	4	10.00	4	112	4	0.015	NR	17.8	4	143	4	708	4
262	0.92	4	10.40	2	105	3					128	1	706	4
265	0.95	3	10.20	3	109	4			18.3	4	136	3		
268	0.82	4	8.80	0	87	0					143	4	740	3
270	0.85	4			108	4							726	3
274	1.07	1	18.21	0	114	3	0.046	NR	16.3	2	99	0	718	4
277	0.95	3	9.50	3	101	2					178	0		
283	1.09	1	10.10	4	119	2	0.140	NR	18.5	4	153	1	701	4
284	1.29	0	8.00	0	111	4	< 0.1	NR	20.3	2	80	0	860	0
287	2.22	0	10.48	2	113	4	< 0.1	NR			138	4	514	0
289	0.75	3	10.10	4	104	3	8.700	NR	16.3	2	137	4	686	3
292	0.80	3	9.30	2	104	3	0.010	NR			139	4	707	4
296	0.19	0	10.00	4	83	0								
300	1.26	0	15.31	0	173	0								
300														

Table 12. *Laboratory performance ratings for standard reference sample Hg-26 (mercury)*

(MPV, most probable value; ug/L, micrograms per liter; Lab, laboratory number; V/1, number of reported values of 1 value; RV, reported value; <, less than.)

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

Analyte =	Hg (Mercury)		
MPV =	0.70	µg/L	
F-pseudosigma =	0.09		

Lab	V/1	RV	Rating
1	1	0.80	2
3	1	0.83	2
5	1	1.80	0
10	1	0.82	2
11	1	0.75	3
13	1	0.66	4
16	1	0.70	4
18	1	0.70	4
26	1	0.77	3
34.1	1	0.62	3
34.2	1	0.86	1
36	1	0.65	3
45	1	0.75	3
48	1	0.61	2
50	1	0.96	0
51	1	0.51	0
59	1	0.76	3
68	1	0.66	4
69	1	0.67	4
70	1	0.71	4
81	1	0.94	0
87	1	0.70	4
89	1	0.46	0
96	1	0.85	1
97	1	0.74	4
100	1	0.74	4
109	1	0.73	4
113	1	0.78	3
118	1	0.60	2
127	1	0.73	4
133	1	0.70	4
134	1	0.76	3
138	1	0.70	4
141	1	1.07	0
142	1	0.63	3
144	1	0.60	2
145	1	0.70	4
146	1	0.73	4
147	1	5.60	0
149	1	0.70	4
154	1	0.70	4
158	1	0.75	4
193	1	0.67	4
198	1	0.70	4
212	1	0.79	3
215	1	0.66	4
217	1	0.20	0
220	1	0.66	4
221	1	0.71	4
234	1	0.81	2
235	1	0.62	3
241	1	0.79	3
245	1	0.61	2
247	1	0.70	4
255	1	0.70	4
256	1	< 2	NR
259	1	0.58	2
265	1	0.64	3
283	1	1.00	0
284	1	0.57	2
289	1	0.76	3
292	1	0.80	2
298	1	0.75	3
304	1	0.92	0

Table 13. *Statistical summary of reported data for standard reference sample T-153 (trace constituents)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

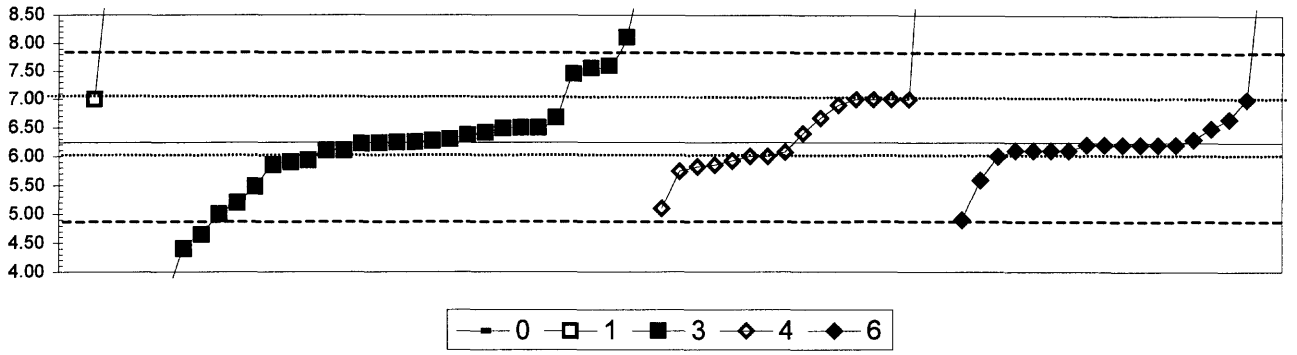
0. Other/Not reported		
1. AA: direct, air	=	atomic absorption: direct, air
2. AA: direct, N_2O	=	atomic absorption: direct, nitrous oxide
3. AA: graphite furnace	=	atomic absorption: graphite furnace
4. ICP	=	inductively coupled plasma
5. DCP	=	direct current plasma
6. ICP/MS	=	inductively coupled plasma / mass spectrometry
7. IC	=	ion chromatography
10. AA: extraction	=	atomic absorption: extraction (chelating agent[s] specified)
11. AA: hydride	=	atomic absorption: hydride (reducing agent specified)
12. AA: flame emission	=	atomic absorption: flame emission
22. Color	=	colorimetric (color reagent specified)

Abbreviations and symbols

N	=	number of analyses--(excluding less than values)
MPV	=	most probable value
F-pseudosigma	=	nonparametric statistic deviation
Hu	=	upper hinge value
Hl	=	lower hinge value
µg/L	=	micrograms per liter
mg/L	=	milligrams per liter
Lab	=	laboratory code number
NR	=	not rated, less than value reported or insufficient data
<	=	less than

Table 13. *Statistical summary of reported data for standard reference water sample T-153 (trace constituents)--Continued*

Ag (Silver) **µg/L**



0. Other				4. ICP			
1. AA: direct, air				6. ICP/MS			
3. AA: graphite furnace							
		N =	1	4	28	17	18
		Minimum =	60.00	7.00	3.50	5.10	4.90
		Maximum =		12.00	9.60	139.10	10.00
		Median =			6.25	6.40	6.20
		F-pseudosigma =			0.46	0.80	0.15

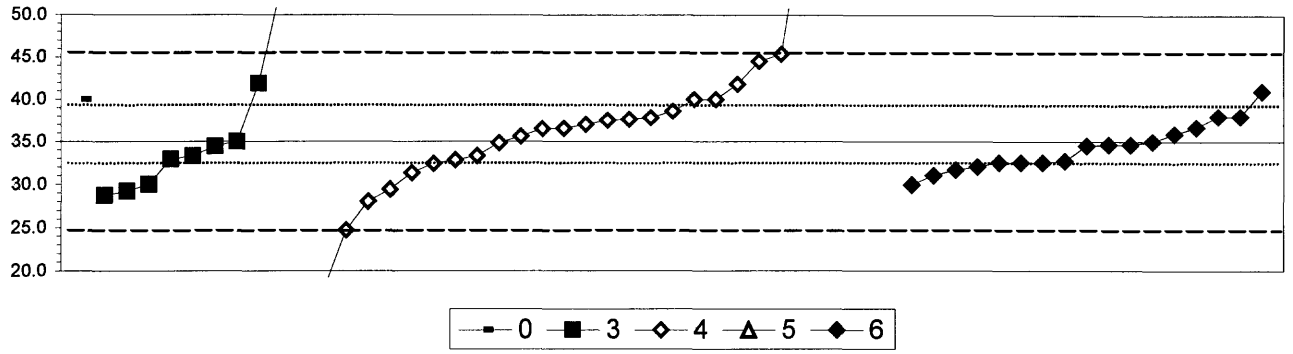
Lab	Rating	Z-value	0	1	3	4	6
1	4	-0.01			6.23		
3	2	1.03				7.00	
5	1	-1.67			5.00		
13	4	-0.42				5.92	
16	1	-1.53				5.10	
18	4	0.22				6.40	
23	1	1.79			7.56		
26	4	0.05			6.27		
30.1	4	-0.18					6.10
32	4	-0.18					6.10
34	3	0.60			6.68		
36	NR					< 10	
40	4	-0.32				6.00	
42	3	-0.87					5.59
48	4	-0.05					6.20
50	4	-0.18					6.10
68	0	-3.69			3.50		
69	4	-0.41			5.93		
70	NR				< 10		
85	0	5.08		10.00			
87	0	7.78		12.00			
89	4	0.18			6.37		
96	4	0.36			6.50		
97	3	-0.52			5.85		
100	4	0.02			6.25		
107	4	0.09			6.30		
113	4	0.36			6.50		
114	0	6.43		11.00			
118	4	-0.18			6.10		
126	0	-2.48			4.40		
127	4	0.24			6.41		
131	0	5.08					10.00
133	NR					< 6	
134	4	-0.22				6.07	
138	3	-0.52				5.85	
140	2	1.03		7.00			
141	0	7.37				11.70	
142	4	0.34					6.49
144	4	-0.45			5.90		
146	NR					< 10	
151	4	-0.05					6.20
154	2	-1.02			5.48		
180	3	0.59				6.67	
183	4	0.34			6.49		
190	1	1.65			7.46		
193	4	-0.18			6.10		
198	3	-0.56				5.82	
204	4	-0.05					6.20
212	4	-0.32					6.00
213	1	1.84			7.60		

MPV =	6.24
F-pseudosigma =	0.74
N =	68
Hu =	7.00
Hl =	6.00

Lab	Rating	Z-value	0	1	3	4	6
215	0	4.54			9.60		
217	4	0.09					6.30
218	0	179.23				139.10	
221	0	2.53			8.11		
234	4	0.01			6.24		
235	3	0.56					6.65
236	2	1.03				7.00	
240	3	-0.67				5.74	
241	4	-0.05					6.20
247	NR					< 10	
249	2	-1.40			5.20		
255	4	-0.02			6.22		
256	NR					< 10	
259	4	-0.32				6.00	
265	4	-0.05					6.20
273	3	0.90				6.90	
277	2	1.03				7.00	
283	1	-1.80					4.90
284	0	72.53	60.00				
289	2	1.03					7.00
292	2	1.03				7.00	
296	4	-0.18					6.10
304	4	-0.05					6.20
306	NR			< 10			
307	0	-2.14			4.65		

Table 13. *Statistical summary of reported data for standard reference water sample T-153 (trace constituents)--Continued*

Al (Aluminum) µg/L



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

N =		1	9	27	1	17
Minimum =		40.0	28.7	15.0	70.0	29.9
Maximum =			53.3	168.0		41.0
Median =			33.3	37.0		34.5
F-pseudosigma =			3.7	6.2		2.5

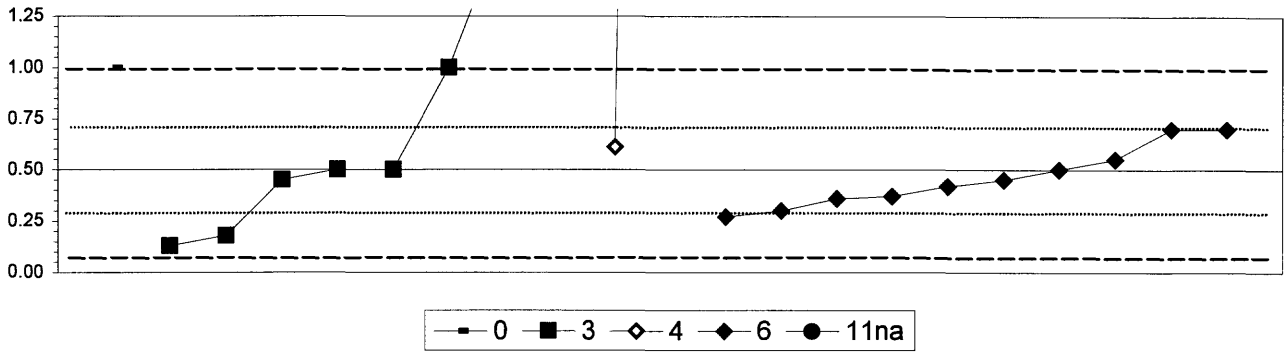
Lab	Rating	Z-value	0	3	4	5	6
1	4	-0.49					32.5
3	0	-3.35			18.0		
5	4	0.39			37.0		
16	4	-0.33			33.3		
18	NR				< 100		
23	0	12.01			96.0		
30.1	3	-0.79					31.0
32	4	-0.10					34.5
33	0	6.89				70.0	
36	NR				< 100		
40	3	0.98			40.0		
42	3	-0.66					31.6
48	4	-0.08					34.6
50	4	-0.45					32.7
68	1	2.05			45.4		
69	4	0.00		35.0			
70	NR				< 100		
76	4	0.33					36.7
81	NR				< 104		
89	2	1.36		41.9			
97	4	-0.41		32.9			
100	4	-0.04			34.8		
107	2	-1.24		28.7			
110	4	-0.43			32.8		
113	3	-0.73			31.3		
127	NR				< 30		
134	4	0.30			36.5		
138	4	0.12			35.6		
141	0	5.14			61.1		
142	4	0.49			37.5		
145	NR				< 180		
146	NR				< 200		
147	4	-0.49					32.5
149	3	-0.98		30.0			
151	4	-0.49					32.5
154	1	-2.03			24.7		
158	3	0.51			37.6		
180	3	0.71			38.6		
190	4	-0.33		33.3			
191	4	-0.08					34.6
198	2	1.34			41.8		
204	3	-0.59					32.0
212	NR				< 100		
221	4	-0.12		34.4			
234	3	-0.51			32.4		
235	4	0.18					35.9
236	0	6.89			70.0		
240	2	-1.10			29.4		
241	3	-1.00					29.9
247	0	-4.90			< 10		

MPV =	35.0
F-pseudosigma =	5.1
N =	55
Hu =	39.3
Hl =	32.5

Lab	Rating	Z-value	0	3	4	5	6
249	0	3.60		53.3			
254	3	0.55			37.8		
255	1	1.87			44.5		
256	0	-3.94			15.0		
259	3	0.98			40.0		
265	4	0.00					35.0
273	4	0.30			36.5		
283	0	26.19			168.0		
284	3	0.98	40.0				
287	2	-1.14		29.2			
289	3	0.59					38.0
292	2	-1.38			28.0		
296	2	1.18					41.0
304	3	0.59					38.0

Table 13. *Statistical summary of reported data for standard reference water sample T-153 (trace constituents)--Continued*

As (Arsenic) **µg/L**



0. Other			6. ICP/MS				
3. AA: graphite furnace			11. AA: hydride NaBH4				
4. ICP							
		N =	1	8	2	10	0
		Minimum =	1.00	0.13	0.61	0.27	
		Maximum =		1.89	17.00	0.70	
		Median =		0.50		0.44	
		F-pseudosigma =		0.77		0.14	

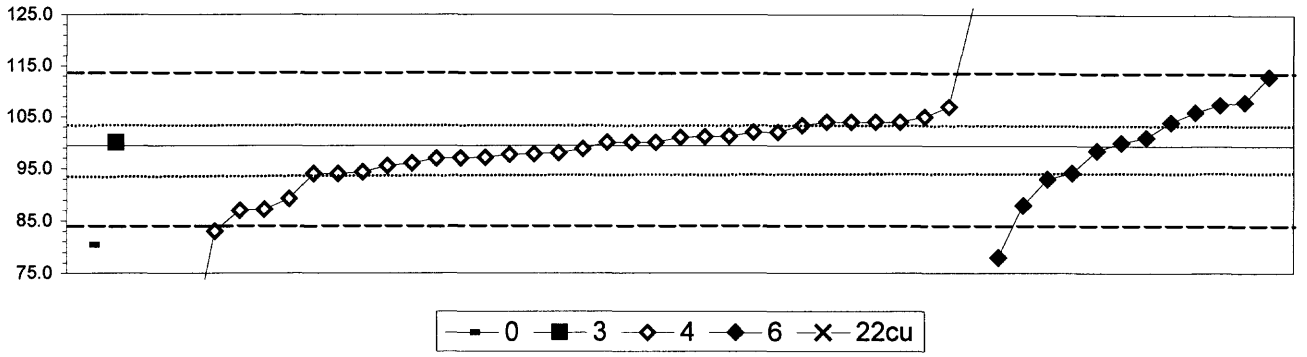
Lab	Rating	Z-value	0	3	4	6	11na
1	NR			< 1			
3	NR				< 10		
5	0	5.61		1.89			
10	NR						< 1
13	NR			< 5			
18	NR			< 2			
23	NR			< 10			
26	NR						< 0.7
30.1	3	-0.93				0.27	
36	NR				< 5		
42	NR					< 2	
45	1	2.02		1.00			
48	4	0.00				0.50	
50	NR					< 1	
68	NR			< 0.95			
69	NR			< 5			
70	NR			< 10			
81	NR			< 2			
89	NR						< 2
96	NR			< 1			
100	NR			< 2			
107	NR			< 5			
109	4	-0.20		0.45			
113	NR			< 1.5			
118	NR			< 4			
127	NR			< 2			
133	NR			< 5			
134	NR			< 1			
138	NR					< 2	
141	4	0.44			0.61		
142	3	0.80				0.70	
144	NR			< 2			
145	NR				< 39		
146	NR				< 10		
147	NR					< 0.09	
149	NR			< 1			
151	4	-0.20				0.45	
180	NR				< 49.4		
190	2	-1.49		0.13			
191	3	-0.52				0.37	
193	NR			< 5			
198	NR			< 10			
204	3	0.81				0.70	
212	NR					< 5	
213	NR			< 1			
221	4	0.00		0.50			
234	4	0.00		0.50			
236	0	66.54			17.00		
240	NR				< 10		
241	3	-0.56				0.36	

MPV =	0.50
F-pseudosigma =	0.24
N =	21
Hu =	0.70
HI =	0.37

Lab	Rating	Z-value	0	3	4	6	11na
247	NR				< 50		
249	0	4.84		1.70			
255	NR			< 2			
265	3	-0.81				0.30	
283	NR					< 1	
284	1	2.02	1.00				
289	NR					< 0.5	
292	NR			< 3			
296	4	-0.32				0.42	
304	4	0.20				0.55	
307	2	-1.29		0.18			

Table 13. *Statistical summary of reported data for standard reference water sample T-153 (trace constituents)--Continued*

B (Boron) **µg/L**



0. Other
3. AA: graphite furnace
4. ICP
6. ICP/MS
22cu. Color: curcumin

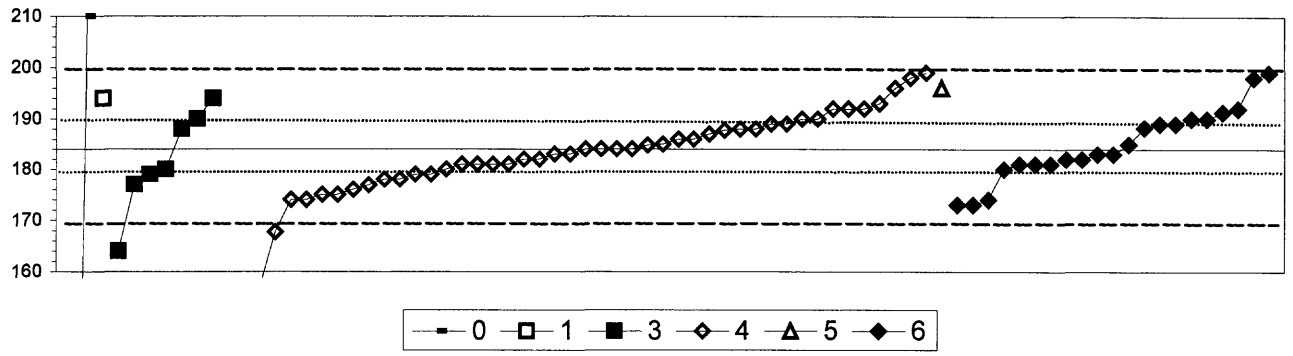
N =	1	1	35	12	1
Minimum =	80.4	100.0	22.3	78.0	200.0
Maximum =			127.0	113.0	
Median =			98.0	100.5	
F-pseudosigma =			5.8	9.7	

MPV =	99.4
F-pseudosigma =	7.4
N =	50
Hu =	104.0
Hl =	94.0

Lab	Rating	Z-value	0	3	4	6	22cu
1	4	-0.31			97.1		
3	3	0.62			104.0		
5	4	0.08			100.0		
11	1	-1.67			87.0		
16	3	-0.69			94.3		
18	4	-0.19			98.0		
23	0	13.57					200.0
24	4	-0.08			98.8		
25	4	0.22			101.0		
26	1	-1.65			87.2		
28	4	-0.22			97.8		
30.1	3	0.62				104.0	
32	4	0.22				101.0	
36	0	-2.21			83.0		
40	4	-0.32			97.0		
42	4	-0.12				98.5	
48	3	-0.86				93.0	
50	3	-0.53			95.5		
68	0	-10.40			22.3		
76	2	1.09				107.5	
85	4	0.08			100.0		
100	4	0.35			102.0		
127	3	-0.73			94.0		
131	2	1.16				108.0	
134	4	0.23			101.1		
138	3	0.62			104.0		
141	2	1.03			107.0		
142	4	0.08			100.0		
145	3	0.62			104.0		
154	4	0.08		100.0			
158	4	-0.34			96.9		
180	0	3.72			127.0		
191	0	-2.89				78.0	
212	NR				< 100		
215	4	-0.46			96.0		
217	1	1.83				113.0	
220	3	0.53			103.3		
234	3	0.62			104.0		
235	3	-0.70				94.2	
236	3	-0.73			94.0		
240	4	-0.23			97.7		
247	0	-5.32			60.0		
254	2	-1.38			89.2		
255	3	0.76			105.0		
256	0	-12.06			< 10		
258	0	-2.56	80.4				
259	4	0.24			101.2		
265	4	0.08				100.0	
273	0	-8.28			38.0		
283	4	0.35			102.0		
289	3	0.89				106.0	
296	1	-1.54				88.0	

Table 13. *Statistical summary of reported data for standard reference water sample T-153 (trace constituents)--Continued*

Ba (Barium) µg/L



0. Other				4. ICP				
1. AA: direct, air				5. DCP				
3. AA: graphite furnace				6. ICP/MS				
		N =	2	1	7	46	1	21
		Minimum =	36	194	164	19	196	173
		Maximum =	210		194	199		199
		Median =			180	184		183
		F-pseudosigma =			8	7		7

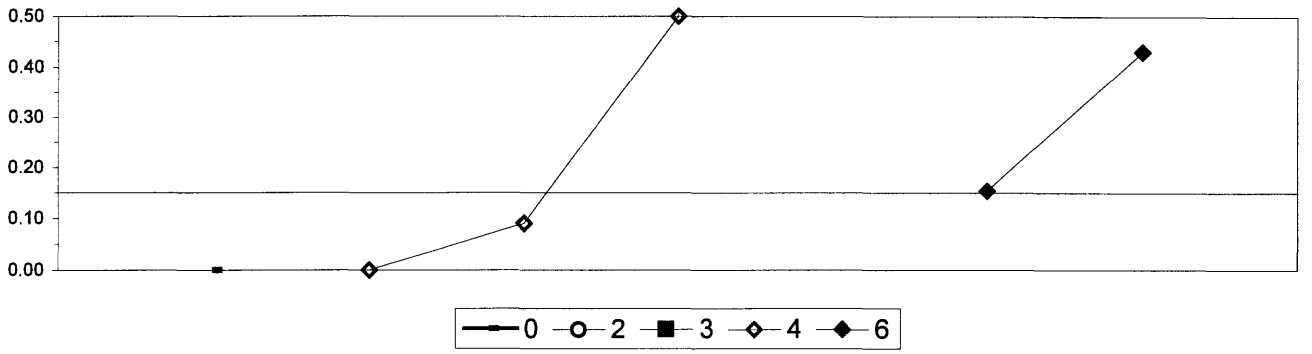
Lab	Rating	Z-value	0	1	3	4	5	6
1	3	0.80						190
3	1	1.78				198		
5	4	-0.06				183		
11	4	-0.18				182		
13	2	1.04				192		
16	3	-0.92				176		
18	4	-0.43				180		
19	4	0.06				184		
23	0	-8.52				114		
24	4	0.31				186		
25	3	0.55				188		
26	3	0.67				189		
28	3	-0.81				177		
30.1	4	-0.06						183
32	4	-0.31						181
33	1	1.53					196	
36	2	-1.17				174		
40	4	-0.31				181		
42	3	0.96						191
48	2	-1.29						173
50	3	0.80						190
68	0	-20.20				19		
69	3	-0.55			179			
70	4	0.31				186		
76	3	0.58						188
81	2	-1.04				175		
83	4	-0.31				181		
85	4	0.06				184		
87	3	0.80			190			
89	0	-2.39			164			
96	0	3.25	210					
97	3	0.55			188			
100	4	-0.18				182		
107	2	1.29			194			
113	4	-0.31				181		
121	4	0.18				185		
127	4	-0.31				181		
131	4	-0.18						182
133	4	0.06				184		
134	4	0.16				185		
138	3	0.55				188		
140	2	1.29		194				
141	2	-1.17				174		
142	3	0.67						189
145	3	0.67				189		
146	2	1.04				192		
147	4	-0.18						182
149	4	-0.43			180			
151	4	-0.31						181
154	3	-0.80			177			

MPV =	184
F-pseudosigma =	8
N =	78
Hu =	190
Hl =	179

Lab	Rating	Z-value	0	1	3	4	5	6
158	3	-0.67				178		
180	4	0.43				187		
198	1	1.90				199		
204	3	0.67						189
212	4	-0.43						180
215	3	0.80				190		
217	1	1.78						198
220	3	0.52				188		
224	0	-3.29				157		
227	1	1.53				196		
234	3	-0.55				179		
235	1	1.90						199
236	4	-0.06				183		
240	3	-0.55				179		
241	4	-0.31						181
247	3	-0.67				178		
255	2	1.04				192		
256	2	-1.04				175		
259	4	0.06				184		
265	4	0.18						185
273	3	0.80				190		
277	1	-1.94				168		
283	4	-0.06						183
284	0	-18.09	36					
289	2	1.04						192
292	2	1.17				193		
296	2	-1.17						174
304	2	-1.29						173

Table 13. *Statistical summary of reported data for standard reference water sample T-153 (trace constituents)--Continued*

Be (Beryllium) **µg/L**



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

	0	2	3	4	6
N =	1	0	0	4	2
Minimum =	0.00	< 10	0.0003	0.00	0.15
Maximum =				5.00	0.43
Median =					
F-pseudosigma =					

MPV = insufficient data

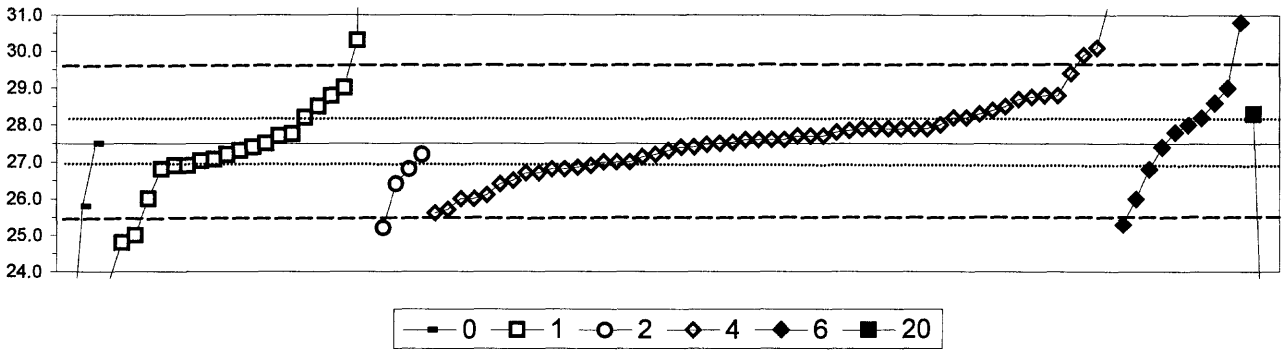
	0	2	3	4	6
N =					7

Lab	Rating	Z-value	0	2	3	4	6
1	NR						< 1
3	NR					< 1	
5	NR					< 0.5	
13	NR					< 4	
18	NR					< 1	
23	NR					5.00	
30.1	NR						< 0.1
36	NR					< 1	
42	NR						< 2
48	NR						< 0.04
50	NR						< 1
68	NR			< 0.0003			
69	NR				< 2		
70	NR					< 2	
81	NR				< 1		
89	NR				< 2		
96	NR			< 10			
100	NR					< 1	
113	NR					< 0.1	
127	NR					< 0.4	
131	NR						< 1
133	NR					< 1	
134	NR					< 0.5	
138	NR						< 0.02
141	NR					0.09	
142	NR						< 1
144	NR				< 0.06		
145	NR					< 2	
146	NR					< 4	
147	NR						< 0.09
149	NR				< 0.5		
180	NR					0.50	
193	NR				< 1		
198	NR				< 1		
204	NR						< 0.1
212	NR						< 1
213	NR				< 0.2		
217	NR						0.43
234	NR					< 1	
235	NR						0.15
236	NR					0.00	
240	NR					< 25	
247	NR					< 10	
255	NR					< 0.2	
256	NR					< 10	
265	NR						< 0.1
283	NR					< 1	
284	NR		0.00				
289	NR						< 0.5
292	NR					< 1	

Lab	Rating	Z-value	0	2	3	4	6
296	NR						< 0.1

Table 13. *Statistical summary of reported data for standard reference water sample T-153 (trace constituents)--Continued*

Ca (Calcium) **mg/L**



0. Other				4. ICP				
1. AA: direct, air				6. ICP/MS				
2. AA: direct, nitrous oxide				20. Titrate: colorimetric				
		N =	3	21	4	53	10	2
		Minimum =	21.0	23.7	25.2	25.6	25.3	18.8
		Maximum =	27.5	65.0	27.2	31.5	30.8	28.3
		Median =		27.3		27.6	27.9	
		F-pseudosigma =		1.0		0.7	1.3	

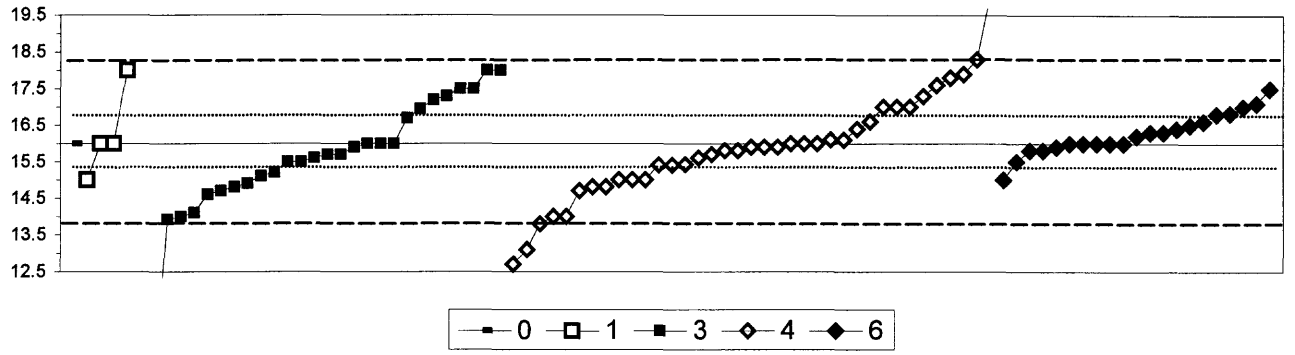
Lab	Rating	Z-value	0	1	2	4	6	20
1	4	0.07				27.6		
3	1	1.74				29.9		
5	4	-0.36				27.0		
11	4	0.07				27.6		
13	1	1.88				30.1		
16	4	0.25				27.9		
18	4	0.00				27.5		
23	2	-1.09				26.0		
24	4	-0.14				27.3		
25	3	0.65				28.4		
28	3	-0.51				26.8		
30.1	3	-0.51			26.8			
30.2	1	-1.59					25.3	
32	3	-0.51					26.8	
33	4	0.00	27.5					
36	2	-1.30				25.7		
40	2	-1.09				26.0		
42	3	0.91				28.8		
43	4	0.36				28.0		
45	4	-0.22		27.2				
48	0	2.39					30.8	
50	4	0.07				27.6		
51	4	-0.07		27.4				
59	3	0.51		28.2				
64	4	-0.36				27.0		
68	3	0.94				28.8		
69	4	-0.43		26.9				
70	3	0.94				28.8		
76	4	-0.31		27.1				
81	3	-0.51				26.8		
83	4	-0.26				27.1		
84	4	-0.14		27.3				
85	3	-0.51		26.8				
87	1	-1.67			25.2			
89	2	-1.09		26.0				
100	4	-0.43				26.9		
107	0	2.03		30.3				
109	4	0.18		27.8				
110	4	-0.36				27.0		
113	4	0.14				27.7		
121	4	0.29				27.9		
127	4	0.07				27.6		
131	2	-1.09					26.0	
133	3	-0.58				28.7		
134	4	-0.07				27.4		
138	4	0.29				27.9		
140	3	0.72		28.5				
141	2	-1.38				25.6		
142	4	0.14				27.7		
144	1	-1.81		25.0				

MPV =	27.5	
F-pseudosigma =	1.0	
Rating Criterion =	1.4	**
N =	93	
Hu =	28.2	
HI =	26.8	

Lab	Rating	Z-value	0	1	2	4	6	20
145	4	0.29				27.9		
146	3	-0.58				26.7		
149	4	0.14		27.7				
154	2	-1.23	25.8					
158	2	1.38				29.4		
180	3	0.51				28.2		
190	3	-0.80			26.4			
191	4	-0.07					27.4	
193	4	-0.22			27.2			
198	3	0.87				28.7		
203	4	-0.35		27.0				
204	4	-0.43		26.9				
212	4	0.29				27.9		
215	4	0.22				27.8		
217	3	0.80					28.6	
218	4	0.02				27.5		
220	4	0.14				27.7		
221	4	0.00		27.5				
224	2	-1.01				26.1		
227	0	2.90				31.5		
234	4	-0.22				27.2		
236	4	-0.47				26.9		
240	3	-0.72				26.5		
241	1	-1.96		24.8				
247	3	-0.80				26.4		
254	3	0.58				28.3		
255	4	0.29				27.9		
256	4	-0.02				27.5		
258	3	0.58						28.3
259	4	0.29				27.9		
265	4	0.22					27.8	
268	0	-2.75		23.7				
273	4	-0.07				27.4		
274	0	-6.31						18.8
277	3	0.72				28.5		
283	3	0.51				28.2		
284	0	-4.71	21.0					
287	3	0.93		28.8				
289	3	0.51					28.2	
292	2	1.09		29.0				
296	4	0.36					28.0	
304	2	1.09					29.0	
307	0	27.17		65.0				

Table 13. *Statistical summary of reported data for standard reference water sample T-153 (trace constituents)--Continued*

Cd (Cadmium) **µg/L**



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

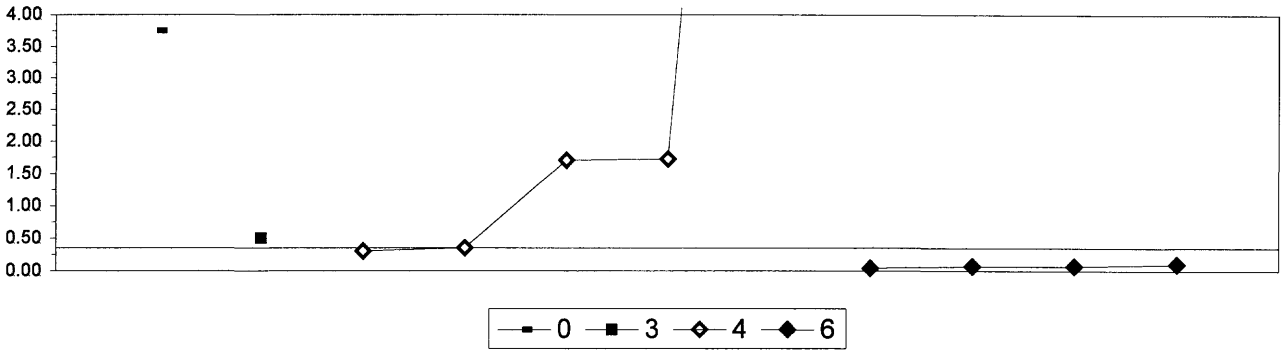
	0	1	3	4	6
N =	1	4	28	37	21
Minimum =	16.0	15.0	7.6	12.7	15.0
Maximum =		18.0	18.0	20.0	17.5
Median =			15.7	15.9	16.2
F-pseudosigma =			1.5	1.2	0.4

MPV = 16.0
F-pseudosigma = 1.1
N = 91
Hu = 16.7
Hl = 15.2

Lab	Rating	Z-value	0	1	3	4	6
1	4	0.00					16.0
3	2	1.17				17.3	
5	4	0.00			16.0		
10	3	-0.72			15.2		
11	4	0.36				16.4	
13	1	-1.80				14.0	
16	4	-0.27				15.7	
18	4	0.00				16.0	
19	1	1.62				17.8	
23	4	-0.27			15.7		
24	4	0.09				16.1	
25	4	0.00				16.0	
26	2	-1.26			14.6		
28	1	-1.98				13.8	
30.1	3	0.90					17.0
32	4	-0.18					15.8
34	2	1.08			17.2		
36	3	-0.90				15.0	
40	3	-0.90				15.0	
42	3	0.75					16.8
48	4	0.18					16.2
50	4	0.00					16.0
59	4	0.27					16.3
68	0	-2.61				13.1	
69	3	-0.81			15.1		
70	1	1.80			18.0		
81	4	0.00			16.0		
83	1	-1.80				14.0	
87	1	1.80		18.0			
89	4	-0.36			15.6		
96	4	-0.45			15.5		
100	4	-0.18				15.8	
107	4	0.00			16.0		
113	4	-0.09				15.9	
114	4	0.00		16.0			
118	3	0.63			16.7		
126	1	1.80			18.0		
127	3	0.90				17.0	
131	3	-0.90					15.0
133	0	2.07				18.3	
134	3	-0.52				15.4	
138	4	-0.18				15.8	
140	4	0.00		16.0			
141	4	-0.36				15.6	
142	3	0.72					16.8
144	2	-1.17			14.7		
145	3	0.90				17.0	
146	4	-0.09				15.9	
147	4	0.00					16.0
151	4	0.36					16.4
154	2	-1.17				14.7	
158	0	-6.03			9.3		
180	2	1.44				17.6	
183	1	-1.87			13.9		
190	2	1.35			17.5		
191	2	1.35					17.5
193	3	-0.99			14.9		
198	2	1.17			17.3		
204	4	-0.45					15.5
212	4	0.00					16.0
213	1	-1.80			14.0		
215	0	-7.55			7.6		
217	3	0.99					17.1
220	4	-0.09				15.9	
221	4	-0.45			15.5		
224	0	-2.97				12.7	
227	3	-0.54				15.4	
234	2	-1.08				14.8	
235	1	-1.71			14.1		
236	3	-0.90				15.0	
240	4	0.09				16.1	
241	3	0.54					16.6
247	0	3.60				20.0	
249	4	-0.27			15.7		
254	3	0.54				16.6	
255	3	-0.54				15.4	
256	3	0.90				17.0	
259	4	0.00				16.0	
265	4	0.45					16.5
273	1	1.71				17.9	
274	3	0.85			17.0		
277	2	-1.08				14.8	
283	4	-0.09					15.9
284	4	0.00	16.0				
287	2	1.35			17.5		
289	4	0.00					16.0
292	2	-1.08			14.8		
296	4	-0.18					15.8
304	4	0.27					16.3
306	3	-0.90		15.0			
307	4	-0.09			15.9		

Table 13. *Statistical summary of reported data for standard reference water sample T-153 (trace constituents)--Continued*

Co (Cobalt) **µg/L**



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

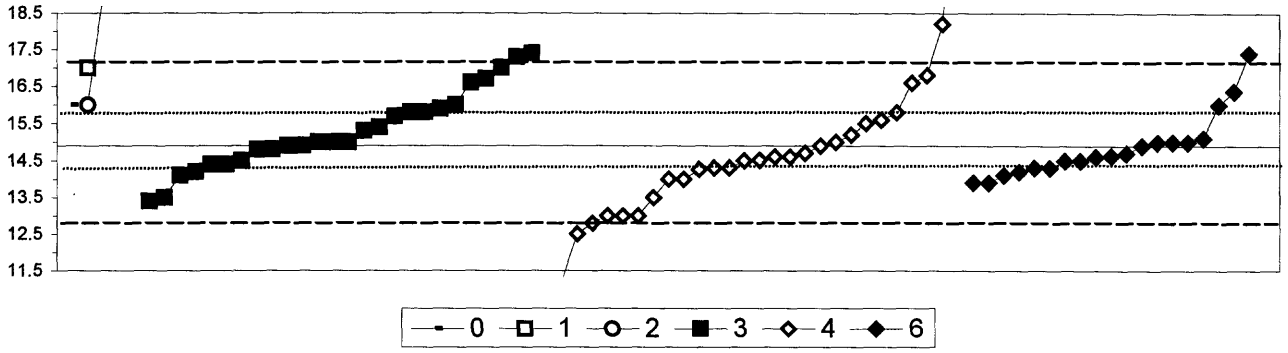
MPV = insufficient data

N = 11

			N =	1	1	5	4
			Minimum =	3.75	0.50	0.30	0.04
			Maximum =			19.30	0.10
			Median =				
			F-pseudosigma =				
Lab	Rating	Z-value		0	3	4	6
1	NR						< 1
3	NR					< 5	
5	NR					< 3	
13	NR					< 10	
18	NR					< 5	
30.1	NR						< 0.1
42	NR						< 2
48	NR						< 0.02
50	NR						< 1
68	NR					< 4	
70	NR					< 50	
89	NR				< 10		
100	NR					< 5	
127	NR				< 0.8		
131	NR						< 10
134	NR					< 1	
138	NR						< 0.1
141	NR					0.35	
142	NR						0.04
145	NR					< 12	
146	NR					< 10	
147	NR						< 0.004
158	NR					1.70	
180	NR					< 5.48	
191	NR						0.10
198	NR					19.30	
212	NR						< 1
213	NR				< 1		
221	NR				0.50		
234	NR					0.30	
236	NR					< 9	
240	NR					< 20	
247	NR					< 10	
255	NR					1.72	
256	NR					< 10	
265	NR						< 0.05
283	NR						< 5
284	NR			3.75			
289	NR						0.07
296	NR						0.07

Table 13. *Statistical summary of reported data for standard reference water sample T-153 (trace constituents)--Continued*

Cr (Chromium) **mg/L**



0. Other			3. AA: graphite furnace					
1. AA: direct, air			4. ICP					
2. AA: direct, nitrous oxide			6. ICP/MS					
		N =	1	1	3	26	28	19
		Minimum =	16.0	17.0	19.0	13.4	11.1	13.9
		Maximum =			92.8	17.4	23.0	17.4
		Median =				15.0	14.5	14.6
		F-pseudosigma =				1.0	1.6	0.5

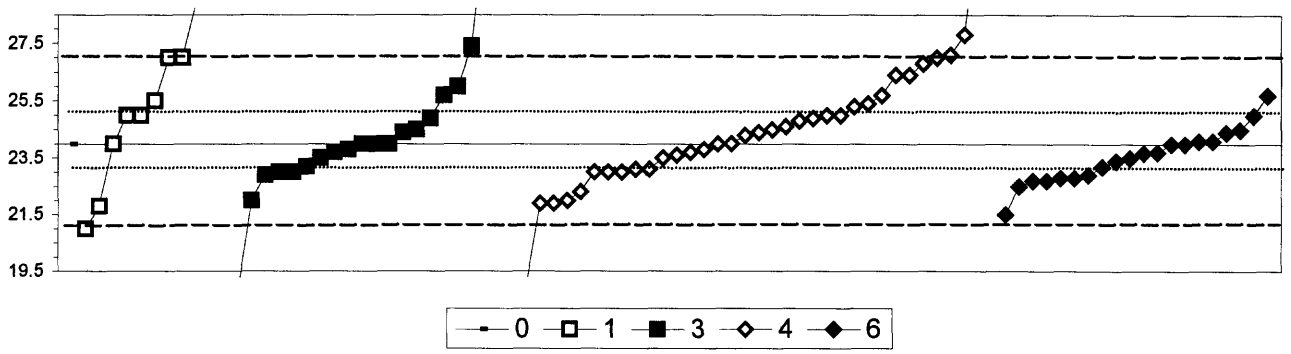
Lab	Rating	Z-value	0	1	2	3	4	6
1	4	0.00				14.9		
3	0	7.28					23.0	
5	4	0.00					14.9	
10	3	0.90				15.9		
13	3	0.63					15.6	
16	3	0.81					15.8	
18	3	-0.81					14.0	
19	2	-1.26					13.5	
23	4	-0.45				14.4		
26	3	0.72				15.7		
30.1	4	0.09						15.0
32	4	0.18						15.1
36	3	-0.54					14.3	
42	4	-0.24						14.6
48	4	-0.18						14.7
50	4	0.09						15.0
59	4	-0.36						14.5
68	1	-1.89					12.8	
69	3	0.81				15.8		
70	4	-0.27					14.6	
76	2	1.32						16.4
81	4	0.09				15.0		
83	1	-1.71					13.0	
87	0	18.98			36.0			
89	4	-0.09				14.8		
96	3	-0.72				14.1		
97	0	2.16				17.3		
100	3	-0.81					14.0	
113	3	-0.54					14.3	
114	0	3.69			19.0			
118	1	1.89				17.0		
126	0	-4.45		< 10				
127	4	0.09				15.0		
131	NR							< 30
134	4	-0.35					14.5	
138	4	-0.27					14.6	
140	1	1.89		17.0				
141	1	1.53					16.6	
142	3	-0.90						13.9
144	4	0.36				15.3		
145	NR						< 15	
146	3	-0.63					14.2	
147	4	-0.36						14.5
149	3	0.99				16.0		
151	3	-0.72						14.1
154	4	-0.09				14.8		
158	2	-1.35				13.4		
180	4	-0.36					14.5	
183	3	-0.63				14.2		
190	2	-1.26				13.5		

MPV =	14.9
F-pseudosigma =	1.1
N =	78
Hu =	15.8
Hl =	14.3

Lab	Rating	Z-value	0	1	2	3	4	6
191	4	0.00						14.9
193	4	-0.36				14.5		
198	1	1.71					16.8	
204	3	-0.90						13.9
212	4	0.09						15.0
213	1	1.53				16.6		
215	0	2.25				17.4		
217	0	2.25						17.4
221	4	0.45				15.4		
227	4	-0.18					14.7	
234	4	0.00				14.9		
235	3	-0.54						14.3
236	1	-1.71					13.0	
240	0	-3.33					11.2	
241	4	-0.27						14.6
247	1	-1.71					13.0	
249	4	0.09				15.0		
255	4	-0.45				14.4		
259	4	0.27					15.2	
265	0	2.97					18.2	
273	0	-2.16					12.5	
277	3	0.54					15.5	
283	0	-3.42					11.1	
284	3	0.99	16.0					
287	1	1.62				16.7		
289	3	0.99						16.0
292	4	0.09					15.0	
296	3	-0.54						14.3
304	3	-0.63						14.2
306	0	70.06			92.8			
307	3	0.81				15.8		

Table 13. *Statistical summary of reported data for standard reference water sample T-153 (trace constituents)--Continued*

Cu (Copper) **µg/L**



0. Other			4. ICP				
1. AA: direct, air			6. ICP/MS				
3. AA: graphite furnace							
		N =	1	9	21	37	20
		Minimum =	24.0	21.0	3.0	11.6	21.5
		Maximum =	0.0	29.0	32.0	40.3	25.7
		Median =		25.0	23.8	24.3	23.6
		F-pseudosigma =		2.2	1.1	1.8	1.0

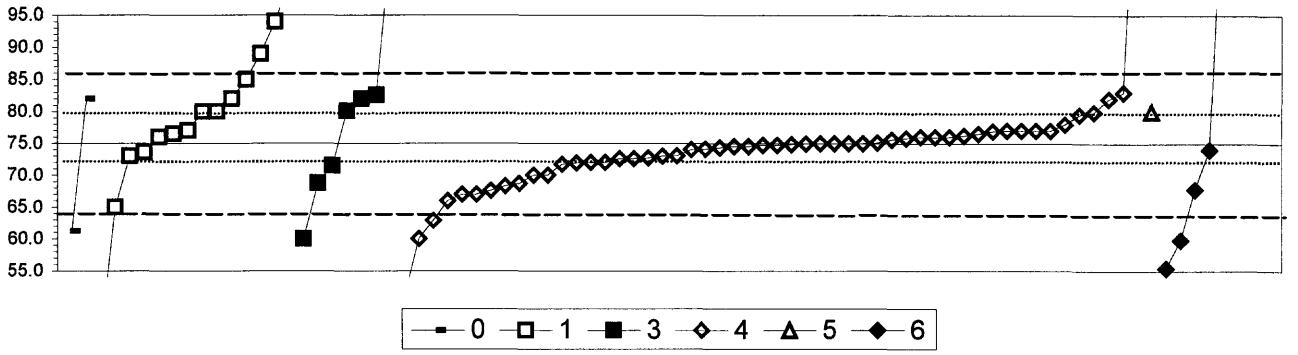
Lab	Rating	Z-value	0	1	3	4	6
1	4	-0.20					23.7
3	1	2.02				27.0	
5	4	0.40				24.6	
10	3	-0.67			23.0		
11	4	0.27				24.4	
13	2	-1.42				21.9	
16	3	-0.61				23.1	
18	3	0.67				25.0	
19	2	1.15				25.7	
23	4	0.27			24.4		
25	3	-0.67				23.0	
26	3	0.67				25.0	
28	2	-1.15				22.3	
30.1	4	0.00					24.0
32	4	0.27					24.4
36	3	-0.67				23.0	
40	0	-3.37				19.0	
42	4	-0.22					23.7
45	0	3.37		29.0			
48	3	-0.54					23.2
50	4	-0.40					23.4
59	2	-1.01					22.5
68	3	-0.67				23.0	
69	NR			< 50			
70	3	0.94				25.4	
81	0	-14.16			3.0		
83	4	0.00				24.0	
85	4	0.00		24.0			
87	3	0.67		25.0			
89	3	-0.67			23.0		
96	4	-0.34			23.5		
97	4	0.34			24.5		
100	4	-0.13				23.8	
107	0	2.29			27.4		
113	4	0.34				24.5	
114	1	-2.02		21.0			
118	2	1.15			25.7		
126	1	2.02		27.0			
127	3	-0.74			22.9		
133	1	1.89				26.8	
134	4	0.01				24.0	
138	3	0.61				24.9	
140	1	2.02		27.0			
141	3	0.54				24.8	
142	1	-1.69					21.5
144	3	-0.54			23.2		
145	NR					< 28	
146	NR					< 25	
147	3	-0.81					22.8
151	3	-0.88					22.7

MPV =	24.0
F-pseudosigma =	1.5
N =	88
Hu =	25.0
HI =	23.0

Lab	Rating	Z-value	0	1	3	4	6
154	0	-4.05			18.0		
158	2	-1.42				21.9	
180	0	2.09				27.1	
190	4	0.00			24.0		
191	4	0.07					24.1
193	2	1.01		25.5			
198	1	1.62				26.4	
203	3	0.67		25.0			
204	4	0.07					24.1
212	4	0.00					24.0
213	0	5.40			32.0		
215	2	-1.35			22.0		
217	2	1.15					25.7
220	4	-0.20			23.7		
221	4	0.00			24.0		
224	0	10.99				40.3	
227	4	-0.27				23.6	
234	4	-0.34				23.5	
235	3	-0.74					22.9
236	2	-1.35				22.0	
240	4	-0.20				23.7	
241	4	-0.34					23.5
247	0	5.40				32.0	
249	4	-0.13			23.8		
254	3	-0.61				23.1	
255	1	1.62				26.4	
256	0	-8.09				12.0	
259	4	0.20				24.3	
265	4	0.34					24.5
273	0	-8.36				11.6	
274	0	-3.53			18.8		
277	3	0.88				25.3	
283	0	2.56				27.8	
284	4	0.00	24.0				
287	3	0.61			24.9		
289	3	0.67					25.0
292	2	1.35			26.0		
296	3	-0.88					22.7
304	3	-0.81					22.8
306	2	-1.48		21.8			
307	4	0.00			24.0		

Table 13. *Statistical summary of reported data for standard reference water sample T-153 (trace constituents)--Continued*

Fe (Iron) **µg/L**



0. Other			4. ICP					
1. AA: direct, air			5. DCP					
3. AA: graphite furnace			6. ICP/MS					
		N =	2	14	7	52	1	8
		Minimum =	61.2	44.5	60.0	51.0	80.0	55.4
		Maximum =	82.0	100.0	106.0	126.0		171.0
		Median =		78.5	80.1	74.7		98.0
		F-pseudosigma =		8.5	9.0	3.1		55.7

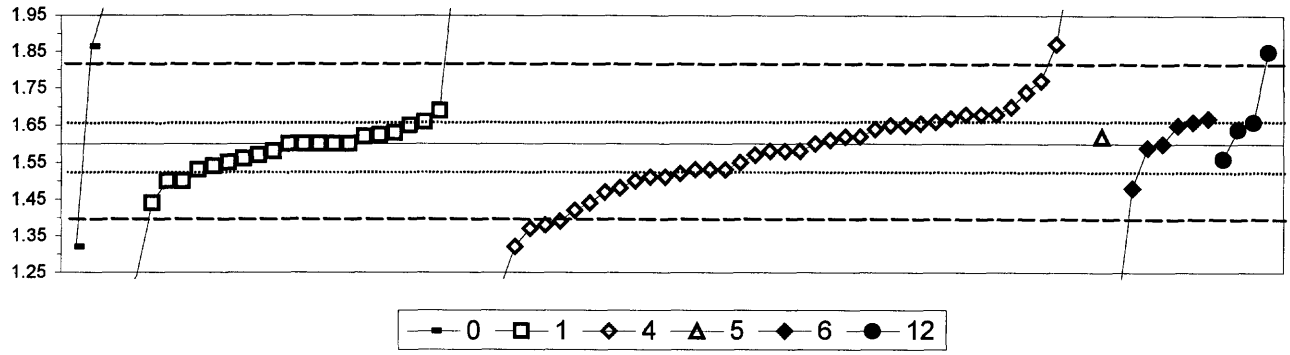
Lab	Rating	Z-value	0	1	3	4	5	6
1	4	-0.05				74.7		
3	2	1.37				83.0		
5	4	0.34				77.0		
10	4	0.34		77.0				
13	2	-1.26				67.6		
16	4	-0.39				72.7		
18	4	-0.34				73.0		
19	4	0.10				75.6		
21	2	1.20	82.0					
23	4	-0.24		73.6				
24	4	0.20				76.2		
25	0	-2.56				60.0		
26	4	0.00				75.0		
28	2	-1.14				68.3		
30.1	NR			< 200				
30.2	0	16.39						171.0
33	3	0.85					80.0	
36	3	-0.85				70.0		
40	4	0.00				75.0		
42	4	0.32				76.9		
43	4	0.34				77.0		
45	1	-1.71		65.0				
48	4	-0.17						74.0
50	2	-1.23						67.8
59	0	13.15						152.0
68	4	0.17				76.0		
69	0	3.24		94.0				
70	4	0.17				76.0		
81	1	-1.54				66.0		
83	3	-0.51				72.0		
87	0	2.39		89.0				
89	3	0.87			80.1			
91	4	0.00				75.0		
96	2	1.20		82.0				
97	2	1.30			82.6			
100	4	-0.41				72.6		
107	0	5.29			106.0			
109	1	1.71		85.0				
113	4	-0.05				74.7		
126	0	4.27		100.0				
127	4	-0.15				74.1		
131	0	-2.60						59.8
133	3	0.77				79.5		
134	4	-0.33				73.1		
138	3	-0.53				71.9		
140	4	0.17		76.0				
141	0	8.71				126.0		
142	4	0.00				75.0		
144	3	-0.60			71.5			
145	4	-0.17				74.0		

MPV =	75.0
F-pseudosigma =	5.9
N =	84
Hu =	79.7
HI =	71.8

Lab	Rating	Z-value	0	1	3	4	5	6
146	4	0.34				77.0		
151	0	-3.35						55.4
154	4	-0.09				74.5		
158	2	-1.08				68.7		
180	4	-0.12				74.3		
190	4	0.26		76.5				
198	3	0.84				79.9		
203	3	0.65		80.0				
204	0	-5.21		44.5				
212	NR					< 100		
213	0	-2.56			60.0			
215	3	0.51				78.0		
218	3	-0.85				70.0		
220	3	-0.56				71.7		
224	0	-2.07				62.9		
227	4	-0.02				74.9		
234	4	-0.41				72.6		
236	3	-0.51				72.0		
240	4	-0.03				74.8		
241	0	8.71						126.0
247	0	-4.10				51.0		
249	2	1.20			82.0			
254	4	0.14				75.8		
255	4	0.02				75.1		
256	2	-1.37				67.0		
259	4	0.17				76.0		
265	2	1.20				82.0		
273	4	-0.09				74.5		
274	2	-1.07			68.8			
277	2	-1.37				67.0		
283	4	0.26				76.5		
284	0	-2.36	61.2					
287	4	-0.34		73.0				
292	4	0.34				77.0		
296	0	8.03						122.0
307	3	0.85		80.0				

Table 13. *Statistical summary of reported data for standard reference water sample T-153 (trace constituents)--Continued*

K (Potassium) **mg/L**



0. Other
1. AA: direct, air
4. ICP
5. DCP
6. ICP/MS
12. Flame emission

	0	1	4	5	6	12
N =	3	24	41	1	7	4
Minimum =	1.32	1.17	1.00	1.62	1.12	1.56
Maximum =	2.00	2.41	2.18		1.67	1.85
Median =		1.60	1.58		1.60	
F-pseudosigma =		0.07	0.12		0.09	

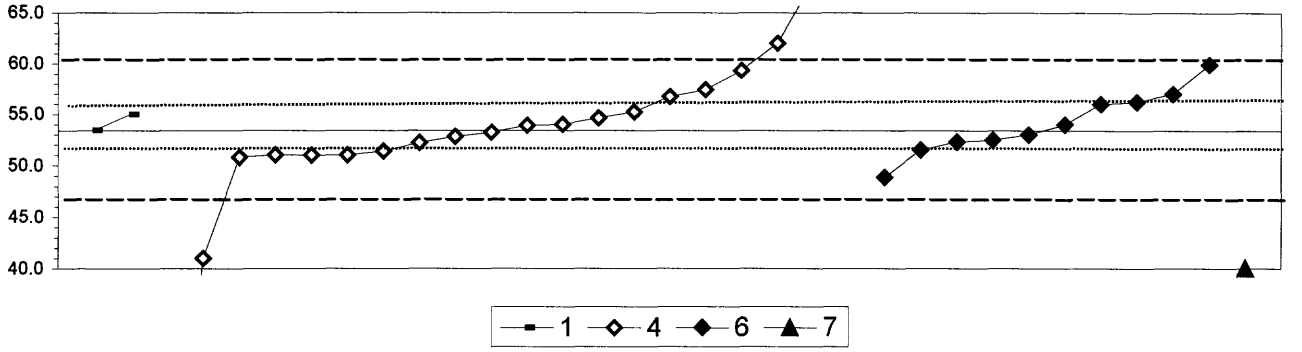
MPV = 1.60
F-pseudosigma = 0.11
N = 80
Hu = 1.66
HI = 1.51

Lab	Rating	Z-value	0	1	4	5	6	12
1	3	-0.54		1.54				
3	3	0.90			1.70			
5	2	1.26			1.74			
11	1	-1.62			1.42			
13	4	0.09			1.61			
16	1	1.53			1.77			
18	3	0.72			1.68			
23	0	-2.52			1.32			
24	1	-1.98			1.38			
25	3	0.72			1.68			
28	3	-0.63			1.53			
32	3	0.54					1.66	
33	4	0.18				1.62		
36	4	0.00		1.60				
40	4	-0.18			1.58			
42	4	0.50			1.66			
43	3	-0.90			1.50			
45	4	-0.18		1.58				
48	3	0.63					1.67	
50	3	-0.72			1.52			
51	4	-0.36						1.56
59	2	-1.08					1.48	
64	4	0.27		1.63				
68	4	0.18			1.62			
69	4	0.36						1.64
70	4	0.45			1.65			
81	0	2.43			1.87			
85	4	0.18		1.62				
87	0	-3.24		1.24				
89	2	-1.44		1.44				
100	4	-0.18			1.58			
107	4	0.00		1.60				
109	4	-0.27		1.57				
113	3	0.63			1.67			
127	3	0.81		1.69				
131	4	0.00					1.60	
134	4	0.22		1.62				
138	4	-0.18			1.58			
140	4	-0.45		1.55				
141	0	-2.07			1.37			
142	3	-0.81			1.51			
145	2	-1.44			1.44			
146	4	0.36			1.64			
149	4	0.00		1.60				
154	0	4.50			2.10			
158	0	-5.40			1.00			
180	2	-1.17			1.47			
183	4	0.00		1.60				
190	3	-0.63		1.53				
191	4	-0.09					1.59	

Lab	Rating	Z-value	0	1	4	5	6	12
193	3	0.54		1.66				
198	4	0.45		1.65				
203	4	0.00		1.60				
204	3	0.54						1.66
209	0	-3.87		1.17				
212	NR				< 5			
218	0	5.24			2.18			
221	4	-0.36		1.56				
224	3	0.54			1.66			
227	3	-0.63			1.53			
234	3	-0.63			1.53			
236	3	-0.81			1.51			
240	4	-0.27			1.57			
241	3	-0.90		1.50				
247	4	-0.45			1.55			
249	0	3.60	2.00					
254	1	-1.89			1.39			
255	4	0.18			1.62			
256	0	-2.52	1.32					
259	4	0.00			1.60			
265	4	0.45			1.65			
268	0	4.32		2.08				
273	2	-1.08			1.48			
274	0	2.25						1.85
277	0	-3.60			1.20			
283	3	0.72			1.68			
284	0	2.37	1.86					
287	0	7.28		2.41				
292	3	-0.90		1.50				
296	0	-4.32					1.12	
304	4	0.45					1.65	

Table 13. *Statistical summary of reported data for standard reference water sample T-153 (trace constituents)--Continued*

Li (Lithium) **µg/L**

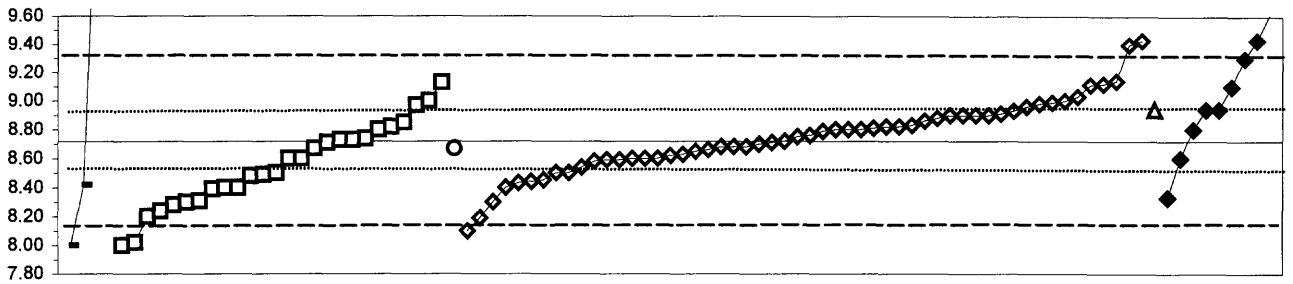


1. AA: direct, air				7. Ion chromatography		
4. ICP						
6. ICP/MS						
		N =	2	20	10	1
		Minimum =	53.4	5.5	48.9	40.0
		Maximum =	55.0	77.0	59.9	
		Median =		53.6	53.5	
		F-pseudosigma =		4.5	2.9	
Lab	Rating	Z-value	1	4	6	7
1	4	0.33		54.6		
3	0	4.10		68.0		
5	3	-0.56		51.4		
11	0	-3.49		41.0		
16	1	1.66		59.3		
25	4	0.17		54.0		
26	2	1.12		57.4		
30.1	2	-1.27			48.9	
32	3	0.73			56.0	
50	4	-0.26			52.5	
68	0	6.63		77.0		
69	4	0.45	55.0			
100	4	-0.17		52.8		
109	4	0.00	53.4			
127	4	0.50		55.2		
131	1	1.82			59.9	
134	4	-0.06		53.2		
142	3	-0.73		50.8		
145	3	-0.68		51.0		
147	4	-0.31			52.3	
151	3	-0.54			51.5	
217	3	0.78			56.2	
220	4	-0.34		52.2		
234	4	0.14		53.9		
236	3	-0.68		51.0		
247	0	2.41		62.0		
254	3	0.92		56.7		
256	0	-3.77				40.0
265	2	1.01			57.0	
273	3	-0.68		51.0		
283	0	-13.46		5.5		
289	4	0.17			54.0	
296	4	-0.12			53.0	

MPV =	53.4
F-pseudosigma =	3.6
N =	33
Hu =	56.2
HI =	51.4

Table 13. *Statistical summary of reported data for standard reference water sample T-153 (trace constituents)--Continued*

Mg (Magnesium) **mg/L**



0. Other			4. ICP					
1. AA: direct, air			5. DCP					
2. AA: direct, nitrous oxide			6. ICP/MS					
		N =	4	26	1	54	1	9
		Minimum =	8.00	8.00	8.67	8.10	8.94	8.33
		Maximum =	17.66	9.13		9.43		9.61
		Median =		8.55		8.76		8.94
		F-pseudosigma =		0.32		0.22		0.37

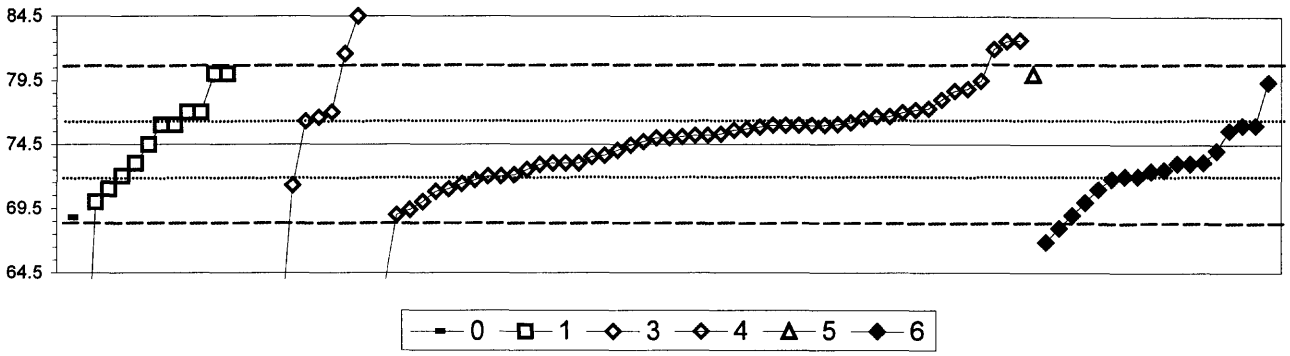
Lab	Rating	Z-value	0	1	2	4	5	6
1	4	-0.30				8.59		
3	1	1.56				9.40		
5	3	-0.67				8.43		
11	4	-0.09				8.68		
13	1	1.63				9.43		
16	4	-0.21				8.63		
18	4	-0.30				8.59		
23	4	0.25				8.83		
24	4	-0.14				8.66		
25	4	0.44				8.91		
28	4	0.41				8.90		
30.1	4	-0.02		8.71				
30.2	4	0.18						8.80
32	2	1.33						9.30
33	4	0.50					8.94	
36	2	-1.42				8.10		
40	4	0.09				8.76		
42	4	0.23				8.82		
43	4	-0.28				8.60		
45	3	0.94		9.13				
48	1	1.63						9.43
50	4	0.21				8.81		
51	4	0.23		8.82				
59	4	0.02		8.73				
64	3	-0.55		8.48				
68	3	0.62				8.99		
69	3	-0.76		8.39				
70	4	0.16				8.79		
76	4	0.30		8.85				
81	4	-0.09				8.68		
83	4	-0.32				8.58		
84	4	-0.28		8.60				
85	3	-0.53		8.49				
87	2	-1.01		8.28				
89	4	0.02		8.73				
100	4	0.32				8.86		
107	4	-0.28		8.60				
109	4	-0.11		8.67				
110	4	-0.28				8.60		
113	3	0.60				8.98		
121	4	0.18				8.80		
127	4	-0.41				8.54		
131	4	-0.28						8.60
133	4	-0.50				8.50		
134	4	-0.16				8.65		
138	4	0.07				8.75		
140	4	0.18		8.80				
141	2	-1.22				8.19		
142	4	-0.05				8.70		
144	3	-0.73		8.40				

MPV =	8.72	
F-pseudosigma =	0.30	**
Rating Criterion =	0.44	
N =	95	
Hu =	8.91	
Hl =	8.50	

Lab	Rating	Z-value	0	1	2	4	5	6
145	4	-0.09				8.68		
146	4	-0.02				8.71		
147	4	0.41				8.90		
149	4	-0.50		8.50				
154	3	-0.96				8.30		
158	4	0.18				8.80		
180	4	0.37				8.88		
183	4	-0.11			8.67			
190	1	-1.61		8.02				
191	4	0.50						8.94
193	3	-0.73		8.40				
198	4	0.48				8.93		
203	2	-1.10		8.24				
204	4	0.05		8.74				
212	4	0.18				8.80		
215	4	0.41				8.90		
217	4	0.50						8.94
218	3	0.90				9.11		
220	4	-0.28				8.60		
221	3	-0.94		8.31				
224	3	-0.62				8.45		
227	3	0.92				9.12		
234	4	-0.23				8.62		
235	3	-0.89						8.33
236	4	0.00				8.72		
240	3	-0.73				8.40		
241	3	-0.96		8.30				
247	3	-0.64				8.44		
254	3	0.71				9.03		
255	4	0.23				8.82		
256	3	-0.69	8.42					
258	0	4.29	10.59					
259	4	0.41				8.90		
265	3	0.64				9.00		
268	2	-1.19		8.20				
273	3	0.55				8.96		
274	0	20.50	17.66					
277	4	-0.50				8.50		
283	3	0.96				9.14		
284	1	-1.65	8.00					
287	3	0.57		8.97				
289	0	2.04						9.61
292	1	-1.65		8.00				
296	3	0.87						9.10
307	3	0.64		9.00				

Table 13. *Statistical summary of reported data for standard reference water sample T-153 (trace constituents)--Continued*

Mn (Manganese) µg/L



0. Other				4. ICP				
1. AA: direct, air				5. DCP				
3. AA: graphite furnace				6. ICP/MS				
		N =	1	12	10	51	1	18
		Minimum =	68.8	50.0	6.3	59.1	80.0	66.9
		Maximum =		80.0	84.5	82.7		79.4
		Median =		75.2	73.8	75.2		72.5
		F-pseudosigma =		4.1	20.0	2.7		2.2

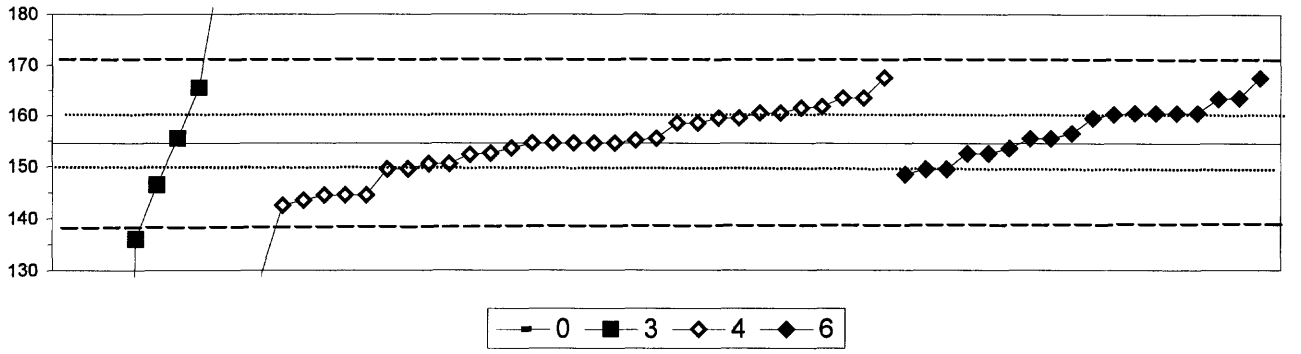
Lab	Rating	Z-value	0	1	3	4	5	6
1	3	-0.52						72.5
3	0	2.03				82.0		
5	4	0.07				74.7		
10	2	1.49		80.0				
11	4	0.42				76.0		
13	2	1.14				78.7		
16	3	-0.74				71.7		
18	4	0.15				75.0		
19	4	0.47				76.2		
23	1	1.92			81.6			
24	4	0.31				75.6		
25	4	0.42				76.0		
26	4	0.34				75.7		
30.1	4	-0.39						73.0
32	4	0.42						76.0
33	2	1.49					80.0	
36	2	-1.36				69.4		
40	3	-0.66				72.0		
42	4	0.37				75.8		
43	4	0.42				76.0		
45	4	0.42		76.0				
48	1	-1.73						68.0
50	3	-0.66						72.0
59	2	-1.46						69.0
68	2	1.36				79.5		
69	3	-0.93		71.0				
70	4	0.17				75.1		
76	4	0.30						75.6
81	2	-1.46				69.0		
83	4	-0.39				73.0		
84	0	-4.20			58.8			
87	3	-0.66		72.0				
89	3	-0.85			71.3			
91	3	0.60				76.7		
96	2	1.49		80.0				
97	3	0.58			76.6			
100	3	-0.52				72.5		
107	0	-6.57		50.0				
109	4	0.00		74.5				
113	4	-0.01				74.4		
118	3	0.50			76.3			
121	3	0.69				77.0		
126	3	0.69		77.0				
127	3	-0.82				71.4		
131	0	-2.03						66.9
134	4	0.43				76.0		
138	4	0.20				75.2		
140	4	-0.39		73.0				
141	3	-0.93				71.0		
142	4	-0.39				73.0		

MPV =	74.5
F-pseudosigma =	3.3
Rating Criterion =	3.7 **
N =	93
Hu =	76.3
Hl =	71.8

Lab	Rating	Z-value	0	1	3	4	5	6
145	4	0.15				75.0		
146	3	0.77				77.3		
147	3	-0.66						72.0
151	2	-1.20						70.0
154	3	-0.98				70.8		
158	4	-0.26				73.5		
180	3	0.55				76.5		
190	0	2.70			84.5			
191	4	0.42						76.0
198	0	2.19				82.6		
203	4	0.42		76.0				
204	3	-0.71						71.8
212	4	-0.39						73.0
215	4	0.42				76.0		
217	2	1.33						79.4
218	2	1.18				78.9		
220	3	-0.63				72.1		
221	3	0.69			77.0			
224	0	-4.12				59.1		
227	4	0.23				75.3		
234	4	-0.42				72.9		
235	0	-18.30			6.3			
236	3	-0.66				72.0		
240	4	-0.23				73.6		
241	4	-0.36						73.1
247	4	-0.12				74.0		
249	0	-6.57			50.0			
254	4	-0.39				73.0		
255	3	0.74				77.2		
256	2	-1.20				70.0		
259	3	0.60				76.7		
265	4	0.42				76.0		
273	4	0.20				75.2		
274	0	-11.45			31.8			
277	0	-3.02				63.2		
283	0	2.22				82.7		
284	1	-1.52	68.8					
287	3	0.69		77.0				
289	4	-0.12						74.0
292	3	0.95				78.0		
296	3	-0.55						72.4
304	3	-0.93						71.0
307	2	-1.20		70.0				

Table 13. *Statistical summary of reported data for standard reference water sample T-153 (trace constituents)--Continued*

Mo (Molybdenum) µg/L



0. Other			6. ICP/MS			
3. AA: graphite furnace						
4. ICP						
		N =	1	7	32	18
		Minimum =	17	15	77	148
		Maximum =		189	167	167
		Median =		146	154	158
		F-pseudosigma =		62	7	6

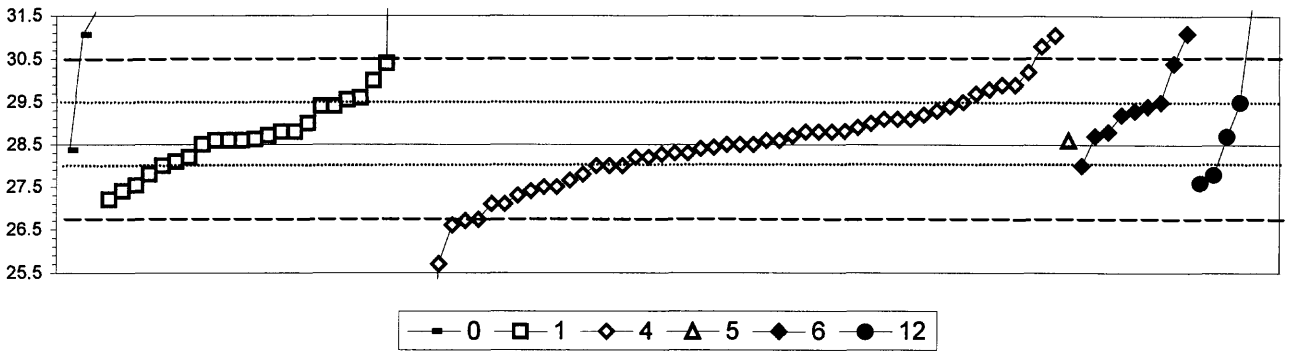
Lab	Rating	Z-value	0	3	4	6
1	4	0.12				155
3	3	0.86			161	
5	2	1.10			163	
11	4	0.00			154	
13	2	1.10			163	
16	4	0.12			155	
18	0	-9.44			77	
23	3	0.74			160	
24	3	0.61			159	
26	3	0.74			160	
30.1	2	1.08				163
32	2	1.10				163
36	2	-1.35			143	
40	4	-0.49			150	
42	3	0.70				160
48	3	0.74				160
50	3	0.74				160
68	0	-3.07			129	
70	4	-0.49			150	
87	0	4.29		189		
97	3	-0.98		146		
100	3	-0.61			149	
109	0	-2.27		136		
127	2	1.35		165		
131	4	-0.12				153
134	4	0.07			155	
138	4	0.00			154	
141	2	-1.23			144	
142	3	0.74				160
145	4	0.49			158	
146	3	0.61			159	
147	3	-0.61				149
151	3	0.74				160
154	4	-0.12			153	
180	4	0.49			158	
198	1	1.59			167	
215	4	0.00			154	
217	1	1.59				167
220	4	-0.27			152	
221	0	-17.00		15		
234	2	-1.23			144	
235	4	0.25				156
236	2	-1.23			144	
240	4	-0.25			152	
241	4	0.12				155
247	2	-1.47			142	
249	4	0.12		155		
255	4	0.00			154	
256	3	-0.61			149	
259	3	0.88			161	

MPV =	154
F-pseudosigma =	8
N =	58
Hu =	160
Hl =	149

Lab	Rating	Z-value	0	3	4	6
265	3	-0.74				148
283	3	-0.61				149
284	0	-16.80	17			
289	3	0.61				159
292	4	0.00			154	
296	4	-0.25				152
304	4	-0.25				152
307	0	-16.91		16		

Table 13. *Statistical summary of reported data for standard reference water sample T-153 (trace constituents)--Continued*

Na (Sodium) **mg/L**



0. Other			5. DCP					
1. AA: direct, air			6. ICP/MS					
4. ICP			12. Flame emission					
		N =	3	23	50	1	9	6
		Minimum =	28.4	27.2	15.5	28.6	28.0	27.6
		Maximum =	31.6	60.0	31.1		31.1	33.3
		Median =		28.6	28.5		29.3	
		F-pseudosigma =		0.9	1.1		0.5	

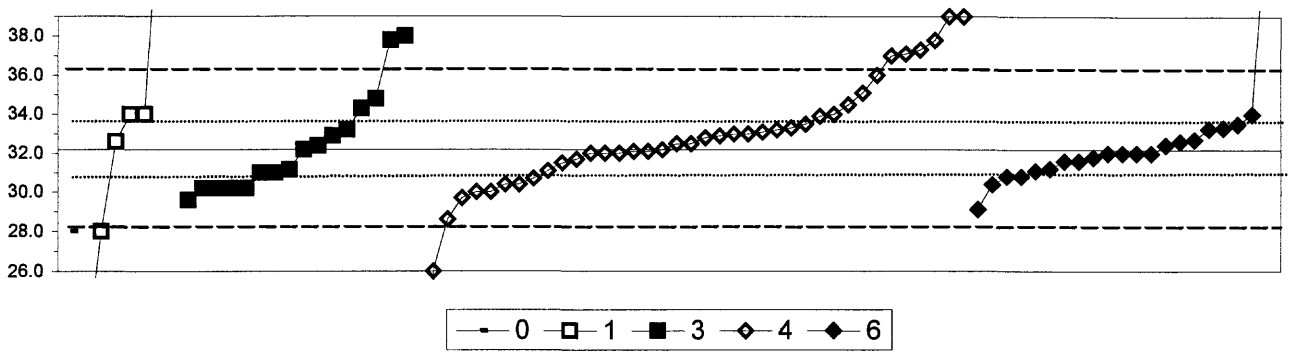
Lab	Rating	Z-value	0	1	4	5	6	12
1	4	-0.05			28.6			
3	2	-1.09			27.1			
5	4	0.09			28.8			
11	2	-1.37			26.7			
13	4	0.16			28.9			
16	4	-0.46			28.0			
18	4	-0.32			28.2			
23	0	-9.19			15.5			
24	4	-0.25			28.3			
25	3	0.86			29.9			
28	4	-0.46			28.0			
30.1	0	2.26						31.9
30.2	4	0.44					29.3	
32	4	0.02					28.7	
33	4	-0.05				28.6		
36	0	-2.07			25.7			
40	4	-0.05			28.6			
42	2	-1.35			26.7			
43	4	-0.46			28.0			
45	3	0.51		29.4				
48	2	1.21					30.4	
50	4	-0.12			28.5			
51	3	-0.74						27.6
59	3	0.58					29.5	
64	4	-0.05		28.6				
68	2	1.49			30.8			
69	3	-0.60						27.8
70	4	0.30			29.1			
81	4	0.30			29.1			
83	4	0.10			28.8			
84	3	0.58						29.5
85	4	-0.39		28.1				
87	4	-0.32		28.2				
89	4	0.09		28.8				
97	4	-0.05		28.6				
100	4	0.23			29.0			
107	2	-1.02		27.2				
109	4	-0.02		28.6				
113	4	0.37			29.2			
118	0	21.86		60.0				
121	4	-0.12			28.5			
127	3	0.79			29.8			
131	4	-0.46					28.0	
134	3	0.62		29.6				
138	4	0.09			28.8			
140	4	-0.05		28.6				
141	2	-1.09			27.1			
142	3	-0.88			27.4			
145	4	-0.25			28.3			
146	3	-0.60			27.8			

MPV =	28.7
F-pseudosigma =	1.0
Rating Criterion =	1.4 **
N =	92
Hu =	29.4
HI =	28.0

Lab	Rating	Z-value	0	1	4	5	6	12
149	4	0.23		29.0				
154	3	-0.81			27.5			
158	2	-1.44			26.6			
180	3	0.51			29.4			
183	4	0.03		28.7				
190	4	-0.46		28.0				
191	4	0.37					29.2	
193	3	-0.60		27.8				
198	3	0.86			29.9			
203	3	-0.78		27.5				
204	4	0.02						28.7
209	4	0.09		28.8				
212	4	-0.18			28.4			
215	3	0.72			29.7			
217	4	0.09					28.8	
218	1	1.66			31.1			
220	4	-0.16			28.4			
221	3	0.51		29.4				
224	3	-0.70			27.7			
227	4	-0.32			28.2			
234	4	-0.12			28.5			
236	4	-0.28			28.3			
240	3	-0.95			27.3			
241	4	-0.12		28.5				
247	3	-0.81			27.5			
249	0	2.05	31.6					
254	2	1.07			30.2			
255	4	0.30			29.1			
256	4	-0.21	28.4					
259	4	0.02			28.7			
265	3	0.58			29.5			
268	3	0.65		29.6				
273	4	0.09			28.8			
274	0	3.25						33.3
277	0	-4.37			22.4			
283	4	0.44			29.3			
284	1	1.67	31.1					
287	2	1.21		30.4				
289	1	1.70					31.1	
292	3	-0.88		27.4				
296	3	0.51					29.4	
307	3	0.93		30.0				

Table 13. *Statistical summary of reported data for standard reference water sample T-153 (trace constituents)--Continued*

Ni (Nickel) µg/L



0. Other			4. ICP				
1. AA: direct, air			6. ICP/MS				
3. AA: graphite furnace							
	N =	1	7	16	39	21	
	Minimum =	28.0	22.0	29.6	18.7	29.1	
	Maximum =		51.0	38.0	39.0	44.4	
	Median =		34.0	31.7	32.5	32.0	
	F-pseudosigma =		7.1	2.6	2.0	1.1	

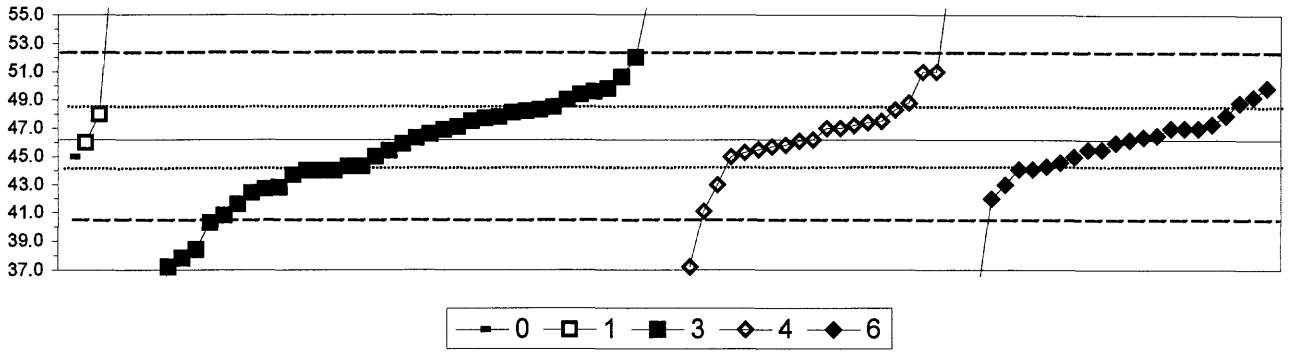
Lab	Rating	Z-value	0	1	3	4	6
1	4	-0.48					31.2
3	0	2.31				37.0	
5	0	2.70				37.8	
11	2	1.40				35.1	
13	4	0.29				32.8	
16	1	-1.73				28.6	
18	4	-0.09				32.0	
19	4	-0.09				32.0	
23	2	-1.25			29.6		
24	4	0.15				32.5	
25	0	-2.98				26.0	
26	3	-0.58			31.0		
28	3	-0.72				30.7	
30.1	4	-0.09					32.0
32	3	0.63					33.5
36	4	-0.33				31.5	
40	2	-1.06				30.0	
42	3	0.51					33.3
48	4	-0.19					31.8
50	4	-0.29					31.6
59	3	-0.53					31.1
68	2	-1.20				29.7	
69	NR			< 50			
70	NR					< 50	
76	4	0.11					32.4
83	2	-1.06				30.0	
87	0	-4.91		22.0			
89	2	1.01			34.3		
96	4	0.34			32.9		
97	0	2.70			37.8		
100	0	2.36				37.1	
113	3	-0.53				31.1	
114	1	-2.02		28.0			
118	3	-0.96			30.2		
126	3	-0.96			30.2		
127	3	-0.96			30.2		
133	0	-6.50				18.7	
134	4	0.00				32.2	
138	2	1.11				34.5	
140	3	0.87		34.0			
141	4	-0.09				32.0	
142	2	-1.49					29.1
144	4	0.48			33.2		
145	4	0.39				33.0	
146	3	0.63				33.5	
147	3	-0.86					30.4
149	0	2.80			38.0		
151	3	-0.67					30.8
154	3	-0.86				30.4	
158	4	-0.24				31.7	

MPV =	32.2
F-pseudosigma =	2.1
N =	84
Hu =	33.7
HI =	30.9

Lab	Rating	Z-value	0	1	3	4	6
180	4	-0.05				32.1	
183	4	-0.50			31.2		
190	2	1.26			34.8		
191	4	0.20					32.6
193	4	0.20		32.6			
198	4	0.15				32.5	
204	4	-0.29					31.6
212	4	-0.09					32.0
213	4	0.00			32.2		
215	0	3.28				39.0	
217	0	5.88					44.4
220	0	9.06		51.0			
221	4	0.10			32.4		
227	4	0.48				33.2	
234	3	0.53				33.3	
235	4	0.24					32.7
236	4	0.39				33.0	
240	3	0.82				33.9	
241	4	-0.09					32.0
247	1	1.83				36.0	
249	3	-0.96			30.2		
254	4	0.44				33.1	
255	4	-0.05				32.1	
256	NR					< 30	
259	4	0.34				32.9	
265	3	0.87				34.0	
273	0	2.46				37.3	
277	3	-0.86				30.4	
283	3	0.53					33.3
284	1	-2.02	28.0				
287	3	0.87		34.0			
289	3	0.87					34.0
292	0	3.28				39.0	
296	3	-0.67					30.8
304	4	-0.09					32.0
306	0	6.55		45.8			
307	3	-0.58			31.0		

Table 13. *Statistical summary of reported data for standard reference water sample T-153 (trace constituents)--Continued*

Pb (Lead) **µg/L**



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

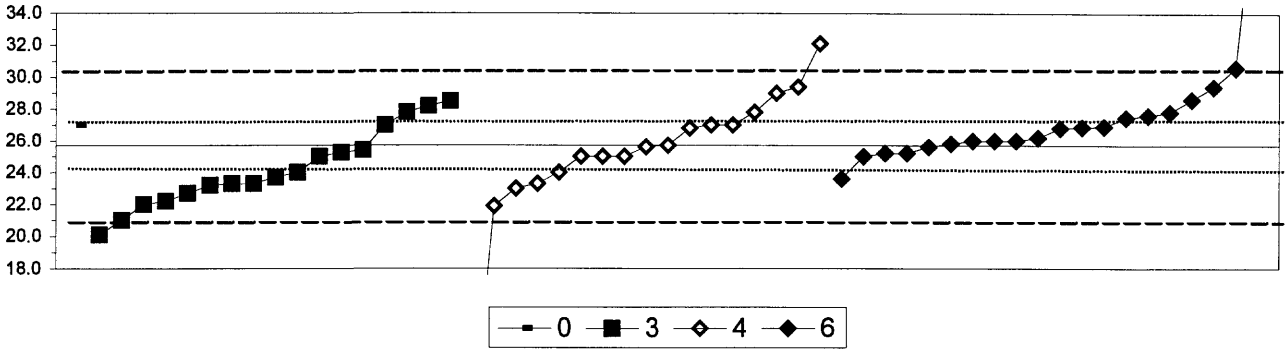
	0	1	3	4	6
N =	1	3	41	21	22
Minimum =	45.0	46.0	4.0	37.2	35.0
Maximum =		59.7	100.4	58.0	49.9
Median =			45.9	47.0	46.1
F-pseudosigma =			4.2	2.1	2.0

MPV = 46.2
F-pseudosigma = 3.0
N = 88
Hu = 48.2
Hl = 44.1

Lab	Rating	Z-value	0	1	3	4	6
1	4	0.07					46.4
3	0	3.88				58.0	
5	1	-1.78			40.8		
10	3	-0.62			44.3		
11	4	0.43				47.5	
13	4	0.13			46.6		
16	0	3.88				58.0	
18	4	-0.39			45.0		
19	4	-0.13				45.8	
23	1	1.58				51.0	
24	4	-0.03				46.1	
26	2	1.05			49.4		
30.1	4	-0.39					45.0
32	4	-0.06					46.0
34	1	-1.94			40.3		
36	2	-1.05				43.0	
40	4	0.26				47.0	
42	2	1.21					49.9
45	2	-1.12			42.8		
48	4	0.36					47.3
50	3	-0.52					44.6
59	3	0.86					48.8
68	0	3.36			56.4		
69	3	-0.72			44.0		
70	3	0.76			48.5		
76	4	0.00					46.2
81	3	-0.72			44.0		
84	0	-2.76			37.8		
87	3	0.92			49.0		
89	4	0.03			46.3		
96	0	17.83			100.4		
97	2	1.12			49.6		
100	2	1.19			49.8		
107	0	-2.56			38.4		
109	0	-2.96			37.2		
113	4	0.50			47.7		
114	3	0.59		48.0			
118	1	1.91			52.0		
126	4	0.30			47.1		
127	3	0.69			48.3		
131	0	-3.68					35.0
133	3	0.69				48.3	
134	4	-0.23				45.5	
138	4	0.33				47.2	
140	4	-0.06		46.0			
141	4	0.40				47.4	
142	3	-0.69					44.1
144	3	-0.62			44.3		
145	NR					< 84	
146	4	-0.16				45.7	
147	3	0.56					47.9
149	0	-13.88				4.0	
151	3	-0.62					44.3
154	4	-0.10				45.9	
158	0	-4.51				32.5	
180	0	-2.96					37.2
183	3	0.53				47.8	
190	3	-0.72				44.0	
191	4	-0.23					45.5
193	2	1.45				50.6	
198	3	0.63				48.1	
204	4	-0.23					45.5
212	4	0.26					47.0
213	3	0.66				48.2	
215	1	1.58					51.0
217	2	-1.05					43.0
221	3	-0.82				43.7	
224	0	12.85				85.3	
227	1	-1.68					41.1
234	4	0.23				46.9	
235	4	-0.26				45.4	
236	4	0.26					47.0
240	3	0.86					48.8
241	2	-1.38					42.0
247	NR						< 50
249	1	-1.51				41.6	
255	4	0.43				47.5	
256	4	-0.39					45.0
259	4	-0.29					45.3
265	4	0.26					47.0
273	4	0.00					46.2
274	0	-4.99				31.0	
283	3	0.99					49.2
284	4	-0.39	45.0				
287	2	-1.15				42.7	
289	4	0.26					47.0
296	3	-0.69					44.1
304	4	0.10					46.5
306	0	4.44		59.7			
307	2	-1.25				42.4	

Table 13. *Statistical summary of reported data for standard reference water sample T-153 (trace constituents)--Continued*

Sb (Antimony) **µg/L**



0. Other			6. ICP/MS			
3. AA: graphite furnace						
4. ICP						
		N =	1	17	17	20
		Minimum =	27.0	20.1	7.0	23.6
		Maximum =		28.5	32.1	43.0
		Median =		23.7	25.6	26.5
		F-pseudosigma =		2.0	2.2	1.5

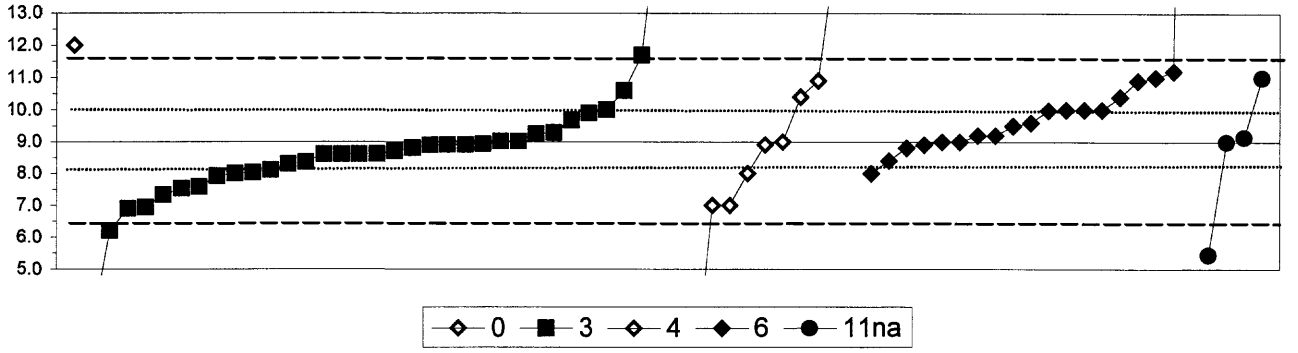
Lab	Rating	Z-value	0	3	4	6
1	3	0.76				27.6
3	4	-0.28			25.0	
5	3	-0.68			24.0	
11	4	-0.04			25.6	
13	3	-1.00		23.2		
16	0	2.56			32.1	
18	3	-0.96		23.3		
23	2	1.32			29.0	
32	3	-0.84				23.6
36	4	-0.28			25.0	
40	4	-0.28			25.0	
42	3	0.70				27.5
48	4	0.20				26.2
50	4	0.44				26.8
59	4	-0.28				25.0
69	3	-0.96		23.3		
70	4	-0.28		25.0		
76	4	0.46				26.9
89	2	-1.20		22.7		
96	3	0.84		27.8		
97	3	-0.68		24.0		
100	2	1.12		28.5		
113	4	0.44			26.8	
127	2	-1.40		22.2		
134	4	-0.18		25.3		
138	4	0.00			25.7	
141	3	0.52			27.0	
142	2	1.48				29.4
144	0	-2.24		20.1		
146	3	-0.96			23.3	
147	4	0.04				25.8
149	1	-1.88		21.0		
151	4	0.48				26.9
154	3	-0.80		23.7		
180	NR				< 46.1	
193	4	-0.12		25.4		
198	3	1.00		28.2		
204	1	1.96				30.6
212	4	0.12				26.0
215	2	-1.48		22.0		
217	4	0.12				26.0
234	3	0.84			27.8	
235	2	1.16				28.6
236	0	-7.47			7.0	
240	1	-1.52			21.9	
241	3	0.84				27.8
247	2	-1.08			23.0	
255	2	1.48			29.4	
256	3	0.52			27.0	
265	4	0.12				26.0

MPV =	25.7
F-pseudosigma =	2.5
N =	55
Hu =	27.2
HI =	23.9

Lab	Rating	Z-value	0	3	4	6
283	4	-0.20				25.2
284	3	0.52	27.0			
289	0	6.91				43.0
292	3	0.52		27.0		
296	4	-0.20				25.2
304	4	-0.04				25.6

Table 13. *Statistical summary of reported data for standard reference water sample T-153 (trace constituents)--Continued*

Se (Selenium) **µg/L**



0. Other
3. AA: graphite furnace
4. ICP
6. ICP/MS
11. AA: hydride NaBH4

	0	3	4	6	11na
N =	1	33	10	19	5
Minimum =	12.0	3.2	1.3	8.0	5.4
Maximum =		16.5	68.0	41.0	900.0
Median =		8.6	9.0	9.6	
F-pseudosigma =		0.7	2.9	0.9	

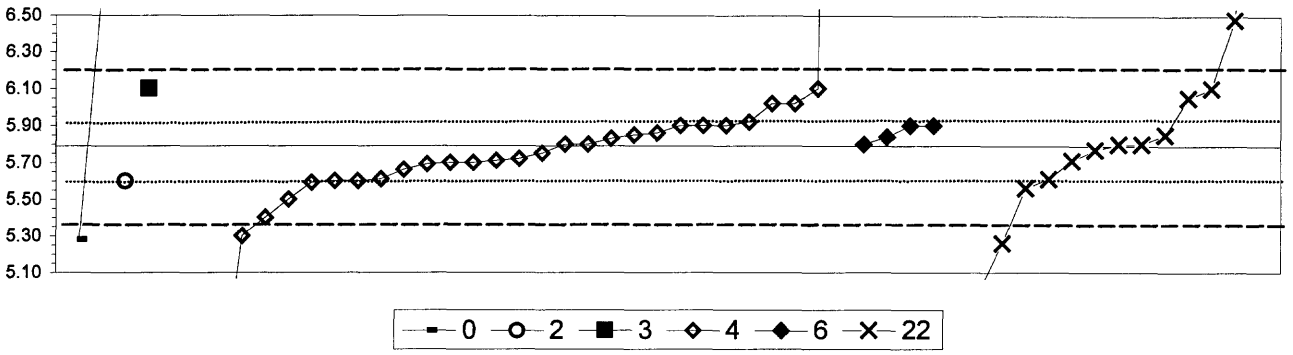
MPV = 9.0
F-pseudosigma = 1.3
N = 68
Hu = 10.0
HI = 8.2

Lab	Rating	Z-value	0	3	4	6	11na
1	4	-0.30		8.6			
3	2	-1.50			7.0		
5	3	-0.81		7.9			
10	4	0.00					9.0
13	1	-1.58		6.9			
18	3	0.68		9.9			
23	0	4.51			15.0		
26	4	0.11					9.2
30.1	3	0.75				10.0	
32	4	0.15				9.2	
34	1	-1.55		6.9			
36	4	0.00			9.0		
40	2	-1.50			7.0		
42	1	1.65				11.2	
45	2	-1.07		7.6			
48	4	-0.08				8.9	
50	4	0.00				9.0	
59	3	0.74				10.0	
68	NR	-5.79		< 1.3			
69	4	-0.23		8.7			
70	4	0.19		9.3			
81	0	-2.10		6.2			
85	2	1.50					11.0
87	0	669.62					900.0
89	0	-2.68					5.4
96	4	0.02		9.0			
97	4	-0.48		8.4			
100	4	0.02		9.0			
107	4	-0.08		8.9			
109	2	-1.26		7.3			
113	3	-0.67		8.1			
127	2	-1.10		7.5			
131	0	24.05				41.0	
133	4	-0.30		8.6			
134	3	-0.73		8.0			
138	4	-0.08			8.9		
141	3	-0.75			8.0		
142	2	1.50				11.0	
144	3	-0.53		8.3			
146	NR				< 10		
149	3	-0.75		8.0			
151	4	0.45				9.6	
154	4	-0.15		8.8			
180	NR				< 70		
190	4	-0.29		8.6			
191	2	1.43				10.9	
193	4	-0.08		8.9			
198	4	-0.08		8.9			
204	3	-0.75				8.0	
212	4	0.15				9.2	

Lab	Rating	Z-value	0	3	4	6	11na
215	0	5.64		16.5			
217	4	0.00				9.0	
220	4	-0.30		8.6			
221	3	0.51		9.7			
227	2	1.43			10.9		
234	4	0.22		9.3			
235	2	1.20		10.6			
236	NR				< 20		
240	0	-5.79			1.3		
241	2	1.05				10.4	
247	0	44.34			68.0		
249	0	-4.36		3.2			
255	4	-0.06		8.9			
259	2	1.05			10.4		
265	4	0.38				9.5	
283	4	-0.15				8.8	
284	0	2.25	12.0				
289	3	0.75				10.0	
292	3	0.75		10.0			
296	4	-0.45				8.4	
304	3	0.75				10.0	
307	1	2.03		11.7			

Table 13. *Statistical summary of reported data for standard reference water sample T-153 (trace constituents)--Continued*

SiO_2 (Silica) **mg/L**



0. Other			4. ICP					
2. AA: direct, nitrous oxide			6. ICP/MS					
3. AA: graphite furnace			22. Colorimetric					
		N =	2	1	1	30	4	14
		Minimum =	5.28	5.60	6.10	2.54	5.80	2.50
		Maximum =	6.64			14.24	5.90	7.71
		Median =				5.72		5.79
		F-pseudosigma =				0.22		0.36

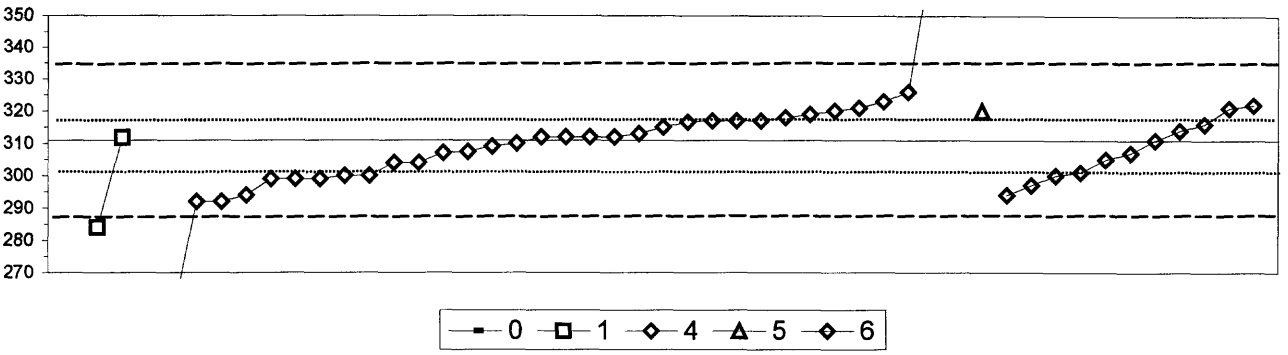
Lab	Rating	Z-value	0	2	3	4	6	22
1	3	-0.69				5.59		
3	2	1.07				6.10		
5	4	0.24				5.86		
13	3	0.80				6.02		
16	0	-11.23				2.54		
24	4	0.45				5.92		
25	0	-10.99				2.61		
32	4	0.38					5.90	
33	1	-1.76	5.28					
36	4	-0.28						5.71
40	3	-0.62				5.61		
42	4	-0.14				5.75		
43	4	0.38				5.90		
50	4	-0.45				5.66		
59	2	1.07						6.10
64	2	-1.00				5.50		
70	4	-0.07						5.77
83	3	-0.66				5.60		
87	4	0.21						5.85
89	3	0.90						6.05
97	3	-0.80						5.56
100	4	-0.28				5.71		
110	0	6.64						7.71
118	4	0.03						5.80
121	4	0.03				5.80		
127	2	-1.35				5.40		
131	4	0.03					5.80	
134	4	0.03				5.80		
140	3	-0.62						5.61
142	3	0.80				6.02		
145	4	0.38				5.90		
147	4	0.21				5.85		
190	0	-11.37						2.50
191	4	0.17					5.84	
203	4	0.03						5.80
212	4	0.38				5.90		
215	0	29.21				14.24		
217	4	0.38					5.90	
234	4	-0.35				5.69		
236	0	-5.05				4.33		
240	4	-0.31				5.70		
241	3	-0.66		5.60				
247	0	2.39						6.48
249	2	1.07			6.10			
254	4	0.14				5.83		
256	0	-2.73						5.00
259	4	-0.31				5.70		
265	1	-1.69				5.30		
273	3	-0.66				5.60		
274	1	-1.83						5.26

MPV =	5.79
F-pseudosigma =	0.22
Rating Criterion =	0.29 **
N =	52
HI = 5.60	Hu = 5.90

Lab	Rating	Z-value	0	2	3	4	6	22
283	4	-0.24				5.72		
284	0	2.94	6.64					

Table 13. *Statistical summary of reported data for standard reference water sample T-153 (trace constituents)--Continued*

Sr (Strontium) **µg/L**



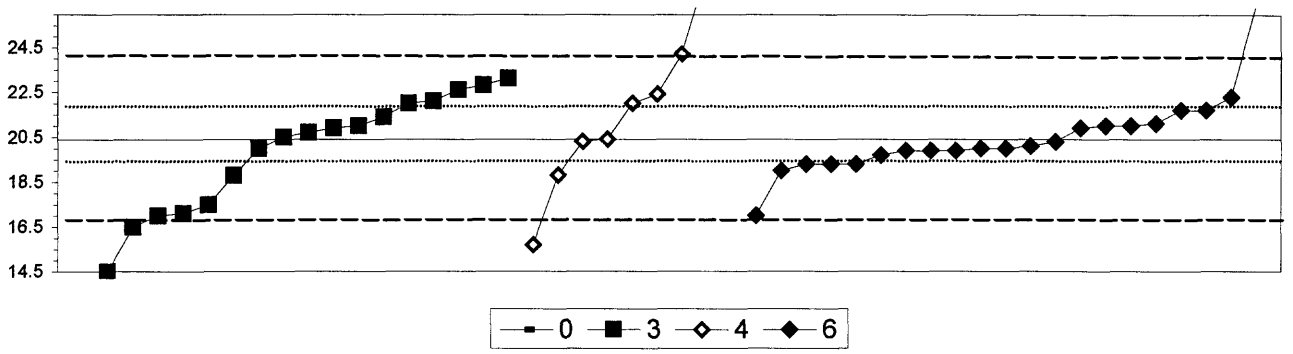
0. Other
1. AA: direct, air
4. ICP
5. DCP
6. ICP/MS

		N =	1	2	34	1	11
		Minimum =	114	284	31	320	294
		Maximum =		312	603		322
		Median =			312		307
		F-pseudosigma =			13		11
Lab	Rating	Z-value	0	1	4	5	6
1	4	0.10			313		
3	3	0.60			323		
5	4	0.05			312		
11	0	-2.80			255		
16	3	-0.60			299		
18	3	-0.55			300		
24	4	0.35			318		
25	3	0.75			326		
28	4	-0.05			310		
30.1	4	-0.30					305
32	4	0.50					321
33	4	0.45				320	
40	3	-0.60			299		
42	4	0.45			320		
50	4	0.15					314
68	0	-14.02			31		
70	4	0.05			312		
100	4	-0.20			307		
109	4	0.04		312			
113	3	-0.95			292		
121	4	0.40			319		
127	0	14.60			603		
131	3	-0.55					300
134	4	-0.18			307		
138	4	0.30			317		
141	4	0.30			317		
142	4	0.30			317		
145	4	0.05			312		
147	3	-0.85					294
151	4	0.00					311
154	0	3.05			372		
191	4	-0.50					301
217	4	0.25					316
218	4	0.28			317		
220	0	-1.35		284			
234	4	-0.35			304		
235	3	0.55					322
236	4	-0.35			304		
240	4	0.20			315		
247	3	-0.85			294		
254	4	0.50			321		
256	3	-0.95			292		
259	4	-0.10			309		
265	4	0.05			312		
273	3	-0.55			300		
283	3	-0.60			299		
284	0	-9.85	114				
289	3	-0.70					297
296	4	-0.20					307

MPV =	311
F-pseudosigma =	13
Rating Criterion =	16 **
N =	49
Hu =	317
HI =	300

Table 13. *Statistical summary of reported data for standard reference water sample T-153 (trace constituents)--Continued*

Tl (Thallium) µg/L



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

N =	1	17	9	21
Minimum =	2.0	14.5	15.7	17.0
Maximum =		23.1	61.0	26.4
Median =		20.7	22.0	20.0
F-pseudosigma =		3.3	2.9	1.0

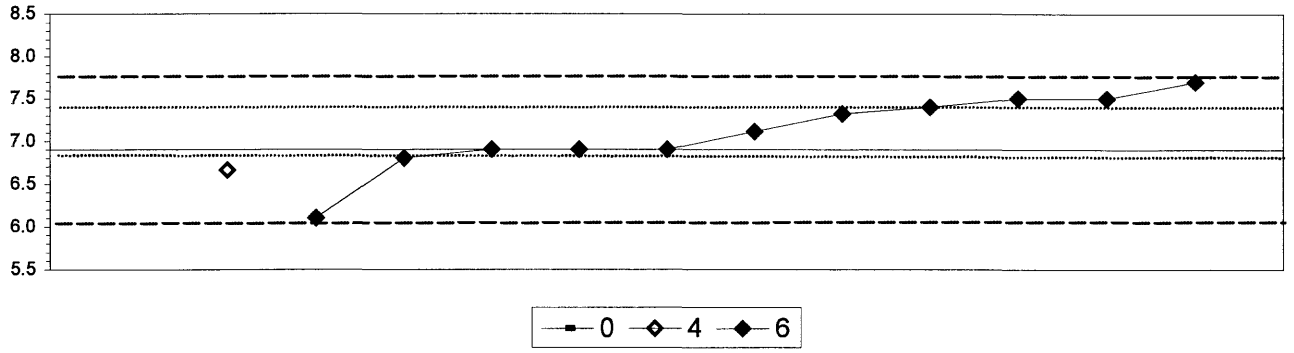
Lab	Rating	Z-value	0	3	4	6
1	3	0.93		22.1		
3	3	0.87			22.0	
11	0	-2.46			15.7	
13	4	0.08		20.5		
18	2	1.45		23.1		
30.1	3	-0.71				19.0
32	4	0.40				21.1
36	3	-0.82			18.8	
40	0	4.05			28.0	
42	2	1.02				22.3
48	3	-0.56				19.3
50	4	-0.24				19.9
59	3	0.71				21.7
68	1	-1.51		17.5		
69	3	0.56		21.4		
70	3	-0.82		18.8		
89	0	-5.47		< 10		
97	2	1.19		22.6		
100	2	1.30		22.8		
113	4	-0.19		20.0		
127	4	0.34		21.0		
134	4	0.19		20.7		
138	0	3.20				26.4
141	4	0.03			20.4	
142	4	0.29				20.9
144	1	-2.04		16.5		
145	0	-2.84			< 15	
146	1	2.04			24.2	
147	4	-0.13				20.1
149	3	0.87		22.0		
151	3	-0.56				19.3
154	4	-0.03			20.3	
180	NR				< 47.6	
191	4	-0.03				20.3
193	0	-3.09		14.5		
198	1	-1.72		17.1		
204	4	-0.19				20.0
212	4	0.34				21.0
213	4	0.29		20.9		
217	1	-1.77				17.0
234	1	-1.77		17.0		
235	3	0.71				21.7
240	2	1.08			22.4	
241	4	-0.24				19.9
247	0	21.50			61.0	
255	NR				< 18.6	
265	3	-0.56				19.3
283	4	-0.24				19.9
284	0	-9.71	2.0			
289	4	-0.19				20.0

MPV =	20.4
F-pseudosigma =	1.9
N =	48
Hu =	21.9
HI =	19.3

Lab	Rating	Z-value	0	3	4	6
296	4	-0.34				19.7
304	4	0.34				21.0

Table 13. *Statistical summary of reported data for standard reference water sample T-153 (trace constituents)--Continued*

U (Uranium) **µg/L**



0. Other
4. ICP
6. ICP/MS

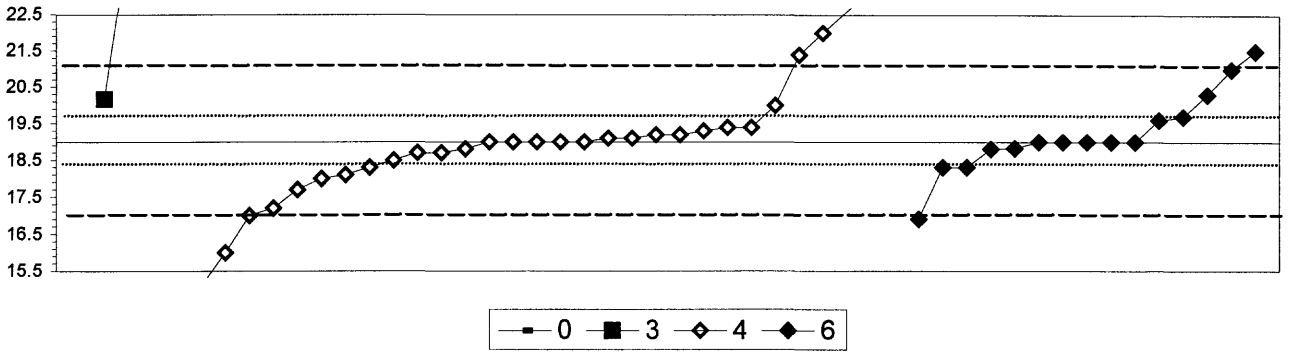
N =	1	1	11
Minimum =	3.2	6.7	6.1
Maximum =			7.7
Median =			7.1
F-pseudosigma =			0.4

Lab	Rating	Z-value	0	4	6
1	4	0.47			7.1
30.1	4	0.00			6.9
32	1	1.80			7.7
127	NR			< 200	
142	2	1.35			7.5
147	3	0.94			7.3
149	0	-8.32	3.2		
191	2	1.12			7.4
217	1	-1.80			6.1
254	3	-0.54		6.7	
265	2	1.35			7.5
283	4	-0.22			6.8
289	4	0.00			6.9
296	4	0.00			6.9

MPV =	6.9
F-pseudosigma =	0.4
N =	13
Hu =	7.4
HI =	6.8

Table 13. *Statistical summary of reported data for standard reference water sample T-153 (trace constituents)--Continued*

V (Vanadium) **µg/L**



0. Other				6. ICP/MS		
3. AA: graphite furnace						
4. ICP						
		N =	1	2	32	15
		Minimum =	280.0	20.2	4.9	16.9
		Maximum =		24.6	27.0	21.5
		Median =			19.0	19.0
		F-pseudosigma =			1.0	0.6

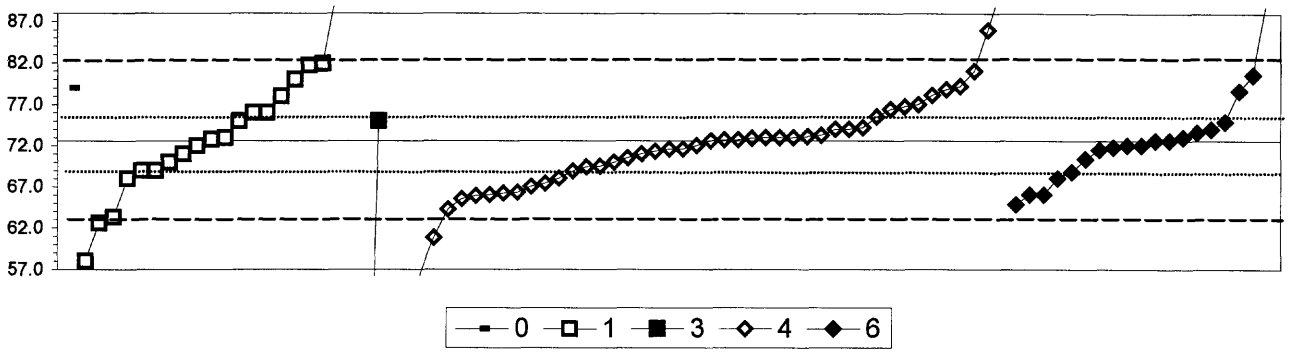
Lab	Rating	Z-value	0	3	4	6
1	4	-0.29			18.7	
3	0	2.89			22.0	
5	4	0.00			19.0	
13	0	-7.03			11.7	
16	3	-0.87			18.1	
18	4	0.00			19.0	
24	2	-1.25			17.7	
26	4	0.39			19.4	
28	4	0.10			19.1	
30.1	4	0.00				19.0
32	3	0.58				19.6
36	4	0.19			19.2	
40	1	-1.93			17.0	
42	4	-0.17				18.8
48	1	-2.02				16.9
50	0	2.41				21.5
68	0	-3.76			15.1	
70	NR				< 50	
89	0	5.40		24.6		
100	4	0.00			19.0	
127	3	-0.67			18.3	
131	1	1.93				21.0
134	4	-0.19			18.8	
138	4	0.10			19.1	
141	4	0.39			19.4	
142	4	0.00				19.0
145	3	0.96			20.0	
146	1	-1.73			17.2	
147	3	-0.67				18.3
154	0	3.95			23.1	
158	4	0.19			19.2	
180	4	0.00			19.0	
183	2	1.13		20.2		
191	3	0.67				19.7
198	0	-9.00			< 10	
212	4	0.00				19.0
217	2	1.25				20.3
220	0	3.47			22.6	
227	4	-0.48			18.5	
234	4	-0.29			18.7	
236	0	-2.89			16.0	
240	0	-13.55			4.9	
241	4	-0.19				18.8
247	0	7.71			27.0	
255	4	0.29			19.3	
256	3	-0.96			18.0	
265	4	0.00			19.0	
283	0	2.31			21.4	
284	0	251.49	280.0			
289	4	0.00				19.0

MPV =	19.0
F-pseudosigma =	1.0
N =	50
Hu =	19.7
HI =	18.3

Lab	Rating	Z-value	0	3	4	6
296	3	-0.67				18.3
304	4	0.00				19.0

Table 13. *Statistical summary of reported data for standard reference water sample T-153 (trace constituents)--Continued*

Zn (Zinc) **µg/L**



0. Other				4. ICP			
1. AA: direct, air				6. ICP/MS			
3. AA: graphite furnace							
		N =	1	20	2	45	19
		Minimum =	79.0	58.0	12.6	7.6	64.8
		Maximum =		236.0	75.0	91.6	89.8
		Median =		72.9		72.0	72.0
		F-pseudosigma =		7.4		4.9	3.1

Lab	Rating	Z-value	0	1	3	4	6
1	2	1.08				78.1	
3	0	2.64				86.0	
5	4	0.08				73.0	
10	4	0.47		75.0			
13	3	0.75				76.4	
16	3	0.81				76.7	
18	4	0.28				74.0	
19	2	-1.02				67.4	
23	1	-1.97		62.6			
24	4	0.02				72.7	
25	4	0.08				73.0	
26	4	0.06				72.9	
30.1	4	-0.12					72.0
32	2	-1.30					66.0
36	2	-1.40				65.5	
40	3	-0.51				70.0	
42	1	1.57					80.6
45	3	0.67		76.0			
48	3	-0.91					68.0
50	2	-1.30					66.0
59	2	1.18					78.6
68	1	1.65				81.0	
69	3	-0.51		70.0			
70	4	0.28				74.0	
83	2	-1.30				66.0	
85	3	-0.71		69.0			
87	0	-2.88		58.0			
89	1	1.83		81.9			
96	3	0.67		76.0			
100	0	3.74				91.6	
107	4	0.04		72.8			
113	4	0.10				73.1	
114	3	-0.71		69.0			
118	0	3.58		90.8			
126	4	0.08		73.0			
127	2	-1.24				66.3	
131	4	0.20					73.6
133	3	0.57				75.5	
134	4	0.13				73.3	
138	4	0.02				72.7	
140	4	-0.12		72.0			
141	2	-1.32				65.9	
142	1	-1.54					64.8
144	3	-0.91		68.0			
145	3	0.87				77.0	
146	3	-0.63				69.4	
147	4	-0.43					70.4
151	4	-0.16					71.8
154	1	-1.65				64.2	
158	4	-0.32				71.0	

MPV =	72.6
F-pseudosigma =	5.1
N =	87
Hu =	75.3
HI =	68.4

Lab	Rating	Z-value	0	1	3	4	6
180	4	0.00				72.6	
190	1	-1.83		63.3			
191	0	3.39					89.8
193	4	-0.32		71.0			
198	2	1.30				79.2	
204	3	-0.75					68.8
212	4	0.08					73.0
215	4	-0.12				72.0	
217	4	0.00					72.6
220	3	-0.61				69.5	
221	0	32.18		236.0			
224	4	-0.26				71.3	
227	3	-0.73				68.9	
234	2	-1.26				66.2	
235	4	-0.22					71.5
236	3	-0.91				68.0	
240	4	-0.41				70.5	
241	4	0.45					74.9
247	2	-1.10				67.0	
249	4	0.47			75.0		
254	4	-0.20				71.6	
255	4	0.32				74.2	
256	0	-5.63				44.0	
259	4	-0.20				71.6	
265	4	0.08				73.0	
273	0	-3.15				56.6	
274	0	-11.82			12.6		
277	0	-2.32				60.8	
283	2	1.22				78.8	
284	2	1.26	79.0				
287	2	1.46		80.0			
289	4	0.28					74.0
292	0	-12.80				7.6	
296	4	0.00					72.6
304	4	-0.12					72.0
306	1	1.79		81.7			
307	2	1.06		78.0			

Table 14. *Statistical summary of reported data for standard reference sample M-146 (major constituents)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

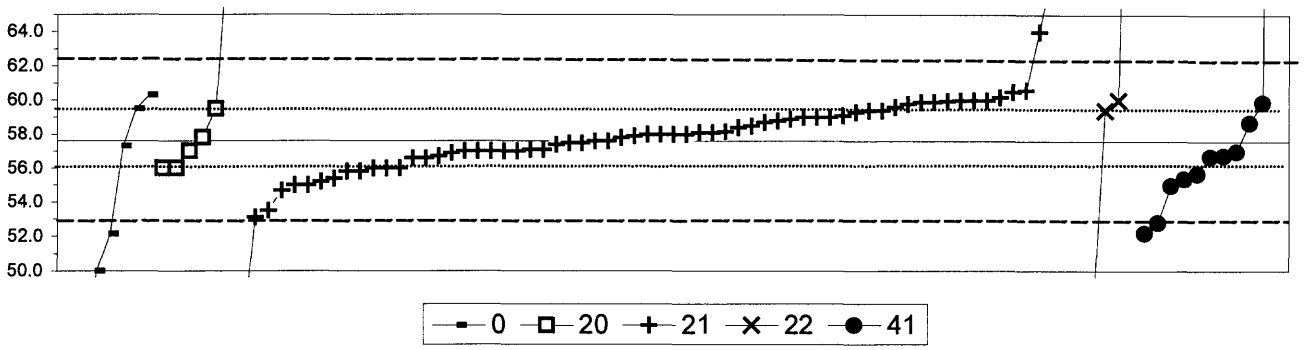
0. Other/Not reported		
1. AA: direct, air	=	atomic absorption: direct, air
2. AA: direct, N_2O	=	atomic absorption: direct, nitrous oxide
3. AA: graphite furnace	=	atomic absorption: graphite furnace
4. ICP	=	inductively coupled plasma
5. DCP	=	direct current plasma
6. ICP/MS	=	inductively coupled plasma / mass spectrometry
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)
51. Turbidimetric	=	turbidimetric: (precipitate specified)

Abbreviations and symbols

N =	number of analyses--(excluding less than values)
MPV =	most probable value
F-pseudosigma =	nonparametric statistic deviation
Hu =	upper hinge value
Hl =	lower hinge value
µg/L =	micrograms per liter
mg/L =	milligrams per liter
µS/cm =	microsiemens per centimeter at 25^0 C
Lab =	laboratory code number
NR =	not rated, less than value reported or insufficient data
< =	less than

Table 14. *Statistical summary of reported data for standard reference water sample M-146 (major constituents)--Continued*

Alkalinity (as $CaCO_3$) **mg/L**



0. Other			22. Colorimetric				
20. Titrate: colorimetric			41. Direct reading				
21. Titrate: electrometric							
		N =	7	6	64	5	11
		Minimum =	44.4	56.0	45.4	42.0	52.2
		Maximum =	60.3	70.0	91.0	90.5	148.0
		Median =	52.1		58.0		56.7
		F-pseudosigma =	8.1		1.9		2.0

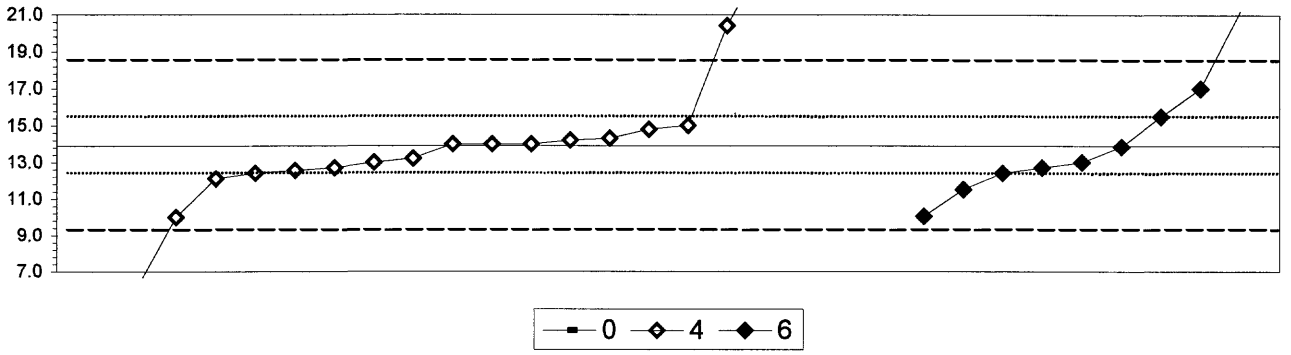
Lab	Rating	Z-value	0	20	21	22	41
1	4	0.07			57.8		
3	3	0.83			60.0		
5	3	0.62			59.4		
10	4	0.00			57.6		
11	3	-0.76			55.4		
13	0	-4.24			45.4		
16	0	11.60			91.0		
19	4	-0.21			57.0		
23	3	-0.56			56.0		
24	4	0.42			58.8		
25	0	2.22			64.0		
26	3	-0.90			55.0		
32	3	0.94	60.3				
33	4	0.00			57.6		
36	4	0.14			58.0		
40	4	0.10			57.9		
42	4	-0.29					56.8
43	4	0.14			58.0		
45	4	-0.35			56.6		
48	0	-4.03				46.0	
50	3	-0.83			55.2		
51	3	-0.56			56.0		
57	3	0.83				60.0	
59	3	-0.66					55.7
68	0	11.42				90.5	
69	3	0.62				59.4	
70	4	0.28			58.4		
81	2	-1.01			54.7		
83	4	-0.10	57.3				
84	4	-0.24			56.9		
85	3	-0.63			55.8		
86	3	-0.63			55.8		
87	3	0.80			59.9		
89	3	0.52			59.1		
90	1	-1.67					52.8
96	4	0.31			58.5		
97	2	1.01			60.5		
100	4	-0.07			57.4		
107	4	-0.35			56.6		
109	3	0.90			60.2		
113	4	0.17			58.1		
114	2	1.04			60.6		
118	4	-0.21		57.0			
127	4	0.49			59.0		
133	4	-0.03			57.5		
134	3	0.80					59.9
138	3	0.59			59.3		
141.1	3	0.69			59.6		
142	3	0.83			60.0		
145	0	-5.42				42.0	

MPV =	57.6
F-pseudosigma =	2.5
Rating Criterion =	2.9 **
N =	93
Hu =	59.4
HI =	56.0

Lab	Rating	Z-value	0	20	21	22	41
146	3	0.76			59.8		
149	3	-0.56		56.0			
154	0	-2.64	50.0				
158	2	-1.42			53.5		
180	3	-0.90					55.0
183	0	4.31		70.0			
190	4	-0.31					56.7
193	3	0.62			59.4		
203	4	0.38			58.7		
204	4	0.38					58.7
212	4	-0.17			57.1		
213	4	-0.21			57.0		
215	4	0.14			58.0		
217	4	0.17			58.1		
218	1	-1.88					52.2
220	4	0.19			58.2		
224	4	0.14			58.0		
227	4	-0.03			57.5		
230	4	-0.17			57.1		
234	3	0.66		59.5			
236	3	0.45			58.9		
240	1	-1.56			53.1		
241	4	-0.21			57.0		
244	3	0.83			60.0		
247	3	0.49			59.0		
249	0	-4.58	44.4				
255	3	0.80			59.9		
256	3	-0.56		56.0			
258	0	-1.90	52.1				
259	3	-0.90			55.0		
262	4	-0.31			56.7		
265	0	31.39					148.0
268	0	3.44			67.5		
270	4	0.07		57.8			
273	3	-0.76					55.4
274	3	0.82			60.0		
277	3	0.66	59.5				
283	4	-0.21			57.0		
284	0	-4.38	45.0				
287	4	0.49			59.0		
292	4	-0.21			57.0		
306	4	-0.21					57.0
307	3	-0.56			56.0		

Table 14. *Statistical summary of reported data for standard reference water sample M-146 (major constituents)--Continued*

B (Boron) µg/L



0. Other
4. ICP
6. ICP/MS

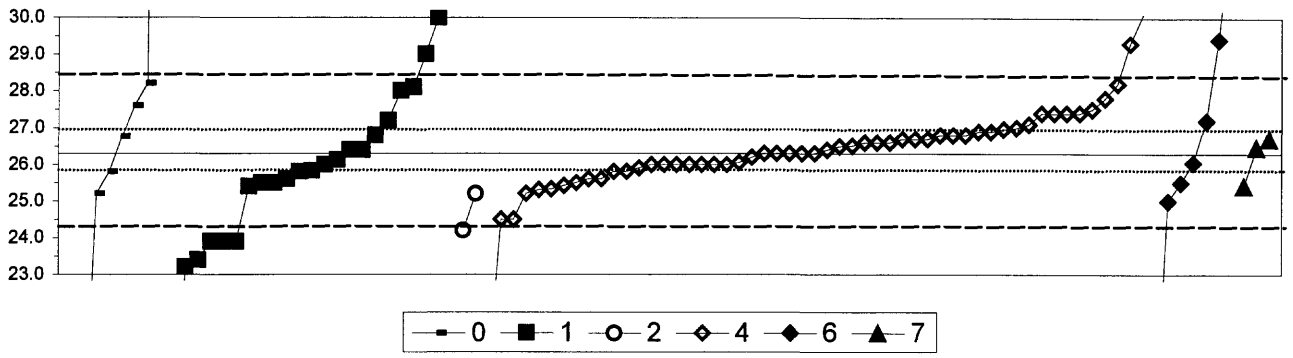
N =	1	20	9
Minimum =	3.9	6.0	10.1
Maximum =		101.0	21.2
Median =		12.7	13.0
F-pseudosigma =		3.8	2.3

MPV =	13.9
F-pseudosigma =	2.3
N =	30
Hu =	15.5
HI =	12.4

Lab	Rating	Z-value	0	4	6
1	4	0.12		14.2	
3	4	-0.40		13.0	
5	4	0.03		14.0	
16	3	-0.79		12.1	
18	NR			< 50	
28	4	0.16		14.3	
30.1	4	-0.40			13.0
32	3	-0.53			12.7
36	NR			< 50	
40	0	-3.45		6.0	
42	1	-1.69			10.1
48	3	-0.66			12.4
50	3	-0.66		12.4	
57	0	2.82		20.4	
68	0	37.89		101.0	
76	4	-0.03			13.9
85	NR			< 20	
86	NR			<20	
100	NR			< 40	
127	NR			< 15	
131	0	3.17			21.2
134	3	-0.60		12.6	
138	4	0.03		14.0	
141.1	0	5.08		25.6	
142	NR			< 30	
145	NR			< 23	
180	0	14.78		47.9	
212	NR			< 100	
215	4	0.47		15.0	
234	4	0.38		14.8	
236	4	0.03		14.0	
240	1	-1.71		10.0	
247	NR			< 50	
255	4	-0.32		13.2	
256	NR			< 10	
258	0	-4.36	3.9		
265	3	0.69			15.5
273	0	4.47		24.2	
283	3	-0.53		12.7	
296	2	-1.06			11.5
300	2	1.34			17.0

Table 14. *Statistical summary of reported data for standard reference water sample M-146 (major constituents)--Continued*

Ca (Calcium) **mg/L**



0. Other			4. ICP					
1. AA: direct, air			6. ICP/MS					
2. AA: direct, nitrous oxide			7. Ion chromatography					
		N =	8	23	2	53	7	3
		Minimum =	17.0	16.6	24.2	20.2	18.6	25.4
		Maximum =	60.9	64.0	25.2	30.1	32.4	26.7
		Median =	26.3	25.8		26.3	26.1	
		F-pseudosigma =	4.6	1.7		0.7	2.3	

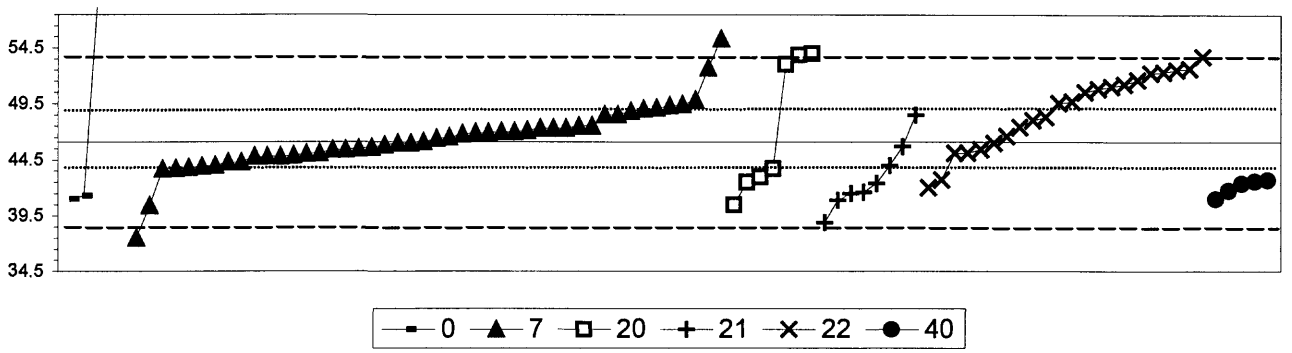
Lab	Rating	Z-value	0	1	2	4	6	7
1	4	0.47				26.8		
3	0	2.82				29.3		
5	3	-0.75				25.5		
10	4	-0.28		26.0				
11	4	0.00				26.3		
13	2	1.13				27.5		
16	4	-0.24				26.1		
18	4	0.00				26.3		
19	4	0.00				26.3		
23	0	-2.26		23.9				
24	4	-0.09				26.2		
25	2	1.03				27.4		
28	4	-0.28				26.0		
30.1	2	-1.03			25.2			
30.2	3	0.85					27.2	
32	2	-1.22					25.0	
33	4	-0.47	25.8					
36	1	-1.69				24.5		
40	3	-0.94				25.3		
42	3	0.63				27.0		
43	3	0.66				27.0		
45	4	-0.47		25.8				
48	0	2.91					29.4	
50	4	-0.47				25.8		
51	0	-2.26		23.9				
57	2	1.03				27.4		
59	4	0.47		26.8				
64	3	-0.66				25.6		
68	4	-0.28				26.0		
69	3	-0.66		25.6				
70	2	1.41				27.8		
76	4	-0.44		25.8				
81	4	-0.28				26.0		
83	4	-0.47				25.8		
84	0	-2.91		23.2				
85	3	-0.75		25.5				
86	3	-0.75		25.5				
87	1	-1.97			24.2			
89	0	-2.26		23.9				
90	0	32.53	60.9					
100	4	-0.38				25.9		
109	4	-0.16		26.1				
113	4	0.38				26.7		
121	4	0.19				26.5		
127	4	-0.28				26.0		
131	0	-7.24					18.6	
133	3	-0.66				25.6		
134	4	0.20				26.5		
138	4	0.00				26.3		
140	0	2.54		29.0				

MPV =	26.3
F-pseudosigma =	1.1
N =	96
Hu =	26.9
HI =	25.5

Lab	Rating	Z-value	0	1	2	4	6	7
141.1	2	-1.03				25.2		
142	4	0.00				26.3		
145	4	0.38				26.7		
146	4	0.28				26.6		
147	4	0.47				26.8		
149	4	0.09		26.4				
154	1	-1.69				24.5		
180	4	0.28				26.6		
183	3	0.85		27.2				
190	3	-0.85						25.4
191	4	-0.24					26.1	
203	3	-0.85		25.4				
212	4	0.09				26.4		
215	2	1.03				27.4		
217	2	1.03				27.4		
218	1	1.79				28.2		
220	4	0.38				26.7		
221	1	1.69		28.1				
224	3	-0.92				25.3		
227	0	3.57				30.1		
230	4	0.38						26.7
234	4	-0.28				26.0		
236	3	-0.83				25.4		
240	0	-5.73				20.2		
241	0	-2.73		23.4				
247	0	-24.25				< 0.5		
249	1	1.79	28.2					
254	3	0.75				27.1		
255	4	0.47				26.8		
256	4	0.15						26.5
258	4	0.44	26.8					
259	3	0.56				26.9		
262	2	1.22	27.6					
265	4	0.28				26.6		
268	0	-9.12		16.6				
270	0	3.48		30.0				
273	4	-0.28				26.0		
274	0	-7.63	18.2					
277	2	-1.03	25.2					
283	3	0.56				26.9		
284	0	-8.74	17.0					
287	4	0.09		26.4				
289	4	-0.28				26.0		
292	1	1.60		28.0				
296	3	-0.75					25.5	
300	0	5.74					32.4	
307	0	35.44		64.0				

Table 14. *Statistical summary of reported data for standard reference water sample M-146 (major constituents)--Continued*

Cl (Chloride) **mg/L**



0. Other				21. Titrate: electrometric				
7. Ion chromatography				22. Colorimetric				
20. Titrate: colorimetric				40. Ion selective electrode				
		N =	5	46	7	8	22	5
		Minimum =	41.0	37.5	40.5	38.9	42.0	41.0
		Maximum =	74.8	55.3	54.0	48.5	53.7	42.7
		Median =		46.3	43.7	42.0	49.6	
		F-pseudosigma =		2.0	7.9	2.7	4.2	

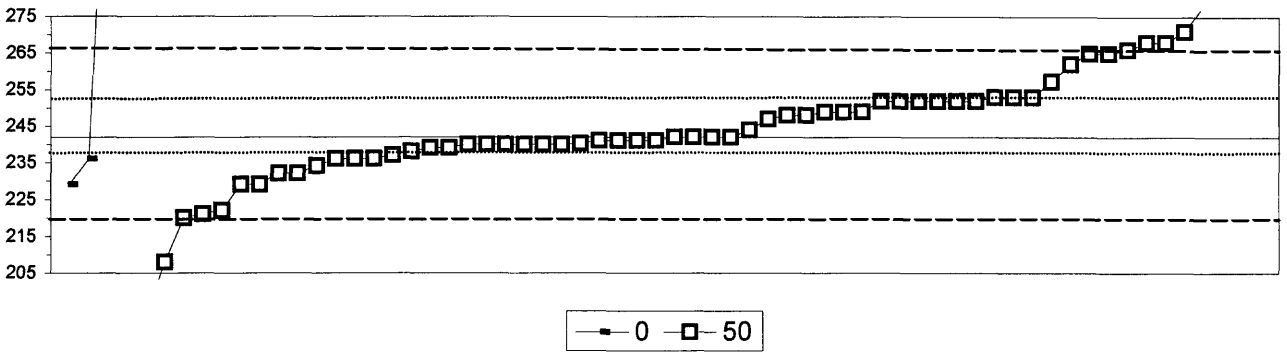
Lab	Rating	Z-value	0	7	20	21	22	40
1	3	-0.55		44.0				
3	4	0.34					47.4	
5	4	0.37		47.5				
10	4	-0.26					45.1	
11	4	0.50					48.0	
13	3	-0.60		43.8				
16	4	0.13					46.6	
18	1	1.99					53.7	
19	3	-0.94			42.5			
23	0	-2.25		37.5				
24	4	-0.18					45.4	
25	4	-0.31		44.9				
30.1	4	0.21		46.9				
32	4	-0.18		45.4				
33	4	-0.34		44.8				
36	4	0.24		47.0				
40	1	1.60					52.2	
42	3	0.76		49.0				
43	2	-1.34						41.0
45	2	1.15					50.5	
48	2	-1.07					42.0	
50	4	-0.26					45.1	
51	0	2.41		55.3				
57	2	-1.34	41.0					
59	4	0.21		46.9				
64	4	-0.26		45.1				
68	1	1.62					52.3	
69	4	-0.03					46.0	
70	0	2.07			54.0			
81	2	-1.18				41.6		
83	1	-1.89				38.9		
85	3	0.63		48.5				
86	3	0.63		48.5				
87	2	1.28					51.0	
89	4	-0.47		44.3				
96	2	1.23					50.8	
97	1	1.68					52.5	
100	3	0.86		49.4				
107	2	-1.20				41.5		
109	3	-0.97				42.4		
113	4	-0.47		44.3				
114	3	-0.89						42.7
127	4	0.24		47.0				
131	2	-1.49		40.4				
134	4	-0.28		45.1				
138	4	-0.18		45.4				
140	3	0.94					49.7	
141.1	3	-0.89					42.7	
141.2	4	-0.34		44.8				
142	4	-0.34		44.8				

MPV = 46.1
F-pseudosigma = 3.8
N = 93
Hu = 49.1
Hl = 44.0

Lab	Rating	Z-value	0	7	20	21	22	40
145	4	0.08		46.4				
146	2	1.34					51.2	
149	4	-0.08		45.8				
154	3	0.58					48.3	
158	3	0.79		49.1				
180	4	0.31		47.3				
190	4	0.26		47.1				
191	4	0.31		47.3				
203	2	-1.36				40.9		
204	3	-0.97						42.4
208	4	0.31		47.3				
212	4	0.18		46.8				
213	3	-0.63			43.7			
217	3	-0.58		43.9				
220	3	0.90					49.5	
224	4	0.36		47.5				
227	3	-0.64		43.6				
230	3	0.71		48.8				
234	3	-0.63		43.7				
236	1	1.73		52.7				
240	4	-0.16		45.5				
241	4	-0.03		46.0				
247	4	0.00		46.1				
249	0	3.22	58.4					
254	4	0.10		46.5				
255	2	1.44					51.6	
256	3	-0.92						42.6
258	1	2.04			53.9			
259	3	-0.55				44.0		
262	3	0.63				48.5		
265	4	-0.10				45.7		
268	3	0.84		49.3				
270	1	1.70					52.6	
273	2	-1.14						41.8
274	3	-0.82			43.0			
277	2	-1.26	41.3					
283	3	0.97		49.8				
284	0	4.51	63.3					
287	1	1.81			53.0			
289	4	-0.03		46.0				
292	4	-0.13		45.6				
300	0	7.52	74.8					
307	2	-1.47			40.5			

Table 14. *Statistical summary of reported data for standard reference water sample M-146 (major constituents)--Continued*

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



0. Other
50. Gravimetric

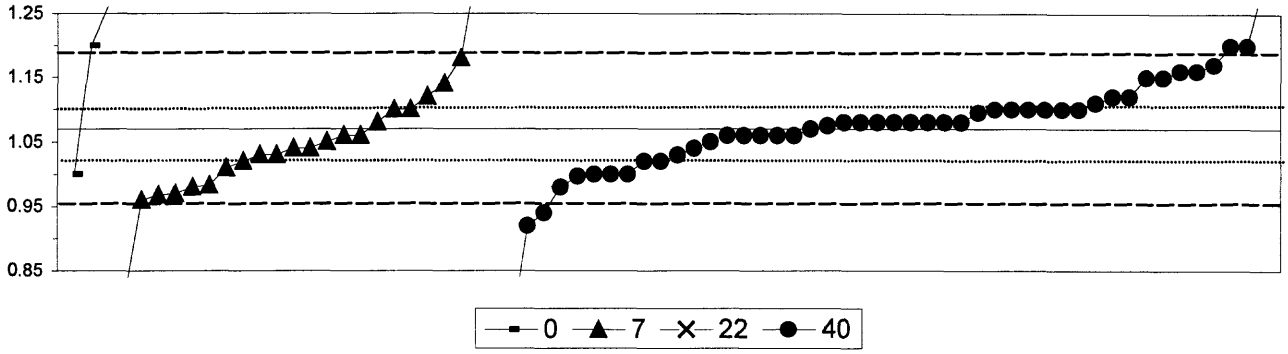
	0	50
N =	3	61
Minimum =	229	50
Maximum =	338	297
Median =		242
F-pseudosigma =		10

MPV = 242
F-pseudosigma = 12
N = 64
Hu = 253
HI = 237

Lab	Rating	Z-value	0	50
1	3	0.51		248
3	0	-16.19		50
5	1	1.94		265
10	4	0.00		242
11	0	2.19		268
13	3	0.51		248
16	3	0.93		253
19	4	-0.08		241
23	3	-0.51		236
25	3	-0.84		232
26	3	0.59		249
32	2	-1.10	229	
36	0	2.19		268
40	3	-0.67		234
43	4	0.17		244
45	4	-0.17		240
48	3	0.84		252
50	3	-0.51		236
51	3	0.84		252
57	4	-0.17		240
59	3	0.84		252
69	0	-4.22		192
70	3	0.84		252
76	4	-0.25		239
81	0	3.37		282
85	4	-0.17		240
86	4	-0.17		240
89	3	-0.84		232
90	1	-1.85		220
96	4	-0.08		241
97	4	-0.42		237
100	0	-2.87		208
109	4	-0.08		241
113	3	-0.51		236
114	0	2.45		271
118	4	-0.17		240
127	4	0.42		247
134	2	1.29		257
138	0	3.04		278
140	1	1.69		262
141.1	4	0.00		242
142	3	0.93		253
146	2	-1.10		229
149	4	0.00		242
154	1	-1.77		221
158	4	-0.17		240
190	1	-1.69		222
212	4	-0.34		238
215	0	3.46		283
217	4	-0.08		241
224	4	-0.15		240
227	3	0.59		249
234	4	0.00		242
236	1	1.94		265
240	0	4.64		297
241	4	-0.25		239
247	3	0.59		249
255	3	0.84		252
259	3	0.93		253
268	1	2.02		266
273	0	8.09	338	
283	3	0.84		252
284	3	-0.51	236	
292	2	-1.10		229

Table 14. *Statistical summary of reported data for standard reference water sample M-146 (major constituents)--Continued*

F (Fluoride) **mg/L**



0. Other			40. Ion selective electrode			
7. Ion chromatography						
22. Colorimetric						
		N =	3	22	1	46
		Minimum =	1.00	0.81	0.00	0.75
		Maximum =	1.26	1.33		1.30
		Median =		1.04		1.08
		F-pseudosigma =		0.09		0.04

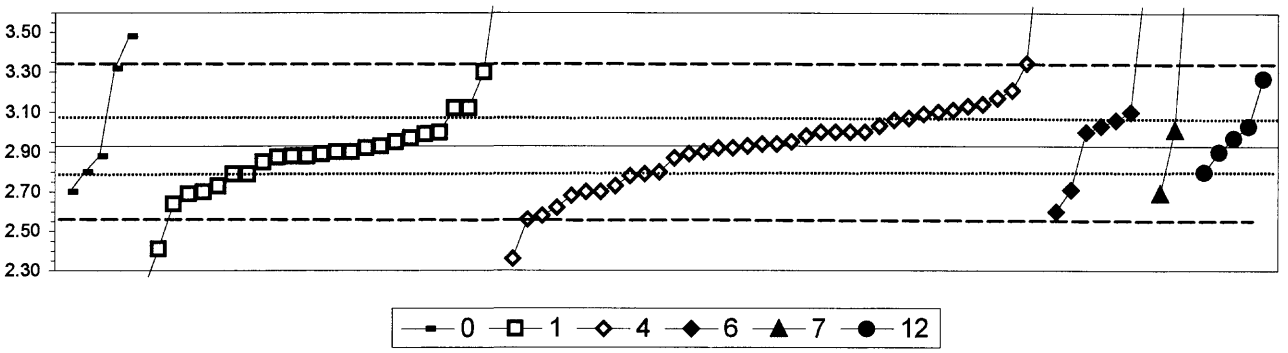
Lab	Rating	Z-value	0	7	22	40
1	4	-0.21				1.06
3	4	0.46				1.10
5	3	-0.72		1.03		
10	3	0.63				1.11
11	0	-2.23				0.94
13	4	0.46		1.10		
16	4	-0.38				1.05
18	0	3.84				1.30
23	1	-1.90		0.96		
24	3	0.80				1.12
25	4	0.13				1.08
32	1	-1.56		0.98		
36	4	-0.21		1.06		
40	4	-0.04				1.07
42	2	-1.05		1.01		
45	4	0.46				1.10
48	2	1.31				1.15
50	4	0.13				1.08
57	1	-1.56				0.98
59	4	0.46				1.10
69	4	-0.21				1.06
70	4	-0.21				1.06
76	4	0.38				1.10
81	4	0.13				1.08
83	4	0.46				1.10
85	2	-1.22				1.00
86	2	-1.22				1.00
89	0	2.15				1.20
96	4	0.13				1.08
97	4	0.04				1.08
100	4	0.46				1.10
107	4	0.13				1.08
109	2	1.31				1.15
113	3	-0.55				1.04
114	0	-2.57				0.92
127	3	-0.55		1.04		
131	2	1.14		1.14		
134	4	0.13				1.08
138	2	-1.27				1.00
140	3	0.80				1.12
141.1	4	0.13				1.08
141.2	1	-1.51		0.98		
142	4	0.13				1.08
145	0	4.34		1.33		
146	2	1.48				1.16
149	4	-0.21		1.06		
158	3	-0.72		1.03		
180	1	1.81		1.18		
190	1	-1.73		0.97		
208	0	-12.83		< 0.3		

MPV =	1.07
F-pseudosigma =	0.06
N =	72
Hu =	1.10
HI =	1.02

Lab	Rating	Z-value	0	7	22	40
212	0	2.15				1.20
215	4	-0.21				1.06
217	0	-5.44				0.75
227	3	-0.55		1.04		
230	3	0.80		1.12		
234	3	-0.89		1.02		
236	4	0.46		1.10		
240	4	-0.21				1.06
241	3	-0.89				1.02
247	1	-1.76		0.97		
249	0	3.16	1.26			
255	2	1.48				1.16
259	4	0.46				1.10
262	3	-0.72				1.03
265	3	-0.89				1.02
273	2	-1.22				1.00
274	0	-18.09			0.00	
277	0	2.15	1.20			
283	0	-4.43		0.81		
284	2	-1.22	1.00			
287	1	1.64				1.17
289	4	0.13		1.08		
292	4	-0.38		1.05		

Table 14. *Statistical summary of reported data for standard reference water sample M-146 (major constituents)--Continued*

K (Potassium) **mg/L**



0. Other
1. AA: direct, air
4. ICP
6. ICP/MS
7. Ion chromatography
12. Flame emission

	0	1	4	6	7	12
N =	5	25	37	7	3	5
Minimum =	2.70	2.20	2.36	2.60	2.69	2.80
Maximum =	3.48	3.85	4.07	3.79	4.07	3.27
Median =		2.89	2.94	3.03		
F-pseudosigma =		0.13	0.21	0.17		

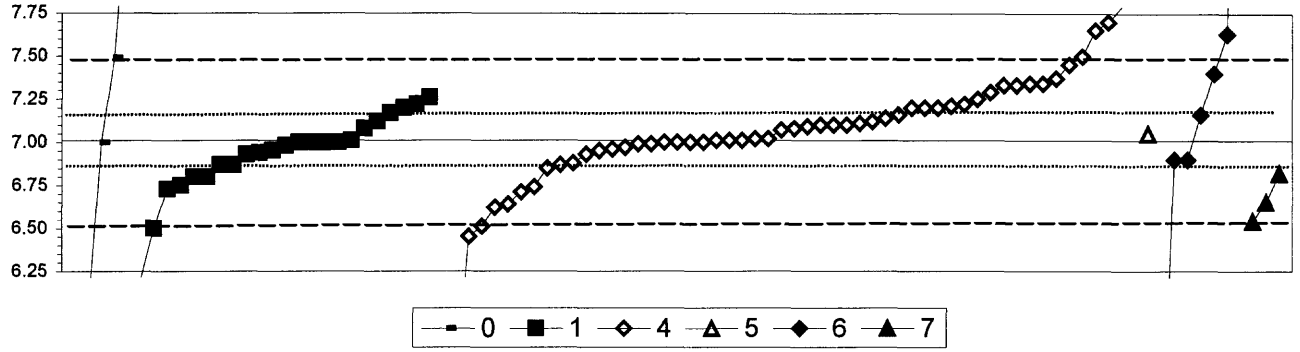
MPV = 2.93
F-pseudosigma = 0.20
N = 82
Hu = 3.06
HI = 2.79

Lab	Rating	Z-value	0	1	4	6	7	12
1	2	-1.20		2.69				
3	4	0.35			3.00			
5	2	-1.25			2.68			
10	4	-0.05		2.92				
11	3	-0.75			2.78			
13	3	0.65			3.06			
16	3	0.95		3.12				
18	4	0.05			2.94			
19	1	-1.75			2.58			
23	3	0.95		3.12				
24	3	-1.00			2.73			
25	2	1.40			3.21			
28	4	0.00			2.93			
32	3	0.65				3.06		
33	4	-0.25	2.88					
36	4	-0.40		2.85				
40	3	0.80			3.09			
42	4	0.50			3.03			
43	3	-0.65			2.80			
45	4	-0.25		2.88				
48	4	0.50				3.03		
50	1	-1.55			2.62			
51	4	-0.15						2.90
57	1	1.85		3.30				
59	2	-1.10				2.71		
64	4	0.20		2.97				
68	4	-0.15			2.90			
69	4	0.50						3.03
70	4	-0.05			2.92			
81	2	1.05			3.14			
85	3	-0.70		2.79				
86	3	-0.70		2.79				
87	2	-1.45		2.64				
89	4	-0.25		2.88				
100	4	0.05			2.94			
109	4	-0.20		2.89				
113	4	0.25			2.98			
127	3	0.90			3.11			
131	3	0.85				3.10		
134	4	0.34		3.00				
138	4	-0.20			2.89			
140	4	-0.27		2.88				
141.1	1	-1.85			2.56			
142	4	-0.05			2.92			
145	2	-1.15			2.70			
146	2	1.20			3.17			
149	4	-0.15		2.90				
154	0	5.70			4.07			
180	4	-0.30			2.87			
190	2	-1.20					2.69	

Lab	Rating	Z-value	0	1	4	6	7	12
191	4	0.35				3.00		
203	4	0.00		2.93				
209	0	-3.65		2.20				
212	NR				< 5			
218	0	2.07			3.34			
221	4	0.30		2.99				
224	2	-1.15			2.70			
227	3	-1.00		2.73				
230	4	0.40					3.01	
234	3	-0.70			2.79			
236	3	1.00			3.13			
240	0	-2.85			2.36			
241	2	-1.15		2.70				
247	3	0.70			3.07			
249	0	2.75	3.48					
254	3	-0.65	2.80					
255	4	0.35			3.00			
256	0	5.70					4.07	
259	3	0.85			3.10			
262	4	0.20						2.97
265	4	0.35			3.00			
268	4	0.10		2.95				
270	3	-0.65						2.80
273	4	0.35			3.00			
274	1	1.70						3.27
277	2	-1.15	2.70					
283	4	0.10			2.95			
284	1	1.94	3.32					
287	0	4.60		3.85				
289	0	-2.60		2.41				
292	4	-0.15		2.90				
296	1	-1.65				2.60		
300	0	4.29				3.79		

Table 14. *Statistical summary of reported data for standard reference water sample M-146 (major constituents)--Continued*

Mg (Magnesium) **mg/L**



0. Other
1. AA: direct, air
4. ICP
5. DCP
6. ICP/MS
7. Ion chromatography

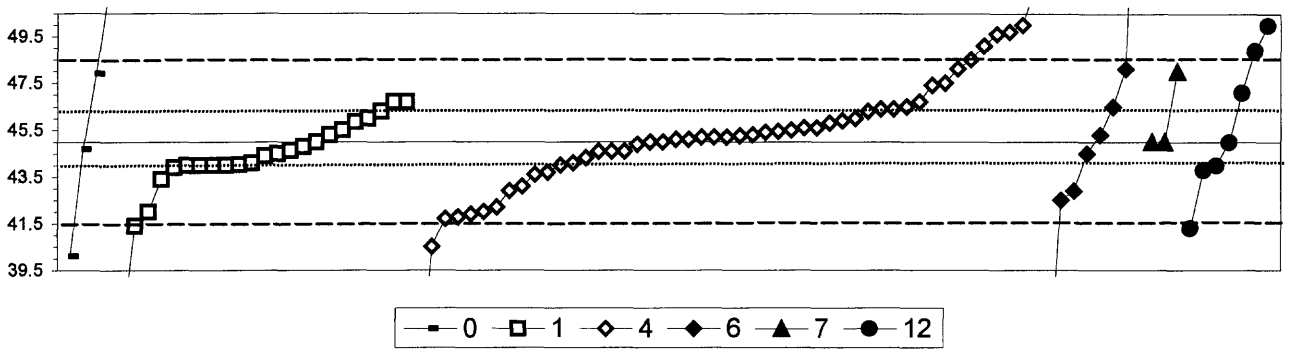
	0	1	4	5	6	7
N =	5	23	54	1	7	3
Minimum =	5.48	6.20	3.39	7.05	4.80	6.54
Maximum =	8.40	7.26	8.00		9.64	6.82
Median =		6.98	7.08		7.16	
F-pseudosigma =		0.13	0.19		0.46	

MPV = 7.01
F-pseudosigma = 0.24
N = 93
Hu = 7.20
HI = 6.87

Lab	Rating	Z-value	0	1	4	5	6	7
1	4	0.00			7.01			
3	0	4.05			8.00			
5	2	-1.23			6.71			
10	4	0.29		7.08				
11	4	-0.20			6.96			
13	0	-14.80			3.39			
16	3	-0.53			6.88			
18	4	-0.33			6.93			
19	4	-0.04			7.00			
23	4	0.00		7.01				
24	4	-0.08			6.99			
25	2	1.31			7.33			
28	2	1.31			7.33			
30.1	4	-0.33		6.93				
30.2	4	-0.45					6.90	
32	1	1.59					7.40	
33	4	0.16				7.05		
36	0	-2.29			6.45			
40	4	-0.25			6.95			
42	4	0.45			7.12			
43	4	-0.04			7.00			
45	3	0.65		7.17				
48	0	2.53					7.63	
50	4	0.25			7.07			
51	3	0.78		7.20				
57	0	2.82			7.70			
59	3	0.86		7.22				
64	4	-0.08			6.99			
68	4	0.37			7.10			
69	2	-1.06		6.75				
70	3	0.61			7.16			
76	4	-0.23		6.95				
81	4	-0.04			7.00			
83	2	-1.10			6.74			
84	4	-0.12		6.98				
85	3	-0.57		6.87				
86	3	-0.57		6.87				
87	3	-0.86		6.80				
89	4	0.45		7.12				
100	3	0.98			7.25			
109	4	-0.04		7.00				
113	2	1.35			7.34			
121	4	-0.04			7.00			
127	3	-0.57			6.87			
131	0	-9.03					4.80	
133	1	-1.59			6.62			
134	4	0.41			7.11			
138	4	-0.16			6.97			
140	4	-0.04		7.00				
141.1	1	-2.04			6.51			
142	4	0.04			7.02			
145	4	0.00			7.01			
146	2	1.47			7.37			
147	3	0.78			7.20			
149	4	-0.04		7.00				
154	1	-1.51			6.64			
160	4	0.29			7.08			
190	1	-1.92						6.54
191	3	0.61					7.16	
203	2	-1.14		6.73				
212	4	0.37			7.10			
215	1	2.00			7.50			
217	3	0.82			7.21			
218	0	3.18			7.79			
220	4	0.37			7.10			
221	4	-0.29		6.94				
224	4	0.00			7.01			
227	1	1.80			7.45			
230	2	-1.47						6.65
234	3	-0.65			6.85			
236	4	0.04			7.02			
240	0	-6.01			5.54			
241	3	-0.86		6.80				
247	0	2.62			7.65			
254	2	1.35			7.34			
255	3	0.53			7.14			
256	3	-0.78						6.82
258	1	1.96	7.49					
259	3	0.78			7.20			
262	0	5.68	8.40					
265	3	0.78			7.20			
268	0	-3.31		6.20				
273	3	0.86			7.22			
274	0	-6.25	5.48					
277	4	-0.04	7.00					
283	2	1.14			7.29			
284	0	-4.13	6.00					
287	2	1.02		7.26				
289	4	0.33			7.09			
292	0	-2.08		6.50				
296	4	-0.45					6.90	
300	0	10.73					9.64	
307	4	-0.04		7.00				

Table 14. *Statistical summary of reported data for standard reference water sample M-146 (major constituents)--Continued*

Na (Sodium) **mg/L**



0. Other				6. ICP/MS				
1. AA: direct, air				7. Ion chromatography				
4. ICP				12. Flame emission				
		N =	4	23	49	8	3	7
		Minimum =	40.1	36.8	34.0	34.0	45.0	41.3
		Maximum =	51.6	46.7	51.6	63.0	48.0	50.0
		Median =		44.4	45.2	44.9		45.0
		F-pseudosigma =		1.0	1.7	3.4		3.0

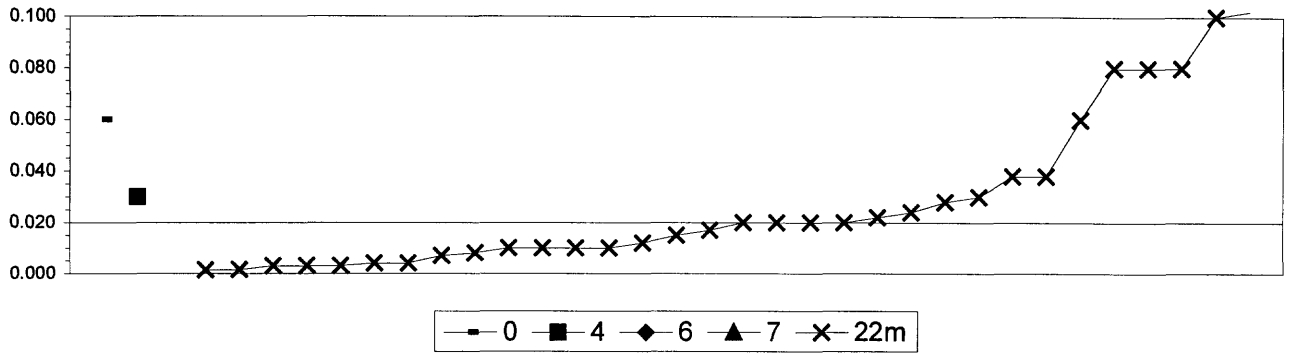
Lab	Rating	Z-value	0	1	4	6	7	12
1	4	-0.22			44.6			
3	0	2.64			49.7			
5	4	-0.06			44.9			
10	4	0.00		45.0				
11	1	-1.74			41.9			
13	0	2.30			49.1			
16	3	-0.79			43.6			
18	4	-0.22			44.6			
19	1	-1.57			42.2			
23	4	0.28		45.5				
24	4	0.11			45.2			
25	0	2.59			49.6			
28	2	-1.07			43.1			
30.1	0	2.19						48.9
30.2	2	-1.41				42.5		
32	4	-0.28				44.5		
33	4	-0.17	44.7					
36	1	-1.85			41.7			
40	3	0.51			45.9			
42	1	-1.82			41.8			
43	4	0.00			45.0			
45	4	-0.28		44.5				
48	1	1.74				48.1		
50	4	0.06			45.1			
51	4	0.00						45.0
57	0	2.81			50.0			
59	3	0.84				46.5		
64	3	0.73		46.3				
68	3	-0.73			43.7			
69	3	-0.67						43.8
70	3	0.73			46.3			
81	3	0.56			46.0			
83	3	-0.51			44.1			
84	2	1.18						47.1
85	3	-0.56		44.0				
86	3	-0.56		44.0				
87	4	-0.34		44.4				
89	3	-0.56		44.0				
97	3	-0.51		44.1				
100	3	0.79			46.4			
109	4	-0.21		44.6				
113	2	1.35			47.4			
118	1	-2.02		41.4				
121	4	0.11			45.2			
127	4	0.11			45.2			
131	0	-6.18				34.0		
134	4	0.47		45.8				
138	4	0.28			45.5			
140	3	0.56		46.0				
141.1	0	-2.53			40.5			

MPV =	45.0
F-pseudosigma =	1.8
N =	94
Hu =	46.4
HI =	44.0

Lab	Rating	Z-value	0	1	4	6	7	12
142	4	-0.22			44.6			
145	4	0.06			45.1			
146	3	0.96			46.7			
149	3	-0.56		44.0				
154	1	-1.69			42.0			
180	4	0.45			45.8			
190	4	0.00					45.0	
191	4	0.17				45.3		
203	4	-0.11		44.8				
209	3	-0.55		44.0				
212	4	0.22			45.4			
215	1	1.97			48.5			
217	4	0.34			45.6			
218	0	3.73			51.6			
220	4	0.25			45.5			
221	3	0.96		46.7				
224	4	0.15			45.3			
227	0	-4.61		36.8				
230	1	1.69					48.0	
234	4	0.17			45.3			
236	4	-0.38			44.3			
240	0	-6.18			34.0			
241	3	-0.62		43.9				
247	1	1.74			48.1			
249	1	1.63	47.9					
254	2	1.41			47.5			
255	3	0.84			46.5			
256	4	0.00					45.0	
259	4	0.00			45.0			
262	0	-2.08						41.3
265	3	0.79			46.4			
268	1	-1.69		42.0				
270	3	-0.56						44.0
273	4	0.34			45.6			
274	0	2.81						50.0
277	0	-2.75	40.1					
283	2	-1.18			42.9			
284	0	3.71	51.6					
287	4	0.17		45.3				
289	3	-0.56			44.0			
292	3	-0.90		43.4				
296	2	-1.18				42.9		
300	0	10.11				63.0		
307	3	0.96		46.7				

Table 14. *Statistical summary of reported data for standard reference water sample M-146 (major constituents)--Continued*

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



0. Other
4. ICP
6. ICP/MS
7. Ion chromatography
22m. Color:phosphomolybdate

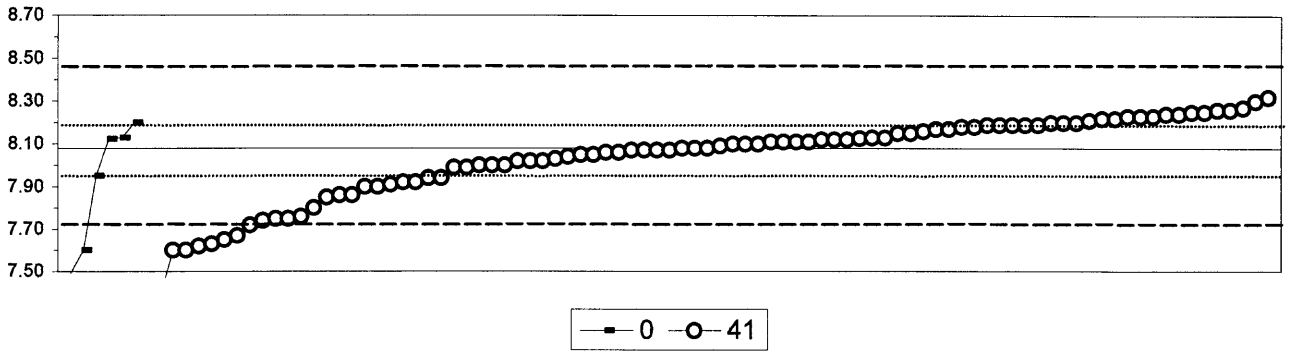
MPV = Insufficient data

	N =	Minimum =	Maximum =	Median =	F-pseudosigma =
0	1	0.060			
4	1	0.030			
6	1	0.120			
7	0	< 0.1	< 0.2		
22m	32	0.001	6.500	0.019	0.020

Lab	Rating	Z-value	0	4	6	7	22m
1	NR						0.003
3	NR						< 0.01
13	NR						< 0.05
16	NR						0.017
18	NR						0.003
23	NR						< 0.01
25	NR						0.060
36	NR						0.024
48	NR						0.010
57	NR						0.080
59	NR						0.010
68	NR						0.012
70	NR						< 0.1
81	NR						< 0.005
87	NR						0.010
89	NR						< 0.005
97	NR						0.080
113	NR						0.004
114	NR						< 0.01
118	NR						< 0.01
127	NR						< 0.02
131	NR					< 0.2	
133	NR						< 0.003
134	NR						0.004
138	NR						< 0.004
140	NR						< 0.01
141.1	NR						0.015
142	NR						0.028
145	NR						0.020
146	NR						< 0.100
149	NR						0.003
158	NR						0.022
180	NR						< 0.025
190	NR						0.020
191	NR				0.120		
203	NR						0.008
212	NR						< 0.05
213	NR						< 0.02
215	NR						0.020
224	NR						0.007
227	NR						< 0.014
234	NR						0.002
236	NR			0.030			
240	NR						0.030
241	NR						0.001
243	NR						< 0.02
247	NR					< 0.1	
249	NR		0.060				
255	NR						< 0.5
256	NR						0.100
259	NR						0.010
274	NR						0.038
283	NR						0.080
284	NR			< 0.1			
287	NR						< 0.1
289	NR						6.500
292	NR						0.020
306	NR						0.038

Table 14. *Statistical summary of reported data for standard reference water sample M-146 (major constituents)--Continued*

pH



0. Other
41. Direct reading

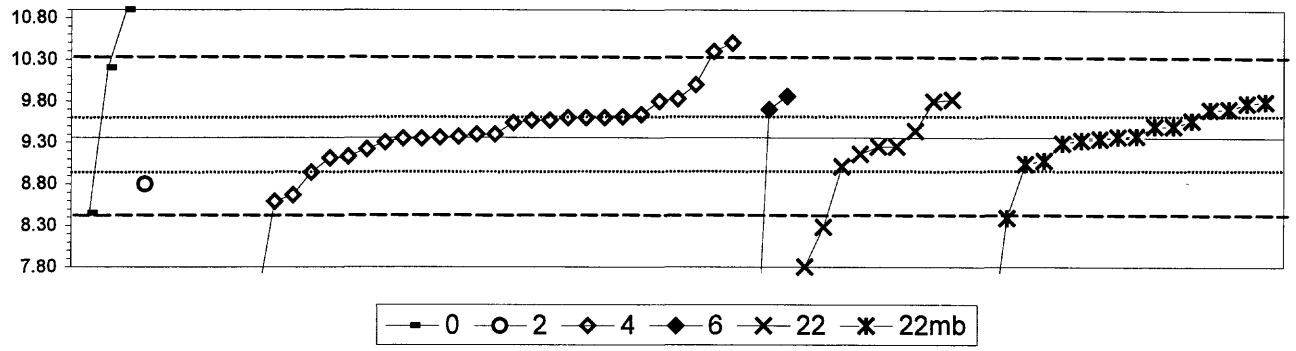
	0	41
N =	6	89
Minimum =	7.49	7.37
Maximum =	8.20	8.32
Median =		8.08
F-pseudosigma =		0.19

MPV = 8.08
F-pseudosigma = 0.19
Rating Criterion = 0.40 **
N = 95
Hu = 8.19
HI = 7.93

Lab	Rating	Z-value	0	41
1	4	0.00		8.08
3	4	0.45		8.26
5	4	0.00		8.08
10	4	0.37		8.23
11	4	-0.15		8.02
13	3	-0.82		7.75
16	4	-0.35		7.94
19	4	0.27		8.19
23	4	0.10		8.12
24	4	0.17		8.15
25	3	0.59		8.32
26	3	-0.79		7.76
30.1	4	0.07		8.11
32	4	0.30	8.20	
33	4	0.20		8.16
34	4	0.27		8.19
36	4	-0.15		8.02
40	4	0.40		8.24
42	2	-1.11		7.63
43	4	-0.40		7.92
45	4	0.35		8.22
48	2	-1.19		7.60
50	4	-0.45		7.90
51	4	-0.42		7.91
57	4	-0.45		7.90
59	4	-0.22		7.99
64	4	0.32		8.21
68	4	0.02		8.09
69	4	-0.02		8.07
70	4	-0.35		7.94
76	4	-0.02		8.07
81	4	0.00		8.08
84	4	-0.10		8.04
85	4	0.27		8.19
86	4	0.27		8.19
87	2	-1.06		7.65
89	4	0.27		8.19
90	4	0.17		8.15
96	4	0.25		8.18
97	4	0.37		8.23
100	4	-0.05		8.06
109	4	-0.02		8.07
113	3	-0.57		7.85
114	4	-0.07		8.05
118	2	-1.19		7.60
127	4	0.42		8.25
133	4	0.30		8.20
134	4	0.12		8.13
138	4	0.07		8.11
140	3	-0.54		7.86
141.1	4	0.12		8.13
142	4	0.05		8.10
146	4	0.10		8.12
154	4	-0.07		8.05
158	3	-0.54		7.86
180	4	0.05		8.10
183	2	-1.01		7.67
190	4	0.07		8.11
203	4	0.30		8.20
204	4	0.10		8.12
209	4	0.07		8.11
212	4	0.30		8.20
213	4	0.12		8.13
215	4	0.05		8.10
217	4	-0.20		8.00
218	4	0.45		8.26
224	3	-0.82		7.75
227	1	-1.76		7.37
230	4	0.42		8.25
234	4	0.40		8.24
236	4	-0.05		8.06
240	4	-0.02		8.07
241	4	0.25		8.18
243	4	0.47		8.27
244	4	0.35		8.22
247	4	0.37		8.23
249	2	-1.46	7.49	
255	4	-0.12		8.03
256	4	-0.32	7.95	
258	3	-0.84		7.74
259	4	-0.20		8.00
262	3	-0.89		7.72
268	2	-1.14		7.62
270	4	-0.20		8.00
273	4	0.11	8.12	
274	3	-0.69		7.80
277	4	0.12	8.13	
283	4	0.22		8.17
284	2	-1.19	7.60	
287	4	-0.22		7.99
289	4	-0.40		7.92
291	1	-1.73		7.38
292	4	-0.15		8.02
306	4	0.22		8.17
307	3	0.54		8.30

Table 14. *Statistical summary of reported data for standard reference water sample M-146 (major constituents)--Continued*

SiO_2 (Silica) **mg/L**



0. Other				6. ICP/MS				
2. AA: direct, nitrous oxide				22. Colorimetric				
4. ICP				22mb. Color: molybdate blue				
		N =	3	1	32	3	9	17
		Minimum =	8.45	8.80	4.05	4.70	7.80	4.20
		Maximum =	10.90		10.50	9.86	9.82	9.80
		Median =			9.37		9.25	9.37
		F-pseudosigma =			0.59		0.32	0.36

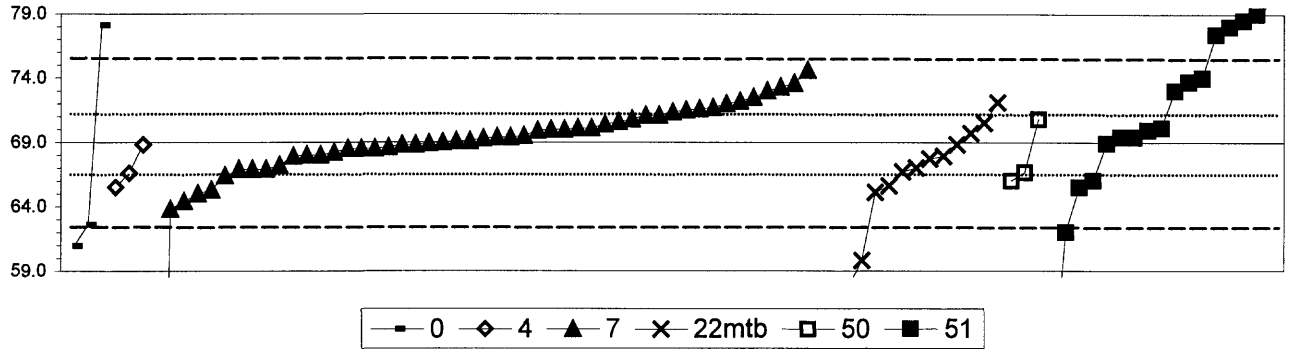
Lab	Rating	Z-value	0	2	4	6	22	22mb
1	4	-0.40					9.16	
3	0	2.09			10.40			
5	4	-0.02			9.35			
10	4	0.28						9.50
11	0	-5.76			6.50			
13	0	2.30			10.50			
16	0	-10.69			4.05			
18	3	-0.56						9.08
24	3	0.95			9.83			
25	0	-10.11			4.34			
32	3	0.68				9.70		
33	1	-1.83	8.45					
36	4	0.04						9.38
40	1	-1.55			8.59			
42	4	0.00			9.36			
43	3	0.89			9.80			
50	4	-0.50			9.11			
57	4	0.08			9.40			
59	3	0.68						9.70
64	4	0.02			9.37			
68	3	-0.70					9.01	
70	4	-0.06						9.33
81	4	0.02						9.37
83	3	-0.85			8.94			
85	3	0.89						9.80
86	3	0.89					9.80	
87	4	-0.14						9.29
89	3	0.93					9.82	
97	4	-0.22					9.25	
100	3	0.56			9.64			
107	3	0.85						9.78
113	4	0.42						9.57
118	4	-0.04						9.34
121	4	-0.02			9.35			
127	2	-1.39			8.67			
131	0	-9.38				4.70		
134	4	0.42			9.57			
138	3	0.70						9.71
140	4	-0.22					9.25	
142	2	1.29			10.00			
145	4	0.36			9.54			
147	4	0.50			9.61			
190	0	-10.39						4.20
191	2	1.01				9.86		
203	4	0.28						9.50
204	3	-0.64						9.04
212	4	0.48			9.60			
215	0	-5.15			6.80			
217	4	0.42			9.57			
234	4	-0.28			9.22			

MPV =	9.36
F-pseudosigma =	0.50
N =	65
Hu =	9.61
HI =	8.94

Lab	Rating	Z-value	0	2	4	6	22	22mb
236	0	-4.73			7.01			
240	0	-4.25			7.25			
241	2	-1.13		8.80				
247	4	0.16					9.44	
249	1	1.69	10.20					
254	4	0.48			9.60			
255	0	-5.52						6.62
256	0	-2.17					8.28	
259	4	0.08			9.40			
265	4	-0.12			9.30			
273	4	-0.46			9.13			
274	1	-1.95						8.39
283	4	0.48			9.60			
284	0	3.10	10.90					
289	0	-3.14					7.80	

Table 14. *Statistical summary of reported data for standard reference water sample M-146 (major constituents)--Continued*

SO_4 (Sulfate) **mg/L**



0. Other					22mtb. Color: methyl thymol blue			
4. ICP					50. Gravimetric			
7. Ion chromatography					51. Turbidimetric			
		N =	3	3	49	14	3	17
		Minimum =	61.0	65.5	0.2	16.0	66.0	49.0
		Maximum =	78.1	68.8	74.6	72.1	70.8	79.8
		Median =			69.3	66.9		70.1
		F-pseudosigma =			2.3	6.7		6.3

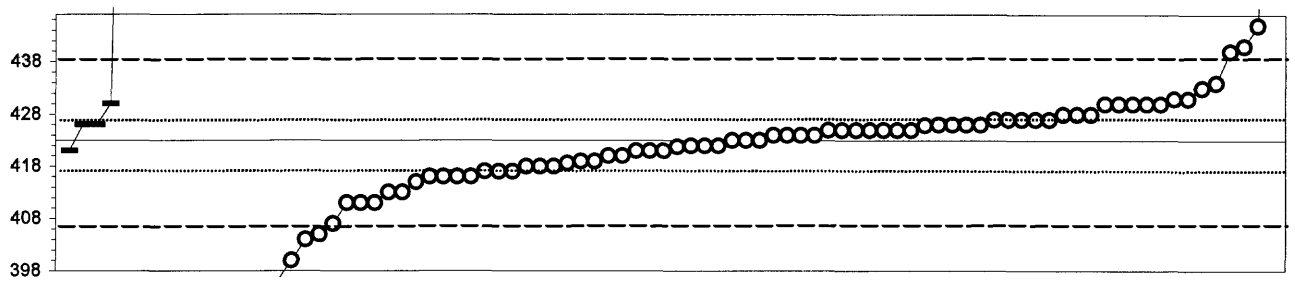
Lab	Rating	Z-value	0	4	7	22mtb	50	51
1	4	-0.31			68.0			
3	0	-2.82				59.8		
5	4	0.03			69.1			
10	4	0.12						69.4
11	2	1.23			73.0			
13	4	-0.06			68.8			
16	4	0.46				70.5		
18	4	-0.40				67.7		
19	3	0.95				72.1		
23	2	-1.41			64.4			
24	4	-0.34				67.9		
25	4	-0.03			68.9			
30.1	3	0.55			70.8			
32	4	0.28			69.9			
33	4	0.03			69.1			
36	4	0.31			70.0			
40	3	-0.74		66.6				
42	2	-1.23			65.0			
43	3	-0.92					66.0	
45	4	-0.03						68.9
48	0	-6.13						49.0
50	4	0.21				69.7		
51	3	0.64			71.1			
57	0	-16.25				16.0		
59	2	1.07			72.5			
64	4	-0.15			68.5			
68	4	0.12						69.4
69	4	-0.06				68.8		
70	2	-1.13			65.3			
81	3	-0.61				67.0		
83	4	-0.06		68.8				
85	3	-0.64			66.9			
86	3	-0.64			66.9			
87	0	-2.15						62.0
89	3	-0.64			66.9			
96	1	1.53						74.0
100	2	1.32			73.3			
109	3	-0.71					66.7	
113	4	-0.15			68.5			
114	3	0.55					70.8	
127	3	0.80			71.6			
131	1	-1.59			63.8			
134	4	0.12			69.4			
138	4	0.15			69.5			
140	2	1.23						73.0
141.1	2	-1.07						65.5
141.2	3	-0.55			67.2			
142	4	-0.34			67.9			
145	3	0.77			71.5			
146	0	3.31						79.8

MPV =	69.0
F-pseudosigma =	3.3
N =	89
Hu =	71.1
HI =	66.7

Lab	Rating	Z-value	0	4	7	22mtb	50	51
149	3	0.98			72.2			
154	2	-1.20				65.1		
158	4	0.12			69.4			
180	4	0.34			70.1			
183	0	2.91						78.5
190	4	-0.12			68.6			
191	4	0.00			69.0			
203	0	-7.51				44.5		
204	3	-0.71				66.7		
208	3	0.83			71.7			
212	4	0.49			70.6			
215	0	3.07						79.0
217	0	-21.09			0.2			
220	2	1.44						73.7
224	4	0.33			70.1			
227	4	-0.15			68.5			
230	1	1.72			74.6			
234	3	-0.80			66.4			
236	3	0.72			71.4			
240	4	0.43			70.4			
241	4	0.31			70.0			
247	2	1.41			73.6			
249	1	-1.96	62.6					
254	4	0.09			69.3			
255	0	-3.46				57.7		
256	0	-2.46	61.0					
258	4	0.34						70.1
259	3	0.92			72.0			
262	2	-1.04				65.6		
265	2	-1.07		65.5				
268	4	-0.25			68.2			
273	0	2.58						77.4
274	4	0.29						69.9
277	0	2.79	78.1					
283	3	0.64			71.1			
284	0	-19.39	< 5					
287	3	-0.92						66.0
289	4	-0.31			68.0			
292	4	-0.06			68.8			
307	0	2.76						78.0

Table 14. *Statistical summary of reported data for standard reference water sample M-146 (major constituents)--Continued*

Sp Cond (Specific Conductance) **µS/cm**



0. Other
41. Direct reading

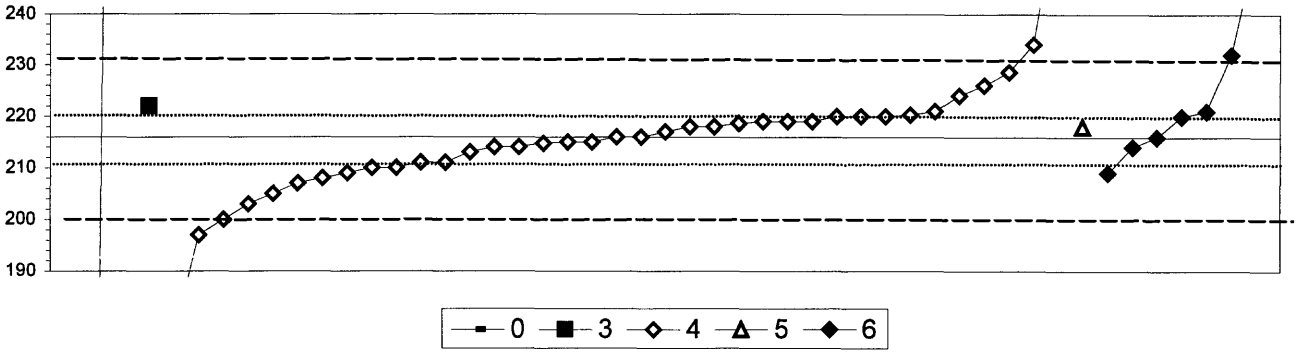
	0	41
N =	5	83
Minimum =	421	6
Maximum =	560	494
Median =		422
F-pseudosigma =		8

MPV = 423
F-pseudosigma = 8
Rating Criterion = 21 **
N = 88
Hu = 427
Hl = 416

Lab	Rating	Z-value	0	41
1	4	0.21		427
3	4	0.12		425
5	4	0.12		425
10	4	0.02		423
11	4	0.07		424
13	4	0.36		430
16	4	-0.03		422
19	4	-0.07		421
23	4	-0.02		422
24	4	-0.12		420
25	4	0.21		427
26	4	0.12		425
32	4	-0.07	421	
33	4	0.02		423
36	4	-0.31		416
40	4	0.07		424
42	4	0.26		428
43	4	-0.07		421
48	4	0.21		427
50	4	0.12		425
51	4	-0.21		418
57	4	-0.12		420
59	4	-0.21		418
64	4	0.16		426
68	0	3.38		494
69	1	-1.54		390
70	1	-1.63		388
76	4	-0.18		419
81	4	0.36		430
84	4	-0.36		415
85	4	-0.26		417
86	4	-0.26		417
87	0	-6.13		293
89	3	-0.54		411
90	0	-2.44		371
96	4	0.50		433
97	4	0.26		428
100	4	0.17		426
109	4	-0.02		422
113	4	-0.45		413
114	4	-0.07		421
118	2	-1.07		400
127	4	0.12		425
134	4	0.02		423
138	4	-0.31		416
140	0	-2.82		363
141.1	4	0.21		427
142	4	0.21		427
145	4	-0.45		413
146	4	-0.21		418
149	4	0.17		426
154	4	0.36		430
158	4	0.12		425
180	2	1.07		445
183	4	0.07		424
190	3	-0.83		405
193	0	-19.71		6
203	3	0.88		441
204	3	-0.54		411
212	4	0.17		426
215	3	0.54		434
217	3	-0.88		404
218	3	-0.73		407
224	0	-4.62		325
227	4	-0.17		419
234	4	0.26		428
236	4	-0.26		417
240	4	-0.31		416
241	0	-2.58		368
243	4	-0.02		422
244	4	-0.31		416
247	4	0.36		430
249	4	0.36	430	
255	4	0.12		425
256	4	0.17	426	
258	2	-1.26		396
259	4	0.40		431
262	4	0.17		426
268	3	0.83		440
270	4	0.36		430
273	4	0.17	426	
274	4	0.40		431
283	4	-0.17		419
284	0	6.51	560	
287	0	-3.62		346
289	3	-0.54		411
292	4	0.07		424
306	0	-2.02		380

Table 14. *Statistical summary of reported data for standard reference water sample M-146 (major constituents)--Continued*

Sr (Strontium) µg/L

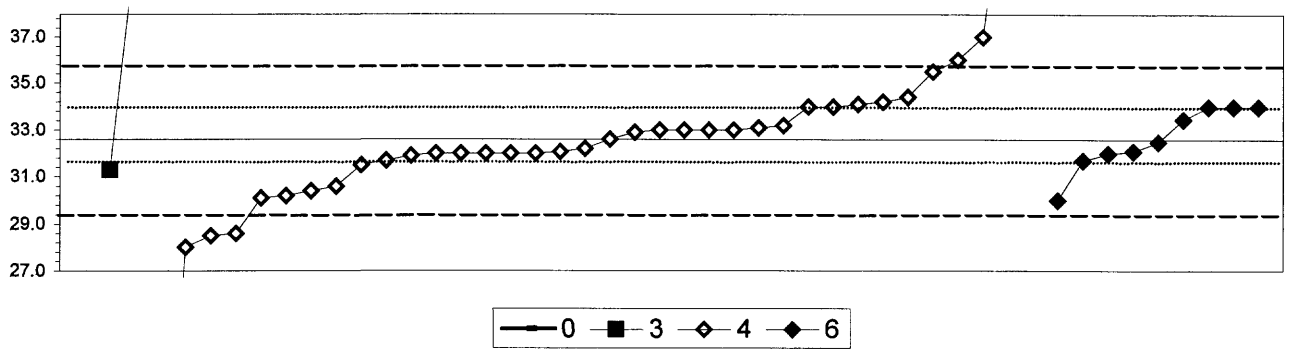


0. Other				5. DCP			
3. AA: graphite furnace				6. ICP/MS			
4. ICP							
		N =	3	1	37	1	7
		Minimum =	84	222	178	218	209
		Maximum =	601		262		253
		Median =			216		220
		F-pseudosigma =			7		9
Lab	Rating	Z-value	0	3	4	5	6
1	4	0.19			218		
3	3	0.74			224		
5	4	-0.19			214		
11	0	-3.52			178		
16	3	-0.56			210		
18	3	-0.74			208		
23	3	0.56		222			
24	4	0.28			219		
25	1	1.67			234		
28	4	0.24			219		
30.1	3	-0.65					209
32	1	1.48					232
33	4	0.19				218	
40	3	-1.02			205		
42	4	0.40			220		
57	4	0.00			216		
68	3	-0.56			210		
70	4	0.28			219		
81	3	-0.83			207		
100	4	-0.09			215		
113	2	-1.20			203		
121	4	0.28			219		
127	3	-0.65			209		
131	4	0.00					216
134	4	-0.12			215		
138	4	0.37			220		
142	4	0.00			216		
145	4	0.09			217		
147	4	-0.46			211		
154	0	4.26			262		
191	4	-0.19					214
212	4	0.37			220		
217	4	-0.19			214		
218	2	1.16			229		
220	0	-3.52	178				
234	4	-0.28			213		
236	4	-0.46			211		
240	4	0.19			218		
247	4	0.46			221		
254	3	0.93			226		
256	2	-1.48			200		
259	4	-0.09			215		
265	4	0.37					220
273	4	0.37			220		
283	1	-1.76			197		
284	0	-12.22	84				
289	0	3.43					253
296	0	35.65	601				
300	4	0.46					221

MPV =	216
F-pseudosigma =	7
Rating Criterion =	11 **
N =	49
Hu =	220
HI =	210

Table 14. *Statistical summary of reported data for standard reference water sample M-146 (major constituents)--Continued*

V (Vanadium) **µg/L**



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

	N =	1	2	36	9
	Minimum =	200.0	31.3	11.2	30.0
	Maximum =		40.9	357.0	34.0
	Median =			32.4	32.5
	F-pseudosigma =			1.8	1.5

MPV =	32.6
F-pseudosigma =	1.7
N =	48
Hu =	34.0
Hl =	31.7

Lab	Rating	Z-value	0	3	4	6
1	4	0.32			33.1	
3	0	2.61			37.0	
5	4	-0.38			31.9	
11	4	0.03			32.6	
13	0	-2.32			28.6	
16	2	-1.14			30.6	
18	4	-0.32			32.0	
23	3	-0.73		31.3		
25	4	-0.32			32.0	
26	4	0.21			32.9	
28	2	-1.44			30.1	
30.1	4	-0.32				32.0
32	4	-0.03				32.5
36	3	-0.62			31.5	
40	4	-0.32			32.0	
42	3	0.53				33.5
48	2	-1.50				30.0
57	1	2.02			36.0	
68	0	-2.38			28.5	
70	NR				< 50	
81	3	0.85			34.0	
89	0	4.90		40.9		
100	3	0.85			34.0	
127	4	0.38			33.2	
131	3	0.85				34.0
134	4	-0.28			32.1	
138	4	-0.21			32.2	
141.1	2	-1.38			30.2	
142	3	0.85				34.0
145	4	-0.32			32.0	
146	3	0.97			34.2	
154	0	190.30			357.0	
180	2	1.09			34.4	
212	4	0.26			33.0	
215	0	7.30			45.0	
217	3	0.91			34.1	
220	1	1.73			35.5	
234	2	-1.26			30.4	
236	4	0.26			33.0	
240	0	-12.52			11.2	
241	3	0.85				34.0
247	0	-2.67			28.0	
255	4	0.26			33.0	
256	4	-0.32			32.0	
285	4	0.26			33.0	
283	4	-0.50			31.7	
284	0	98.21	200.0			
296	4	-0.26				32.1
300	4	-0.50				31.7

Table 15. *Statistical summary of reported data for standard reference sample N-57 (nutrient constituents)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

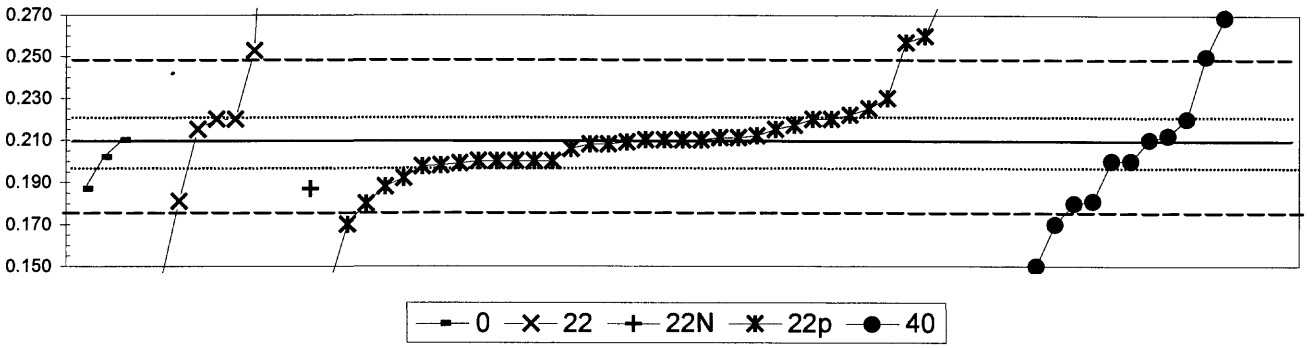
0. Other/Not reported		
4. ICP	=	inductively coupled plasma
5. DCP	=	direct coupled plasma
7. IC	=	ion chromatography
20. Titrate: color	=	titration: colorimetric (color reagent specified)
21. Titrate: electro	=	titration: electrmetric
22. Color	=	colorimetric (color reagent specified)
40. Ion electrode	=	ion selective electrode

Abbreviations and symbols

N =	number of analyses--(excluding less than values)
MPV =	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 or insufficient data
< =	less than

Table 15. *Statistical summary of reported data for standard reference water sample N-57 (nutrient constituents)--Continued*

NH_3 as N (Ammonia as nitrogen) **mg/L**



0. Other
22. Colorimetric
22n. Color: Nesslerization
22p. Color: phenate
40. Ion selective electrode

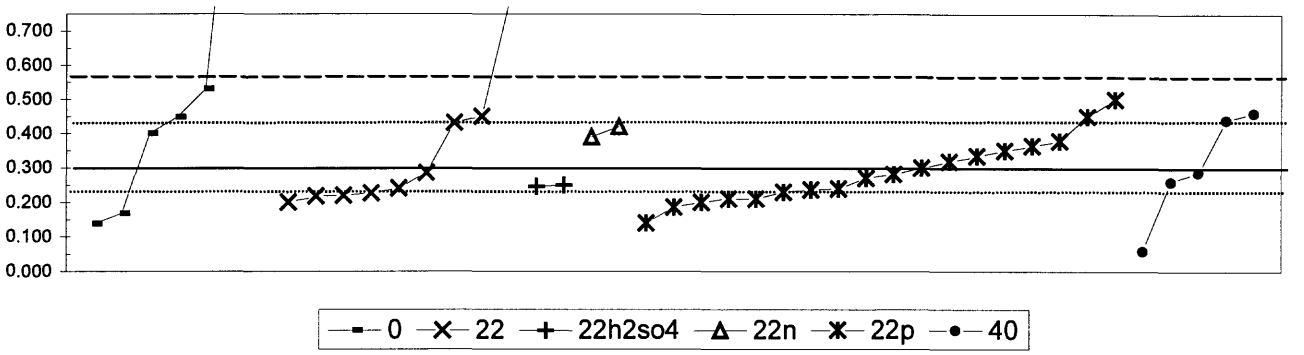
	0	22	22N	22p	40
N =	3	9	1	37	15
Minimum =	0.187	0.103	0.187	0.140	0.030
Maximum =	0.210	0.565		1.390	0.850
Median =		0.220		0.210	0.210
F-pseudosigma =		0.053		0.015	0.059

MPV = 0.210
F-pseudosigma = 0.018
N = 65
Hu = 0.222
Hl = 0.198

Lab	Rating	Z-value	0	22	22N	22p	40
1	3	-0.62				0.199	
3	0	11.30		0.411			
10	4	0.00					0.210
11	3	0.56				0.220	
12	0	10.68				0.400	
13	4	0.00				0.210	
16	0	-6.01		0.103			
18	0	2.64				0.257	
19	4	0.00				0.210	
21	3	-0.56				0.200	
23	2	-1.24				0.188	
25	3	0.56		0.220			
33	3	-0.56				0.200	
36	4	0.39				0.217	
39	2	-1.29	0.187				
45	0	8.82					0.367
48	0	66.33				1.390	
51	3	0.56					0.220
57	0	-2.25					0.170
59	3	0.56				0.220	
64	3	-0.56				0.200	
70	4	0.00				0.210	
76	4	-0.24				0.206	
81	4	0.11				0.212	
84	3	-0.56					0.200
89	4	-0.11				0.208	
90	0	19.95		0.565			
91	1	-1.69				0.180	
97	4	0.28		0.215			
100	3	-0.56				0.200	
108	0	2.25					0.250
111	2	-1.01				0.192	
113	4	-0.45	0.202				
114	3	-0.56					0.200
127	3	-0.67				0.198	
129	2	-1.29			0.187		
133	0	-10.12					0.030
134	3	0.67				0.222	
138	4	-0.06				0.209	
140	0	-3.93		0.140			
141	4	0.06				0.211	
142	3	-0.56				0.200	
145	0	2.81				0.260	
146	4	-0.11				0.208	
154	2	1.12				0.230	
158	1	-1.63		0.181			
180	4	0.28				0.215	
183	0	35.97					0.850
190	4	0.06				0.211	
203	3	0.56		0.220			
209	4	0.11					0.212
212	0	-3.93				0.140	
213	NR		< 1				
215	0	3.93				0.280	
220	0	2.42		0.253			
221	0	9.95					0.387
224	3	0.84				0.225	
234	1	-1.69					0.180
240	4	0.00	0.210				
241	1	-1.63					0.181
243	3	-0.70				0.198	
247	0	-2.25				0.170	
255	4	0.00				0.210	
284	0	-6.18					< 0.1
292	0	-3.37					0.150
297	0	4.22				0.285	
306	0	3.32					0.269

Table 15. *Statistical summary of reported data for standard reference water sample N-57 (nutrient constituents)--Continued*

NH_3 + Organic N as N (Ammonia + organic nitrogen as nitrogen) mg/L



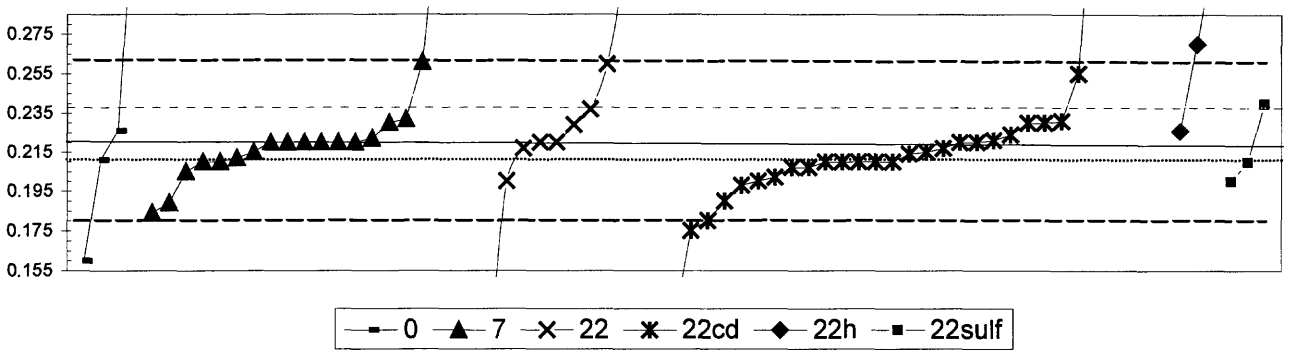
0. Other				22n. Color: Nesslerization				
22. Colorimetric				22p. Color: phenate				
$22h_2so_4$. Color: sulfuric acid				40. Ion selective electrode				
		N =	7	9	2	2	18	5
		Minimum =	0.138	0.200	0.246	0.390	0.140	0.060
		Maximum =	1.780	0.786	0.250	0.420	0.500	0.460
		Median =	0.448	0.240			0.276	
		F-pseudosigma =	0.468	0.156			0.104	

		MPV =	0.285					
		F-pseudosigma =	0.150					
		N =	43					
		Hu =	0.426					
		Hl =	0.223					

Lab	Rating	Z-value	0	22	$22h_2so_4$	22n	22p	40
1	3	-0.66					0.186	
3	NR			< 1				
10	4	-0.37					0.230	
11	4	-0.23			0.250			
12	2	1.43					0.500	
16	3	-0.78	0.168					
18	4	0.43					0.350	
21	4	-0.26			0.246			
25	4	-0.43		0.220				
36	4	-0.02					0.282	
45	2	1.03						0.439
48	3	0.90				0.420		
51	4	-0.17						0.260
57	0	6.76	1.300					
59	4	0.10					0.300	
70	3	-0.57					0.200	
81	3	0.62					0.378	
89	4	-0.32					0.237	
90	0	3.34		0.786				
91	4	-0.50					0.210	
97	4	-0.30		0.240				
100	3	0.77	0.400					
113	NR		< 0.5					
129	4	0.01						0.286
133	2	-1.50						0.060
134	4	-0.50					0.210	
138	4	-0.31					0.239	
140	3	-0.57		0.200				
141	3	0.70				0.390		
142	4	0.33					0.334	
145	3	-0.97					0.140	
146	4	0.22					0.318	
158	4	-0.45		0.218				
190	1	1.63	0.530					
209	3	0.97		0.431				
212	NR						< 0.5	
213	NR		< 1					
215	2	1.10					0.450	
220	4	0.00		0.285				
221	2	1.09	0.448					
224	3	0.52					0.363	
240	3	-0.98	0.138					
241	2	1.17						0.460
247	4	-0.10					0.270	
255	2	1.10		0.450				
284	0	9.96	1.780					
297	4	-0.39		0.226				
306	NR		< 0.4					

Table 15. *Statistical summary of reported data for standard reference water sample N-57 (nutrient constituents)--Continued*

$NO_3 + NO_2$ as N (Nitrate + Nitrite as Nitrogen) mg/L



0. Other
7. Ion chromatography
22. Colorimetric
22cd. Cd diazotization
22h. Color: hydrazine diazotization
22s. Color: sulfanilamide

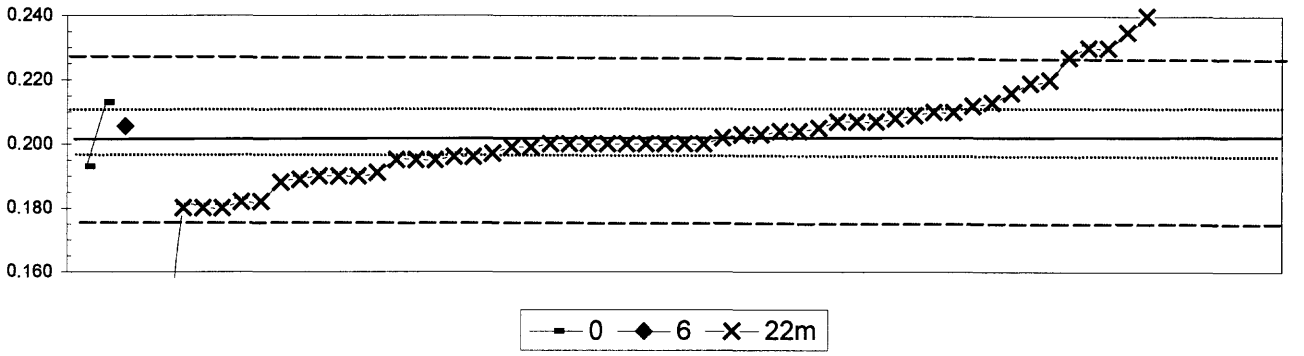
	0	7	22	22cd	22h	22sulf
N =	4	20	11	30	3	3
Minimum =	0.160	0.184	0.116	0.130	0.226	0.200
Maximum =	0.350	0.560	0.994	1.300	0.318	0.240
Median =		0.220	0.229	0.215		
F-pseudosigma =		0.015	0.050	0.017		

MPV = 0.220
F-pseudosigma = 0.021
N = 71
Hu = 0.239
HI = 0.210

Lab	Rating	Z-value	0	7	22	22cd	22h	22sulf
1	2	-1.04				0.198		
3	0	-4.92			0.116			
10	4	0.00				0.220		
11	3	-0.95						0.200
12	4	-0.47				0.210		
13	4	0.00		0.220				
16	4	0.43			0.229			
18	4	-0.24				0.215		
19	4	0.47				0.230		
21	0	4.64					0.318	
23	4	0.00		0.220				
25	4	0.09		0.222				
33	4	0.00		0.220				
38	3	0.95						0.240
39	4	-0.43	0.211					
42	4	0.00		0.220				
45	0	4.31			0.311			
48	0	2.37					0.270	
51	4	0.47		0.230				
53	0	-2.84	0.160					
57	0	51.12				1.300		
59	4	-0.47				0.210		
64	0	11.36				0.460		
69	4	0.47				0.230		
70	3	-0.95				0.200		
81	4	0.28					0.226	
84	0	5.96		0.346				
89	3	0.52				0.231		
90	0	36.64			0.994			
91	2	-1.42				0.190		
97	4	0.00			0.220			
100	0	-8.10		< 0.05				
108	4	-0.47						0.210
111	2	-1.47		0.189				
113	4	0.28	0.226					
114	0	12.31				0.480		
127	1	1.94		0.261				
129	4	-0.24		0.215				
133	4	0.00				0.220		
134	4	-0.14				0.217		
138	3	-0.62				0.207		
140	4	-0.14			0.217			
141	4	-0.47		0.210				
142	4	-0.28				0.214		
145	4	-0.47				0.210		
146	1	1.66				0.255		
154	1	-1.89				0.180		
158	4	0.05				0.221		
180	3	-0.62				0.207		
183	0	6.15	0.350					
190	4	-0.47				0.210		
191	3	-0.71		0.205				
193	4	-0.47		0.210				
203	1	1.89			0.260			
208	0	16.09		0.560				
209	3	0.80			0.237			
212	0	-4.26				0.130		
215	4	-0.47				0.210		
220	0	7.81			0.385			
221	3	-0.95			0.200			
224	4	0.00		0.220				
234	3	0.57		0.232				
240	0	11.69		0.467				
241	4	-0.38		0.212				
243	4	0.00			0.220			
247	1	-1.70		0.184				
255	4	0.19				0.224		
284	0	7.10				0.370		
291	0	17.99				0.600		
292	4	0.00		0.220				
297	0	-2.13				0.175		
306	3	-0.85				0.202		

Table 15. *Statistical summary of reported data for standard reference water sample N-57 (nutrient constituents)--Continued*

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



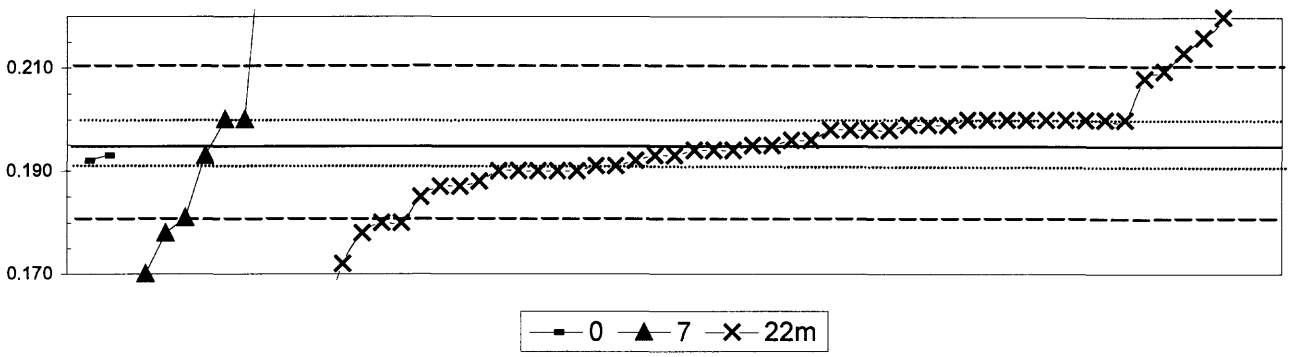
0. Other					
6. ICP/MS					
22m. Color:phosphomolybdate					
	N =	2	1	59	
	Minimum =	0.193	0.206	0.114	
	Maximum =	0.213		0.310	
	Median =			0.200	
	F-pseudosigma =			0.013	

				MPV =	0.201
				F-pseudosigma =	0.013
				N =	62
				Hu =	0.213
				HI =	0.195

Lab	Rating	Z-value	0	6	22m
1	2	1.12			0.216
3	4	-0.07			0.200
10	3	0.90			0.213
11	4	-0.15			0.199
12	0	2.17			0.230
13	4	-0.07			0.200
16	1	1.95			0.227
18	4	-0.15			0.199
19	4	-0.07			0.200
21	4	0.45			0.207
22	3	0.82			0.212
23	2	-1.42			0.182
25	3	0.67			0.210
36	4	-0.45			0.195
39	3	0.90	0.213		
45	4	-0.07			0.200
48	0	5.92			0.280
51	3	-0.75			0.191
57	2	1.42			0.220
59	4	-0.07			0.200
70	0	8.17			0.310
76	4	0.34		0.206	
81	4	-0.37			0.196
89	3	0.52			0.208
91	4	-0.07			0.200
97	3	-0.82			0.190
108	0	3.67			0.250
113	3	-0.60	0.193		
114	3	-0.82			0.190
127	4	0.22			0.204
129	4	-0.45			0.195
133	4	-0.07			0.200
134	0	2.17			0.230
138	4	0.07			0.202
140	0	3.67			0.250
141	0	-5.32			0.130
142	3	-0.90			0.189
145	1	-1.57			0.180
146	0	2.55			0.235
154	4	-0.37			0.196
158	2	-1.42			0.182
180	4	0.30			0.205
183	4	-0.07			0.200
190	3	-0.97			0.188
193	4	0.15			0.203
203	0	2.92			0.240
212	1	-1.57			0.180
213	4	-0.07			0.200
215	3	0.67			0.210
220	2	1.35			0.219
221	0	4.12			0.256
224	4	0.15			0.203
234	4	0.45			0.207
240	3	0.60			0.209
241	4	0.45			0.207
243	1	-1.57			0.180
247	3	-0.82			0.190
255	0	-6.52			0.114
284	0	6.67			0.290
292	4	-0.45			0.195
297	4	0.22			0.204
306	4	-0.30			0.197

Table 15. *Statistical summary of reported data for standard reference water sample N-57 (nutrient constituents)--Continued*

PO_4 as P (Orthophosphate as phosphorus) mg/L



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

	2	10	49
N =	2	10	49
Minimum =	0.192	0.020	0.160
Maximum =	0.193	0.500	0.266
Median =		0.197	0.196
F-pseudosigma =		0.048	0.007

MPV = 0.195
F-pseudosigma = 0.007
Rating Criterion 0.010 **
N = 61
Hu = 0.200
HI = 0.190

Lab	Rating	Z-value	0	7	22m
1	2	1.33			0.208
3	3	0.51			0.200
10	4	-0.20			0.193
11	4	-0.31			0.192
12	1	-1.53			0.180
13	0	-2.55		0.170	
16	2	1.47			0.209
18	4	0.31			0.198
19	3	0.51			0.200
21	4	0.31			0.198
23	0	-17.86		0.020	
25	4	0.41			0.199
33	3	0.51		0.200	
36	4	0.00			0.195
39	4	-0.20	0.193		
45	4	-0.10			0.194
48	3	0.51			0.200
51	3	-0.71			0.188
53	4	-0.41			0.191
57	3	0.51			0.200
59	3	-0.51			0.190
64	3	0.51			0.200
70	3	-0.51			0.190
81	1	-1.73			0.178
84	0	13.78		0.330	
89	4	0.41			0.199
97	4	0.41			0.199
100	NR			< 0.5	
111	4	0.10			0.196
113	4	-0.31	0.192		
127	0	-11.73		< 0.08	
129	3	-0.51			0.190
133	1	-1.53			0.180
134	3	-0.82			0.187
138	3	-0.82			0.187
140	0	-3.57			0.160
141	1	1.84			0.213
142	2	-1.02			0.185
145	3	-0.51			0.190
146	0	-2.35			0.172
154	4	-0.10			0.194
158	4	-0.41			0.191
180	4	0.31			0.198
183	4	0.00			0.195
190	4	0.10			0.196
191	3	0.51		0.200	
203	3	0.51			0.200
208	0	31.12		0.500	
212	3	0.51			0.200
213	3	-0.51			0.190
215	3	0.51			0.200
220	4	-0.20			0.193
221	4	0.31			0.198
224	4	-0.10			0.194
234	1	-1.73	0.178		
240	0	4.90	0.243		
241	4	-0.20	0.193		
247	2	-1.43	0.181		
255	0	7.24			0.266
284	3	0.51			0.200
292	0	2.55			0.220
297	0	2.14			0.216
306	0	4.08			0.235

Table 16. *Statistical summary of reported data for standard reference sample N-58 (nutrient constituents)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

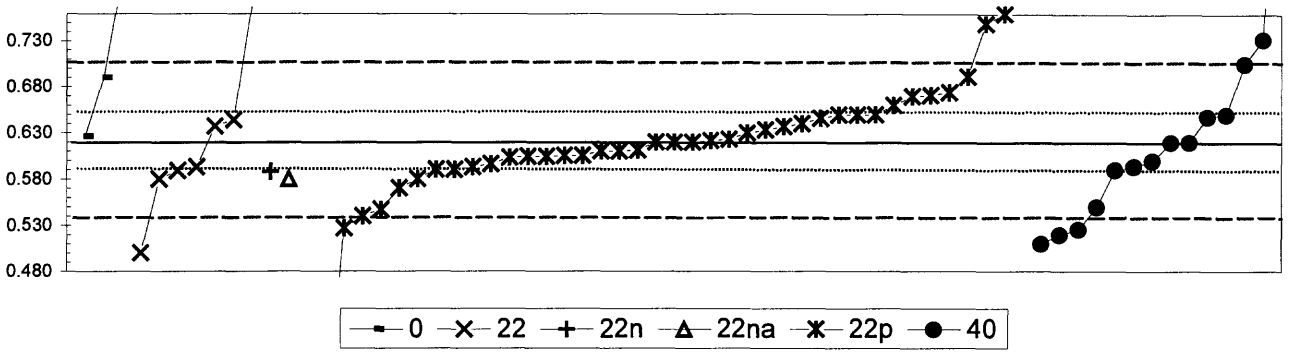
0. Other/Not reported		
4. ICP	=	inductively coupled plasma
5. DCP	=	direct coupled plasma
7. IC	=	ion chromatography
20. Titrate: color	=	titration: colorimetric (color reagent specified)
21. Titrate: electro	=	titration: electrometric
22. Color:	=	colorimetric (color reagent specified)
40. Ion electrode	=	ion selective electrode

Abbreviations and symbols

N	=	number of analyses--(excluding less than values)
MPV	=	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 or insufficient data
<	=	less than

Table 16. *Statistical summary of reported data for standard reference water sample N-58 (nutrient constituents)--Continued*

NH_3 as N (Ammonia as nitrogen) **mg/L**



0. Other				22n. Color: Nesslerization				
22. Colorimetric				22p. Color: phenate				
22n. Color: Nesslerization				40. Ion selective electrode				
		N =	3	7	1	1	40	14
		Minimum =	0.626	0.500	0.588	0.580	0.227	0.510
		Maximum =	0.800	0.770			1.280	1.100
		Median =		0.593			0.620	0.610
		F-pseudosigma =		0.042			0.041	0.074

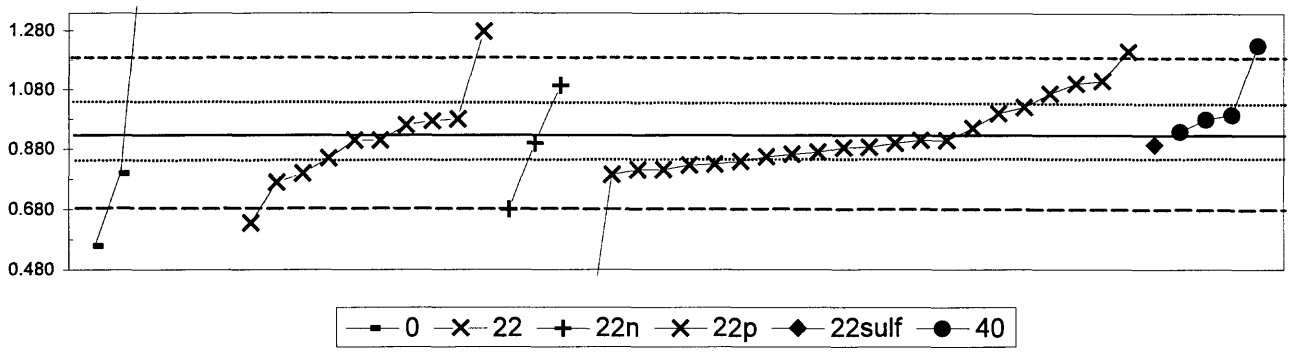
Lab	Rating	Z-value	0	22	22n	22na	22p	40
1	4	0.45					0.640	
10	4	0.00						0.620
11	4	0.00					0.620	
12	0	-7.19					0.300	
13	2	1.12					0.670	
16	4	0.38		0.637				
18	0	-2.09					0.527	
19	3	-0.90					0.580	
23	3	-0.67					0.590	
25	0	3.37		0.770				
28	0	2.90					0.749	
33	4	-0.22					0.610	
36	4	-0.34					0.605	
45	1	1.91						0.705
48	0	14.84					1.280	
51	4	0.00						0.620
59	3	0.67					0.650	
64	4	0.00					0.620	
70	3	-0.67					0.590	
76	4	0.04					0.622	
81	4	-0.36					0.604	
84	0	-2.47						0.510
89	4	-0.22					0.610	
90	0	-8.84					0.227	
91	1	-1.80					0.540	
97	3	0.54		0.644				
100	0	4.05	0.800					
107	4	-0.34					0.605	
108	3	-0.67						0.590
111	4	0.38					0.637	
113	4	-0.36					0.604	
114	1	-1.57						0.550
127	1	-1.64					0.547	
129	3	-0.72			0.588			
134	2	1.21					0.674	
138	3	-0.54					0.596	
140	0	-2.70		0.500				
141	2	1.15					0.671	
142	3	-0.61					0.593	
145	3	0.90					0.660	
146	4	-0.20					0.611	
154	3	0.67					0.650	
158	2	-1.12					0.570	
180	4	0.29					0.633	
183	0	10.79						1.100
190	4	0.22					0.630	
203	3	-0.90		0.580				
204	4	-0.38					0.603	
205	1	1.60					0.691	
209	4	0.13	0.626					

MPV =	0.620
F-pseudosigma =	0.044
N =	66
Hu =	0.650
HI =	0.590

Lab	Rating	Z-value	0	22	22n	22na	22p	40
212	3	-0.90				0.580		
213	NR		< 1					
215	3	0.67					0.650	
220	3	-0.70		0.589				
221	0	2.52						0.732
224	4	0.07					0.623	
234	0	-2.11						0.526
240	1	1.57	0.690					
241	3	-0.58						0.594
243	3	-0.61		0.593				
247	0	3.15					0.760	
255	4	0.00					0.620	
284	0	-2.25						0.520
292	4	-0.45						0.600
297	3	0.58					0.646	
306	3	0.63						0.648
307	3	0.67						0.650

Table 16. *Statistical summary of reported data for standard reference water sample N-58 (nutrient constituents)--Continued*

NH_3 + Organic N as N (Ammonia + organic nitrogen as nitrogen) mg/L



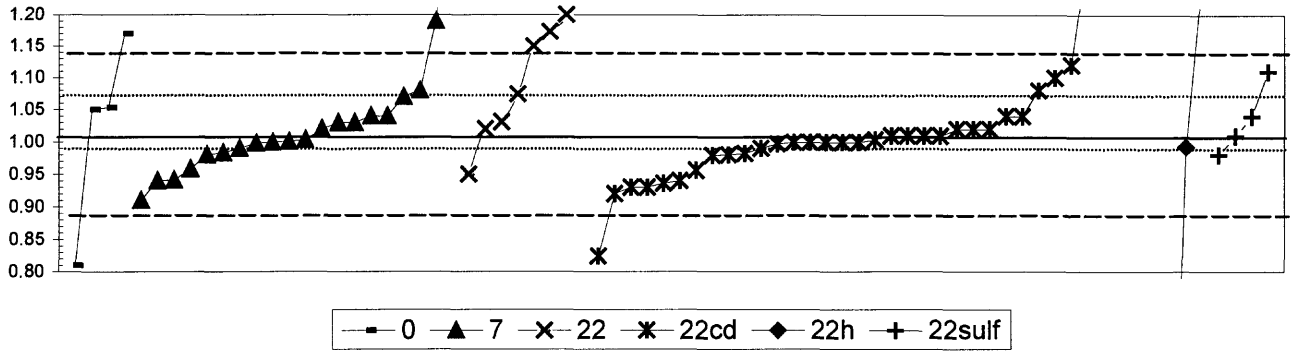
0. Other				22p. Color: phenate				
22. Colorimetric				22sulf. Color: sulfuric acid				
22n. Color: Nesslerization				40. Ion selective electrode				
		N =	6	10	3	22	1	4
		Minimum =	0.559	0.635	0.680	0.203	0.895	0.940
		Maximum =	3.070	1.276	1.094	1.210		1.230
		Median =		0.910		0.886		
		F-pseudosigma =		0.129		0.126		

Lab	Rating	Z-value	0	22	22n	22p	22sulf	40
1	4	-0.39				0.855		
10	4	0.00				0.910		
11	4	0.50		0.980				
12	4	-0.07				0.900		
16	3	-0.78	0.800					
18	2	1.35				1.100		
23	3	-0.71				0.810		
25	3	-0.99		0.770				
36	2	1.11				1.067		
45	3	0.61						0.996
48	1	-1.63			0.680			
51	4	0.21						0.940
59	3	0.64				1.000		
70	4	-0.50				0.840		
81	3	-0.70				0.812		
89	4	-0.33				0.863		
90	0	-5.02				0.203		
91	4	0.00				0.910		
97	4	0.00		0.910				
100	0	7.03	1.900					
113	2	1.42				1.110		
129	2	1.31			1.094			
134	3	-0.82				0.795		
138	4	-0.16				0.887		
140	4	0.00		0.910				
141	4	-0.07			0.900			
142	4	0.35		0.960				
145	3	-0.57				0.830		
146	4	-0.28				0.870		
158	4	0.45		0.974				
180	4	-0.18				0.885		
190	0	7.74	2.000					
204	3	-0.78		0.800				
209	0	2.60		1.276				
212	4	-0.43		0.850				
213	NR		< 1					
215	3	0.78				1.020		
220	1	-1.95		0.635				
221	0	2.27						1.230
224	4	0.28				0.950		
240	0	-2.49	0.559					
241	4	0.50						0.980
247	0	2.13				1.210		
255	3	-0.59				0.827		
284	0	15.34	3.070					
297	4	-0.11					0.895	
306	0	5.75	1.720					

MPV =	0.910
F-pseudosigma =	0.141
N =	46
Hu =	1.020
HI =	0.830

Table 16. *Statistical summary of reported data for standard reference water sample N-58 (nutrient constituents)--Continued*

$NO_3 + NO_2$ as N (Nitrate + Nitrite as Nitrogen) mg/L



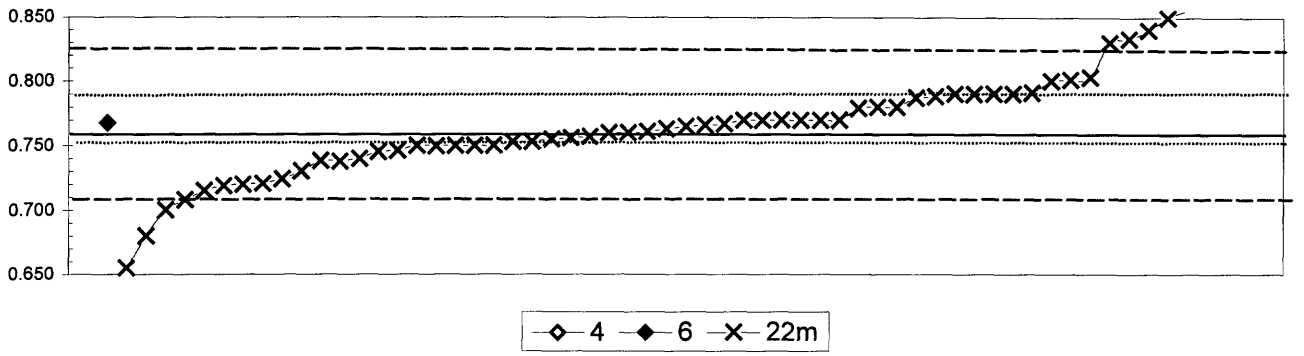
0. Other			22cd. Cd diazotization					
7. Ion chromatography			22h. Color: hydrazine diazotization					
22. Colorimetric			22sulf Color: Sulfanilamide					
		N =	4	20	8	35	3	4
		Minimum =	0.81	0.91	0.95	0.82	0.21	0.98
		Maximum =	1.17	1.57	1.39	2.10	1.26	1.11
		Median =		1.00	1.11	1.00		
		F-pseudosigma =		0.04	0.12	0.04		

MPV =	1.01
F-pseudosigma =	0.06
N =	74
Hu =	1.07
Hl =	0.98

Lab	Rating	Z-value	0	7	22	22cd	22h	22sulf
1	2	-1.15				0.94		
10	4	0.16				1.02		
11	4	0.47						1.04
12	4	0.00				1.01		
13	4	0.31		1.03				
16	3	-0.93			0.95			
18	4	-0.31				0.99		
19	2	1.09				1.08		
23	4	0.00						1.01
25	3	0.93		1.07				
28	0	2.48	1.17					
33	4	-0.31		0.99				
36	1	1.55						1.11
42	1	-1.55		0.91				
45	0	5.89			1.39			
48	0	3.88					1.26	
51	4	-0.16		1.00				
53	3	0.67	1.05					
59	4	-0.16				1.00		
64	0	11.63				1.76		
69	4	0.47				1.04		
70	2	-1.40				0.92		
81	4	-0.26					0.99	
84	2	1.09		1.08				
89	4	-0.09				1.00		
90	0	-12.47					0.21	
91	2	-1.24				0.93		
97	3	0.99			1.07			
100	0	2.79		1.19				
107	4	-0.16				1.00		
108	4	-0.47						0.98
111	4	-0.47		0.98				
113	4	0.16				1.02		
114	0	16.90				2.10		
126	2	-1.09				0.94		
127	4	-0.42		0.98				
129	4	-0.19		1.00				
133	0	4.50				1.30		
134	4	-0.43				0.98		
138	4	-0.20				1.00		
140	4	0.33			1.03			
141	4	0.31		1.03				
142	4	0.16				1.02		
145	2	-1.24				0.93		
146	1	1.71				1.12		
154	4	-0.16				1.00		
158	4	0.47				1.04		
180	4	0.00				1.01		
183	0	-3.10	0.81					
190	3	-0.84				0.96		
191	4	-0.14		1.00				
193	4	0.16		1.02				
203	0	2.95			1.20			
204	4	0.00				1.01		
205	4	-0.48				0.98		
208	4	0.47		1.04				
209	0	2.17			1.15			
212	2	1.40				1.10		
215	4	-0.47				0.98		
220	0	2.53			1.17			
221	3	0.62	1.05					
224	4	-0.09		1.00				
234	4	0.47		1.04				
240	0	8.64		1.57				
241	3	-0.81		0.96				
243	4	0.16			1.02			
247	2	-1.07		0.94				
255	4	-0.16				1.00		
284	0	9.92				1.65		
291	0	9.15				1.60		
292	2	-1.09		0.94				
297	0	-2.88				0.82		
306	4	0.00				1.01		
307	4	-0.16				1.00		

Table 16. *Statistical summary of reported data for standard reference water sample N-58 (nutrient constituents)--Continued*

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



4. ICP
6. ICP/MS
22m. Color:phosphomolybdate

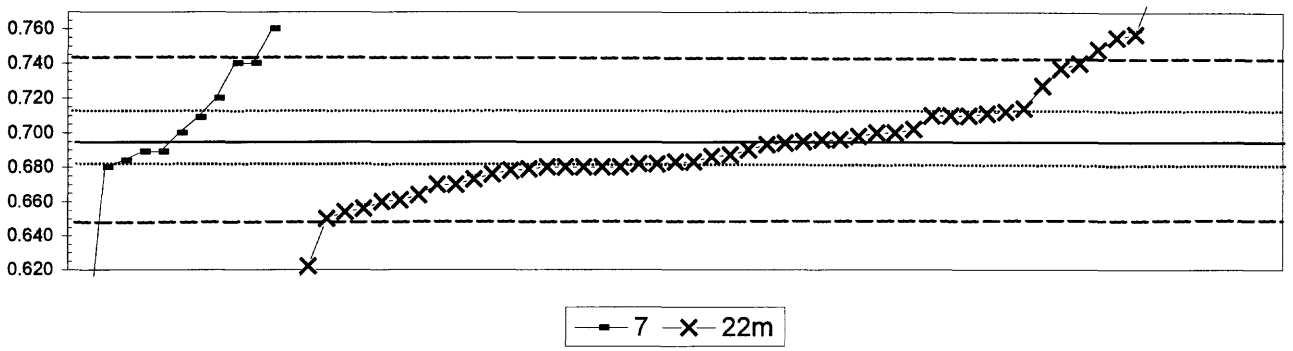
	4	6	22m
N =	1	1	59
Minimum =	0.900	0.768	0.655
Maximum =			0.892
Median =			0.765
F-pseudosigma =			0.031

MPV = 0.766
F-pseudosigma = 0.030
Rating Criterion 0.038 **
N = 61
Hu = 0.790
HI = 0.750

Lab	Rating	Z-value	4	6	22m
1	3	0.55			0.787
10	4	0.00			0.766
11	4	0.03			0.767
12	4	0.11			0.770
13	3	0.63			0.790
16	0	2.84			0.874
18	4	-0.26			0.756
19	3	-0.68			0.740
22	3	0.92			0.801
23	4	0.11			0.770
25	3	0.89			0.800
28	0	3.53	0.900		
36	4	-0.29			0.755
45	4	-0.08			0.763
48	4	-0.42			0.750
51	3	-0.53			0.746
59	1	-1.74			0.700
70	0	2.47			0.860
76	4	0.05		0.768	
81	2	-1.24			0.719
89	4	0.11			0.770
91	4	0.11			0.770
97	3	0.63			0.790
107	4	0.11			0.770
108	3	0.63			0.790
113	4	-0.03			0.765
114	2	-1.21			0.720
127	4	-0.42			0.750
129	4	-0.13			0.761
133	4	-0.16			0.760
134	4	-0.24			0.757
138	4	-0.34			0.753
140	4	-0.42			0.750
141	3	-0.74			0.738
142	4	-0.34			0.753
145	3	-0.95			0.730
146	3	0.63			0.790
154	3	-0.55			0.745
158	3	-0.74			0.738
180	3	0.97			0.803
183	0	2.37			0.856
190	0	-2.92			0.655
193	4	-0.16			0.760
203	1	1.95			0.840
204	3	0.58			0.788
212	4	0.11			0.770
213	4	-0.42			0.750
215	4	0.37			0.780
220	0	3.32			0.892
221	1	1.76			0.833
224	4	0.34			0.779
234	4	-0.42			0.750
240	0	2.21			0.850
241	3	0.66			0.791
243	0	-2.26			0.680
247	4	0.37			0.780
255	3	-1.11			0.724
284	1	1.68			0.830
292	2	-1.18			0.721
297	1	-1.53			0.708
306	2	-1.34			0.715

Table 16. *Statistical summary of reported data for standard reference water sample N-58 (nutrient constituents)--Continued*

PO_4 as P (Orthophosphate as phosphorus) mg/L



7. Ion chromatography
22m. Color:phosphomolybdate

N =	11	52
Minimum =	0.568	0.609
Maximum =	0.760	0.893
Median =	0.700	0.692
F-pseudosigma =	0.032	0.024

MPV =	0.693
F-pseudosigma =	0.024
Rating Criterion =	0.035 **
N =	63
Hu =	0.713
HI =	0.680

Lab	Rating	Z-value	7	22m
1	2	1.27		0.737
10	4	-0.32		0.682
11	3	-0.58		0.673
12	4	-0.38		0.680
13	4	-0.38	0.680	
16	1	1.59		0.748
18	4	-0.40		0.679
19	2	-1.24		0.650
23	3	-0.66		0.670
25	4	0.00		0.693
28	4	-0.17		0.687
33	2	1.36	0.740	
36	1	1.79		0.755
45	0	2.63		0.784
48	2	1.36		0.740
51	4	0.49		0.710
53	4	-0.32		0.682
59	3	-0.66		0.670
64	4	0.20		0.700
70	4	-0.38		0.680
81	4	-0.49		0.676
84	1	1.93	0.760	
89	4	-0.29		0.683
97	4	0.09		0.696
100	4	0.20	0.700	
107	4	-0.43		0.678
111	4	0.06		0.695
113	4	-0.29		0.683
127	4	-0.12	0.689	
129	3	-0.84		0.664
133	4	-0.38		0.680
134	4	0.26		0.702
138	2	-1.07		0.656
140	4	-0.38		0.680
141	4	0.14		0.698
142	3	0.61		0.714
145	4	0.49		0.710
146	0	-2.05		0.622
154	4	-0.20		0.686
158	4	0.03		0.694
180	2	-1.13		0.654
183	3	0.98		0.727
190	1	1.85		0.757
191	3	0.78	0.720	
203	4	0.49		0.710
204	3	-0.92		0.661
208	2	1.36	0.740	
212	4	-0.09		0.690
213	4	-0.38		0.680
215	4	0.20		0.700
220	3	0.55		0.712
221	0	-2.42		0.609
224	4	0.09		0.696
234	0	-3.61	0.568	
240	4	0.46	0.709	
241	4	-0.26	0.684	
247	4	-0.12	0.689	
255	3	0.52		0.711
284	3	-0.95		0.660
292	0	3.38		0.810
297	0	3.95		0.830
306	0	5.77		0.893
307	0	2.80		0.790

Table 17. *Statistical summary of reported data for standard reference sample P-30 (low ionic strength constituents)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

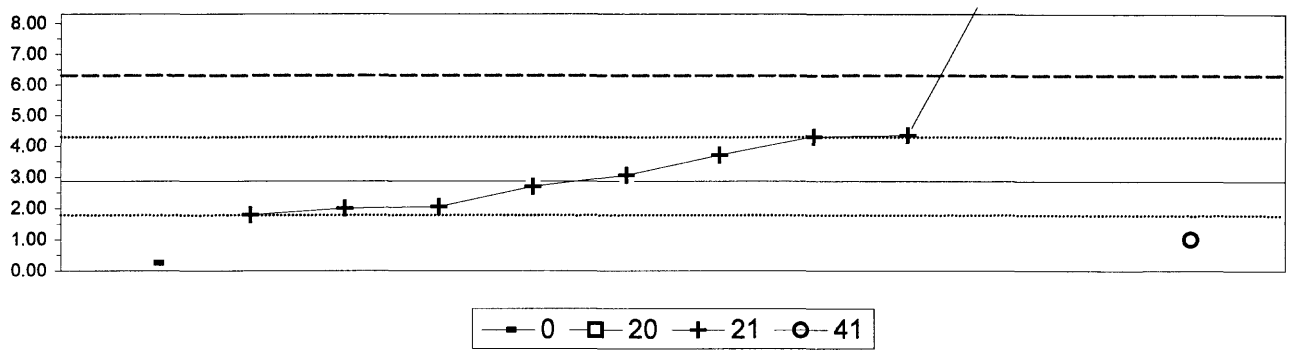
0. Other/Not reported		
1. AA: direct, air	=	atomic absorption: direct, air
2. AA: direct, N_2O	=	atomic absorption: direct, nitrous oxide
3. AA: graphite furnace	=	atomic absorption: graphite furnace
4. ICP	=	inductively coupled plasma
5. DCP	=	direct current plasma
6. ICP/MS	=	inductively coupled plasma / mass spectrometry
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)
51. Turbidimetric	=	turbidimetric: (precipitate specified)

Abbreviations and symbols

N =	number of analyses--(excluding less than values)
MPV =	most probable value
F-pseudosigma =	nonparametric statistic deviation
Hu =	upper hinge value
Hl =	lower hinge value
mg/L =	milligrams per liter
µS/cm =	microsiemens per centimeter at 25^0 C
Lab =	laboratory code number
NR =	not rated, less than value reported or insufficient data
< =	less than

Table 17. *Statistical summary of reported data for standard reference water sample P-30 (low ionic strength constituents)--Continued*

Acidity (as $CaCO_3$) **mg/L**

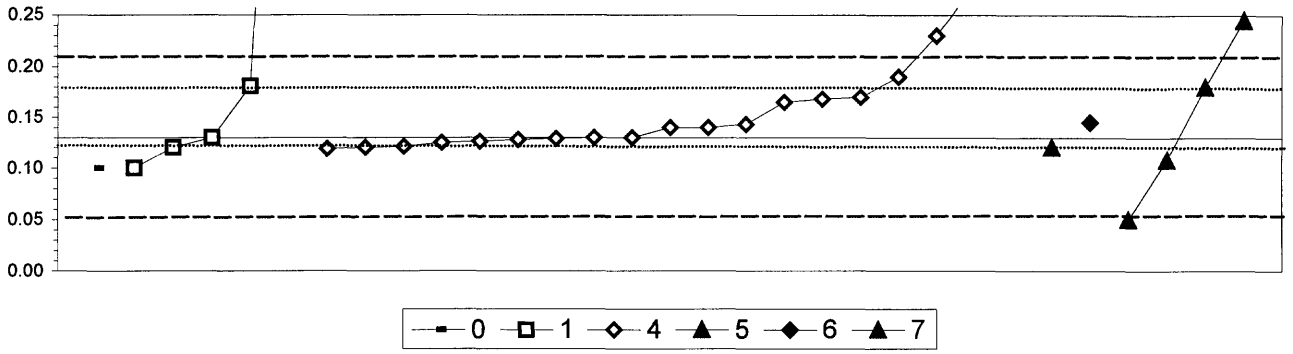


0. Other			41. Direct reading			
20. Titrate: colorimetric						
21. Titrate: electrometric						
		N =	1	0	10	1
		Minimum =	0.25	< 2	1.80	1.01
		Maximum =			14.40	
		Median =			3.39	
		F-pseudosigma =			1.70	
Lab	Rating	Z-value	0	20	21	41
3	NR				< 10	
16	0	6.41			14.40	
36	4	-0.49			2.00	
59	2	-1.04				1.01
81	4	-0.10			2.70	
89	3	0.79			4.30	
127	4	0.46			3.71	
141.1	3	0.82			4.35	
146	NR				< 10	
215	NR			< 2		
224	4	0.10			3.06	
228.1	NR				< 0.1	
228.2	NR				< 0.1	
240	4	-0.46			2.06	
247	0	3.96			10.00	
283	3	-0.60			1.80	
284	2	-1.46	0.25			

MPV =	2.88
F-pseudosigma =	1.80
N =	12
Hu =	4.33
HI =	1.90

Table 17. *Statistical summary of reported data for standard reference water sample P-30 (low ionic strength constituents)--Continued*

Ca (Calcium) **mg/L**

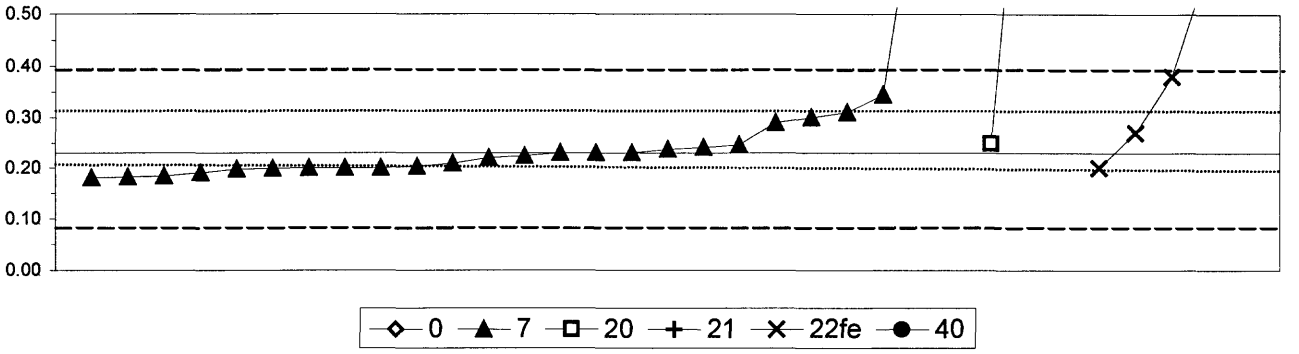


0. Other				5. DCP				
1. AA: direct, air				6. ICP/MS				
4. ICP				7. Ion chromatography				
		N =	1	5	19	1	1	4
		Minimum =	0.10	0.10	0.12	0.12	0.15	0.05
		Maximum =		0.80	0.31			0.25
		Median =			0.14			
		F-pseudosigma =			0.03			
Lab	Rating	Z-value	0	1	4	5	6	7
1	4	-0.12			0.13			
2	3	-0.54						0.11
3	2	1.49			0.19			
5	4	-0.05			0.13			
16	0	3.71			0.28			
23	NR			< 0.2				
25	4	-0.02			0.13			
33	4	-0.25				0.12		
36	NR				< 0.5			
48	4	0.37					0.15	
64	4	-0.25		0.12				
81	4	-0.27			0.12			
83	4	-0.25			0.12			
89	NR			< 0.3				
110	4	0.25			0.14			
113	NR				< 0.2			
127	4	-0.22			0.12			
134	4	-0.10			0.13			
138	0	2.48			0.23			
140	3	-0.74		0.10				
141.1	3	0.94			0.17			
145	0	4.46			0.31			
146	NR				< 0.5			
180	3	0.87			0.17			
190	2	1.24						0.18
203	4	0.00		0.13				
215	3	0.99			0.17			
224	4	0.00			0.13			
228.1	0	2.85						0.25
228.2	1	-1.98						0.05
240	4	0.00			0.13			
241	0	16.58		0.80				
247	NR				< 0.5			
255	4	0.32			0.14			
283	NR				< 0.5			
284	3	-0.74	0.10					
287	2	1.26		0.18				
289	4	0.25			0.14			

MPV =	0.13
F-pseudosigma =	0.04
N =	31
Hu =	0.18
HI =	0.12

Table 17. *Statistical summary of reported data for standard reference water sample P-30 (low ionic strength constituents)--Continued*

Cl (Chloride) **mg/L**



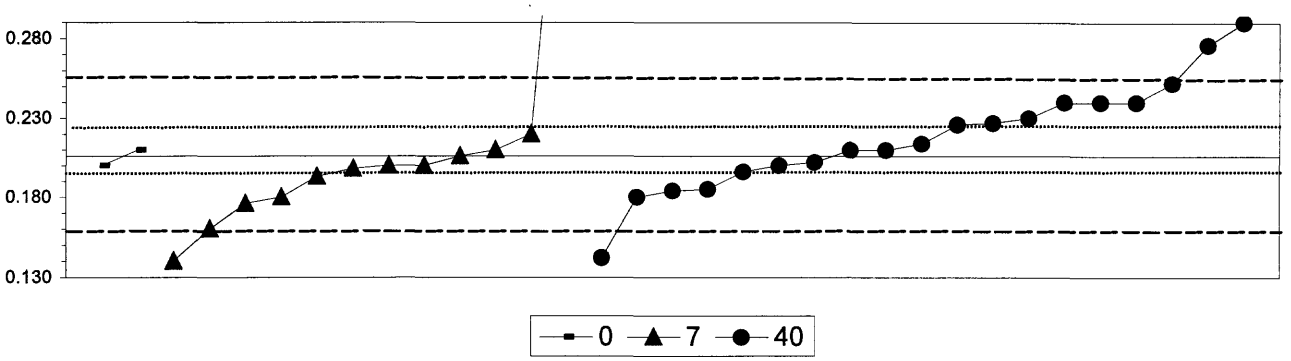
0. Other				21. Titrate: electrometric				
7. Ion chromatography				22fe: Color. ferricyanide				
20. Titrate: colorimetric				40. Ion selective electrode				
		N =	0	25	3	0	5	0
		Minimum =	< 5	0.18	0.25	< 1	0.20	< 1
		Maximum =		0.98	1.55	< 2	1.10	
		Median =		0.22				
		F-pseudosigma =		0.03				

Lab	Rating	Z-value	0	7	20	21	22fe	40
1	3	-0.56		0.18				
2	4	-0.33		0.20				
3	0	4.44					0.59	
5	NR			< 0.17				
16	0	10.67					1.10	
23	NR			< 1				
25	4	0.00		0.23				
30.1	4	-0.37		0.20				
33	3	-0.61		0.18				
36	4	0.00		0.23				
48	NR						< 1	
59	3	0.98		0.31				
64	4	-0.37		0.20				
81	NR					< 1		
89	4	0.25			0.25			
96	NR						< 2	
110	4	-0.07		0.22				
113	3	-0.59		0.18				
127	4	-0.26		0.21				
134	4	-0.12		0.22				
138	4	0.20		0.25				
140	4	0.49					0.27	
141.1	4	-0.37					0.20	
145	4	-0.37		0.20				
146	NR						< 1	
158	0	6.75		0.78				
180	2	1.40		0.34				
190	4	-0.49		0.19				
203	NR					< 2		
204	NR							< 1
209	4	-0.38		0.20				
215	0	9.44			1.00			
220	1	1.84					0.38	
224	3	0.74		0.29				
228.1	4	0.09		0.24				
228.2	4	0.00		0.23				
240	4	0.13		0.24				
241	4	-0.39		0.20				
247	NR			< 1.5				
255	NR						< 5	
283	0	9.20		0.98				
284	NR		< 5					
287	0	16.19			1.55			
289	3	0.86		0.30				

MPV =	0.23
F-pseudosigma =	0.08
N =	33
Hu =	0.31
HI =	0.20

Table 17. *Statistical summary of reported data for standard reference water sample P-30 (low ionic strength constituents)--Continued*

F (Fluoride) **mg/L**



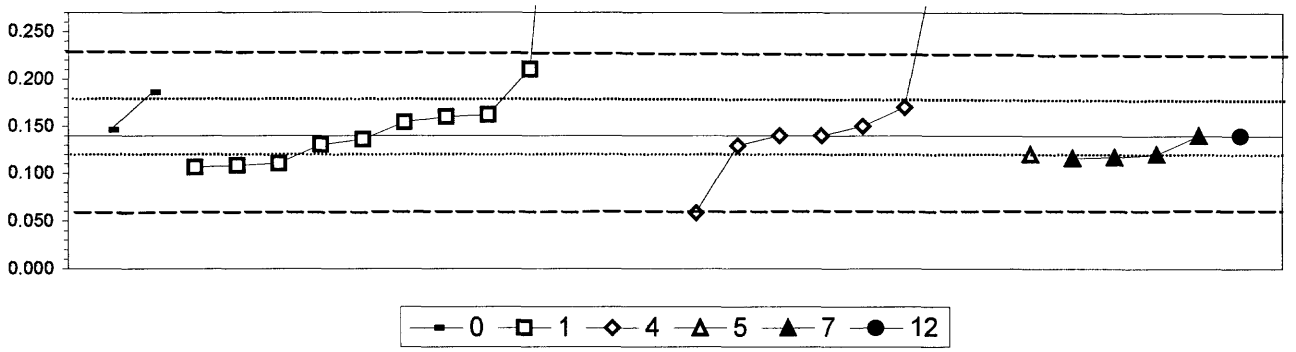
0. Other					
7. Ion chromatography					
40. Ion selective electrode					
		N =	2	12	19
		Minimum =	0.200	0.140	0.142
		Maximum =	0.210	0.460	0.290
		Median =		0.199	0.214
		F-pseudosigma =		0.022	0.031

MPV =	0.206
F-pseudosigma =	0.025
N =	33
Hu =	0.227
HI =	0.193

Lab	Rating	Z-value	0	7	40
1	3	0.95			0.230
2	4	-0.32		0.198	
3	4	0.16			0.210
5	3	0.56		0.220	
16	4	-0.40			0.196
23	4	-0.24		0.200	
25	2	-1.03			0.180
36	3	-0.52		0.193	
48	0	3.33			0.290
59	4	0.16	0.210		
81	3	0.83			0.227
83	2	1.35			0.240
89	3	-0.83			0.185
113	3	-0.87			0.184
127	2	-1.19		0.176	
134	4	0.16			0.210
138	0	-2.54			0.142
140	4	0.32			0.214
141.1	3	0.79			0.226
145	2	-1.03		0.180	
146	2	1.35			0.240
158	0	10.08		0.460	
180	4	0.00		0.206	
190	0	-2.62		0.140	
215	4	-0.16			0.202
240	2	1.35			0.240
241	4	-0.24			0.200
247	1	-1.83		0.160	
255	1	1.83			0.252
283	4	-0.24		0.200	
284	4	-0.24	0.200		
287	0	2.78			0.276
289	4	0.16		0.210	

Table 17. *Statistical summary of reported data for standard reference water sample P-30 (low ionic strength constituents)--Continued*

K (Potassium) **mg/L**

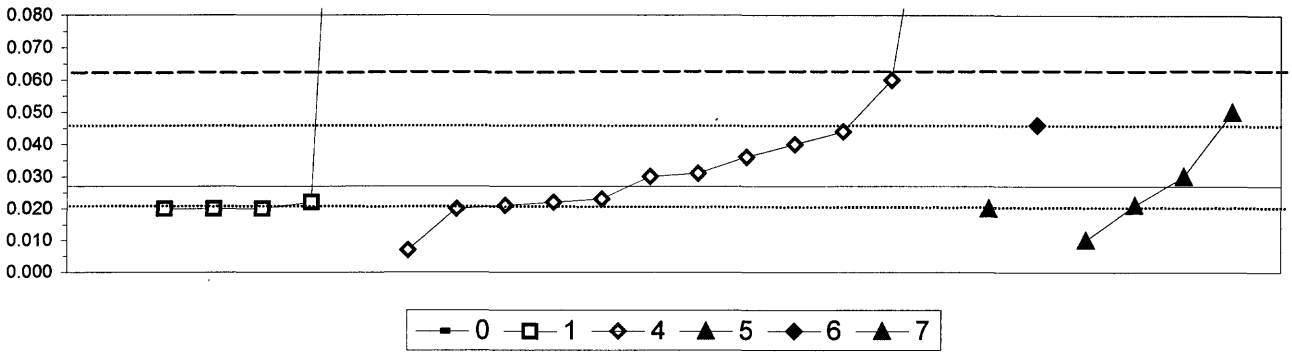


0. Other				5. DCP				
1. AA: direct, air				7. Ion chromatography				
4. ICP				12. Flame emission				
		N =	2	12	8	1	4	1
		Minimum =	0.146	0.106	0.058	0.120	0.116	0.140
		Maximum =	0.186	1.600	0.713		0.140	
		Median =		0.157	0.145			
		F-pseudosigma =		0.248	0.106			
Lab	Rating	Z-value	0	1	4	5	7	12
1	4	-0.09		0.136				
2	4	0.00					0.140	
3	NR				< 1			
5	NR				< 1			
16	1	1.63		0.210				
23	0	23.26		1.140				
33	4	-0.47				0.120		
36	NR			< 0.5				
48	2	1.07	0.186					
64	4	-0.23		0.130				
81	4	-0.26			0.129			
89	4	0.00						0.140
113	3	0.70			0.170			
127	3	-0.74		0.108				
134	4	0.33		0.154				
138	4	0.00			0.140			
140	3	0.51		0.162				
141.1	1	-1.91			0.058			
145	NR				< 0.7			
146	NR				< 1			
180	0	13.33			0.713			
190	4	-0.47					0.120	
203	4	0.47		0.160				
209	3	-0.79		0.106				
224	4	0.23			0.150			
228.1	3	-0.56					0.116	
228.2	3	-0.53					0.117	
240	4	0.00			0.140			
241	0	33.96		1.600				
247	NR				< 1			
255	NR				< 0.098			
283	0	5.68			0.384			
284	4	0.14	0.146					
287	0	13.02		0.700				
289	3	-0.70		0.110				

MPV =	0.140
F-pseudosigma =	0.043
N =	28
Hu =	0.178
HI =	0.120

Table 17. *Statistical summary of reported data for standard reference water sample P-30 (low ionic strength constituents)--Continued*

Mg (Magnesium) **mg/L**



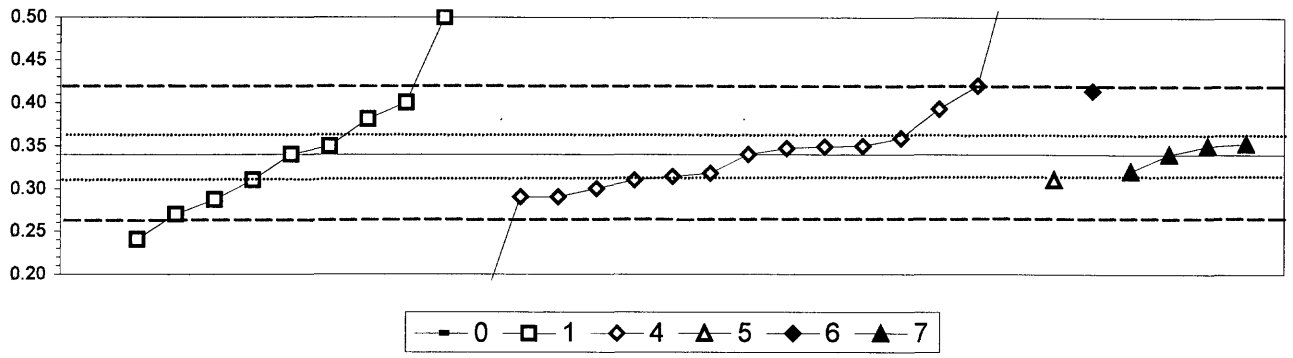
0. Other
1. AA: direct, air
4. ICP
5. DCP
6. ICP/MS
7. Ion chromatography

			0	1	4	5	6	7
		N =	1	5	12	1	1	4
		Minimum =	0.100	0.020	0.007	0.020	0.046	0.010
		Maximum =		0.300	0.150			0.050
		Median =			0.031			
		F-pseudosigma =			0.015			
Lab	Rating	Z-value	0	1	4	5	6	7
1	4	-0.19			0.023			
2	4	-0.30						0.021
3	0	6.66			0.150			
5	NR				< 0.03			
16	NR				< 0.1			
23	NR			< 0.2				
25	3	0.51			0.036			
33	4	-0.35				0.020		
36	NR				< 0.5			
48	2	1.05					0.046	
64	4	-0.35		0.020				
81	NR				< 0.118			
83	NR				< 0.035			
89	NR			< 0.01				
110	3	0.73			0.040			
113	NR				< 0.1			
127	NR				< 0.07			
134	4	-0.24			0.022			
138	4	0.24			0.031			
140	4	-0.24		0.022				
141.1	4	-0.30			0.021			
145	NR				< 0.19			
146	NR				< 0.5			
180	3	0.94			0.044			
190	2	1.27						0.050
203	4	-0.35		0.020				
215	1	1.81			0.060			
224	4	0.19			0.030			
228.1	4	0.19						0.030
228.2	3	-0.89						0.010
240	2	-1.05			0.007			
241	0	14.76		0.300				
247	NR				< 0.5			
255	NR				< 0.088			
283	NR				< 0.1			
284	0	3.97	0.100					
287	4	-0.35		0.020				
289	4	-0.35			0.020			

MPV = 0.027
F-pseudosigma = 0.019
N = 24
Hu = 0.045
HI = 0.020

Table 17. *Statistical summary of reported data for standard reference water sample P-30 (low ionic strength constituents)--Continued*

Na (Sodium) **mg/L**



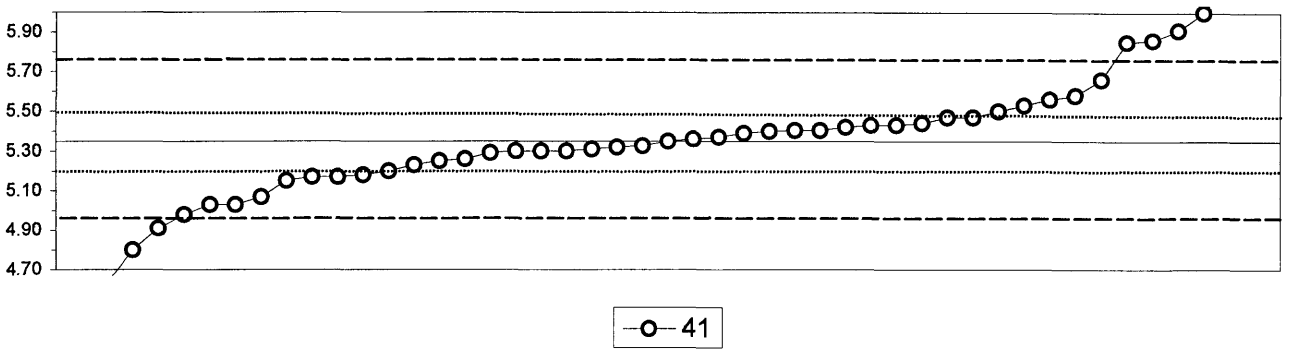
0. Other				5. DCP				
1. AA: direct, air				6. ICP/MS				
4. ICP				7. Ion chromatography				
		N =	1	9	15	1	1	4
		Minimum =	0.00	0.24	0.16	0.31	0.41	0.32
		Maximum =		0.50	0.58			0.35
		Median =		0.34	0.34			
		F-pseudosigma =		0.07	0.04			

MPV =		0.34
F-pseudosigma =		0.04
N =		31
Hu =		0.36
HI =		0.31

Lab	Rating	Z-value	0	1	4	5	6	7
1	3	-0.58			0.32			
2	4	0.34						0.35
3	NR				< 1			
5	3	-0.69			0.31			
16	NR				< 3			
23	4	0.26		0.35				
25	4	0.50			0.36			
33	3	-0.79				0.31		
36	NR				< 0.5			
48	1	1.96					0.41	
64	3	-0.79		0.31				
81	NR				< 0.326			
83	3	-0.79			0.31			
89	0	-2.65		0.24				
113	2	-1.06			0.30			
127	4	0.24			0.35			
134	2	1.08		0.38				
138	0	2.12			0.42			
140	4	0.00		0.34				
141.1	4	0.19			0.35			
145	2	-1.32			0.29			
146	NR				< 0.5			
180	2	1.40			0.39			
190	3	-0.53						0.32
203	1	-1.85		0.27				
209	2	-1.40		0.29				
215	4	0.00			0.34			
224	4	0.26			0.35			
228.1	4	0.00						0.34
228.2	4	0.26						0.35
240	0	-4.76			0.16			
241	0	4.23		0.50				
247	NR				< 0.5			
255	NR				< 0.574			
283	0	6.45			0.58			
284	NR	-8.99	0.00					
287	1	1.59		0.40				
289	2	-1.32			0.29			

Table 17. *Statistical summary of reported data for standard reference water sample P-30 (low ionic strength constituents)--Continued*

pH



41. Direct reading

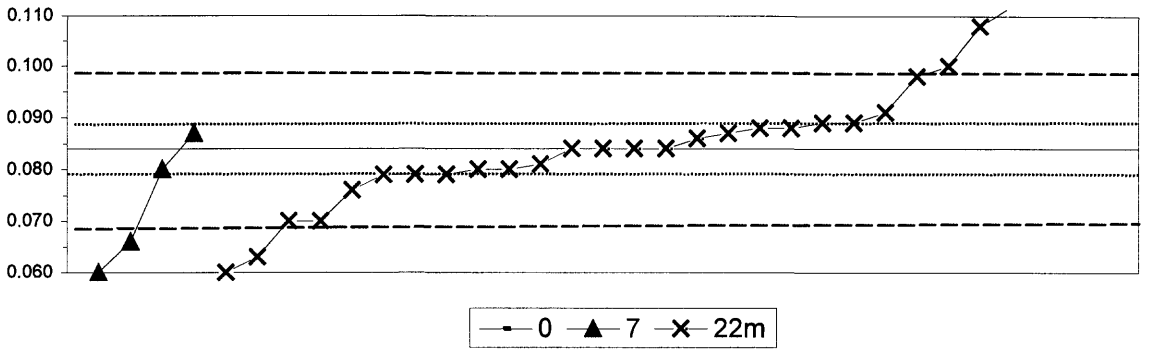
N =	47
Minimum =	4.31
Maximum =	6.30
Median =	5.35
F-pseudosigma =	0.21

Lab	Rating	Z-value	41
1	4	0.45	5.47
2	4	0.21	5.41
3	4	0.15	5.39
5	1	-1.64	4.91
11	4	-0.37	5.25
16	1	1.91	5.86
23	3	-0.64	5.18
25	4	0.30	5.43
26	0	-2.69	4.63
30.1	2	1.16	5.66
33	4	-0.15	5.31
34	0	-2.06	4.80
36	0	3.55	6.30
48	4	-0.19	5.30
59	3	0.86	5.58
64	4	-0.34	5.26
81	3	-0.75	5.15
89	2	-1.05	5.07
96	3	0.67	5.53
107	4	0.30	5.43
110	4	0.20	5.40
113	4	0.00	5.35
127	3	-0.67	5.17
134	4	-0.09	5.33
138	0	2.09	5.91
140	0	2.43	6.00
141.1	4	0.34	5.44
146	2	-1.20	5.03
180	4	0.19	5.40
183	2	-1.20	5.03
203	3	0.79	5.56
204	4	-0.22	5.29
209	4	0.07	5.37
215	3	0.56	5.50
224	0	-3.89	4.31
228.1	4	-0.19	5.30
228.2	4	-0.19	5.30
240	0	3.07	6.17
241	4	-0.45	5.23
243	4	0.45	5.47
244	4	-0.11	5.32
247	4	0.04	5.36
255	3	-0.67	5.17
283	1	1.87	5.85
284	3	-0.56	5.20
287	2	-1.38	4.98
289	4	0.26	5.42

MPV =	5.35
F-pseudosigma =	0.21
Rating Criterion =	0.27
N =	47
Hu =	5.47
HI =	5.19

Table 17. *Statistical summary of reported data for standard reference water sample P-30 (low ionic strength constituents)--Continued*

PO_4 as P (Orthophosphate as Phosphorus) mg/L



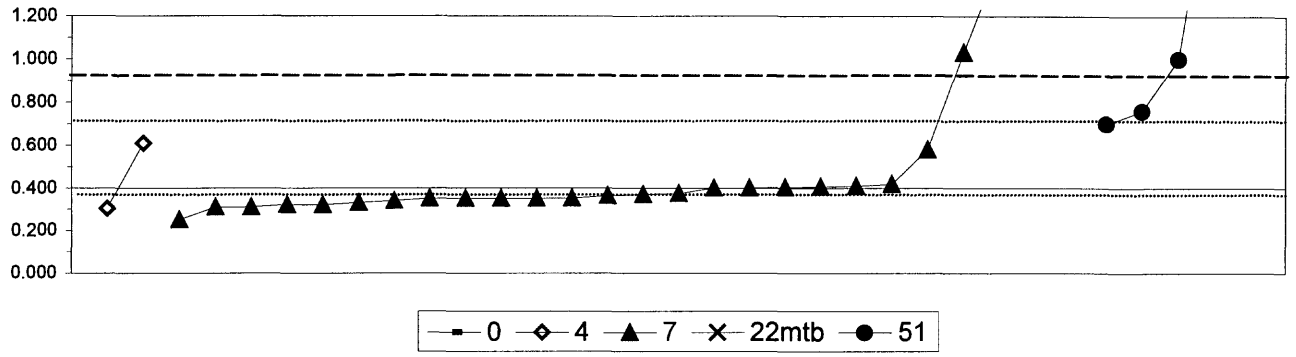
0. Other					
7. Ion chromatography					
22m. Color:phosphomolybdate					
		N =	0	4	29
		Minimum =	< 0.1	0.060	0.060
		Maximum =		0.087	0.692
		Median =			0.084
		F-pseudosigma =			0.009

		MPV =	0.084
		F-pseudosigma =	0.007
		N =	33
		Hu =	0.089
		HI =	0.079

Lab	Rating	Z-value	0	7	22m
1	4	0.00			0.084
3	0	82.02			0.692
5	3	0.67			0.089
11	3	-0.67			0.079
16	3	0.67			0.089
23	NR			< 0.1	
25	3	-0.67			0.079
33	3	-0.54		0.080	
36	4	0.00			0.084
48	0	14.30			0.190
64	4	0.27			0.086
81	0	-3.24			0.060
83	0	60.30			0.531
89	4	-0.40			0.081
96	3	-0.67			0.079
113	3	0.94			0.091
127	1	1.89			0.098
134	1	-1.89			0.070
138	3	0.54			0.088
140	3	-0.54			0.080
141.1	0	3.24			0.108
145	1	-1.89			0.070
146	0	3.78			0.112
158	2	-1.08			0.076
180	4	0.40			0.087
183	4	0.00			0.084
190	4	0.00			0.084
203	3	-0.54			0.080
215	0	2.16			0.100
224	3	0.54			0.088
240	0	-3.24		0.060	
241	0	-2.43		0.066	
247	4	0.40		0.087	
255	NR				< 0.5
283	NR			< 0.2	
284	NR		< 0.1		
287	NR				< 0.1
289	0	-2.83			0.063

Table 17. *Statistical summary of reported data for standard reference water sample P-30 (low ionic strength constituents)--Continued*

SO_4 (Sulfate) **mg/L**



0. Other
4. ICP
7. Ion chromatography
22mtb. Color: methyl thymol blue
51. Turbidimetric

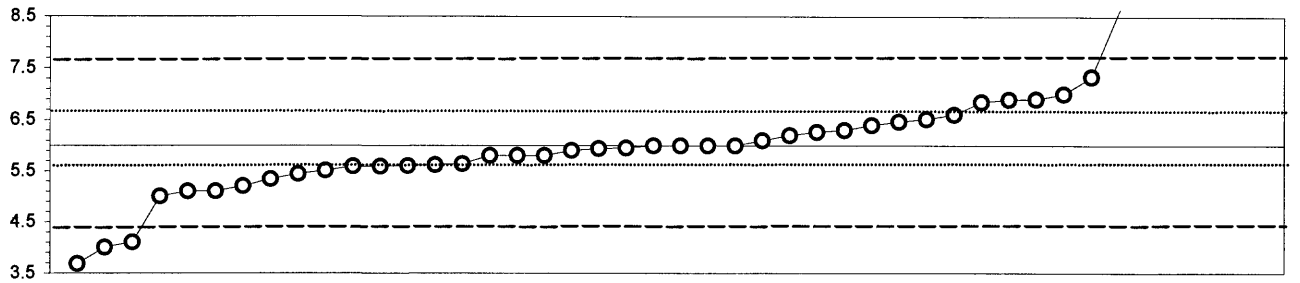
	0	2	24	2	5
N =					
Minimum =	< 5	0.303	0.250	1.500	0.700
Maximum =		0.610	1.458	7.500	2.600
Median =			0.357		
F-pseudosigma =			0.052		

MPV = 0.400
F-pseudosigma = 0.259
N = 33
Hu = 0.700
HI = 0.350

Lab	Rating	Z-value	0	4	7	22mtb	51
1	4	-0.12			0.369		
2	4	0.02			0.406		
3	NR					< 10	
5	4	-0.31			0.320		
16	0	27.37				7.500	
23	NR				< 2		
25	NR				< 5		
30.1	4	-0.23			0.340		
33	4	-0.19			0.350		
36	4	-0.19			0.350		
48	0	2.31					1.000
59	3	0.69			0.580		
64	4	-0.19			0.350		
81	NR					< 5	
83	3	0.81		0.610			
89	2	1.39					0.760
96	NR						< 1
110	4	0.03			0.409		
113	4	0.01			0.403		
127	4	-0.37		0.303			
134	4	-0.19			0.350		
138	4	-0.14			0.363		
140	0	6.17					2.000
141.1	NR						< 5
145	4	-0.27			0.330		
146	NR						< 5
158	0	4.08			1.458		
180	4	-0.10			0.374		
190	3	-0.58			0.250		
203	0	4.24				1.500	
209	4	0.07			0.418		
220	2	1.16					0.700
224	4	0.00			0.400		
228.1	4	-0.35			0.309		
228.2	4	-0.35			0.310		
240	4	-0.31			0.320		
241	4	-0.19			0.351		
247	NR				< 1.5		
255	NR					< 30	
283	0	2.43			1.030		
284	NR		< 5				
287	0	8.48					2.600
289	4	0.00			0.400		

Table 17. *Statistical summary of reported data for standard reference water sample P-30 (low ionic strength constituents)--Continued*

Sp Cond (Specific Conductance) µS/cm



41. Direct reading

N =	44
Minimum =	3.7
Maximum =	57.6
Median =	6.0
F-pseudosigma =	0.1

MPV =	6.0
F-pseudosigma =	0.8
N =	44
Hu =	6.7
Hl =	5.6

Lab	Rating	Z-value	41
1	4	0.47	6.4
3	4	0.00	6.0
5	3	0.61	6.5
11	4	0.00	6.0
16	4	0.36	6.3
23	4	-0.45	5.6
25	2	1.19	7.0
26	3	0.72	6.6
33	4	-0.48	5.6
36	3	-0.58	5.5
48	3	-0.67	5.4
59	4	0.24	6.2
64	4	0.12	6.1
81	1	1.59	7.3
89	2	1.06	6.9
96	0	61.60	57.6
107	3	1.00	6.8
110	4	-0.06	6.0
113	2	-1.07	5.1
127	4	-0.24	5.8
134	4	-0.07	5.9
138	NR		< 10
140	0	-2.39	4.0
141.1	4	-0.12	5.9
145	3	-0.96	5.2
146	0	3.10	8.6
180	0	5.97	11.0
183	4	-0.24	5.8
190	3	0.55	6.5
203	0	27.58	29.1
204	4	0.00	6.0
215	4	0.00	6.0
224	0	-2.27	4.1
228.1	4	-0.49	5.6
228.2	4	-0.49	5.6
240	2	-1.19	5.0
241	0	-2.77	3.7
243	4	0.31	6.3
244	4	-0.24	5.8
247	4	-0.43	5.6
255	3	-0.79	5.3
283	0	4.89	10.1
284	0	4.18	9.5
287	2	1.07	6.9
289	2	-1.07	5.1

Table 18. *Statistical summary of reported data for standard reference sample GWT-3 (ground-water trace constituents)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

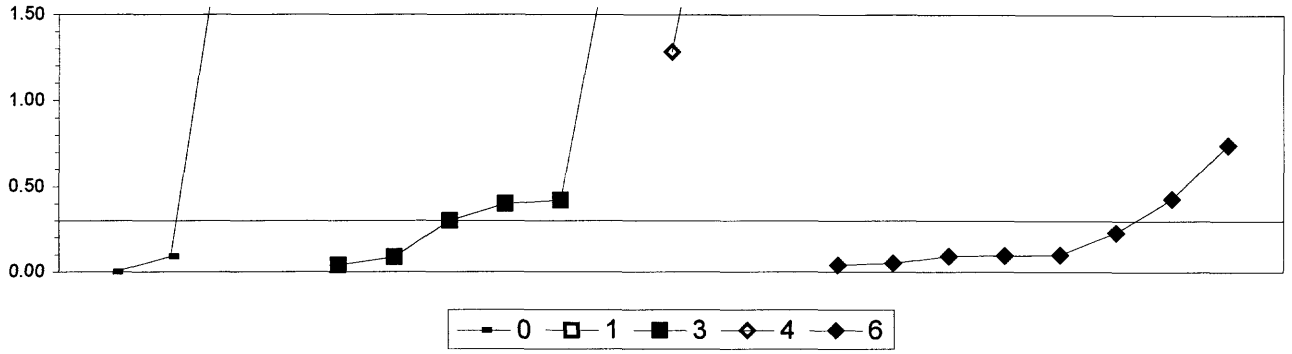
0. Other/Not reported		
1. AA: direct, air	=	atomic absorption: direct air
2. AA: direct, N_2O	=	atomic absorption: direct, nitrous oxide
3. AA: graphite furnace	=	atomic absorption: graphite furnace
4. ICP	=	inductively coupled plasma
5. DCP	=	direct current plasma
6. ICP/MS	=	inductively coupled plasma / mass spectrometry
7. IC	=	ion chromatography
10. AA: extraction	=	atomic absorption: extraction (chelating agent[s] specified)
11. AA: hydride	=	atomic absorption: hydride (reducing agent specified)
12. AA: flame emission	=	atomic absorption: flame emission
22. Color	=	colorimetric (color reagent specified)

Abbreviations and symbols

N =	number of analyses--(excluding less than values)
MPV =	most probable value
F-pseudosigma =	nonparametric statistic deviation
Hu =	upper hinge value
Hl =	lower hinge value
µg/L =	micrograms per liter
mg/L =	milligrams per liter
Lab =	laboratory code number
NR =	not rated, less than value reported or insufficient data
< =	less than

Table 18. *Statistical summary of reported data for standard reference water sample GWT-3 (ground-water trace constituents)--Continued*

Ag (Silver) **µg/L**



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

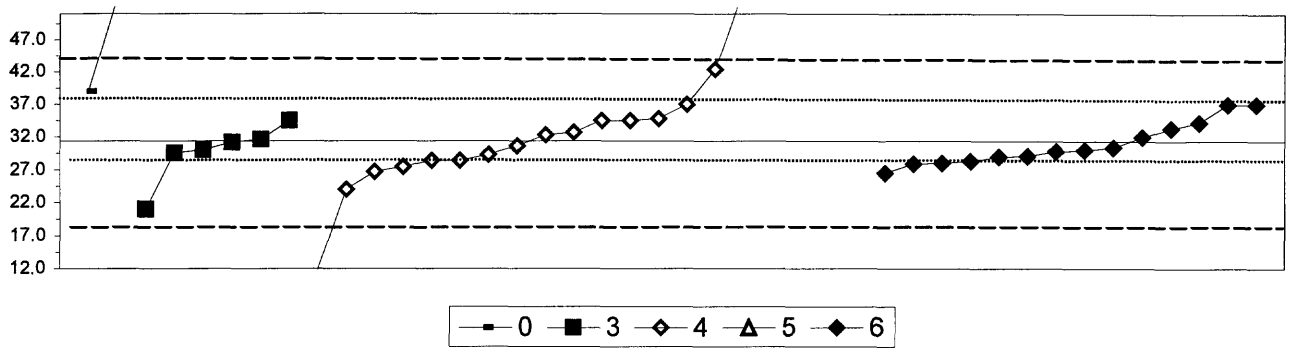
MPV = insufficient data

N = 21

		N =	3	1	6	3	8
		Minimum =	0.00	2.00	0.04	1.28	0.04
		Maximum =	2.20		2.12	5.60	0.74
		Median =					0.10
		F-pseudosigma =					0.19
Lab	Rating	Z-value	0	1	3	4	6
1	NR				< 1		
5	NR				< 0.5		
13	NR					2.88	
23	NR				0.42		
26	NR				< 0.2		
30.1	NR						< 0.1
34	NR				< 0.5		
36	NR					< 10	
48	NR						< 0.6
69	NR				< 2		
85	NR			< 5			
89	NR				< 2		
96	NR				< 1		
100	NR					< 2	
113	NR				< 0.5		
126	NR				0.40		
133	NR					< 6	
134	NR					< 1	
138	NR						< 0.05
140	NR			2.00			
141	NR					5.60	
142	NR						0.74
146	NR					< 10	
151	NR						0.43
180	NR					< 3.7	
190	NR				0.04		
212	NR						< 1
221	NR				2.12		
234	NR				0.30		
235	NR						0.10
236	NR					< 6	
240	NR					1.28	
241	NR						0.05
247	NR					< 10	
249	NR		0.09				
255	NR				0.09		
256	NR					<10	
265	NR						0.04
277	NR		2.20				
283	NR						< 1
284	NR		0.00				
287	NR						< 1
289	NR					< 3	
296	NR						0.23
300	NR						0.10
304	NR						0.09

Table 18. *Statistical summary of reported data for standard reference water sample GWT-3 (ground-water trace constituents)--Continued*

Al (Aluminum) **µg/L**



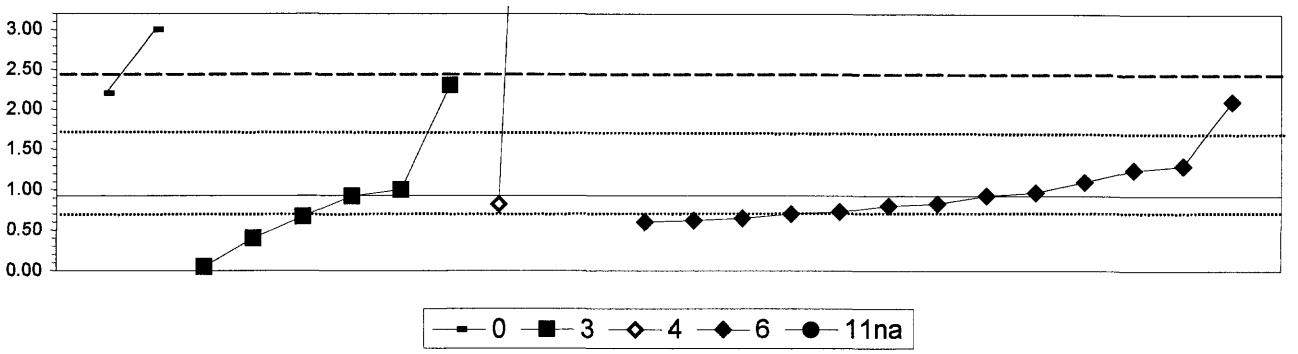
0. Other				5. DCP			
3. AA: graphite furnace				6. ICP/MS			
4. ICP							
		N =	2	6	19	1	14
		Minimum =	39.0	21.0	11.8	70.0	26.5
		Maximum =	53.4	34.5	188.0		37.0
		Median =			32.7		29.9
		F-pseudosigma =			8.4		3.7

MPV =	31.4						
F-pseudosigma =	6.4						
N =	42						
Hu =	37.0						
HI =	28.4						

Lab	Rating	Z-value	0	3	4	5	6
1	3	-0.55					27.9
5	3	0.53			34.8		
16	4	-0.47			28.4		
23	0	5.27			65.0		
25	3	0.88			37.0		
30.1	3	-0.77					26.5
32	4	-0.25					29.8
33	0	6.05				70.0	
36	NR				< 100		
48	4	-0.38					29.0
69	4	-0.22		30.0			
76	4	0.30					33.3
81	NR				< 104		
89	4	0.49		34.5			
97	4	-0.03		31.2			
100	0	-3.34			< 10		
113	4	-0.47			28.4		
134	4	0.49			34.5		
138	4	-0.13			30.6		
141	0	3.65			54.7		
142	4	-0.33			29.3		
145	NR				< 179		
146	NR				< 200		
151	4	-0.36					29.1
180	4	0.14			32.3		
190	4	0.03		31.6			
191	4	-0.49					28.3
212	NR				< 100		
221	4	-0.30		29.5			
234	3	-0.63			27.4		
235	4	-0.16					30.4
236	0	3.86			56.0		
240	3	-0.74			26.7		
241	3	-0.53					28.0
247	0	-3.34			< 10		
249	0	3.45	53.4				
254	4	0.20			32.7		
255	1	1.73			42.4		
256	0	-3.34			< 10		
259	4	0.49			34.5		
265	4	-0.22					30.0
273	0	-3.07			11.8		
283	0	24.56			188.0		
284	2	1.19	39.0				
287	1	-1.63		21.0			
289	3	0.88					37.0
292	2	-1.16			24.0		
296	4	0.44					34.2
300	3	0.88					37.0
304	4	0.09					32.0

Table 18. *Statistical summary of reported data for standard reference water sample GWT-3 (ground-water trace constituents)--Continued*

As (Arsenic) **µg/L**



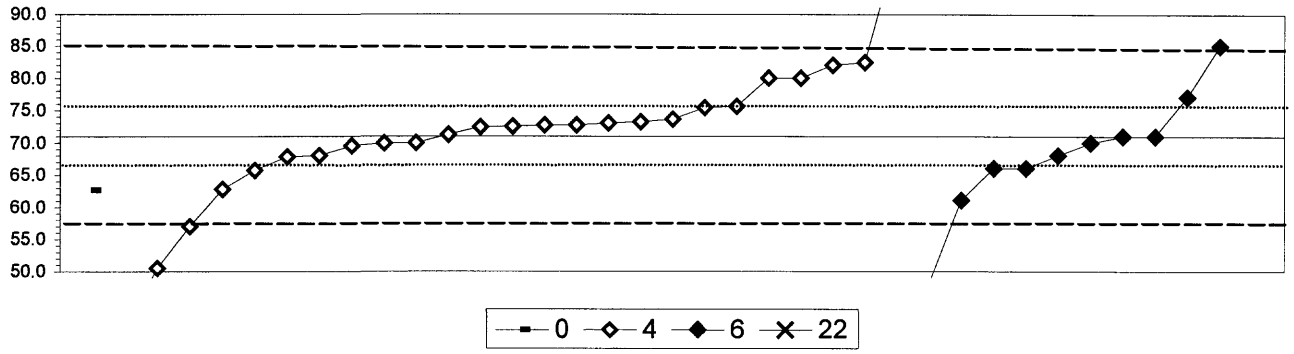
0. Other			6. ICP/MS				
3. AA: graphite furnace			11na. AA: hydride NaBH4				
4. ICP							
		N =	2	6	3	13	0
		Minimum =	2.20	0.05	0.82	0.60	< 0.7
		Maximum =	3.00	2.30	19.00	2.10	< 2
		Median =				0.83	
		F-pseudosigma =				0.30	

		MPV =	0.93				
		F-pseudosigma =	0.75				
		N =	24				
		Hu =	1.70				
		Hl =	0.69				

Lab	Rating	Z-value	0	3	4	6	11na
1	NR			< 1			
5	1	1.83		2.30			
13	NR			< 5			
23	NR			< 10			
26	NR						< 0.7
30.1	4	-0.41				0.62	
32	4	-0.17				0.80	
36	NR				< 5		
45	4	0.10		1.00			
48	4	-0.30				0.70	
69	NR			< 5			
81	NR			< 2			
89	NR						< 2
96	NR			< 1			
100	NR			< 2			
109	4	-0.34		0.67			
113	NR			< 1.5			
133	NR			< 5			
134	NR			< 1			
138	NR					< 2	
141	4	-0.14			0.82		
142	4	0.43				1.25	
145	NR				< 39		
146	NR				< 10		
151	4	0.01				0.93	
180	NR				< 49.4		
190	2	-1.16		0.05			
191	4	-0.13				0.83	
212	NR					< 5	
221	4	-0.01		0.92			
234	3	-0.70		0.40			
236	0	24.02			19.00		
240	0	16.85			13.60		
241	4	-0.26				0.73	
247	NR				< 50		
249	1	1.69	2.20				
255	NR			< 2			
265	4	-0.37				0.65	
283	1	1.56				2.10	
284	0	2.76	3.00				
289	4	-0.43				0.60	
292	NR		< 3				
296	4	0.06				0.97	
300	4	0.50				1.30	
304	4	0.23				1.10	

Table 18. *Statistical summary of reported data for standard reference water sample GWT-3 (ground-water trace constituents)--Continued*

B (Boron) **µg/L**

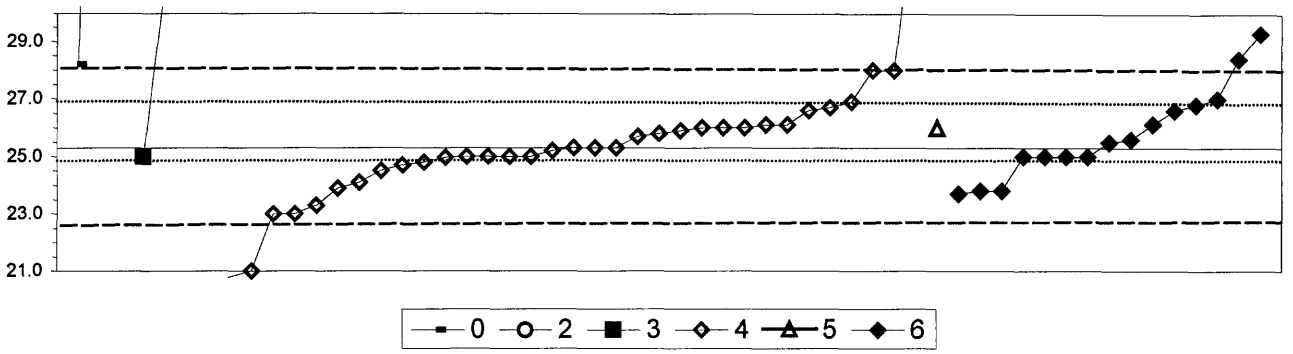


0. Other			22. Colorimetric			
4. ICP						
6. ICP/MS						
		N =	1	25	10	1
		Minimum =	62.7	40.5	48.0	210.0
		Maximum =		101.0	85.0	
		Median =		72.5	69.0	
		F-pseudosigma =		5.5	3.7	
Lab	Rating	Z-value	0	4	6	22
1	4	-0.22		69.5		
5	4	0.24		72.7		
16	3	-0.76		65.7		
23	0	19.95				210.0
24	3	0.63		75.4		
25	2	1.29		80.0		
28	4	-0.46		67.8		
30.1	4	-0.14			70.0	
32	4	0.00			71.0	
36	1	-2.01		57.0		
48	3	-0.72			66.0	
76	3	0.87			77.1	
85	2	1.29		80.0		
100	2	-1.18		62.8		
134	4	0.03		71.2		
138	3	0.66		75.6		
141	1	1.64		82.4		
142	4	-0.16		69.9		
145	1	1.58		82.0		
180	0	4.31		101.0		
191	0	-3.30			48.0	
212	NR			< 100		
215	4	-0.14		70.0		
220	4	0.32		73.2		
234	4	0.29		73.0		
235	2	-1.42			61.1	
236	4	-0.43		68.0		
240	4	0.24		72.7		
247	0	-3.00		< 50		
254	0	-2.94		50.5		
255	4	0.37		73.6		
256	0	-8.71		< 10		
258	2	-1.19	62.7			
259	4	0.22		72.5		
265	3	-0.72			66.0	
273	0	-4.38		40.5		
283	4	0.20		72.4		
289	1	2.01			85.0	
296	4	-0.43			68.0	
300	4	0.00			71.0	

MPV =	71.0
F-pseudosigma =	7.0
N =	37
Hu =	75.4
HI =	66.0

Table 18. *Statistical summary of reported data for standard reference water sample GWT-3 (ground-water trace constituents)--Continued*

Ba (Barium) µg/L



0. Other			4. ICP					
2. AA: direct, nitrous oxide			4. ICP					
3. AA: graphite furnace			6. ICP/MS					
		N =	3	0	2	35	1	15
		Minimum =	28.2	< 100	25.0	20.0	26.0	23.7
		Maximum =	418.0		31.0	34.0		29.3
		Median =				25.2		25.5
		F-pseudosigma =				1.3		1.3

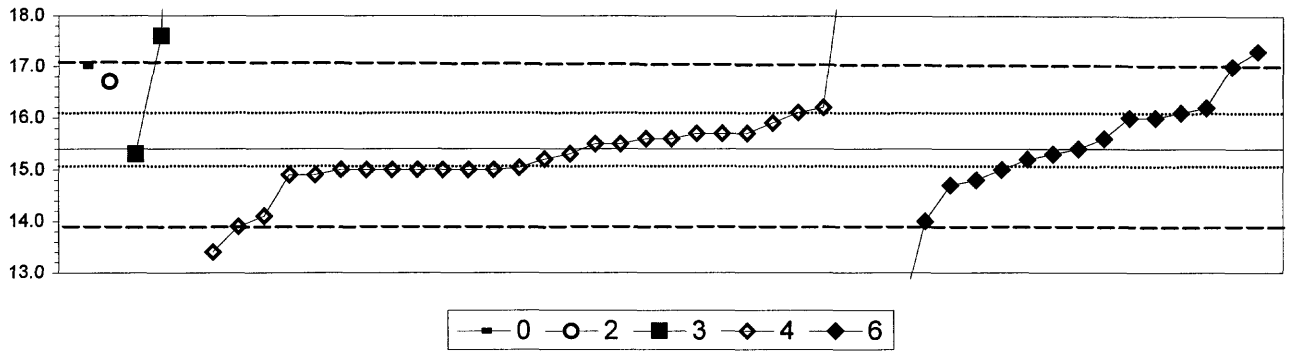
Lab	Rating	Z-value	0	2	3	4	5	6
1	3	0.92						26.6
5	3	0.57				26.1		
11	4	0.00				25.3		
13	4	0.00				25.3		
16	3	-0.57				24.5		
23	0	-3.76				20.0		
24	2	1.14				26.9		
25	4	0.50				26.0		
26	3	0.99				26.7		
28	4	0.00				25.3		
30.1	4	-0.21						25.0
32	2	-1.07						23.8
33	4	0.50					26.0	
36	1	-1.63				23.0		
48	2	-1.07						23.8
69	0	4.05			31.0			
76	3	0.58						26.1
81	0	-3.05				21.0		
83	4	-0.21				25.0		
85	4	-0.21				25.0		
89	NR				< 50			
96	NR			< 100				
97	4	-0.21			25.0			
100	0	-3.41				20.5		
113	3	-0.99				23.9		
121	4	0.50				26.0		
133	4	-0.43				24.7		
134	4	-0.24				25.0		
138	4	0.36				25.8		
140	0	22.37	56.8					
141	1	-1.63				23.0		
142	2	1.07						26.8
145	4	-0.21				25.0		
146	4	0.28				25.7		
151	4	-0.21						25.0
180	4	0.43				25.9		
212	4	-0.21						25.0
215	1	1.92				28.0		
220	3	0.57				26.1		
234	4	-0.07				25.2		
235	0	2.84						29.3
236	4	-0.21				25.0		
240	3	-0.85				24.1		
241	4	0.21						25.6
247	0	6.18				34.0		
255	3	0.92				26.6		
256	4	0.50				26.0		
259	4	-0.36				24.8		
265	4	0.14						25.5
273	0	-3.20				20.8		

MPV =	25.3
F-pseudosigma =	1.4
N =	56
Hu =	26.7
Hl =	24.8

Lab	Rating	Z-value	0	2	3	4	5	6
277	0	2.06	28.2					
283	2	-1.42				23.3		
284	0	278.82	418.0					
289	2	1.21						27.0
292	1	1.92				28.0		
296	2	-1.14						23.7
300	0	2.20						28.4
304	4	-0.21						25.0

Table 18. *Statistical summary of reported data for standard reference water sample GWT-3 (ground-water trace constituents)--Continued*

Be (Beryllium) **µg/L**



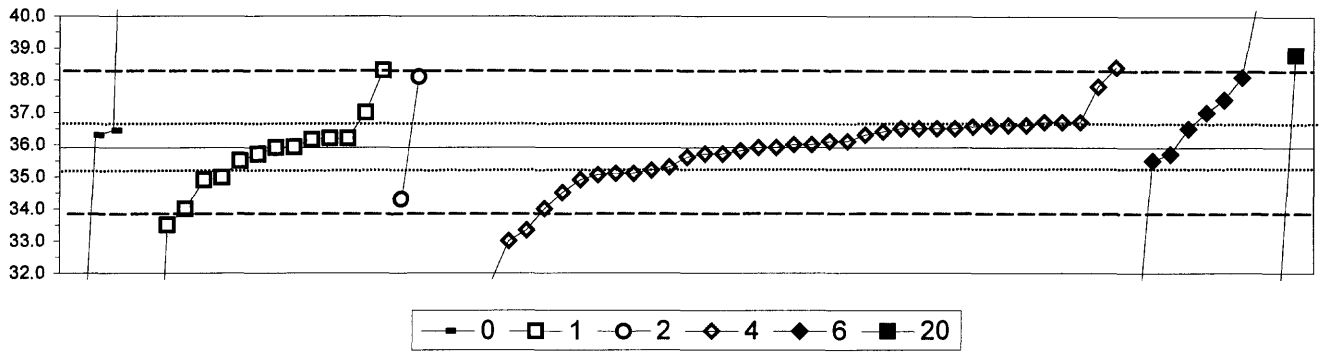
0. Other
2. AA: direct, nitrous oxide
3. AA: graphite furnace
4. ICP
6. ICP/MS

MPV = 15.4
F-pseudosigma = 0.8
N = 47
Hu = 16.1
Hl = 15.0

		N =	1	1	3	27	15
		Minimum =	17.0	16.7	15.3	13.4	12.0
		Maximum =			31.0	27.0	17.3
		Median =				15.2	15.4
		F-pseudosigma =				0.5	0.9
Lab	Rating	Z-value	0	2	3	4	6
1	3	-0.77					14.8
5	4	0.26				15.6	
11	4	0.39				15.7	
13	3	0.64				15.9	
16	4	-0.26				15.2	
23	0	5.91				20.0	
25	3	-0.51				15.0	
26	4	0.39				15.7	
30.1	3	0.77					16.0
32	2	1.03					16.2
36	1	-1.93				13.9	
48	3	-0.90					14.7
59	1	-1.80					14.0
69	4	-0.13			15.3		
81	0	20.04			31.0		
83	3	-0.51				15.0	
89	0	2.83			17.6		
96	1	1.67		16.7			
100	0	-18.50				< 1	
113	3	-0.64				14.9	
133	4	0.39				15.7	
134	4	-0.46				15.0	
138	4	0.13				15.5	
141	1	-1.67				14.1	
142	3	0.90					16.1
145	3	-0.51				15.0	
146	3	0.90				16.1	
151	4	-0.26					15.2
180	3	-0.64				14.9	
212	3	-0.51					15.0
215	3	-0.51				15.0	
220	4	-0.13				15.3	
234	4	0.13				15.5	
235	4	0.00					15.4
236	3	-0.51				15.0	
240	0	-2.57				13.4	
241	0	-4.37					12.0
247	0	14.90				27.0	
255	4	0.26				15.6	
256	3	-0.51				15.0	
265	4	0.26					15.6
283	2	1.03				16.2	
284	0	2.06	17.0				
289	0	2.06					17.0
292	3	-0.51				15.0	
296	4	-0.13					15.3
300	3	0.77					16.0
304	0	2.44					17.3

Table 18. *Statistical summary of reported data for standard reference water sample GWT-3 (ground-water trace constituents)--Continued*

Ca (Calcium) **mg/L**



0. Other				4. ICP				
1. AA: direct, air				6. ICP/MS				
2. AA: direct, nitrous oxide				20. Titrate: colorimetric				
		N =	4	14	2	39	8	2
		Minimum =	26.0	22.7	34.3	28.5	29.0	30.3
		Maximum =	55.4	38.3	38.1	38.4	40.9	38.8
		Median =		35.8		35.9	36.8	
		F-pseudosigma =		1.0		1.1	1.6	

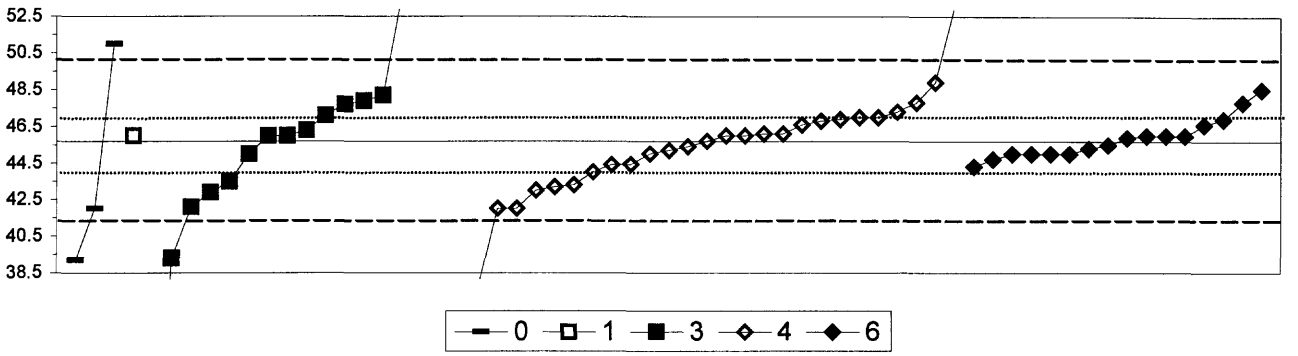
Lab	Rating	Z-value	0	1	2	4	6	20
1	4	0.04				36.0		
5	4	-0.35				35.3		
11	4	0.43				36.7		
13	2	1.38				38.4		
16	4	-0.07				35.8		
23	0	-2.35				31.7		
24	4	-0.01				35.9		
25	2	1.05				37.8		
28	4	-0.46				35.1		
30.1	3	-0.90			34.3			
30.2	0	-3.85					29.0	
32	4	-0.23					35.5	
33	4	0.21	36.3					
36	1	-1.63				33.0		
43	4	0.04				36.0		
45	4	-0.01		35.9				
48	2	1.21					38.1	
59	4	0.16		36.2				
64	2	1.33		38.3				
68	4	0.38				36.6		
69	4	-0.12		35.7				
76	4	0.13		36.2				
81	3	-0.57				34.9		
83	4	-0.12				35.7		
85	3	-0.57		34.9				
89	2	-1.07		34.0				
100	0	-4.13				28.5		
109	4	0.00		35.9				
113	4	0.32				36.5		
121	4	0.32				36.5		
133	3	-0.79				34.5		
134	4	-0.46				35.1		
138	4	0.32				36.5		
140	4	-0.23		35.5				
141	0	-3.13				30.3		
142	4	-0.12				35.7		
145	4	0.32				36.5		
146	4	-0.40				35.2		
180	4	0.27				36.4		
190	2	1.21			38.1			
191	4	-0.12					35.7	
212	4	0.21				36.3		
215	4	0.38				36.6		
220	4	0.43				36.7		
221	4	0.16		36.2				
224	2	-1.44				33.3		
234	4	0.10				36.1		
236	4	-0.48				35.1		
240	4	0.10				36.1		
241	2	-1.35		33.5				

MPV =	35.9
F-pseudosigma =	1.2
Rating Criteon =	1.8 **
N =	69
Hu =	36.6
HI =	35.0

Lab	Rating	Z-value	0	1	2	4	6	20
247	2	-1.07				34.0		
254	4	0.36				36.6		
255	4	0.38				36.6		
256	4	0.29	36.4					
258	1	1.60						38.8
259	4	-0.01				35.9		
265	4	0.43				36.7		
268	0	-7.36		22.7				
273	0	-4.13				28.5		
274	0	-3.13						30.3
277	0	10.85	55.4					
283	4	-0.18				35.6		
284	0	-5.52	26.0					
287	3	-0.52		35.0				
289	4	0.32					36.5	
292	3	0.60		37.0				
296	3	0.82					37.4	
300	0	2.77					40.9	
304	3	0.60					37.0	

Table 18. *Statistical summary of reported data for standard reference water sample GWT-3 (ground-water trace constituents)--Continued*

Cd (Cadmium) **µg/L**



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

	0	1	3	4	6
N =	3	1	14	29	16
Minimum =	39.2	46.0	20.8	1.0	44.3
Maximum =	51.0		53.8	53.0	48.5
Median =			46.0	45.4	45.7
F-pseudosigma =			3.6	2.7	1.0

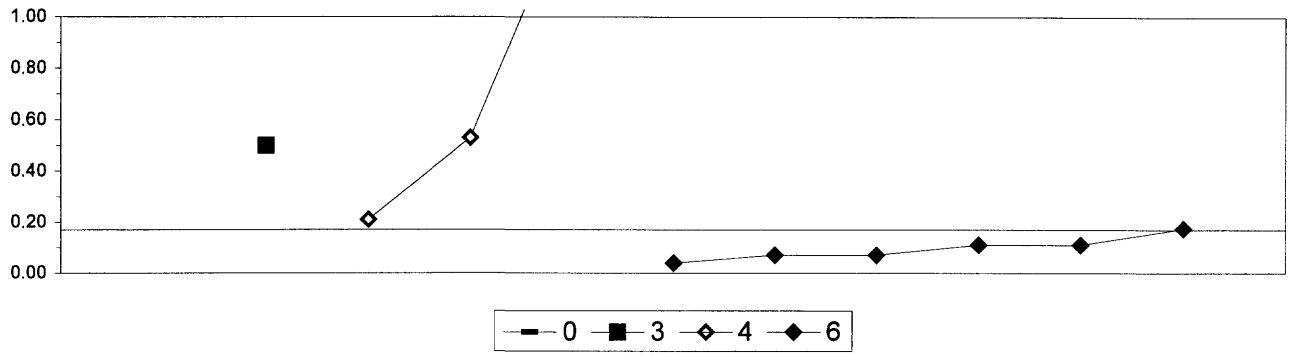
Lab	Rating	Z-value	0	1	3	4	6
1	3	-0.61					44.3
5	4	0.26			46.3		
11	4	0.39				46.6	
13	0	-3.57				37.5	
16	2	-1.04				43.3	
23	1	-1.57			42.1		
24	4	0.00				45.7	
25	3	0.57				47.0	
26	3	-0.57				44.4	
28	0	-3.48				37.7	
30.1	4	0.13					46.0
32	4	-0.30					45.0
34	3	0.87			47.7		
36	1	-1.61				42.0	
48	4	-0.30					45.0
59	4	-0.17					45.3
69	3	-0.96			43.5		
81	4	-0.30			45.0		
83	2	-1.17				43.0	
89	2	-1.22			42.9		
96	3	0.96			47.9		
100	0	-17.71				< 5	
113	4	-0.22				45.2	
126	3	0.61			47.1		
133	3	0.91				47.8	
134	3	-0.55				44.4	
138	4	-0.13				45.4	
140	4	0.13		46.0			
141	2	-1.09				43.2	
142	4	0.09					45.9
145	3	0.57				47.0	
146	3	0.52				46.9	
151	3	0.52					46.9
180	4	0.17				46.1	
190	2	1.09			48.2		
191	4	-0.09					45.5
212	4	0.13					46.0
215	4	0.13				46.0	
220	4	0.48				46.8	
221	4	0.13			46.0		
224	0	-4.40				35.6	
234	1	-1.61				42.0	
235	0	-2.79			39.3		
236	3	-0.74				44.0	
240	3	0.70				47.3	
241	3	0.91					47.8
247	0	3.18				53.0	
249	0	2.31	51.0				
254	2	1.39				48.9	
255	4	0.17				46.1	

MPV = 45.7
F-pseudosigma = 2.3
N = 63
Hu = 46.9
Hl = 43.8

Lab	Rating	Z-value	0	1	3	4	6
256	4	-0.30				45.0	
259	4	0.13				46.0	
265	4	0.39					46.6
273	0	-19.45				1.0	
274	0	-10.86			20.8		
277	0	-2.83	39.2				
283	4	-0.30					45.0
284	1	-1.61	42.0				
287	0	3.52			53.8		
289	4	0.13					46.0
292	4	0.13			46.0		
296	4	-0.30					45.0
300	2	1.22					48.5
304	4	-0.44					44.7

Table 18. *Statistical summary of reported data for standard reference water sample GWT-3 (ground-water trace constituents)--Continued*

Co (Cobalt) **µg/L**



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

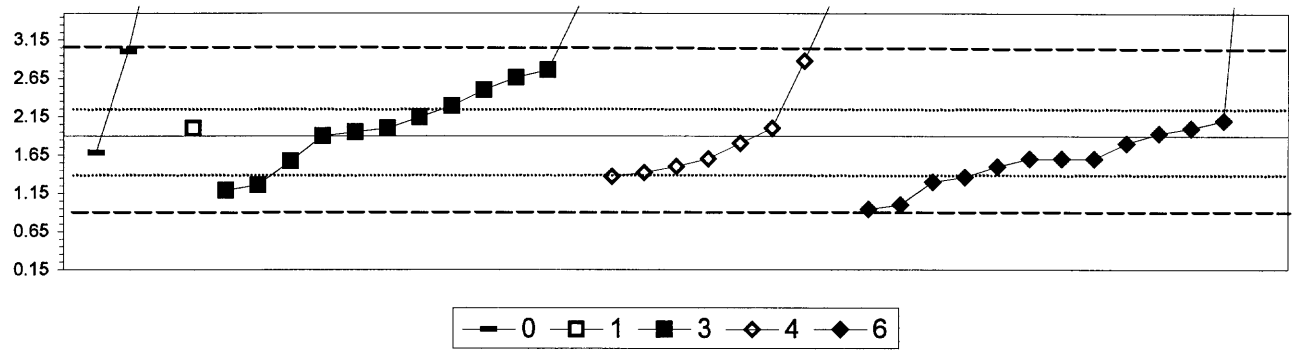
MPV = insufficient data

			0	3	4	6
		N =	1	1	3	6
		Minimum =	3.12	0.50	0.21	0.04
		Maximum =			1.47	0.17
		Median =				
		F-pseudosigma =				
Lab	Rating	Z-value				
1	NR			< 1		
5	NR				< 3	
13	NR				< 10	
30.1	NR					< 0.1
48	NR					< 0.02
89	NR			< 10		
100	NR				< 5	
134	NR				< 1	
138	NR					0.11
141	NR				0.53	
142	NR					0.04
145	NR				< 12	
146	NR				< 10	
180	NR				< 5.48	
191	NR					0.11
212	NR					< 1
221	NR			0.50		
234	NR				< 1	
236	NR				< 9	
240	NR				0.21	
247	NR				< 10	
255	NR				1.47	
256	NR				< 10	
265	NR					< 0.05
283	NR					< 5
284	NR		3.12			
289	NR					0.07
296	NR					0.07
300	NR					0.17

N = 11

Table 18. *Statistical summary of reported data for standard reference water sample GWT-3 (ground-water trace constituents)--Continued*

Cr (Chromium) **µg/L**



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

	0	1	3	4	6
N =	3	1	12	8	13
Minimum =	1.68	2.00	1.19	1.37	0.94
Maximum =	4.80		3.62	3.80	6.80
Median =			2.07	1.70	1.60
F-pseudosigma =			0.63	0.73	0.42

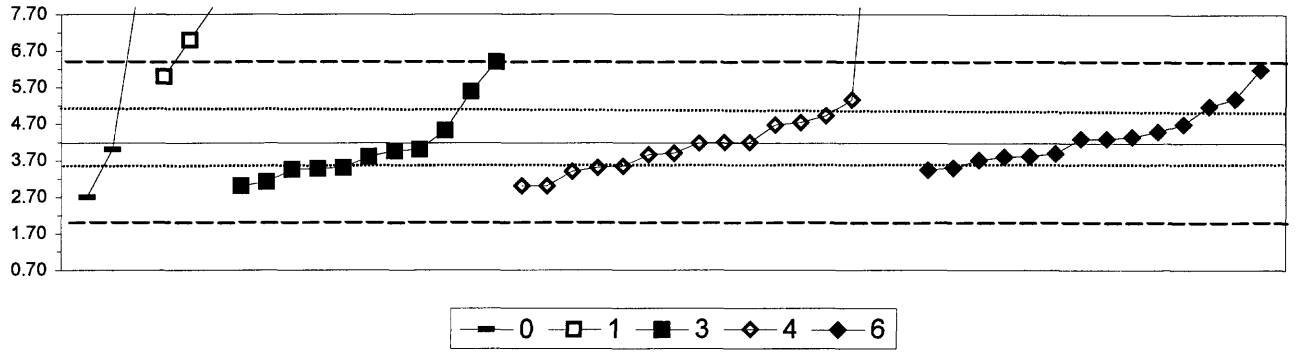
Lab	Rating	Z-value	0	1	3	4	6
1	4	0.00			1.90		
5	NR					< 4	
13	1	1.67				2.88	
23	NR				< 4		
26	2	1.30			2.66		
30.1	4	0.34					2.10
32	3	-0.51					1.60
36	NR					< 10	
48	4	0.17					2.00
69	NR				< 5		
61	4	0.17			2.00		
89	NR				< 10		
96	2	1.47			2.76		
97	4	0.41			2.14		
100	NR					< 10	
113	3	-0.91				1.37	
126	NR			< 10			
134	3	-0.82				1.42	
138	3	-0.51				1.60	
140	4	0.17		2.00			
141	0	3.24				3.80	
142	1	-1.63					0.94
145	NR					< 14	
146	NR					< 10	
151	3	-0.51					1.60
180	NR					< 3.59	
190	3	0.67			2.29		
191	3	-0.51					1.60
212	4	-0.17					1.80
215	2	1.02			2.50		
221	4	0.09			1.95		
234	2	-1.09			1.26		
235	3	-0.56			1.57		
236	NR					< 5	
240	NR					< 10	
241	4	0.05					1.93
247	NR					< 10	
249	4	-0.38	1.68				
255	2	-1.21			1.19		
259	3	-0.68				1.50	
265	3	-0.68					1.50
273	4	-0.17				1.80	
277	0	4.95	4.80				
283	NR					< 5	
284	1	1.88	3.00				
287	0	2.94			3.62		
289	1	-1.54					1.00
292	4	0.17				2.00	
296	2	-1.02					1.30
300	0	8.37					6.80

MPV =	1.90
F-pseudosigma =	0.59
N =	37
Hu =	2.29
HI =	1.50

Lab	Rating	Z-value	0	1	3	4	6
304	3	-0.92					1.36

Table 18. *Statistical summary of reported data for standard reference water sample GWT-3 (ground-water trace constituents)--Continued*

Cu (Copper) **mg/L**



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

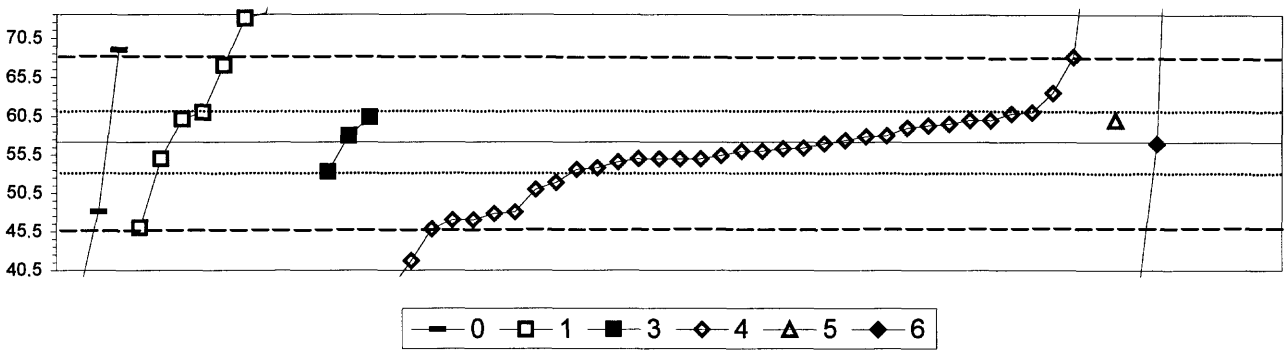
	0	1	3	4	6
N =	3	3	11	16	14
Minimum =	2.70	6.00	3.00	3.00	3.44
Maximum =	8.40	8.00	6.40	24.70	6.20
Median =			3.80	4.19	4.30
F-pseudosigma =			0.59	0.98	0.67

MPV =	4.18
F-pseudosigma =	1.14
N =	47
Hu =	5.06
HI =	3.52

Lab	Rating	Z-value	0	1	3	4	6
1	4	-0.41					3.71
5	3	-0.56				3.54	
13	NR					< 5	
23	NR				< 5		
28	4	-0.25				3.90	
30.1	3	-0.60					3.50
32	4	0.11					4.30
36	NR					< 10	
45	0	2.47		7.00			
48	1	1.77					6.20
69	NR			< 50			
81	2	-1.03			3.00		
83	2	-1.03				3.00	
85	NR			< 5			
89	NR				< 10		
96	3	-0.64			3.45		
97	4	-0.33			3.80		
100	NR					< 5	
113	3	0.66				4.93	
126	1	1.59		6.00			
133	NR					< 5	
134	3	-0.60				3.50	
138	4	0.02				4.20	
140	0	3.35		8.00			
141	4	0.02				4.20	
142	4	0.15					4.35
145	NR					< 26	
146	NR					< 25	
151	2	1.07					5.40
180	2	1.04				5.37	
190	4	-0.20			3.95		
191	3	0.88					5.19
212	4	-0.33					3.80
215	1	1.94			6.40		
220	3	-0.60			3.50		
221	4	0.30			4.52		
224	0	17.97				24.70	
234	4	0.44				4.68	
235	3	-0.61			3.48		
236	2	-1.03				3.00	
240	4	0.50				4.75	
241	4	-0.32					3.82
247	0	7.73				13.00	
249	2	-1.30	2.70				
255	4	0.00				4.18	
256	NR					< 10	
259	3	-0.68				3.40	
265	4	0.11					4.30
273	4	-0.29				3.85	
274	3	-0.93			3.12		
277	0	3.70	8.40				
283	NR					< 10	
284	4	-0.16	4.00				
287	2	1.24			5.59		
289	4	0.46					4.70
292	4	-0.16			4.00		
296	4	-0.25					3.90
300	4	0.28					4.50
304	3	-0.65					3.44

Table 18. *Statistical summary of reported data for standard reference water sample GWT-3 (ground-water trace constituents)--Continued*

Fe (Iron) **µg/L**



0. Other			4. ICP					
1. AA: direct, air			5. DCP					
3. AA: graphite furnace			6. ICP/MS					
		N =	3	9	3	35	1	7
		Minimum =	36.3	46.0	53.3	38.0	60.0	35.1
		Maximum =	69.0	90.0	60.4	89.6		282.0
		Median =		67.0		56.0		131.0
		F-pseudosigma =		10.1		4.7		47.8

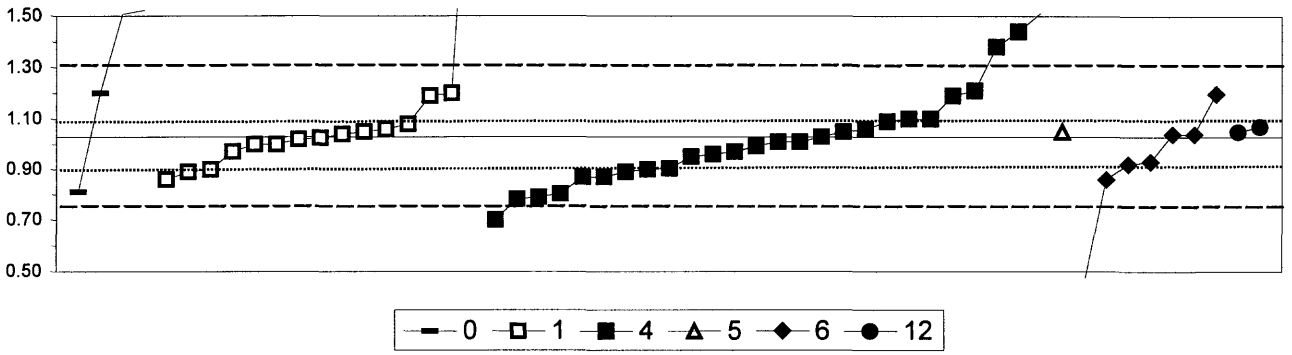
Lab	Rating	Z-value	0	1	3	4	5	6
1	4	-0.33				55.4		
5	4	0.13				57.9		
13	0	-2.83				41.7		
16	3	-0.66				53.6		
23	0	4.70		83.0				
24	3	0.66				60.8		
25	4	0.33				59.0		
26	4	-0.16				56.3		
28	1	-1.86				47.0		
30.1	NR			< 200				
30.2	0	20.75						171.0
33	3	0.51					60.0	
36	1	-1.68				48.0		
43	4	0.15				58.0		
45	1	1.79		67.0				
48	4	-0.04						57.0
59	0	16.01						145.0
69	0	2.88		73.0				
81	1	-1.86				47.0		
83	4	-0.40				55.0		
89	3	-0.71			53.3			
96	4	-0.40		55.0				
97	4	0.15			58.0			
100	0	-9.52				< 5		
109	0	3.00		73.7				
113	4	-0.40				55.0		
126	0	5.98		90.0				
133	3	0.69				61.0		
134	4	-0.47				54.6		
138	3	-0.97				51.9		
140	1	-2.04		46.0				
141	0	5.91				89.6		
142	4	-0.04				57.0		
145	4	-0.22				56.0		
146	4	0.38				59.3		
151	0	-4.03						35.1
180	1	-1.71				47.8		
190	3	0.53		60.1				
212	NR					< 100		
215	3	0.51				60.0		
220	4	-0.22				56.0		
224	0	-2.08				45.8		
234	4	-0.40				55.0		
236	4	-0.40				55.0		
240	1	1.99				68.1		
241	0	13.45						131.0
247	0	-3.50				38.0		
249	0	2.15	69.0					
254	4	-0.15				56.4		
255	4	0.04				57.4		

MPV =	57.2
F-pseudosigma =	5.5
N =	58
Hu =	61.0
HI =	53.6

Lab	Rating	Z-value	0	1	3	4	5	6
256	2	-1.13				51.0		
259	4	0.42				59.5		
265	2	1.15				63.5		
274	3	0.58			60.4			
277	1	-1.66	48.1					
283	3	-0.62				53.8		
284	0	-3.81	36.3					
287	3	0.69		61.0				
292	3	0.51				60.0		
296	0	13.27						130.0
300	0	40.98						282.0

Table 18. *Statistical summary of reported data for standard reference water sample GWT-3 (ground-water trace constituents)--Continued*

K (Potassium) **mg/L**



0. Other				5. DCP				
1. AA: direct, air				6. ICP/MS				
4. ICP				12. Flame emission				
		N =	4	15	26	1	7	2
		Minimum =	0.81	0.86	0.70	1.05	0.45	1.05
		Maximum =	150.00	2.47	1.51		1.20	1.07
		Median =		1.03	1.00		0.93	
		F-pseudosigma =		0.06	0.16		0.11	

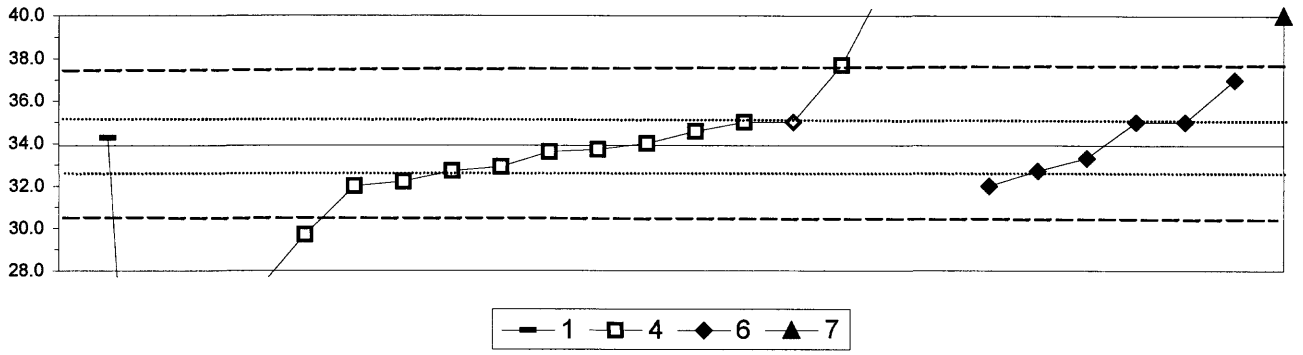
Lab	Rating	Z-value	0	1	4	5	6	12
1	3	-0.94		0.89				
5	0	2.48			1.38			
11	2	1.29			1.21			
13	2	-1.08			0.87			
16	2	1.15			1.19			
23	4	-0.10			1.01			
24	0	-2.27			0.70			
28	4	-0.45			0.96			
32	4	0.10					1.04	
33	4	0.17				1.05		
36	2	1.15		1.19				
43	3	-0.52			0.95			
45	4	0.10		1.04				
48	4	0.10					1.04	
59	2	-1.15					0.86	
64	4	0.17		1.05				
69	4	0.17						1.05
81	0	2.90			1.44			
85	4	-0.03		1.02				
89	2	-1.15		0.86				
100	NR				< 1			
109	2	1.22		1.20				
113	0	3.39			1.51			
134	4	-0.18		1.00				
138	4	-0.10			1.01			
140	4	0.00		1.03				
141	3	-0.87			0.90			
142	NR				< 1			
145	3	-0.94			0.89			
146	4	0.45			1.09			
180	4	0.17			1.05			
190	4	0.24		1.06				
191	3	-0.73					0.92	
212	NR				< 5			
221	4	0.38		1.08				
224	1	-1.54			0.80			
234	3	-0.85			0.90			
236	2	-1.08			0.87			
240	4	0.03			1.03			
241	3	-0.87		0.90				
247	4	-0.38			0.97			
249	0	1041	150.00					
254	1	-1.64			0.79			
255	4	0.24			1.06			
256	2	-1.50	0.81					
259	3	0.52			1.10			
265	3	0.52			1.10			
268	4	-0.38		0.97				
273	1	-1.69			0.78			
274	4	0.31						1.07

MPV =	1.03
F-pseudosigma =	0.14
N =	55
Hu =	1.10
HI =	0.90

Lab	Rating	Z-value	0	1	4	5	6	12
277	2	1.22	1.20					
283	4	-0.23			0.99			
284	0	3.36	1.51					
287	0	10.10		2.47				
292	4	-0.17		1.00				
296	0	-4.02					0.45	
300	2	1.20					1.20	
304	3	-0.66					0.93	

Table 18. *Statistical summary of reported data for standard reference water sample GWT-3 (ground-water trace constituents)--Continued*

Li (Lithium) **µg/L**



1. AA: direct, air
4. ICP
6. ICP/MS
7. Ion chromatography

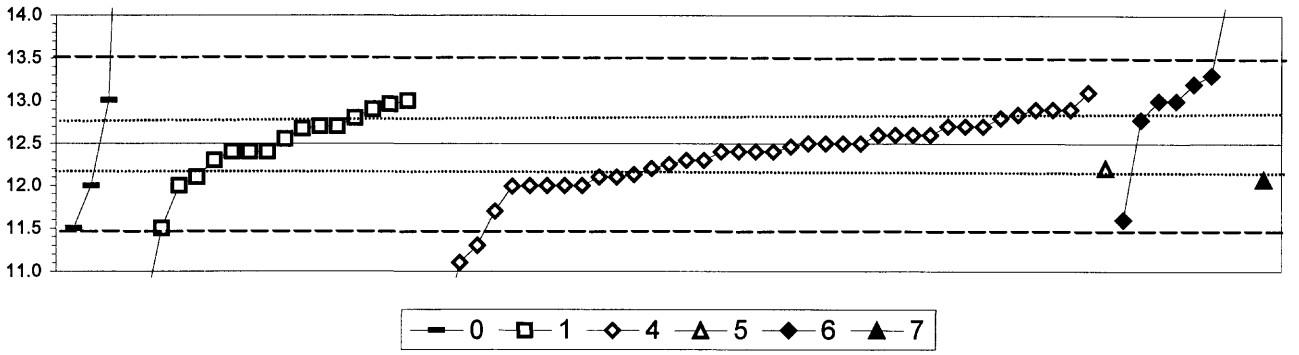
	1	4	6	7
N =	1	16	6	1
Minimum =	34.3	25.9	32.0	40.0
Maximum =		43.0	37.0	
Median =		33.7		
F-pseudosigma =		2.2		

MPV = 33.9
F-pseudosigma = 1.9
N = 24
Hu = 35.0
Hl = 32.5

Lab	Rating	Z-value	1	4	6	7
1	3	0.61		35.0		
5	3	-0.87		32.2		
16	0	-2.20		29.7		
25	4	0.08		34.0		
26	1	2.04		37.7		
30.1	3	-0.98			32.0	
32	3	0.61			35.0	
69	NR		< 50			
100	0	-4.21		25.9		
109	4	0.22	34.3			
134	4	-0.13		33.6		
142	3	-0.61		32.7		
145	3	-0.98		32.0		
151	3	-0.61			32.7	
234	4	-0.08		33.7		
236	3	0.61		35.0		
247	0	4.84		43.0		
254	4	0.38		34.6		
256	0	3.25				40.0
265	0	4.31		42.0		
273	0	-3.62		27.0		
283	4	-0.50		32.9		
289	1	1.67			37.0	
296	4	-0.29			33.3	
300	3	0.61			35.0	

Table 18. *Statistical summary of reported data for standard reference water sample GWT-3 (ground-water trace constituents)--Continued*

Mg (Magnesium) **mg/L**



0. Other
1. AA: direct, air
4. ICP
5. DCP
6. ICP/MS
7. Ion chromatography

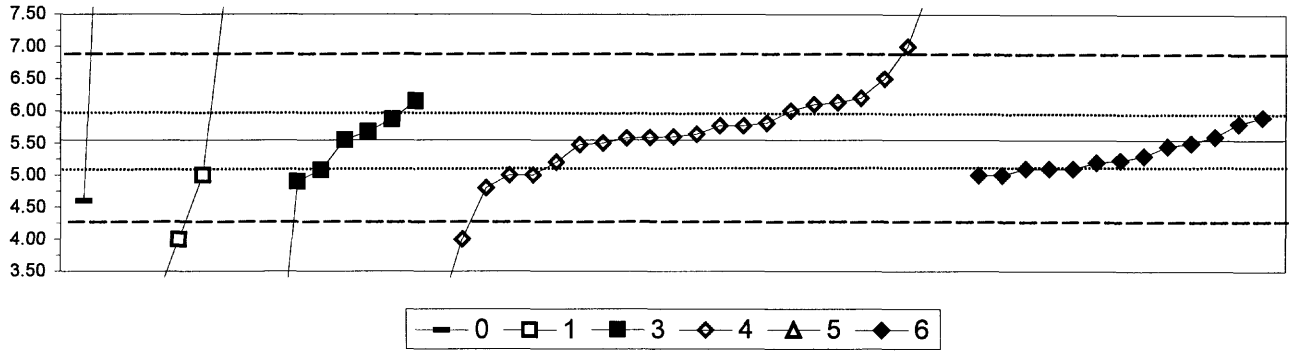
	0	1	4	5	6	7
N =	4	16	39	1	8	1
Minimum =	11.5	10.5	10.2	12.2	11.6	12.1
Maximum =	19.1	13.0	13.1		15.6	
Median =		12.5	12.4		13.1	
F-pseudosigma =		0.4	0.4		0.7	

MPV = 12.5
F-pseudosigma = 0.5
Rating Criterion = 0.6 **
N = 69
Hu = 12.8
HI = 12.1

Lab	Rating	Z-value	0	1	4	5	6	7
1	4	-0.32			12.3			
5	3	-0.80			12.0			
11	4	0.00			12.5			
13	3	0.96			13.1			
16	4	-0.40			12.3			
23	2	-1.28			11.7			
24	4	-0.16			12.4			
25	3	0.64			12.9			
28	4	0.32			12.7			
30.1	4	-0.16		12.4				
30.2	3	0.80					13.0	
32	2	1.12					13.2	
33	4	-0.48				12.2		
36	1	-1.93			11.3			
43	3	-0.80			12.0			
45	3	0.80		13.0				
48	2	1.28					13.3	
59	3	0.64		12.9				
64	4	0.48		12.8				
68	4	0.32			12.7			
69	3	-0.64		12.1				
76	4	0.08		12.6				
81	3	-0.64			12.1			
83	4	-0.48			12.2			
85	4	-0.32		12.3				
89	4	0.32		12.7				
100	0	-3.69			10.2			
109	4	0.27		12.7				
113	3	0.64			12.9			
121	4	0.00			12.5			
133	3	-0.80			12.0			
134	3	-0.59			12.1			
138	4	0.00			12.5			
140	4	0.32		12.7				
141	0	-2.25			11.1			
142	3	-0.64			12.1			
145	4	-0.16			12.4			
146	4	0.16			12.6			
180	4	0.16			12.6			
190	0	-3.21		10.5				
191	4	0.45					12.8	
212	4	0.16			12.6			
215	3	0.64			12.9			
220	4	-0.32			12.3			
221	4	-0.16		12.4				
224	3	-0.82			12.0			
234	4	-0.16			12.4			
235	2	-1.44					11.6	
236	4	-0.06			12.5			
240	4	0.16			12.6			
241	4	-0.16		12.4				
247	3	-0.80			12.0			
254	3	0.55			12.8			
255	4	0.48			12.8			
256	3	-0.69						12.1
258	3	0.82	13.0					
259	4	0.00			12.5			
265	4	0.32			12.7			
268	1	-1.61		11.5				
273	0	-3.69			10.2			
274	0	10.63	19.1					
277	1	-1.61	11.5					
283	4	-0.16			12.4			
284	3	-0.80	12.0					
287	3	0.74		13.0				
289	0	2.89					14.3	
292	3	-0.80		12.0				
296	3	0.80					13.0	
300	0	5.04					15.6	

Table 18. *Statistical summary of reported data for standard reference water sample GWT-3 (ground-water trace constituents)--Continued*

Mn (Manganese) µg/L



0. Other				4. ICP				
1. AA: direct, air				5. DCP				
3. AA: graphite furnace				6. ICP/MS				
		N =	3	5	7	22	1	13
		Minimum =	4.60	3.00	1.06	2.80	10.00	5.00
		Maximum =	13.10	16.21	6.15	8.00		5.90
		Median =			5.55	5.62		5.23
		F-pseudosigma =			0.58	0.67		0.30

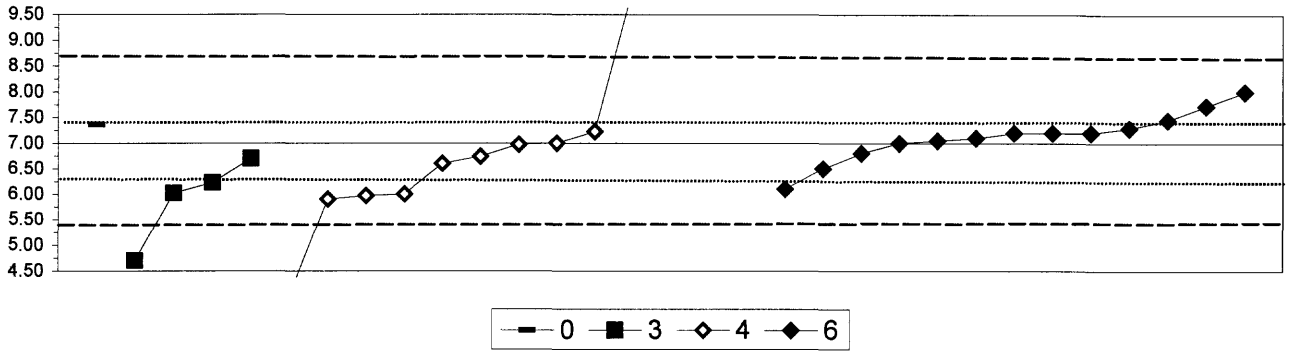
Lab	Rating	Z-value	0	1	3	4	5	6
1	4	-0.37						5.30
5	4	0.33				5.77		
13	0	-4.08				2.80		
16	3	-0.52				5.20		
23	4	0.00			5.55			
24	3	0.82				6.10		
25	0	2.15				7.00		
30.1	3	-0.67						5.10
32	4	0.07						5.60
33	0	6.60					10.00	
36	NR					< 5		
43	NR					< 10		
45	0	3.63		8.00				
48	3	-0.67						5.10
69	NR			< 20				
81	NR					< 5		
83	2	-1.11				4.80		
89	3	-0.96			4.90			
96	NR			< 20				
97	3	0.89			6.15			
100	0	-6.75				< 1		
109	0	15.80		16.21				
113	4	-0.12				5.47		
121	0	3.63				8.00		
126	0	-2.30		4.00				
134	4	0.06				5.59		
138	4	0.07				5.60		
140	3	-0.82		5.00				
141	3	0.96				6.20		
142	0	-2.30				4.00		
145	3	-0.82				5.00		
146	NR					< 10		
151	3	-0.82						5.00
180	3	0.86				6.13		
190	0	-6.66			1.06			
191	4	-0.47						5.23
212	4	-0.07						5.50
215	2	1.41				6.50		
221	4	0.47			5.87			
234	4	0.39				5.81		
235	3	-0.70			5.08			
236	3	-0.82				5.00		
240	4	0.33				5.77		
241	3	-0.52						5.20
247	NR					< 10		
249	0	10.30	12.50					
255	4	0.04				5.58		
256	NR					< 10		
259	4	-0.07				5.50		
265	4	0.37						5.80

MPV =	5.55
F-pseudosigma =	0.67
N =	51
Hu =	5.95
Hl =	5.04

Lab	Rating	Z-value	0	1	3	4	5	6
274	4	0.19			5.68			
277	2	-1.41	4.60					
283	4	0.13				5.64		
284	0	11.19	13.10					
287	0	-3.78		3.00				
289	3	0.52						5.90
292	3	0.67				6.00		
296	3	-0.67						5.10
300	4	-0.15						5.45
304	3	-0.82						5.00

Table 18. *Statistical summary of reported data for standard reference water sample GWT-3 (ground-water trace constituents)--Continued*

Mo (Molybdenum) µg/L



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

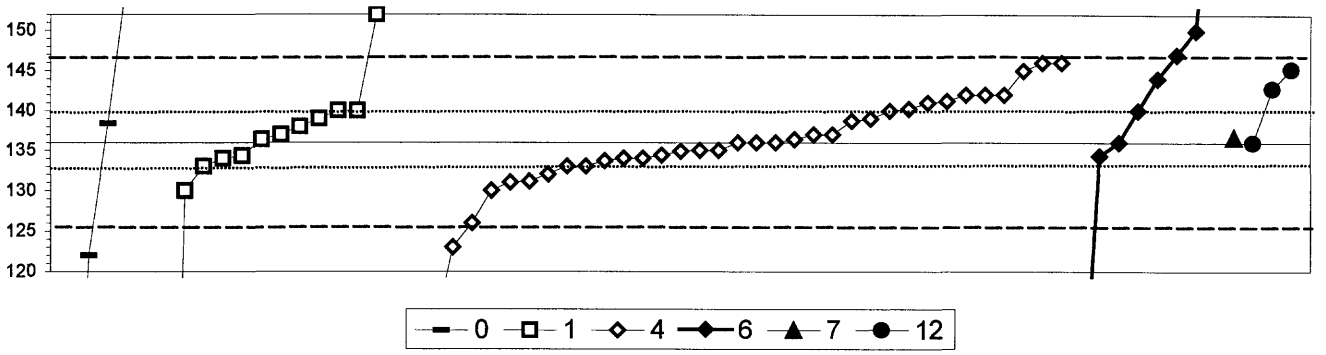
	1	4	13	13
N =				
Minimum =	7.36	4.70	4.00	6.10
Maximum =		6.70	47.00	8.00
Median =			6.97	7.20
F-pseudosigma =			2.97	0.21

MPV =	7.00
F-pseudosigma =	0.71
N =	31
Hu =	7.33
Hl =	6.37

Lab	Rating	Z-value	0	3	4	6
1	3	-1.08		6.23		
5	0	7.72			12.50	
13	NR				< 20	
16	2	-1.54			5.90	
23	0	4.21			10.00	
30.1	4	0.14				7.10
32	4	0.28				7.20
36	NR				< 10	
48	4	0.28				7.20
97	2	-1.38		6.02		
100	0	33.85			31.10	
109	0	-3.23		4.70		
134	4	-0.37			6.74	
138	3	-0.56			6.60	
141	2	-1.40			6.00	
142	4	0.41				7.29
145	NR				< 11	
146	NR				< 10	
151	4	-0.28				6.80
180	4	-0.04			6.97	
221	4	-0.42		6.70		
235	3	0.63				7.45
236	0	-4.21			4.00	
240	2	-1.45			5.97	
241	4	0.07				7.05
247	0	56.18			47.00	
249	3	0.51	7.36			
255	4	0.31			7.22	
256	NR				< 10	
259	4	0.00			7.00	
265	4	0.00				7.00
283	4	0.28				7.20
289	2	1.40				8.00
292	0				< 5	
296	2	-1.26				6.10
300	2	1.01				7.72
304	3	-0.70				6.50

Table 18. *Statistical summary of reported data for standard reference water sample GWT-3 (ground-water trace constituents)--Continued*

Na (Sodium) **mg/L**



0. Other			6. ICP/MS					
1. AA: direct, air			7. Ion chromatography					
4. ICP			12. Flame emission					
		N =	4	13	36	8	1	3
		Minimum =	71	13	75	97	137	136
		Maximum =	157	152	146	173		145
		Median =		136	136	142		
		F-pseudosigma =		4	6	10		

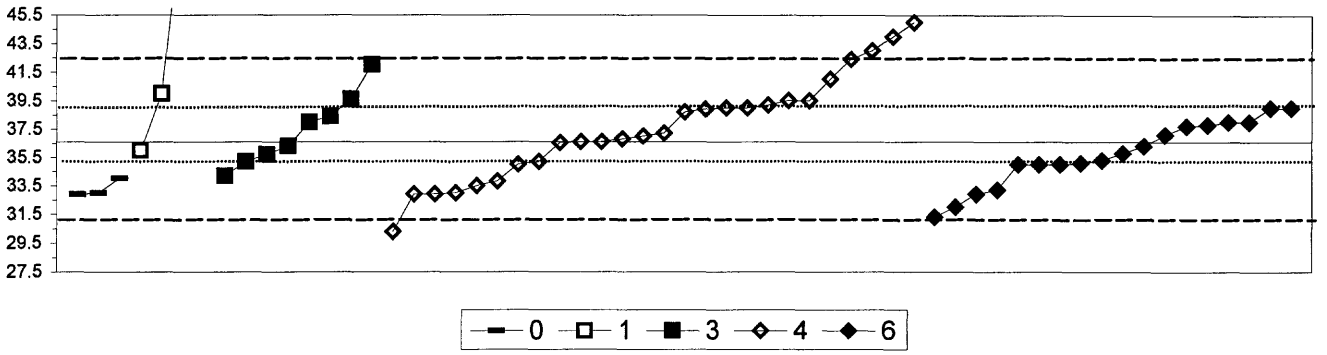
Lab	Rating	Z-value	0	1	4	6	7	12
1	3	-0.59			132			
5	4	0.15			137			
11	2	-1.47			126			
13	4	-0.44			133			
16	4	-0.34			134			
23	0	-8.93			75			
24	4	0.44			139			
25	2	1.32			145			
28	4	0.06			136			
30.1	3	1.00						143
30.2	4	0.00				136		
32	3	0.59				140		
33	4	0.35	138					
36	3	0.88			142			
43	4	-0.29			134			
45	4	0.15		137				
48	1	1.62				147		
59	2	1.18				144		
64	3	0.59		140				
69	4	0.00						136
81	4	-0.15			135			
83	4	-0.16			135			
85	4	-0.44		133				
89	3	-0.88		130				
97	4	0.44		139				
100	0	-3.53			112			
109	4	-0.24		134				
113	3	0.74			141			
121	3	-0.74			131			
134	4	0.06		136				
138	4	0.00			136			
140	4	0.29		138				
141	1	-1.91			123			
142	4	-0.29			134			
145	4	0.00			136			
146	2	1.47			146			
180	4	0.15			137			
190	0	-15.88		28				
191	4	-0.25				134		
212	4	0.00			136			
215	3	0.59			140			
220	4	-0.23			134			
224	3	0.62			140			
234	3	0.88			142			
236	3	-0.71			131			
240	4	-0.15			135			
241	0	2.35		152				
247	3	-0.88			130			
249	0	3.09	157					
254	3	0.76			141			

MPV =	136
F-pseudosigma =	5
Rating Criterion =	7 **
N =	65
Hu =	140
HI =	133

Lab	Rating	Z-value	0	1	4	6	7	12
255	3	0.88			142			
256	4	0.08					137	
259	4	0.40			139			
265	4	-0.44			133			
268	4	-0.29		134				
273	0	-3.68			111			
274	2	1.36						145
277	0	-2.06	122					
283	2	1.47			146			
284	0	-9.60	71					
287	3	0.59		140				
289	0	2.06				150		
292	0	-18.10		13				
296	0	-5.74				97		
300	0	5.50				173		

Table 18. *Statistical summary of reported data for standard reference water sample GWT-3 (ground-water trace constituents)--Continued*

Ni (Nickel) **µg/L**



0. Other				4. ICP			
1. AA: direct, air				6. ICP/MS			
3. AA: graphite furnace							
		N =	3	4	8	26	18
		Minimum =	32.9	36.0	34.2	30.3	31.3
		Maximum =	34.0	60.0	42.0	45.0	39.0
		Median =			37.2	37.1	35.6
		F-pseudosigma =			2.6	3.3	2.1

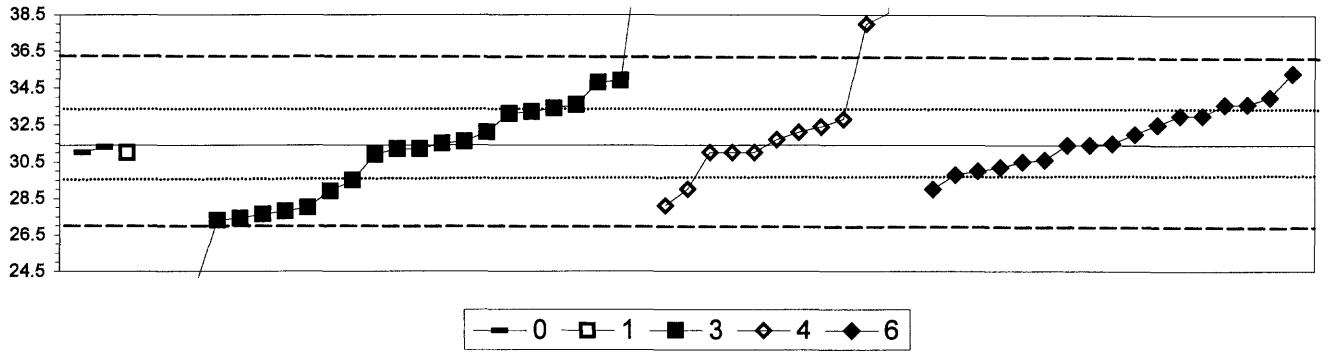
Lab	Rating	Z-value	0	1	3	4	6
1	2	-1.15					33.2
5	1	1.96				42.4	
11	3	0.98				39.5	
13	2	-1.25				32.9	
16	2	-1.05				33.5	
23	4	0.47			38.0		
24	3	0.98				39.5	
25	4	0.13				37.0	
26	3	-0.81			34.2		
28	4	0.20				37.2	
30.1	3	-0.54					35.0
32	3	0.81					39.0
36	4	-0.47				35.2	
48	3	-0.54					35.0
59	1	-1.55					32.0
69	0	5.53		53.0			
76	4	-0.10					36.3
83	2	1.48				41.0	
89	2	1.01			39.6		
96	4	-0.30			35.7		
97	1	1.82			42.0		
100	0	-10.53				< 5	
113	3	-0.54				35.0	
126	4	-0.47			35.2		
133	0	-2.12				30.3	
134	4	-0.02				36.5	
138	3	0.71				38.7	
140	4	-0.20		36.0			
141	2	-1.25				32.9	
142	1	-1.79					31.3
145	3	0.81				39.0	
146	3	0.88				39.2	
151	2	-1.25					32.9
180	NR					< 31.2	
190	3	0.61			38.4		
191	3	-0.51					35.1
212	3	-0.54					35.0
215	0	2.83				45.0	
220	0	7.89		60.0			
221	4	-0.10			36.3		
234	4	0.00				36.6	
235	4	0.37					37.7
236	3	0.81				39.0	
240	3	0.78				38.9	
241	4	0.17					37.1
247	0	2.16				43.0	
249	3	-0.88	34.0				
254	4	0.00				36.6	
255	3	-0.94				33.8	
256	2	-1.21				33.0	

MPV =	36.6
F-pseudosigma =	3.0
N =	59
Hu =	39.0
Hl =	35.0

Lab	Rating	Z-value	0	1	3	4	6
259	4	0.07				36.8	
265	4	0.47					38.0
277	2	-1.25	32.9				
283	4	-0.27					35.8
284	2	-1.21	33.0				
287	2	1.15		40.0			
289	3	0.81					39.0
292	0	2.50				44.0	
296	4	-0.44					35.3
300	4	0.40					37.8
304	4	0.47					38.0

Table 18. *Statistical summary of reported data for standard reference water sample GWT-3 (ground-water trace constituents)--Continued*

Pb (Lead) µg/L



0. Other				4. ICP			
1. AA: direct, air				6. ICP/MS			
3. AA: graphite furnace							
		N =	2	1	23	12	17
		Minimum =	31.0	31.0	21.1	28.1	29.0
		Maximum =	31.3		44.0	56.0	35.3
		Median =			31.2	31.9	31.5
		F-pseudosigma =			4.0	3.3	1.9

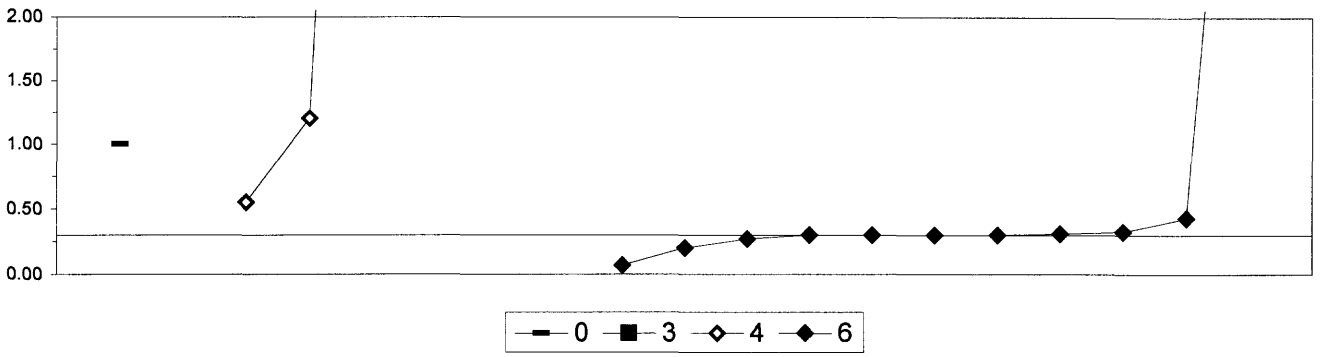
Lab	Rating	Z-value	0	1	3	4	6
1	4	0.47					32.5
5	4	0.04			31.5		
11	4	0.13				31.7	
13	2	1.46			34.8		
23	0	2.83				38.0	
26	3	0.86			33.4		
30.1	2	-1.03					29.0
32	4	0.00					31.4
34	1	-1.71			27.4		
36	2	-1.41				28.1	
45	2	-1.07			28.9		
48	3	0.94					33.6
59	1	1.67					35.3
69	3	0.94			33.6		
76	3	0.95					33.6
81	2	-1.46			28.0		
89	0	-3.38			23.5		
96	4	-0.09			31.2		
97	3	0.77			33.2		
100	2	1.50			34.9		
109	1	-1.61			27.6		
113	4	0.30			32.1		
126	4	-0.09			31.2		
133	0	3.08				38.6	
134	4	-0.17				31.0	
138	3	0.60				32.8	
140	4	-0.17		31.0			
141	4	-0.17				31.0	
142	4	0.00					31.4
145	NR					< 84	
146	4	0.43				32.4	
151	3	-0.69					29.8
180	NR					< 36.3	
190	4	-0.21			30.9		
191	4	-0.34					30.6
212	3	0.69					33.0
215	0	5.40			44.0		
221	1	-1.76			27.3		
224	0	-4.28			21.4		
234	4	0.09			31.6		
235	3	-0.81			29.5		
236	2	-1.03				29.0	
240	4	0.30				32.1	
241	3	-0.60					30.0
247	NR					< 50	
249	4	-0.04	31.3				
255	3	0.73			33.1		
256	0	10.54				56.0	
259	4	-0.17				31.0	
265	4	-0.39					30.5

MPV =	31.4
F-pseudosigma =	2.3
N =	55
Hu =	33.1
HI =	29.9

Lab	Rating	Z-value	0	1	3	4	6
274	0	-4.40			21.1		
283	3	0.69					33.0
284	4	-0.17	31.0				
287	1	-1.54			27.8		
289	4	0.26					32.0
296	3	-0.51					30.2
300	2	1.11					34.0
304	4	0.04					31.5

Table 18. *Statistical summary of reported data for standard reference water sample GWT-3 (ground-water trace constituents)--Continued*

Sb (Antimony) **µg/L**



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

	0	3	4	6
N =	1	1	6	11
Minimum =	1.00	19.10	0.55	0.07
Maximum =			420.00	6.00
Median =				0.30
F-pseudosigma =				0.02

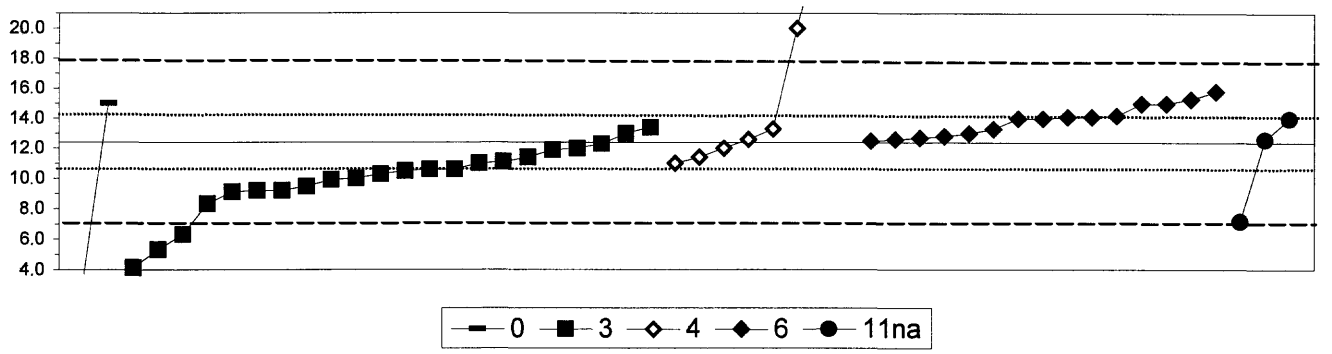
Lab	Rating	Z-value	0	3	4	6
1	NR			< 1		
5	NR				< 20	
13	NR			< 5		
23	NR				10.00	
32	NR					0.20
36	NR				< 10	
48	NR					0.30
69	NR			< 5		
89	NR			< 2		
96	NR			19.10		
100	NR			< 2		
113	NR				< 2.2	
134	NR			< 1		
138	NR					< 0.2
141	NR				0.55	
142	NR					0.07
146	NR				< 20	
151	NR					0.30
180	NR				< 46.1	
212	NR					< 1
234	NR				420.00	
235	NR					0.33
236	NR				15.00	
240	NR				1.20	
241	NR					0.31
247	NR				16.00	
255	NR				< 7.7	
256	NR				< 10	
265	NR					0.30
283	NR					< 1
284	NR		1.00			
289	NR					6.00
292	NR			< 3		
296	NR					0.30
300	NR					0.43
304	NR					0.27

MPV = Estimated

An estimated concentration based on determinations by Inductively Coupled Plasma - Mass Spectrometry = 0.30
F-psuedosigma = 0.02
N = 11

Table 18. *Statistical summary of reported data for standard reference water sample GWT-3 (ground-water trace constituents)--Continued*

Se (Selenium) **µg/L**



0. Other
3. AA: graphite furnace
4. ICP
6. ICP/MS
11na. AA: hydride NaBH4

N =	2	22	8	15	3	0
Minimum =	3.7	4.1	11.0	12.5	7.2	
Maximum =	15.0	13.4	62.0	15.8	14.0	
Median =		10.4	13.0	14.0		
F-pseudosigma =		1.6	8.7	1.3		

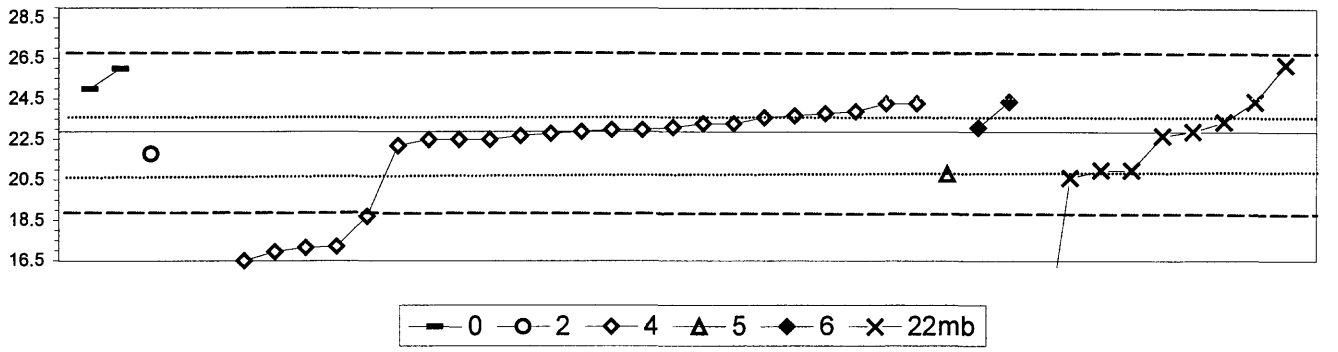
Lab	Rating	Z-value	0	3	4	6	11na
1	4	-0.47		11.1			
5	0	-2.99		4.1			
13	2	-1.16		9.2			
23	0	2.75			20.0		
26	4	0.07					12.6
30.1	3	0.94				15.0	
32	4	0.07				12.6	
34	0	-2.21		6.3			
36	3	-0.51			11.0		
45	3	-0.90		9.9			
48	4	0.14				12.8	
59	3	0.65				14.2	
69	4	-0.18		11.9			
81	0	-2.57		5.3			
85	3	0.58					14.0
89	1	-1.90					7.2
96	2	-1.48		8.3			
97	3	-0.65		10.6			
100	4	-0.14		12.0			
109	3	-0.77		10.3			
113	3	-0.51		11.0			
133	4	0.22		13.0			
134	2	-1.19		9.1			
138	4	0.07			12.6		
141	4	-0.36			11.4		
142	2	1.23				15.8	
146	NR				< 10		
151	4	0.33				13.3	
180	NR				< 70.0		
190	3	-0.65		10.6			
191	3	0.94				15.0	
212	3	0.58				14.0	
215	2	-1.16		9.2			
220	4	-0.04		12.3			
221	4	-0.36		11.4			
234	3	-0.69		10.5			
235	4	0.36		13.4			
236	0	5.28			27.0		
240	4	0.33			13.3		
241	3	0.61				14.1	
247	0	17.94			62.0		
249	0	-3.15	3.7				
255	2	-1.06		9.5			
259	4	-0.14			12.0		
265	2	1.05				15.3	
283	4	0.04				12.5	
284	3	0.94	15.0				
289	3	0.58				14.0	
292	3	-0.87		10.0			
296	4	0.11				12.7	

MPV =	12.4
F-pseudosigma =	2.8
N =	50
Hu =	14.0
Hl =	10.3

Lab	Rating	Z-value	0	3	4	6	11na
300	3	0.61				14.1	
304	4	0.22				13.0	

Table 18. *Statistical summary of reported data for standard reference water sample GWT-3 (ground-water trace constituents)--Continued*

SiO_2 (Silica) **mg/L**



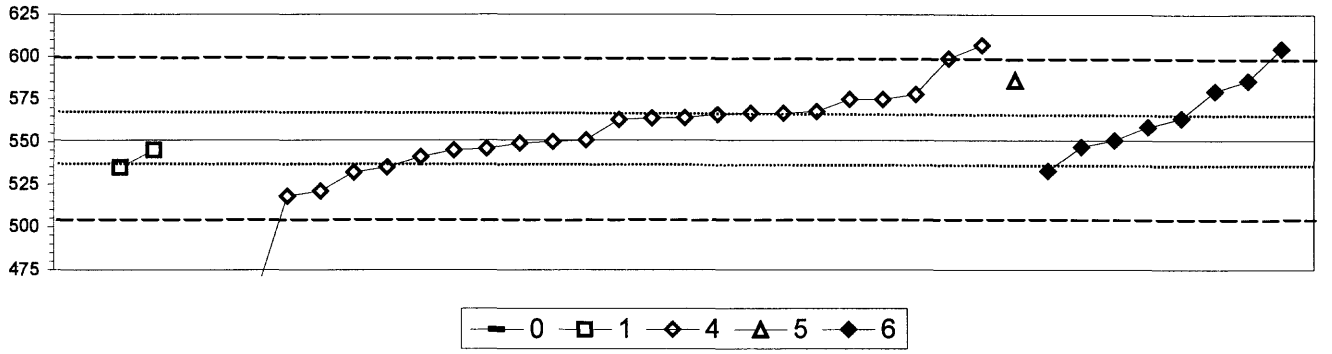
0. Other
2. AA: direct, nitrous oxide
4. ICP
5. DCP
6. ICP/MS
22mb. Color: molybdate blue

		N =	2	1	25	1	2	9
		Minimum =	25.0	21.8	10.1	20.8	23.1	10.2
		Maximum =	26.0		24.3		24.4	26.2
		Median =			22.8			22.7
		F-pseudosigma =			3.4			1.2
Lab	Rating	Z-value	0	2	4	5	6	22mb
1	4	-0.17			22.5			
5	4	0.47			23.8			
11	0	-3.11			16.5			
13	4	0.22			23.3			
16	0	-6.25			10.1			
24	3	0.71			24.3			
25	0	-5.96			10.7			
32	3	0.76					24.4	
33	2	-1.01				20.8		
36	3	-0.91						21.0
43	4	0.07			23.0			
59	3	0.76						24.4
64	4	0.02			22.9			
83	4	-0.02			22.8			
89	4	0.27						23.4
97	4	-0.07						22.7
100	1	-2.04			18.7			
121	4	-0.17			22.5			
134	4	-0.07			22.7			
140	4	0.03						22.9
142	4	0.42			23.7			
145	4	0.37			23.6			
190	0	-6.21						10.2
191	4	0.12					23.1	
212	3	0.71			24.3			
215	0	-2.80			17.2			
234	4	0.07			23.0			
236	0	-2.77			17.2			
240	3	0.52			23.9			
241	3	-0.52		21.8				
247	1	1.64						26.2
249	2	1.05	25.0					
254	4	0.22			23.3			
256	3	-0.91						21.0
259	4	-0.32			22.2			
265	4	0.12			23.1			
273	0	-2.90			16.9			
274	2	-1.10						20.6
283	4	-0.17			22.5			
284	1	1.55	26.0					

MPV =	22.9
F-pseudosigma =	2.0
N =	40
Hu =	23.7
Hl =	20.9

Table 18. *Statistical summary of reported data for standard reference water sample GWT-3 (ground-water trace constituents)--Continued*

Sr (Strontium) **µg/L**



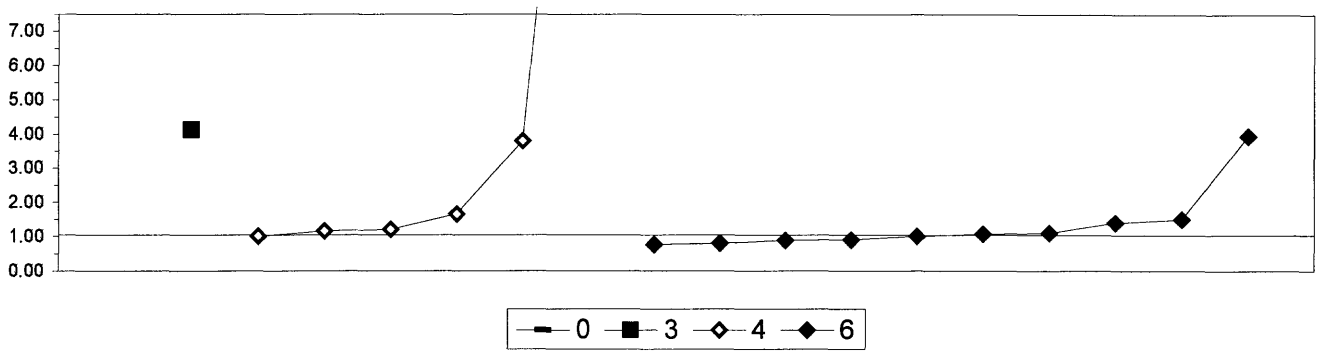
0. Other
1. AA: direct, air
4. ICP
5. DCP
6. ICP/MS

		N =	1	2	25	1	8
		Minimum =	368	535	422	586	533
		Maximum =		545	607		605
		Median =			551		562
		F-pseudosigma =			24		25
Lab	Rating	Z-value	0	1	4	5	6
1	3	0.58			567		
5	4	0.47			564		
11	0	-3.38			458		
16	4	-0.22			545		
24	0	2.03			607		
25	1	1.74			599		
28	4	0.48			564		
30.1	4	-0.15					547
32	2	1.05					580
33	2	1.27				586	
100	0	-3.74			448		
109	3	-0.59		535			
113	2	-1.09			521		
121	3	0.62			568		
134	4	-0.07			549		
138	3	0.98			578		
141	3	0.58			567		
142	4	0.00			551		
145	3	0.54			566		
151	4	0.47					564
191	4	0.29					559
220	4	-0.22		545			
234	4	0.44			563		
235	1	1.96					605
236	4	-0.36			541		
240	3	0.87			575		
247	3	-0.69			532		
254	3	0.87			575		
256	3	-0.58			535		
259	4	-0.18			546		
265	4	-0.04			550		
273	0	-4.68			422		
283	2	-1.20			518		
284	0	-6.64	368				
289	2	1.27					586
296	3	-0.65					533
300	4	0.00					551

MPV =	551
F-pseudosigma =	24
Rating Criterion =	28 **
N =	37
Hu =	568
Hl =	535

Table 18. *Statistical summary of reported data for standard reference water sample GWT-3 (ground-water trace constituents)--Continued*

V (Vanadium) **µg/L**



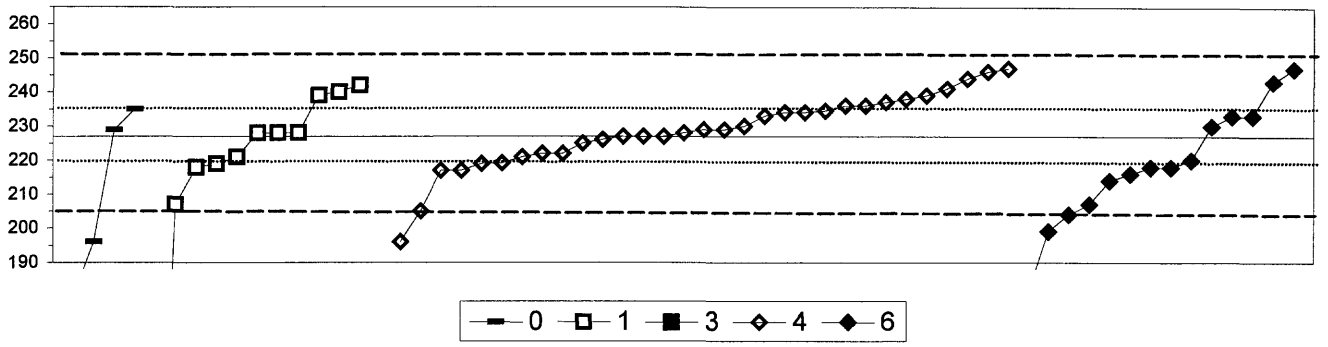
0. Other				6. ICP/MS		
3. AA: graphite furnace						
4. ICP						
		N =	1	1	6	10
		Minimum =	730	4.14	1.00	0.76
		Maximum =			22.00	3.95
		Median =				1.04
		F-pseudosigma =				0.38
Lab	Rating	Z-value	0	3	4	6
1	NR				1.15	
5	NR				< 4	
13	NR				< 20	
28	NR				3.80	
30.1	NR					1.10
32	NR					0.90
36	NR				< 10	
48	NR					0.80
89	NR			4.14		
100	NR				< 5	
134	NR				< 1	
138	NR				1.00	
141	NR				1.65	
142	NR					0.76
145	NR				< 18	
146	NR				< 10	
180	NR				< 8.07	
191	NR					1.07
212	NR					< 5
215	NR				22.00	
234	NR				< 1	
236	NR				< 7	
240	NR				< 50	
241	NR					1.50
247	NR				< 10	
255	NR				1.20	
256	NR				< 10	
265	NR					1.40
283	NR				< 20	
284	NR		730			
289	NR					< 1
296	NR					0.88
300	NR					3.95
304	NR					1.00

MPV = Estimated

An estimated concentration based on determinations by Inductively Coupled Plasma - Mass Spectrometry = 1.04
F-psuedosigma = 0.38
N = 10

Table 18. *Statistical summary of reported data for standard reference water sample GWT-3 (ground-water trace constituents)--Continued*

Zn (Zinc) **µg/L**



0. Other				4. ICP				
1. AA: direct, air				6. ICP/MS				
3. AA: graphite furnace								
		N =	4	11	1	31	14	
		Minimum =	180	74	16	196	181	
		Maximum =	235	242		247	247	
		Median =		228		229	218	
		F-pseudosigma =		11		10	19	

Lab	Rating	Z-value	0	1	3	4	6
1	1	-1.88					204
5	3	0.57				234	
11	3	0.82				237	
13	4	0.49				233	
16	4	0.00				227	
23	1	-1.64		207			
24	3	0.98				239	
25	1	1.55				246	
26	4	0.16				229	
30.1	3	-0.74					218
32	1	-1.64					207
36	3	-0.82				217	
45	2	1.23		242			
48	0	-2.29					199
59	4	0.49					233
69	3	-0.65		219			
83	3	-0.65				219	
85	4	0.08		228			
89	4	-0.49		221			
96	3	0.98		239			
100	2	1.39				244	
113	4	0.08				228	
126	2	1.06		240			
133	3	0.74				236	
134	3	0.61				235	
138	4	0.00				227	
140	4	0.08		228			
141	0	-2.53				196	
142	0	-3.76					181
145	3	0.74				236	
146	4	0.25				230	
151	2	-1.06					214
180	4	0.00				227	
190	3	-0.74		218			
191	2	1.31					243
212	3	-0.57					220
215	3	0.90				238	
220	3	-0.64				219	
221	0	-12.53		74			
224	0	-2.53	196				
234	3	-0.82				217	
235	4	0.49					233
236	4	-0.49				221	
240	4	-0.16				225	
241	4	0.25					230
247	4	-0.41				222	
249	4	0.16	229				
254	4	-0.08				226	
255	3	0.57				234	
256	1	-1.80				205	

MPV =	227
F-pseudosigma =	12
N =	61
Hu =	235
HI =	218

Lab	Rating	Z-value	0	1	3	4	6
259	4	0.16				229	
265	4	-0.41				222	
274	0	-17.24			16		
277	0	-3.84	180				
283	1	1.64				247	
284	3	0.65	235				
287	4	0.08		228			
289	1	1.64					247
292	2	1.14				241	
296	3	-0.74					218
300	3	-0.90					216

Table 19. *Statistical summary of reported data for standard reference sample GWM-3 (ground-water major constituents)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

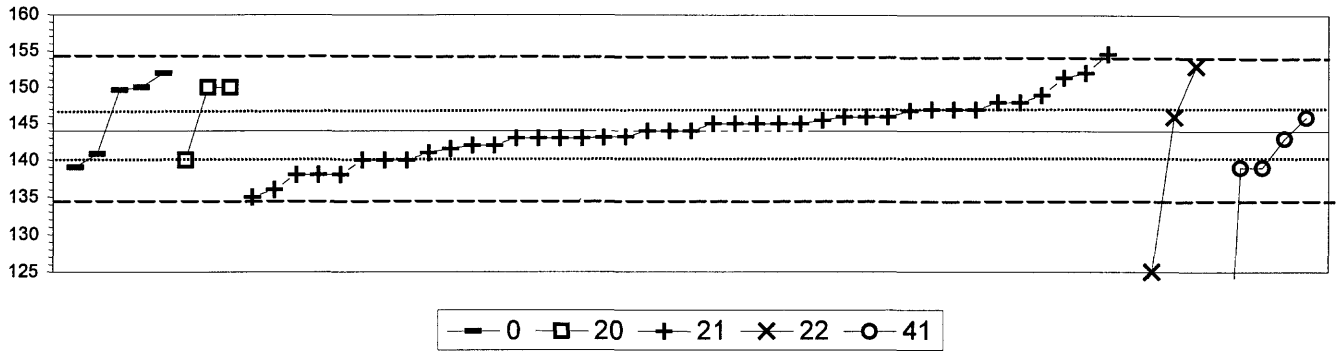
0. Other/Not reported		
1. AA: direct, air	=	atomic absorption: direct, air
2. AA: direct, N_2O	=	atomic absorption: direct, nitrous oxide
3. AA: graphite furnace	=	atomic absorption: graphite furnace
4. ICP	=	inductively coupled plasma
5. DCP	=	direct current plasma
6. ICP/MS	=	inductively coupled plasma / mass spectrometry
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)
51. Turbidimetric	=	turbidimetric: (precipitate specified)

Abbreviations and symbols

N	=	number of analyses--(excluding less than values)
MPV	=	most probable value
F-pseudosigma	=	nonparametric statistic deviation
Hu	=	upper hinge value
Hl	=	lower hinge value
µg/L	=	micrograms per liter
mg/L	=	milligrams per liter
µS/cm	=	microsiemens per centimeter at 25^0 C
Lab	=	laboratory code number
NR	=	not rated, less than value reported or insufficient data
<	=	less than

Table 19. *Statistical summary of reported data for standard reference water sample GWM-3 (ground-water major constituents)--Continued*

Alkalinity (as $CaCO_3$) **mg/L**



0. Other	22. Colorimetric
20. Titrate: colorimetric	41. Direct reading
21. Titrate: electrometric	

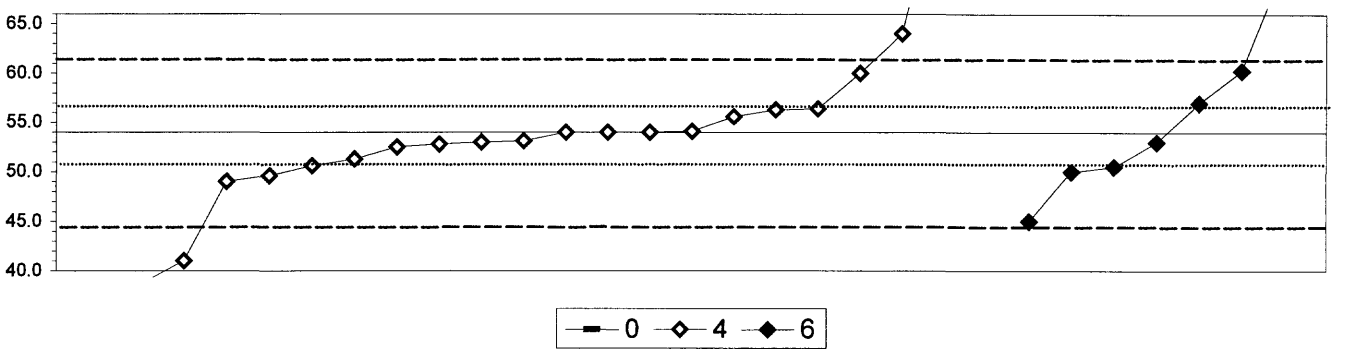
		N =	5	3	40	4	5
		Minimum =	139	140	135	119	82
		Maximum =	152	150	155	153	146
		Median =			144		
		F-pseudosigma =			3		
Lab	Rating	Z-value	0	20	21	22	41
1	4	0.42			147		
11	3	-0.83			138		
13	2	-1.11			136		
16	3	-0.83			138		
23	3	-0.56			140		
24	4	0.28			146		
25	4	0.00			144		
26	4	0.00			144		
32	3	0.83	150				
33	4	0.21			146		
36	4	-0.14			143		
43	4	0.14			145		
45	4	-0.42			141		
48	0	-3.47				119	
59	4	-0.14					143
68	2	1.25				153	
69	4	0.28				146	
81	4	-0.14			143		
83	3	0.78	150				
85	3	0.56			148		
89	4	0.28			146		
97	2	1.03			151		
100	4	0.42			147		
109	2	1.12			152		
113	3	-0.56			140		
133	4	-0.14			143		
134	4	0.27					146
138	3	0.69			149		
141.1	4	0.42			147		
142	4	0.28			146		
145	0	-2.64				125	
146	4	0.14			145		
180	3	-0.69					139
190	3	-0.69					139
212	4	-0.28			142		
215	4	-0.14			143		
220	4	-0.11			143		
224	4	0.00			144		
234	3	0.83		150			
236	4	0.39			147		
240	2	-1.25			135		
241	4	0.14			145		
247	4	0.14			145		
255	3	0.56			148		
256	3	-0.56		140			
258	4	-0.44	141				
259	4	-0.28			142		
262	4	-0.13			143		
265	0	-8.61					82
268	4	0.14			145		

MPV =	144
F-pseudosigma =	5
Rating Criterion =	7 **
N =	57
Hu =	147
HI =	140

Lab	Rating	Z-value	0	20	21	22	41
270	3	0.83		150			
274	2	1.48			155		
277	2	1.11	152				
283	3	-0.56			140		
284	3	-0.69	139				
287	3	-0.83			138		
292	4	-0.35			142		

Table 19. *Statistical summary of reported data for standard reference water sample GWM-3 (ground-water major constituents)--Continued*

B (Boron) µg/L



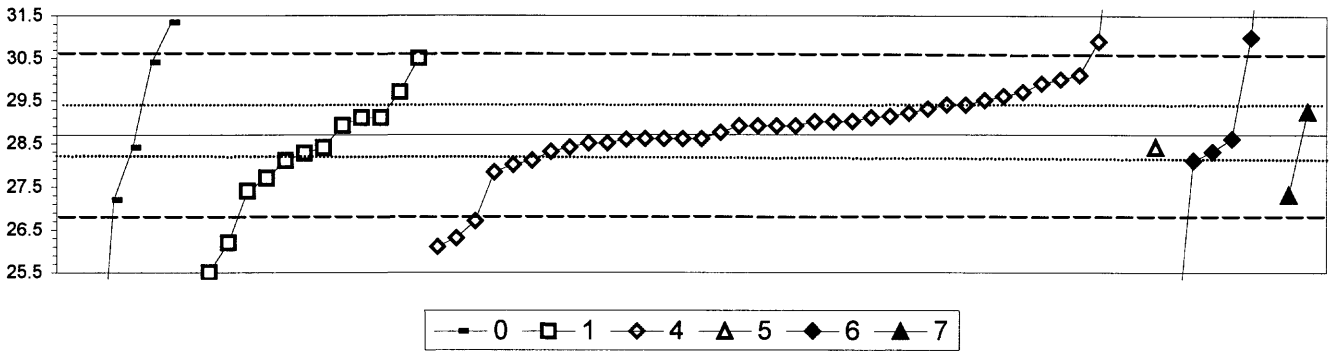
0. Other
4. ICP
6. ICP/MS

			0	4	6
		N =	1	21	7
		Minimum =	38.5	38.7	45.0
		Maximum =		85.1	71.0
		Median =		54.0	53.0
		F-pseudosigma =		3.7	6.2
Lab	Rating	Z-value	0	4	6
1	3	-0.80		49.6	
16	3	-0.57		50.6	
18	NR			< 50	
24	3	0.57		55.6	
28	4	-0.07		52.8	
30.1	3	0.89			57.0
32	4	-0.02			53.0
36	NR			< 50	
48	3	-0.71			50.0
76	1	1.64			60.3
85	1	1.58		60.0	
100	0	6.49		81.5	
134	4	0.21		54.0	
138	3	0.75		56.4	
141.1	0	-3.29		38.7	
142	4	-0.14		52.5	
145	0	2.49		64.0	
180	0	7.32		85.1	
212	NR			< 100	
215	4	0.21		54.0	
220	4	0.23		54.1	
234	4	-0.41		51.3	
236	3	-0.94		49.0	
240	4	0.00		53.1	
247	NR			< 50	
254	0	-2.77		41.0	
255	3	0.73		56.3	
256	NR	-9.80		< 10	
258	0	-3.34	38.5		
259	4	-0.02		53.0	
265	3	-0.59			50.5
283	4	0.21		54.0	
296	1	-1.85			45.0
300	0	4.09			71.0

MPV =	53.1
F-pseudosigma =	4.4
N =	29
Hu =	56.4
Hl =	50.5

Table 19. *Statistical summary of reported data for standard reference water sample GWM-3 (ground-water major constituents)--Continued*

Ca (Calcium) **mg/L**



0. Other
1. AA: direct, air
4. ICP
5. DCP
6. ICP/MS
7. Ion chromatography

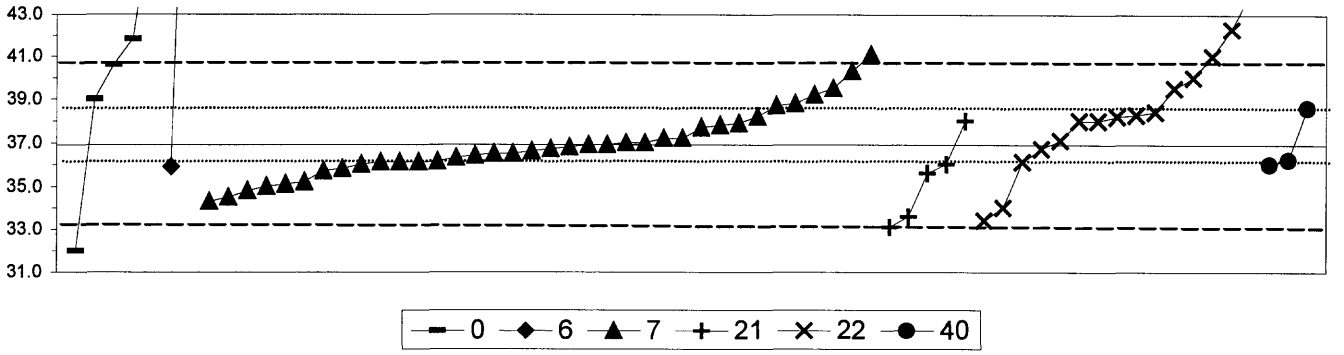
	0	1	4	5	6	7
N =	6	13	38	1	6	2
Minimum =	20.9	15.6	26.1	28.4	23.4	27.3
Maximum =	31.3	30.5	36.8		35.6	29.2
Median =		28.3	28.9			
F-pseudosigma =		1.3	0.7			

MPV = 28.7
F-pseudosigma = 1.0
Rating Criterion = 1.4 **
N = 66
Hu = 29.4
Hl = 28.1

Lab	Rating	Z-value	0	1	4	5	6	7
1	4	0.30			29.1			
11	4	0.16			28.9			
13	3	0.85			29.9			
16	4	0.05			28.8			
18	1	-1.66			26.3			
23	3	-0.68		27.7				
24	4	0.16			28.9			
25	3	0.99			30.1			
28	4	0.16			28.9			
30.1	2	-1.03	27.2					
30.2	0	-3.68					23.4	
32	4	-0.40					28.1	
33	4	-0.19				28.4		
36	2	-1.38			26.7			
43	3	0.92			30.0			
45	4	-0.19		28.4				
48	1	1.62					31.0	
59	4	0.30		29.1				
64	4	-0.26			28.3			
69	4	-0.40		28.1				
76	4	-0.28		28.3				
81	4	-0.05			28.6			
83	4	-0.40			28.1			
85	3	-0.89		27.4				
89	1	-1.73		26.2				
100	0	4.34			34.9			
109	4	0.17		28.9				
113	4	0.37			29.2			
121	4	0.23			29.0			
133	4	-0.47			28.0			
134	4	0.23			29.0			
138	4	0.16			28.9			
140	2	1.27		30.5				
141.1	1	-1.80			26.1			
142	4	-0.12			28.5			
145	3	0.65			29.6			
146	3	0.51			29.4			
180	4	0.44			29.3			
190	3	-0.96						27.3
191	4	-0.05					28.6	
212	4	-0.05			28.6			
215	3	0.71			29.7			
220	4	0.31			29.1			
224	4	-0.06			28.6			
234	4	-0.19			28.4			
236	3	-0.59			27.8			
240	4	-0.05			28.6			
241	0	-2.21		25.5				
247	0	5.67			36.8			
254	3	0.58			29.5			
255	3	0.51			29.4			
256	4	0.39						29.2
258	1	1.86	31.3					
259	4	-0.05			28.6			
262	2	1.20	30.4					
265	4	0.23			29.0			
268	0	-9.12		15.6				
274	0	-5.41	20.9					
277	4	-0.19	28.4					
283	1	1.55			30.9			
284	0	-5.35	21.0					
287	4	0.30		29.1				
289	4	-0.12			28.5			
292	3	0.71		29.7				
296	4	-0.26					28.3	
300	0	4.80					35.6	

Table 19. *Statistical summary of reported data for standard reference water sample GWM-3 (ground-water major constituents)--Continued*

Cl (Chloride) **mg/L**



0. Other				21. Titrate: electrometric				
6. ICP/MS				22. Colorimetric				
7. Ion chromatography				40. Ion selective electrode				
		N =	5	2	36	5	15	3
		Minimum =	32.0	35.9	34.3	33.1	33.4	36.0
		Maximum =	47.9	62.6	41.1	38.0	44.1	38.6
		Median =			36.7		38.2	
		F-pseudosigma =			1.3		2.1	

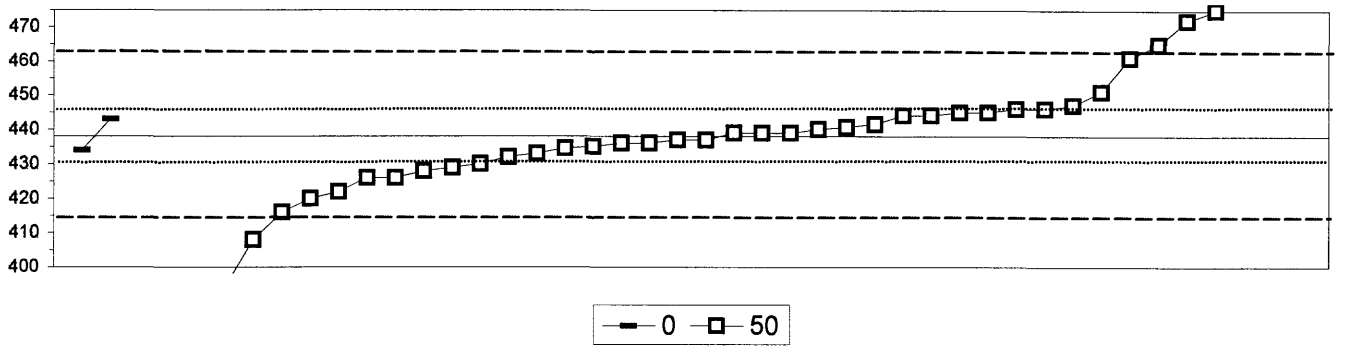
Lab	Rating	Z-value	0	6	7	21	22	40
1	3	-0.93			35.1			
11	3	0.57					38.0	
13	3	-0.62			35.7			
16	4	-0.10					36.7	
18	0	2.80					42.3	
23	2	1.35			39.5			
24	4	-0.42					36.1	
25	4	-0.42			36.1			
30.1	4	-0.10			36.7			
32	3	-0.88			35.2			
33	4	-0.42			36.1			
36	4	0.05			37.0			
42	3	0.67			38.2			
43	4	-0.47						36.0
45	3	0.78					38.4	
48	2	-1.50					34.0	
59	4	0.00			36.9			
64	4	-0.05			36.8			
68	0	2.13					41.0	
69	3	0.57					38.0	
81	1	-1.97				33.1		
83	1	-1.71				33.6		
85	4	0.16			37.2			
89	4	-0.42			36.1			
97	2	1.35					39.5	
100	3	0.93			38.7			
109	3	-0.67				35.6		
113	2	-1.35			34.3			
134	4	-0.39			36.1			
138	4	-0.31			36.3			
140	3	0.71					38.3	
141.1	1	-1.82					33.4	
141.2	3	-0.57			35.8			
142	4	0.16			37.2			
145	4	-0.21			36.5			
146	0	3.74					44.1	
158	3	0.99			38.8			
180	4	-0.26			36.4			
190	4	0.42			37.7			
191	3	-0.52		35.9				
206	4	0.47			37.8			
212	4	-0.21			36.5			
220	1	1.60					40.0	
224	3	0.51			37.9			
234	2	-1.25			34.5			
236	1	1.76			40.3			
240	4	-0.16			36.6			
241	2	-1.09			34.8			
247	4	0.05			37.0			
254	4	0.00			36.9			

MPV =	36.9
F-pseudosigma =	1.9
N =	66
Hu =	38.6
Hl =	36.0

Lab	Rating	Z-value	0	6	7	21	22	40
255	3	0.67					36.2	
256	4	-0.36						36.2
258	0	2.56	41.8					
259	4	-0.47				36.0		
262	3	0.57				38.0		
265	3	0.88						36.6
268	2	1.19			39.2			
270	4	0.10					37.1	
274	1	1.92	40.6					
277	0	-2.54	32.0					
283	0	2.18			41.1			
284	0	5.71	47.9					
287	2	1.09	39.0					
289	4	-0.47			36.0			
292	3	-0.99			35.0			
300	0	13.35		62.6				

Table 19. *Statistical summary of reported data for standard reference water sample GWM-3 (ground-water major constituents)--Continued*

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



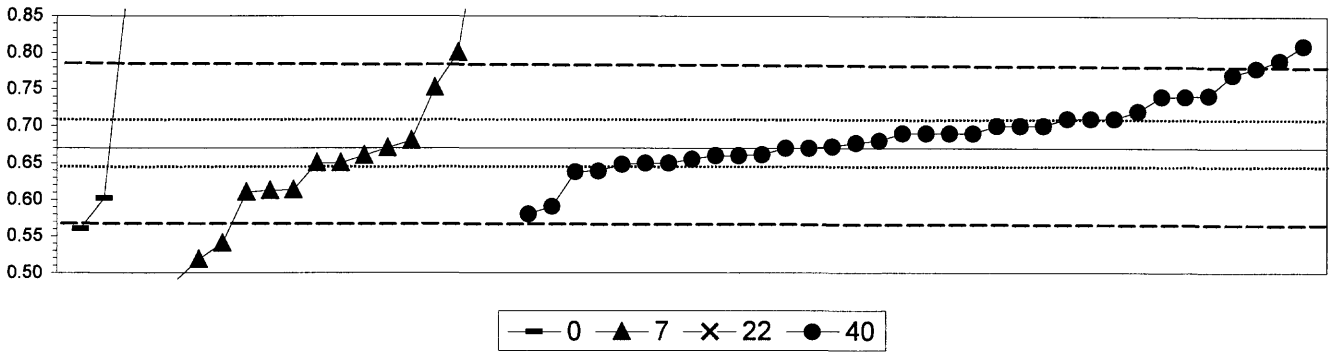
0. Other
50. Gravimetric

			0	50
		N =	2	42
		Minimum =	434	376
		Maximum =	443	500
		Median =		438
		F-pseudosigma =		13
Lab	Rating	Z-value	0	50
1	3	0.63		446
11	0	2.70		472
13	0	-3.97		388
16	0	3.57		483
23	2	-1.27		422
25	3	-0.95		426
26	4	-0.08		437
32	4	-0.32	434	
36	0	4.60		496
43	4	-0.16		436
45	4	-0.16		436
48	2	-1.43		420
59	4	-0.40		433
69	0	-4.05		387
76	4	-0.28		435
81	0	-3.49		394
85	4	0.08		439
89	4	0.08		439
97	3	-0.95		426
100	4	-0.48		432
109	3	0.63		446
113	3	-0.63		430
134	4	0.21		441
138	1	1.83		461
140	3	0.56		445
141.1	4	-0.24		435
142	4	0.48		444
146	1	-1.75		416
158	4	0.08		439
190	0	-2.38		408
212	3	-0.71		429
215	4	0.48		444
224	4	0.28		442
234	4	0.16		440
236	0	2.14		465
240	0	4.92		500
241	4	-0.08		437
247	3	0.56		445
255	2	1.03		451
259	3	0.71		447
268	0	2.94		475
283	0	-4.92		376
284	4	0.40	443	
292	3	-0.79		428

MPV =	438
F-pseudosigma =	13
N =	44
Hu =	446
Hl =	429

Table 19. *Statistical summary of reported data for standard reference water sample GWM-3 (ground-water major constituents)--Continued*

F (Fluoride) **mg/L**



0. Other			40. Ion selective electrode			
7. Ion chromatography						
22. Colorimetric						
		N =	3	15	1	34
		Minimum =	0.56	0.48	0.46	0.58
		Maximum =	0.90	1.01		0.81
		Median =		0.65		0.69
		F-pseudosigma =		0.07		0.04

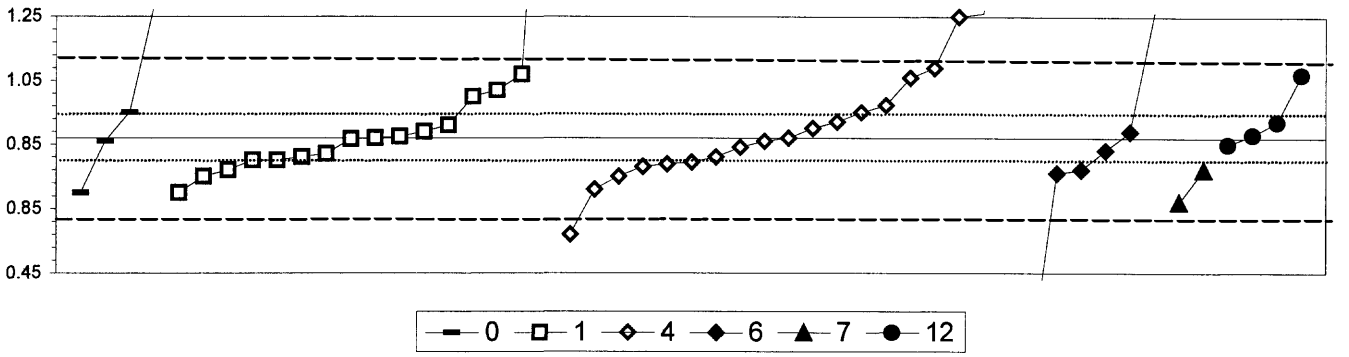
Lab	Rating	Z-value	0	7	22	40
1	3	0.95				0.72
11	1	-1.71				0.58
13	4	-0.38		0.65		
16	4	-0.42				0.65
18	2	1.33				0.74
23	4	0.19		0.68		
24	4	0.38				0.69
25	4	0.00				0.67
32	2	-1.29	0.60			
36	4	-0.38		0.65		
42	0	-2.89		0.52		
45	3	0.76				0.71
48	0	2.66				0.81
59	4	0.38				0.69
69	4	-0.38				0.65
76	2	-1.50				0.59
81	4	0.13				0.68
83	3	0.57				0.70
85	4	-0.19				0.66
89	3	0.76				0.71
97	4	-0.19				0.66
100	3	0.57				0.70
109	2	1.33				0.74
113	4	-0.29				0.66
134	4	0.19				0.68
138	3	-0.61				0.64
140	4	0.38				0.69
141.1	4	-0.17				0.66
141.2	0	-3.46		0.49		
142	3	0.76				0.71
145	0	6.46		1.01		
146	2	1.37				0.74
158	2	-1.10		0.61		
180	1	1.56		0.75		
190	0	-3.61		0.48		
208	0	-6.98		< 0.3		
212	0	2.28				0.79
215	4	0.04				0.67
234	2	-1.14		0.61		
236	4	-0.19		0.66		
240	3	0.57				0.70
241	3	-0.59				0.64
247	2	-1.08		0.61		
255	0	2.07				0.78
259	4	0.38				0.69
262	4	-0.38				0.65
265	4	0.00				0.67
274	0	-3.99			0.46	
277	0	-2.09	0.56			
283	0	-2.47		0.54		

MPV =	0.67
F-pseudosigma =	0.05
N =	53
Hu =	0.71
HI =	0.64

Lab	Rating	Z-value	0	7	22	40
284	0	4.37	0.90			
287	1	1.90				0.77
289	4	0.00		0.67		
292	0	2.47		0.80		

Table 19. *Statistical summary of reported data for standard reference water sample GWM-3 (ground-water major constituents)--Continued*

K (Potassium) **mg/L**



0. Other			6. ICP/MS					
1. AA: direct, air			7. Ion chromatography					
4. ICP			12. Flame emission					
		N =	4	16	19	6	2	4
		Minimum =	0.70	0.70	0.57	0.19	0.67	0.85
		Maximum =	1.29	2.22	1.48	1.26	0.77	1.07
		Median =		0.87	0.87			
		F-pseudosigma =		0.11	0.17			

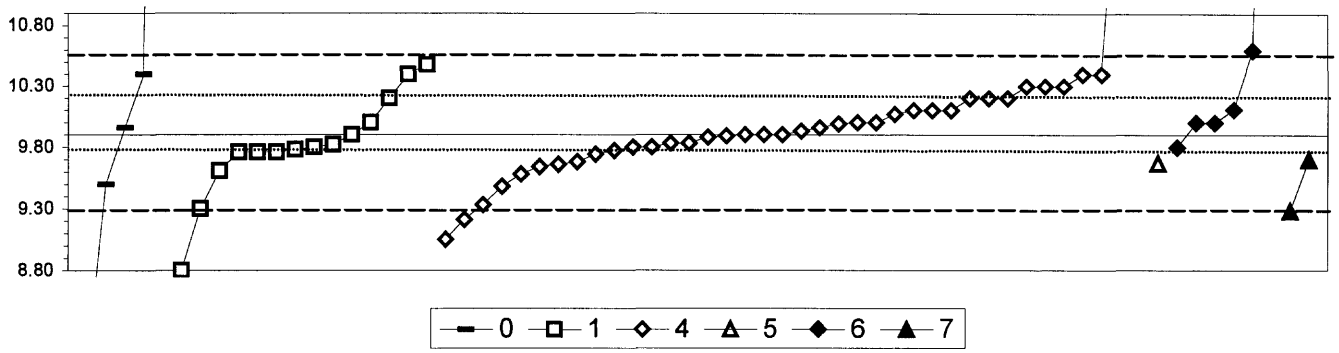
Lab	Rating	Z-value	0	1	4	6	7	12
1	3	-0.74		0.77				
11	3	0.81			0.97			
13	3	-0.66			0.78			
16	1	1.54		1.07				
18	NR				< 1			
23	4	-0.43		0.81				
24	0	-2.26			0.57			
25	0	4.66			1.48			
28	4	0.02			0.87			
32	4	-0.28				0.83		
33	4	-0.05	0.86					
36	2	1.16		1.02				
43	4	-0.05			0.86			
45	4	0.17		0.89				
48	4	0.17				0.89		
59	3	-0.74				0.77		
64	4	0.33		0.91				
69	4	0.10						0.88
81	0	2.91			1.25			
85	4	0.02		0.87				
89	2	-1.27		0.70				
100	NR				< 1			
109	2	1.01		1.00				
113	2	1.47			1.08			
134	4	0.00		0.87				
138	4	-0.21			0.84			
140	4	0.06		0.88				
141.1	3	-0.60			0.79			
142	NR				< 1			
145	NR				< 0.8			
146	NR				< 1			
180	NR				< 0.713			
190	3	-0.74					0.77	
191	3	-0.81				0.76		
212	NR				< 5			
224	2	-1.19			0.71			
234	3	-0.89			0.75			
236	4	-0.43			0.81			
240	4	0.40			0.92			
241	3	-0.51		0.80				
247	0	2.99			1.26			
254	2	-1.27	0.70					
255	3	-0.55			0.79			
256	2	-1.50					0.87	
259	4	0.25			0.90			
262	4	0.40						0.92
265	3	0.63			0.95			
268	4	-0.36		0.82				
270	4	-0.13						0.85
274	1	1.54						1.07

MPV =	0.87
F-pseudosigma =	0.13
N =	51
Hu =	0.96
HI =	0.78

Lab	Rating	Z-value	0	1	4	6	7	12
277	3	0.63	0.95					
283	1	1.69			1.09			
284	0	3.23	1.29					
287	0	10.28		2.22				
289	3	-0.89		0.75				
292	3	-0.51		0.80				
296	0	-5.15				0.19		
300	0	3.00				1.26		

Table 19. *Statistical summary of reported data for standard reference water sample GWM-3 (ground-water major constituents)--Continued*

Mg (Magnesium) **mg/L**



0. Other				5. DCP				
1. AA: direct, air				6. ICP/MS				
4. ICP				7. Ion chromatography				
		N =	5	14	38	1	6	2
		Minimum =	8.00	8.80	9.05	9.67	9.80	9.28
		Maximum =	18.21	10.48	12.90		15.31	9.70
		Median =		9.79	9.92			
		F-pseudosigma =		0.18	0.32			

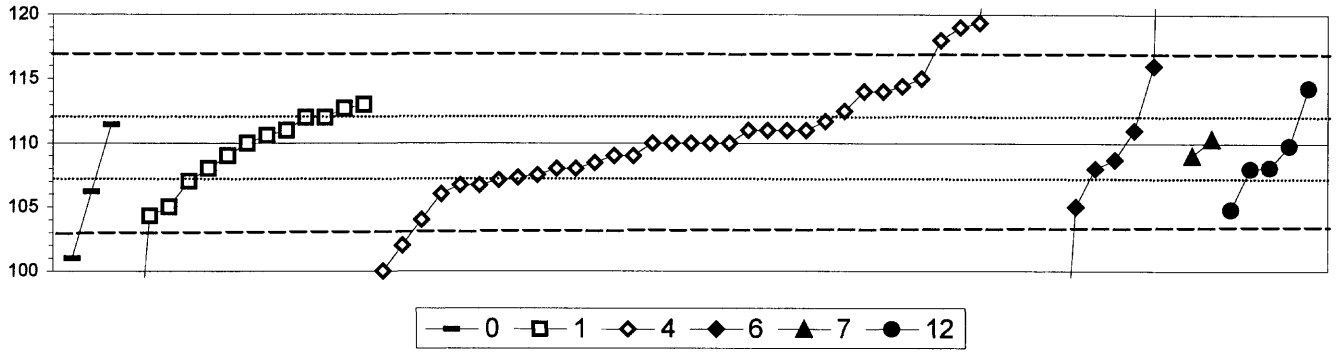
Lab	Rating	Z-value	0	1	4	5	6	7
1	4	-0.14			9.83			
11	4	-0.48			9.66			
13	2	1.01			10.40			
16	3	-0.65			9.58			
18	4	-0.20			9.80			
23	4	-0.16		9.82				
24	4	0.06			9.93			
25	3	0.61			10.20			
28	3	0.81			10.30			
30.1	4	-0.24		9.78				
30.2	4	0.20					10.00	
32	4	-0.20					9.80	
33	4	-0.46				9.67		
36	1	-1.72			9.05			
43	4	0.00			9.90			
45	2	1.01		10.40				
48	2	1.41					10.60	
59	3	0.61		10.20				
64	4	-0.32			9.74			
69	3	-0.59		9.61				
76	4	-0.28		9.76				
81	4	0.00			9.90			
83	3	-0.85			9.48			
85	4	-0.28		9.76				
89	4	-0.28		9.76				
100	0	5.25			12.50			
109	4	0.20		10.00				
113	2	1.01			10.40			
121	4	-0.44			9.68			
133	2	-1.15			9.33			
134	4	-0.02			9.89			
138	4	-0.26			9.77			
140	4	0.00		9.90				
141.1	2	-1.39			9.21			
142	4	-0.14			9.83			
145	4	0.12			9.96			
146	3	0.81			10.30			
180	4	0.18			9.99			
190	2	-1.25						9.28
191	4	0.42					10.11	
212	4	-0.20			9.80			
215	3	0.81			10.30			
220	4	0.00			9.90			
224	4	0.34			10.07			
234	3	-0.53			9.64			
236	4	-0.04			9.88			
240	4	0.40			10.10			
241	4	-0.20		9.80				
247	0	6.06			12.90			
254	3	0.61			10.20			

MPV =	9.90
F-pseudosigma =	0.34
Rating Criterion =	0.50 **
N =	66
Hu =	10.20
HI =	9.74

Lab	Rating	Z-value	0	1	4	5	6	7
255	4	0.20			10.00			
256	4	-0.40						9.70
258	4	0.12	9.96					
259	4	0.20			10.00			
262	2	1.01	10.40					
265	3	0.61			10.20			
268	0	-2.22		8.80				
274	0	16.79	18.21					
277	3	-0.81	9.50					
283	4	0.40			10.10			
284	0	-3.84	8.00					
287	2	1.17		10.48				
289	4	0.40			10.10			
292	2	-1.21		9.30				
296	4	0.20					10.00	
300	0	10.94					15.31	

Table 19. *Statistical summary of reported data for standard reference water sample GWM-3 (ground-water major constituents)--Continued*

Na (Sodium) **mg/L**



0. Other
1. AA: direct, air
4. ICP
6. ICP/MS
7. Ion chromatography
12. Flame emission

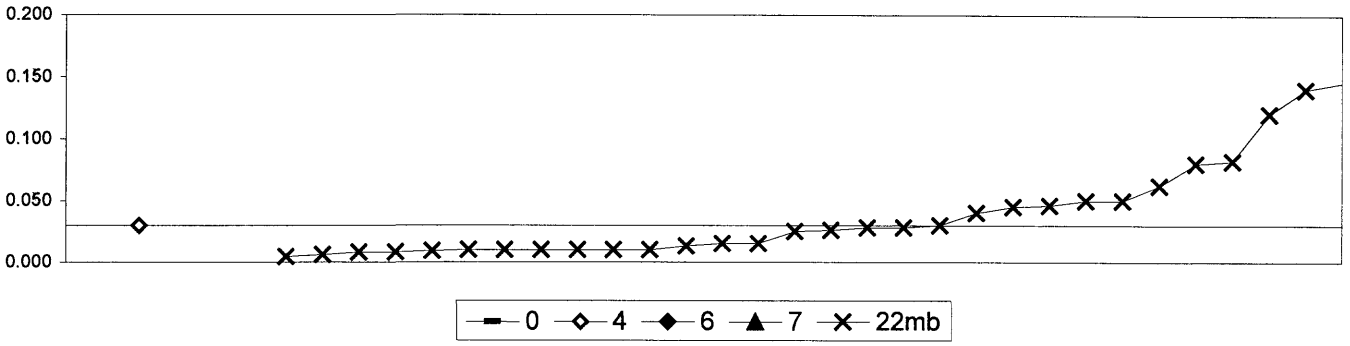
	0	1	4	6	7	12
N =	3	13	35	7	2	5
Minimum =	101	87	100	83	109	105
Maximum =	111	113	148	173	110	114
Median =		110	110	109		
F-pseudosigma =		4	5	5		

MPV = 110
F-pseudosigma = 3
Rating Criterion = 6 **
N = 65
Hu = 112
HI = 107

Lab	Rating	Z-value	0	1	4	6	7	12
1	4	-0.33			108			
11	1	-1.67			100			
13	3	0.83			115			
16	3	-0.55			107			
18	3	-0.55			107			
23	4	0.33		112				
24	4	0.17			111			
25	2	1.33			118			
28	4	0.42			113			
30.1	4	-0.03						110
30.2	3	-0.83				105		
32	4	-0.33				108		
33	3	-0.63	106					
36	4	0.00			110			
43	4	0.00			110			
45	4	0.33		112				
48	3	1.00				116		
59	4	0.17				111		
64	4	0.50		113				
69	4	-0.33						108
81	4	0.00			110			
83	4	-0.48			107			
85	3	-0.83		105				
89	4	-0.50		107				
97	4	0.00		110				
100	0	4.17			135			
109	4	-0.33		108				
113	3	0.67			114			
121	4	-0.33			108			
134	4	0.10		111				
138	4	-0.42			108			
140	4	-0.17		109				
141.1	2	-1.33			102			
142	4	0.00			110			
145	4	0.00			110			
146	0	6.33			148			
180	4	0.17			111			
190	4	-0.17					109	
191	4	-0.22				109		
212	4	-0.17			109			
215	3	0.67			114			
220	4	-0.26			108			
224	1	1.56			119			
234	4	0.17			111			
236	4	-0.45			107			
240	3	-0.67			106			
241	4	0.17		111				
247	0	4.83			139			
254	3	0.73			114			
255	4	0.17			111			
256	4	0.05					110	
259	4	0.28			112			
262	3	-0.87						105
265	4	-0.17			109			
268	0	-3.92		87				
270	4	-0.32						108
274	3	0.72						114
277	2	-1.50	101					
283	2	1.50			119			
284	4	0.24	111					
287	4	0.45		113				
289	3	-1.00			104			
292	3	-0.95		104				
296	0	-4.58				83		
300	0	10.43				173		

Table 19. *Statistical summary of reported data for standard reference water sample GWM-3 (ground-water major constituents)--Continued*

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



0. Other
4. ICP
6. ICP/MS
7. Ion chromatography
22m. Color:phosphomolybdate

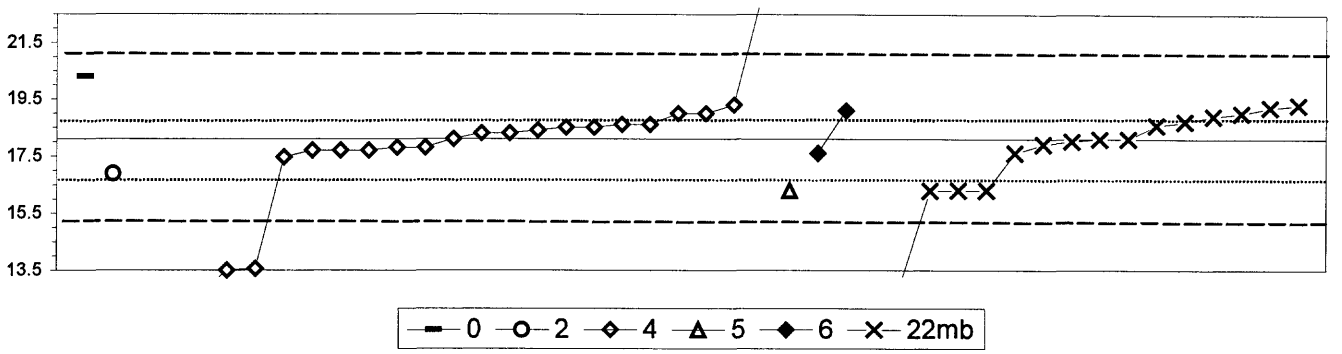
MPV = insufficient data

N = 31

			0	1	0	0	30
		N =	0	1	0	0	30
		Minimum =	< 0.1	0.030	< 0.01	< 0.1	0.00
		Maximum =					8.70
		Median =					0.026
		F-pseudosigma =					0.030
Lab	Rating	Z-value	0	4	6	7	22m
1	NR						0.006
13	NR						< 0.025
16	NR						0.026
18	NR						0.005
23	NR						< 0.005
25	NR						0.046
36	NR						0.050
48	NR						0.009
59	NR						0.010
81	NR						8.700
89	NR						0.010
97	NR						0.062
113	NR						0.010
133	NR						0.008
134	NR						0.008
138	NR						0.010
140	NR						< 0.01
141.1	NR						0.013
142	NR						0.080
145	NR						0.028
146	NR						< 0.05
158	NR						0.025
180	NR						< 0.01
190	NR						0.050
191	NR				< 0.01		
212	NR						< 0.05
215	NR						0.015
220	NR						0.028
224	NR						0.040
234	NR					< 0.1	
236	NR			0.030			
240	NR						0.030
241	NR						0.010
247	NR						
255	NR						< 0.1
256	NR						0.082
259	NR						0.015
274	NR						0.045
283	NR						0.120
284	NR		< 0.1				
287	NR						< 0.1
289	NR						0.140
292	NR						0.010
							< 0.5

Table 19. *Statistical summary of reported data for standard reference water sample GWM-3 (ground-water major constituents)--Continued*

SiO_2 (Silica) **mg/L**

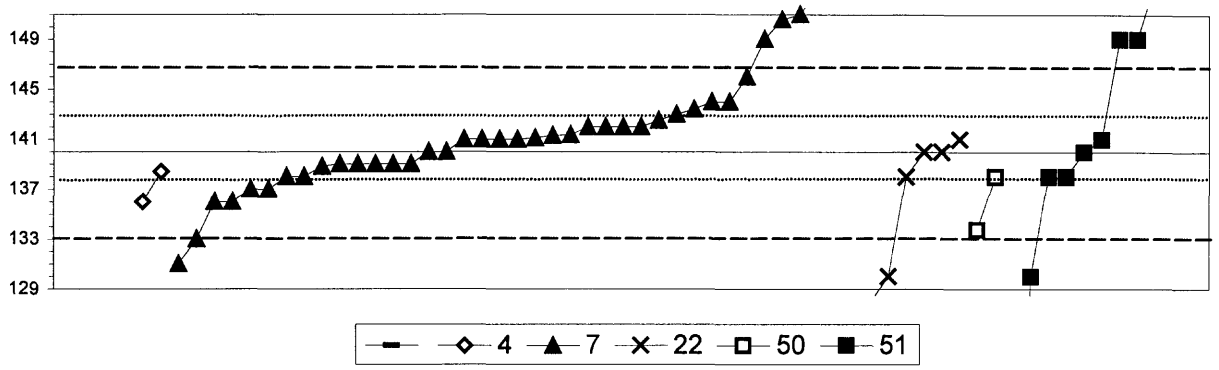


0. Other				5. DCP				
2. AA: direct, nitrous oxide				6. ICP/MS				
4. ICP				22mb. Color: molybdate blue				
		N =	1	1	23	1	2	16
		Minimum =	20.3	16.9	7.8	16.3	17.6	7.9
		Maximum =			23.2		19.1	19.3
		Median =			18.1			18.1
		F-pseudosigma =			0.7			1.9
Lab	Rating	Z-value	0	2	4	5	6	22mb
1	4	-0.24			17.7			
11	0	-3.59			12.6			
13	3	0.62			19.0			
16	0	-6.76			7.8			
18	4	-0.30						17.6
24	3	0.82			19.3			
25	0	-6.32			8.5			
32	4	-0.30					17.6	
33	2	-1.16				16.3		
36	4	0.03						18.1
43	3	0.62			19.0			
59	3	0.62						19.0
64	4	0.03			18.1			
81	4	0.03						18.1
83	4	-0.39			17.5			
85	3	0.75						19.2
89	3	0.82						19.3
97	4	-0.11						17.9
100	0	3.38			23.2			
113	4	0.34						18.6
121	4	-0.17			17.8			
134	4	0.16			18.3			
138	4	0.42						18.7
140	4	-0.03						18.0
142	4	0.29			18.5			
145	4	0.36			18.6			
190	0	-6.69						7.9
191	3	0.68					19.1	
212	4	0.36			18.6			
215	0	-3.00			13.5			
234	4	-0.24			17.7			
236	0	-2.96			13.6			
240	4	-0.24			17.7			
241	3	-0.76		16.9				
247	3	0.55						18.9
254	4	0.22			18.4			
255	0	-3.20						13.2
256	2	-1.16						16.3
259	4	-0.17			17.8			
265	4	0.16			18.3			
274	2	-1.16						16.3
283	4	0.29			18.5			
284	2	1.47	20.3					
289	2	-1.16						16.3

MPV =	18.1
F-pseudosigma =	1.5
N =	44
Hu =	18.7
Hl =	16.6

Table 19. *Statistical summary of reported data for standard reference water sample GWM-3 (ground-water major constituents)--Continued*

SO_4 (Sulfate) **mg/L**



0. Other	22. Colorimetric
4. ICP	50. Gravimetric
7. Ion chromatography	51. Turbidimetric

	0	4	7	22	50	51
N =	4	2	38	7	2	11
Minimum =	80	136	131	117	134	99
Maximum =	178	138	153	141	138	157
Median =			141	138		141
F-pseudosigma =			3	8		10

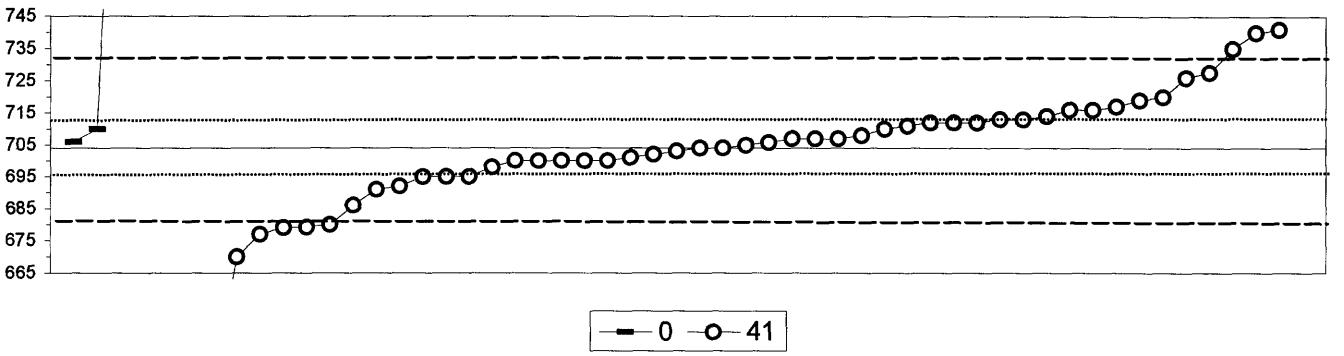
Lab	Rating	Z-value	0	4	7	22	50	51
1	4	-0.14			139			
11	2	-1.29			131			
13	4	0.00			140			
16	0	-3.23				117		
18	2	-1.43				130		
23	2	1.29			149			
24	4	-0.29				138		
25	4	-0.14			139			
30.1	4	0.29			142			
32	4	0.29			142			
33	4	0.00			140			
36	4	0.14			141			
42	3	-1.00			133			
43	4	-0.29					138	
45	4	0.14						141
48	2	-1.43						130
59	1	1.86			153			
64	4	0.14			141			
68	4	-0.29						138
69	4	0.14				141		
81	4	0.00				140		
83	4	-0.23		138				
85	4	-0.14			139			
89	4	-0.29			138			
100	3	0.86			146			
109	3	-0.89					134	
113	4	0.14			141			
134	4	0.19			141			
138	4	0.29			142			
140	2	1.29						149
141.1	4	0.00						140
141.2	3	-0.57			136			
142	4	-0.29			138			
145	4	0.43			143			
146	2	1.29						149
158	3	0.57			144			
180	4	0.29			142			
190	4	-0.14			139			
191	4	0.00	140					
208	1	1.57			151			
212	4	-0.43			137			
215	0	2.29						156
220	1	1.97						154
224	4	0.19			141			
234	4	-0.14			139			
236	1	1.51			151			
240	3	0.57			144			
241	4	0.14			141			
247	3	-0.57			136			
254	4	0.16			141			

MPV =	140
F-pseudosigma =	4
Rating Criterion =	7 **
N =	64
Hu =	143
HI =	138

Lab	Rating	Z-value	0	4	7	22	50	51
255	4	0.00				140		
256	2	-1.49	130					
258	0	2.44						157
259	4	0.36			143			
262	1	-1.71				128		
265	3	-0.57		136				
268	4	0.49			143			
274	0	-5.90						99
277	0	5.44	178					
283	1	1.86			153			
284	0	-8.53	80					
287	4	-0.29						138
289	4	-0.43			137			
292	4	-0.17			139			

Table 19. *Statistical summary of reported data for standard reference water sample GWM-3 (ground-water major constituents)--Continued*

Sp Cond (Specific Conductance) **µS/cm**



0. Other
41. Direct reading

N =	3	51
Minimum =	706	514
Maximum =	860	7048
Median =		704
F-pseudosigma =		13

Lab	Rating	Z-value	0	41
1	4	0.17		711
11	4	0.34		717
13	4	0.20		712
16	3	0.65		728
23	4	-0.06		703
24	4	0.14		710
25	2	1.03		741
26	4	0.06		707
32	4	0.14	710	
33	4	-0.14		700
36	4	-0.29		695
43	4	-0.09		702
48	4	0.23		713
59	4	-0.14		700
64	0	181.23		7048
69	3	-1.00		670
76	4	-0.14		700
81	4	-0.03		704
85	4	-0.03		704
89	3	-0.80		677
97	4	0.06		707
100	4	0.00		705
109	4	-0.14		700
113	4	-0.37		692
134	4	0.02		706
138	4	-0.29		695
140	0	-2.91		603
141.1	4	0.20		712
142	4	0.20		712
145	4	-0.40		691
146	3	-0.74		679
180	3	0.86		735
190	3	-0.71		680
212	4	-0.20		698
215	4	0.23		713
224	0	-4.71		540
234	4	0.31		716
236	4	-0.29		695
240	4	-0.14		700
241	0	-2.20		628
247	4	0.40		719
255	4	0.26		714
256	4	0.43		720
258	3	-0.74		679
259	4	0.09		708
262	4	0.03	706	
268	3	1.00		740
270	3	0.60		726
274	4	0.31		716
283	4	-0.11		701

MPV =	705
F-pseudosigma =	13
Rating Criterion =	35 **
N =	54
Hu =	713
HI =	695

Lab	Rating	Z-value	0	41
284	0	4.43	860	
287	0	-5.46		514
289	3	-0.54		686
292	4	0.06		707

Table 20. *Statistical summary of reported data for standard reference sample Hg-26 (mercury)*

Definition of analytical methods, abbreviations, and symbols

Analytical methods

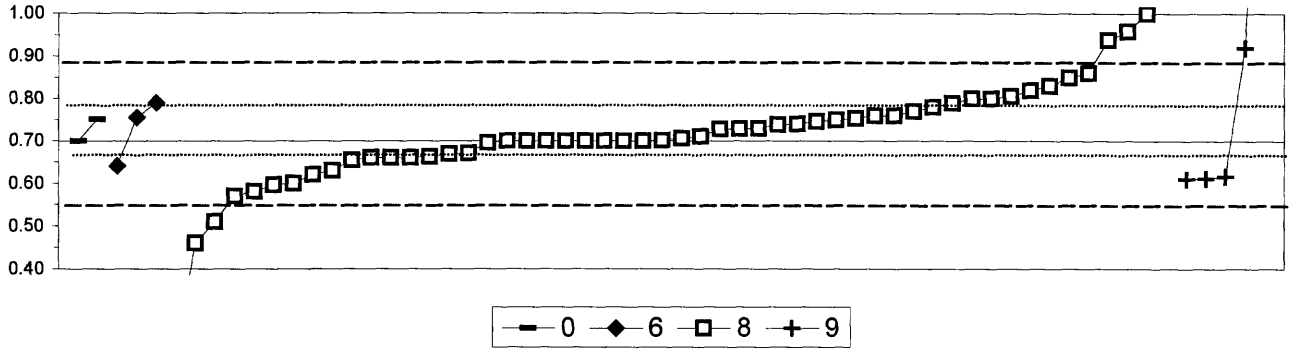
0. Other/Not reported
6. ICP/MS = inductively coupled plasma / mass spectrometry
8. AA: cold vapor = atomic absorption: cold vapor
9. Atomic fluorescence

Abbreviations and symbols

N =	number of analyses--(excluding less than values)
MPV =	most probable value
F-pseudosigma =	nonparametric statistic deviation
Hu =	upper hinge value
Hl =	lower hinge value
µg/L =	micrograms per liter
Lab =	laboratory code number
NR =	not rated, less than value reported or insufficient data
< =	less than

Table 20. *Statistical summary of reported data for standard reference water sample Hg-26 (mercury)--Continued*

Hg (Mercury) µg/L



0. Other
6. ICP/MS
8. AA: cold vapor
9. Atomic fluorescence

	0	6	8	9
N =	2	3	52	6
Minimum =	0.70	0.64	0.20	0.61
Maximum =	0.75	0.79	1.07	5.60
Median =			0.70	
F-pseudosigma =			0.08	

MPV = 0.70
F-pseudosigma = 0.09
N = 63
Hu = 0.78
HI = 0.66

Lab	Rating	Z-value	0	6	8	9
1	2	1.08			0.80	
3	2	1.42			0.83	
5	0	12.33				1.80
10	2	1.31			0.82	
11	3	0.52			0.75	
13	4	-0.49			0.66	
16	4	-0.04			0.70	
18	4	-0.03			0.70	
26	3	0.75			0.77	
34.1	3	-0.98				0.62
34.2	1	1.76			0.86	
36	3	-0.56			0.65	
45	3	0.57			0.75	
48	2	-1.05				0.61
50	0	2.86			0.96	
51	0	-2.18			0.51	
59	3	0.58		0.76		
68	4	-0.47			0.66	
69	4	-0.38			0.67	
70	4	0.03			0.71	
81	0	2.64			0.94	
87	4	-0.04			0.70	
89	0	-2.74			0.46	
96	1	1.65			0.85	
97	4	0.41			0.74	
100	4	0.40			0.74	
109	4	0.30			0.73	
113	3	0.86			0.78	
118	2	-1.16			0.60	
127	4	0.28			0.73	
133	4	-0.04	0.70			
134	3	0.64			0.76	
138	4	-0.04			0.70	
141	0	4.12			1.07	
142	3	-0.83			0.63	
144	2	-1.21			0.60	
145	4	-0.04			0.70	
146	4	0.29			0.73	
147	0	55.04				5.60
149	4	-0.04			0.70	
154	4	-0.04			0.70	
158	4	0.48			0.75	
193	4	-0.39			0.67	
198	4	-0.04			0.70	
212	3	0.97			0.79	
215	4	-0.49			0.66	
217	0	-5.66			0.20	
220	4	-0.49			0.66	
221	4	0.07			0.71	
234	2	1.15			0.81	
235	3	-0.94			0.62	
241	3	0.97		0.79		
245	2	-1.03				0.61
247	4	-0.04			0.70	
255	4	-0.10			0.70	
256	NR				< 2	
259	2	-1.39			0.58	
265	3	-0.71		0.64		
283	0	3.33			1.00	
284	2	-1.50			0.57	
289	3	0.64			0.76	
292	2	1.08			0.80	
298	3	0.53	0.75			
304	0	2.43				0.92

Table 21. *Most probable values for constituents and properties in standard reference samples distributed in April 1998*

(MPV, most probable value; N, number of samples; µg/L, microgram per liter; mg/L, milligram per liter; µS/cm, microsiemens per centimeter at 25 degrees Celsius.)

T-153 (trace constituents)

Analyte	MPV	F-pseudosigma	N	Analyte	MPV	F-pseudosigma	N
Ag	6.24 µg/L	0.74	68	Mg	8.72 mg/L	0.30	95
Al	35.0 µg/L	5.1	55	Mn	74.5 µg/L	3.3	93
As	0.50 µg/L	0.24	21	Mo	154 µg/L	8	58
B	99.4 µg/L	7.4	50	Na	28.7 mg/L	1.0	92
Ba	184 µg/L	8	78	Ni	32.2 µg/L	2.1	84
Be	insuff data			Pb	46.2 µg/L	3.0	88
Ca	27.5 mg/L	1.0	93	Sb	25.7 µg/L	2.5	55
Cd	16.0 µg/L	1.1	91	Se	9.00 µg/L	1.33	68
Co	insuff data			SiO_2	5.79 mg/L	0.22	52
Cr	14.9 µg/L	1.1	78	Sr	311 µg/L	13	49
Cu	24.0 µg/L	1.5	88	Tl	20.4 µg/L	1.9	48
Fe	75.0 µg/L	5.9	84	U	6.9 µg/L	0.4	13
K	1.60 mg/L	0.11	80	V	19.0 µg/L	1.0	50
Li	53.4 µg/L	3.6	33	Zn	72.6 µg/L	5.1	87

M-146 (major constituents)

Analyte	MPV	F-pseudosigma	N	Analyte	MPV	F-pseudosigma	N
Ikalinity as $CaCO_3$	57.6 mg/L	2.5	93	Na	45.0 mg/L	1.8	94
B	13.9 µg/L	2.3	30	total P as P	insuff data		
Ca	26.3 mg/L	1.1	96	pH	8.08 units	0.19	95
Cl	46.1 mg/L	3.8	93	SiO_2	9.36 mg/L	0.5	65
DSRD	242 mg/L	12	64	SO_4	69.0 mg/L	3.3	89
F	1.07 mg/L	0.06	72	Sp Cond	423 µS/cm	8	88
K	2.93 mg/L	0.20	82	Sr	216 µg/L	7	49
Mg	7.01 mg/L	0.24	93	V	32.6 µg/L	1.7	48

N-57 (nutrient constituents)

Analyte	MPV	F-pseudosigma	N
NH_3 as N	0.210 mg/L	0.018	65
NH_3+OrgN as N	0.285 mg/L	0.150	43
NO_3+NO_2 as N	0.220 mg/L	0.021	71
total P as P	0.201 mg/L	0.013	62
PO_4 as P	0.195 mg/L	0.007	61

N-58 (nutrient constituents)

Analyte	MPV	F-pseudosigma	N
NH_3 as N	0.620 mg/L	0.044	66
NH_3+OrgN as N	0.91 mg/L	0.141	46
NO_3+NO_2 as N	1.01 mg/L	0.06	74
total P as P	0.766 mg/L	0.030	61
PO_4 as P	0.693 mg/L	0.024	63

P-30 (low ionic strength constituents)

Analyte	MPV	F-pseudosigma	N	Analyte	MPV	F-pseudosigma	N
Acidity	2.88 mg/L	1.80	12	Na	0.34 mg/L	0.04	31
Ca	0.13 mg/L	0.04	31	pH	5.35 units	0.21	47
Cl	0.23 mg/L	0.08	33	PO_4 as P	0.084 mg/L	0.007	33
F	0.206 mg/L	0.025	33	SO_4	0.400 mg/L	0.259	33
K	0.140 mg/L	0.043	28	Sp Cond	6.0 µS/cm	0.8	44
Mg	0.027 mg/L	0.019	24				

GWT-3 (ground-water trace constituents)

Analyte	MPV	F-pseudosigma	N	Analyte	MPV	F-pseudosigma	N
Ag	insuff data			Li	33.9 µg/L	1.9	24
Al	31.4 µg/L	6.4	42	Mg	12.5 mg/L	0.5	69
As	0.93 µg/L	0.75	24	Mn	5.55 µg/L	0.67	51
B	71.0 µg/L	7.0	37	Mo	7.00 µg/L	0.84	31
Ba	25.3 µg/L	1.4	56	Na	136 mg/L	5	65
Be	15.4 µg/L	0.8	47	Ni	36.6 µg/L	3.0	59
Ca	35.9 mg/L	1.2	69	Pb	31.4 µg/L	2.3	55
Cd	45.7 µg/L	2.3	63	Sb	insuff data		
Co	insuff data			Se	12.4 µg/L	2.8	50
Cr	1.90 µg/L	0.59	37	SiO_2	22.9 mg/L	2.0	40
Cu	4.18 µg/L	1.14	47	Sr	551 µg/L	24	37
Fe	57.2 µg/L	5.5	58	V	insuff data		
K	1.03 mg/L	0.14	55	Zn	227 µg/L	12	61

GWM-3 (ground-water major constituents)

Analyte	MPV	F-pseudosigma	N	Analyte	MPV	F-pseudosigma	N
Alkalinity	144 mg/L	5	57	Mg	9.90 mg/L	0.34	66
B	53.1 µg/L	4.4	29	Na	110 mg/L	3	65
Ca	28.7 mg/L	1.0	66	total P as P	insuff data		
Cl	36.9 mg/L	1.9	66	SiO_2	18.1 mg/L	1.5	44
DSRD	438 mg/L	13	44	SO_4	140 mg/L	4	64
F	0.67 mg/L	0.05	53	Sp Cond	705 µS/cm	13	54
K	0.87 mg/L	0.13	51				

Hg-26 (mercury)

Analyte	MPV	F-pseudosigma	N
Hg	0.70 µg/L	0.09	62

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