



**U.S. Department of the Interior
U.S. Geological Survey**

**RESULTS OF THE U.S. GEOLOGICAL SURVEY'S ANALYTICAL
EVALUATION PROGRAM FOR STANDARD REFERENCE SAMPLES
DISTRIBUTED IN MARCH 2002**

Open-File Report 02-243

**Results of the U.S. Geological Survey's Analytical
Evaluation Program for Standard Reference Samples
Distributed in March 2002**

By Mark T. Woodworth and Brooke F. Connor

U.S. GEOLOGICAL SURVEY

Open-File Report 02-243

**Lakewood, Colorado
2002**

DEPARTMENT OF THE INTERIOR

Gayle A. Norton, Secretary

U.S. GEOLOGICAL SURVEY

Charles G. Groat, Director

For additional information
write to:

Chief, Branch of Quality Systems
U.S. Geological Survey
Water Resources Division
Box 25046, Mail Stop 401
Denver Federal Center
Denver, Colorado 80225-0046

Copies of this report can be
purchased from:

U.S. Geological Survey
Branch of Information Services
DFC, Bldg. 810, Box 25286
Denver, Colorado 80225-0286
888-ASK-USGS

CONTENTS

	Page
Definition of analytical methods, abbreviations, and symbols.....	iv
Abstract.....	1
Introduction.....	1
Preparation of standard reference samples.....	6
Laboratory analyses.....	7
Statistical presentation of data..	10
Laboratory performance ratings	10
Reference.....	11

FIGURE

Figure 1. Statistical parameters shown on data graphs in tables 11-16.....	11
--	----

TABLES

1. USGS used laboratories that participated in the analyses of standard reference samples distributed in March 2002.....	3
2. Other laboratory participants in the analyses of standard reference samples distributed in March 2002.....	4
3. Analytes determined in standard reference samples distributed in March 2002.....	8
4. Overall laboratory performance ratings for standard reference samples distributed in March 2002.....	12
5. Laboratory performance ratings for standard reference sample T-169 (trace constituents).....	14
6. Laboratory performance ratings for standard reference sample M-162 (major constituents).....	26
7. Laboratory performance ratings for standard reference sample N-73 (nutrient constituents).....	33
8. Laboratory performance ratings for standard reference sample N-74 (nutrient constituents).....	35
9. Laboratory performance ratings for standard reference sample P-38 (low ionic-strength constituents).....	37
10. Laboratory performance ratings for standard reference sample Hg-34 (mercury).....	40
11. Statistical summary of reported data for standard reference sample T-169 (trace constituents).....	41
12. Statistical summary of reported data for standard reference sample M-162 (major constituents).....	69
13. Statistical summary of reported data for standard reference sample N-73 (nutrient constituents).....	85
14. Statistical summary of reported data for standard reference sample N-74 (nutrient constituents).....	90
15. Statistical summary of reported data for standard reference sample P-38 (low ionic-strength constituents).....	95
16. Statistical summary of reported data for standard reference sample Hg-34 (mercury).....	106
17. Most probable values for constituents and properties in standard reference samples distributed in March 2002..	107

Definition of analytical methods, abbreviations, and symbols

Abbreviations and figure symbols

C = Celsius
Fσ = F-pseudosigma - nonparametric statistic for deviation
HCl = hydrochloric acid
Hg = mercury sample
HNO ₃ = nitric acid
Lh = lower hinge value
L = liter
Lab = laboratory
mg/L = milligrams per liter
mL = milliliter
M - = major ion sample
MPV = most probable value (center line on graphs)
n = number of analyses
N = Normality
N - = nutrient sample
NR = not rated, less than values reported or insufficient data
OLR = overall laboratory rating for each sample type
OWR = overall weighted rating for all sample types
P - = precipitation sample (low ionic-strength, typically <50 μS/cm)
ppm = parts per million
SRS = USGS standard reference sample
T - = trace metal sample
Uh = upper hinge value
USGS = United States Geological Survey
V = number of rated analyses
Z-value = number of F-pseudosigmas from the MPV
μg/L = micrograms per liter
μm = micrometer
μS/cm = microsiemens per centimeter at 25° Celsius
< = less than
-- = not reported

Analytical methods and 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 fluorescence
10	Atomic absorption: extraction
11	Atomic absorption: hydride
12	Flame emission
20	Titration: colorimetric
21	Titration: electrometric
22	Colorimetric
40	Ion selective electrode
41	Electrometric [pH and specific conductance]
50	Gravimetric
51	Turbidimetric

Formulas

MPV = median value (excluding less than values)

F-pseudosigma (Fσ) = (Uh - Lh)/1.349

Uh = median of the upper half of the reported values (excluding less than values)

Lh = median of the lower half of the reported values (excluding less than values)

Z-value = (reported value - MPV)/F-pseudosigma

OLR = mean of all rated analytes for sample type

OWR =
$$\frac{(OLR \cdot V_1) + (OLR \cdot V_2) \dots (OLR \cdot V_n)}{(V_1 + V_2 + \dots + V_n)}$$
 for each SRS type

Ratings

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

RESULTS OF THE U.S. GEOLOGICAL SURVEY'S ANALYTICAL EVALUATION PROGRAM FOR STANDARD REFERENCE SAMPLES DISTRIBUTED IN MARCH 2002

By Mark T. Woodworth and Brooke F. Connor

ABSTRACT

This report presents the results of the U.S. Geological Survey's analytical evaluation program for six standard reference samples -- T-169 (trace constituents), M-162 (major constituents), N-73 (nutrient constituents), N-74 (nutrient constituents), P-38 (low ionic-strength constituents), and Hg-34 (mercury) -- that were distributed in March 2002 to laboratories enrolled in the U.S. Geological Survey sponsored interlaboratory testing program. Analytical data received from 93 laboratories were evaluated with respect to overall laboratory performance and relative laboratory performance for each analyte in the six reference samples. Results of these evaluations are presented in tabular form. Also presented are tables and graphs summarizing the analytical data provided by each laboratory for each analyte in the six standard reference samples. The most probable value for each analyte was determined using nonparametric statistics.

INTRODUCTION

The U.S. Geological Survey (USGS) conducts an interlaboratory 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 274 USGS and non-USGS laboratories are enrolled in the program, which can currently provide 5 different types of SRSs:

1. Trace constituents.
2. Major constituents.
3. Nutrient constituents.
4. Low ionic-strength constituents.
5. Mercury.

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 databases. The results from this study can be used to alert participating laboratories of possible deficiencies in their analytical operations and provide reference materials for laboratory quality-control programs. Laboratories that provide data for the USGS are identified with a laboratory identification number while all other laboratories are kept confidential.

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

U.S. Geological Survey
Branch of Quality Systems
SRS Purchasing
Denver Federal Center, Bldg. 53
P. O. Box 25046, MS 401
Denver, Colorado 80225-0046
(303) 236-1875

This report summarizes the analytical results submitted by 93 laboratories for the March 2002 evaluation (table 1 and table 2). Analytical results for the following are presented in this report:

T-169	Trace constituents	N-74	Nutrient constituents
M-162	Major constituents	P-38	Low ionic-strength constituents
N-73	Nutrient constituents	Hg-34	Mercury

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 11-16.

Not all SRSs are requested or necessarily analyzed by all the laboratories; nor do all laboratories enrolled in the program participate in each evaluation.

Table 1. USGS used laboratories that participated in the analyses of standard reference samples distributed in March 2002

Lab	Participating Laboratory	City	State
1	U.S. Geological Survey - National Water Quality Laboratory	Denver	CO
4	U.S. Geological Survey - Utah District Laboratory	Salt Lake City	UT
7	U.S. Geological Survey Geologic Division - Coal Analytical Laboratory	Denver	CO
12	Metro Wastewater Reclamation District	Denver	CO
16	Oklahoma Department of Environmental Quality	Oklahoma City	OK
21	UC Davis - Department of Environmental Science & Policy	Davis	CA
23	City of Fort Collins Water Quality Laboratory	Ft. Collins	CO
25	Kentucky Geological Survey	Lexington	KY
33	U.S. Geological Survey - Georgia District Laboratory	Atlanta	GA
46	Wisconsin State Laboratory of Hygiene	Madison	WI
59	Division of Consolidated Laboratory Services	Richmond	VA
70	University of Iowa Hygienic Laboratory	Des Moines	IA
72	New Jersey Department of Health Laboratory	Trenton	NJ
89	Monroe County Environmental Health Laboratory	Rochester	NY
102	Heidelberg College	Tiffin	OH
109	North Dakota State Water Commission Laboratory	Bismarck	ND
110	U.S. Geological Survey - New York District Laboratory	Troy	NY
118	Virginia Tech - Occoquan Watershed Monitoring Laboratory	Manassas	VA
134	Ocala Water Quality and Research Laboratory	Ocala	FL
142	North Dakota Department of Health	Bismarck	ND
147	U.S. Geological Survey - Surface Water Quality Research	Boulder	CO
180	Clean Water Services (formally Unified Sewerage Agency)	Hillsboro	OR
193	Vermont Department of Environmental Conservation Laboratory	Waterbury	VT
198	Maryland Department of Health and Mental Hygiene	Baltimore	MD
205	Olsen Agriculture Laboratory	McCook	NE
208	U.S. Geological Survey - WRD San Diego	San Diego	CA
212	Severn Trent Laboratory	Arvada	CO
224	University of Arkansas - Water Quality Laboratory	Fayetteville	AR
234	City of Wichita Laboratory	Wichita	KS
255	Colorado Springs Utilities - Water Resource Department	Colorado Springs	CO
315	Wisconsin District WEBB Laboratory	Middleton	WI
319	Fairfax County Environmental Services	Lorton	VA
330	Kennecott Environmental Laboratory	Magna	UT
333	U.S. Geological Survey - WEBB Colorado District Office	Lakewood	CO
341	Michigan Department of Environmental Quality	Lansing	MI
356	Washington State Department of Ecology - Manchester Laboratory	Port Orchard	WA
366	TriMatrix Laboratory	Grand Rapids	MI
370	Guardian Systems, Inc.	Leeds	AL
372	Alabama Power Company	Calera	AL
373	City of Tulsa - Quality Assurance Laboratory	Tulsa	OK
374	U.S. Geological Survey - Miami Subdistrict Laboratory	Miami	FL
375	U.S. Geological Survey - Upper Midwest Environmental Science Center	La Crosse	WI

Table 2. Other laboratory participants in the analyses of standard reference samples distributed in March 2002

Participating Laboratory	City	State
Albion Environmental	College Station	TX
Aqua Tech Environmental Laboratory (ATEL)	Marion	OH
Boise City Water Quality Laboratory	Boise	ID
City of Northglenn - Water Treatment Facility	Northglenn	CO
City of Tallahassee - Water Quality Laboratory	Tallahassee	FL
Columbia Analytical Services	Rochester	NY
Darrin Freshwater Institute	Bolton Landing	NY
Denver Water Department	Denver	CO
Desert Research Institute	Reno	NV
Environmental Task Force Laboratory	Stevens Point	WI
Florida Department of Environmental Protection	Tallahassee	FL
Frontier Geosciences Inc.	Seattle	WA
High Sierra Water Laboratory	Truckee	CA
Huffman Laboratories	Golden	CO
Institute of Ecosystem Studies	Millbrook	NY
Kansas Geological Survey	Lawrence	KS
Lower Colorado River Authority - Environmental Laboratory Services	Austin	TX
Madison Public Health Laboratory	Madison	WI
Montana Bureau of Mines & Geology	Butte	MT
Old Dominion University - Applied Marine Research Laboratory	Norfolk	VA
Ouachita Baptist University - Department of Biology	Arkadelphia	AR
Pennsylvania Department of Environmental Protection	Harrisburg	PA
Rocky Mount Waste Water Treatment Plant	Rocky Mount	NC
Severn Trent Laboratory	Tallahassee	FL
South Florida Water Management District	West Palm Beach	FL
Southwest Florida Water Management District	Brooksville	FL
Suffolk County Water Authority	Hauppauge	NY
U.S. Bureau of Reclamation	Denver	CO
U.S. Bureau of Reclamation	Boise	ID
U.S. Bureau of Reclamation	Alamosa	CO
U.S. Bureau of Reclamation	Boulder City	NV
U.S. Bureau of Reclamation	Bismarck	ND
U.S. Department of Agriculture - Cooperative Chemical Analytical Laboratory	Corvallis	OR
U.S. Department of Agriculture - Forest Service	Ft. Collins	CO
U.S. Environmental Protection Agency	Edison	NJ
University of Georgia - Soil, Plant, & Water Laboratory	Athens	GA
University of Hawaii - Department of Oceanography	Honolulu	HI
University of Maryland - Chesapeake Biological Laboratory	Solomons	MD
University of Maryland - Horn Point Laboratory	Cambridge	MD
West Coast Analytical Service, Inc.	Santa Fe Springs	CA
WMRC - Hazardous Waste Research Center	Champaign	IL
Wyoming Department of Agriculture	Laramie	WY

Table 2. Other laboratory participants in the analyses of standard reference samples distributed in March 2002 -- continued

Middle East Participating Laboratory	Location	
Geological Survey of Israel Laboratory	Jerusalem	Israel
Mekorot Laboratory	Eylat	Israel
Mekorot Laboratory	Ashqelon	Israel
Mekorot Laboratory - Rosh-Haayn Laboratory	Ramla	Israel
Mekorot Water Co. Ltd. - Central Lab	Nazaret Illit	Israel
Public Health Laboratory	Tel Aviv	Israel
Public Health Laboratory - Ministry of Health	Beer Sheva	Israel
Public Health Laboratory - Sabha Medical Clinic	Gaza	via West Bank
Water Authority of Jordan	Amman	Jordan

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 before mailing. A supply of these SRSs is maintained and are available to purchase by participating laboratories and USGS offices for use in their quality-control programs.

Trace constituents sample T-169 was prepared using water collected from the South Platte west of Bailey, Colorado. The water was pumped through a 0.2- and 0.1-micrometer (μm) filter into a 1325-liter (L) polypropylene drum. The water was continuously circulated and passed through a 0.1- μm filter and ultraviolet sterilizer for 24 hours. The water was then acidified to a $\text{pH} < 2$ with nitric acid (HNO_3) 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 through a 0.1- μm filter and an ultraviolet sterilizer for an additional 24 hours prior and during bottling. The 500-milliliter (mL) polypropylene bottles and caps were acid leached with 0.16N HNO_3 , deionized-water rinsed, and autoclave sterilized.

Major constituents sample M-162 was prepared using water collected from Bear Creek east of Kittridge, Colorado. The water was pumped through a 0.2- and 0.1- μm filter into a 1325-L polypropylene drum. The water was continuously circulated and passed through a 0.1- μm filter and ultraviolet sterilizer for 24 hours. The water was then chlorinated to 5-ppm free chlorine with sodium hypochlorite. The major constituent concentrations were adjusted by adding reagent-grade chemicals. The sample was circulated an additional 24 hours, then allowed to sit for 48 hours. During bottling, the sample was pumped through an ultraviolet sterilizer and a 0.1- μm filter. The 500-mL polypropylene bottles and caps were acid leached with 0.16N HNO_3 , deionized-water rinsed, and autoclave sterilized.

Nutrient constituents sample N-73 was prepared in a 50-L polypropylene carboy using deionized water. This SRS was prepared the week prior to sample distribution. The water was circulated through a 0.1- μm filter and kept chilled with ice (12 degrees Celsius) during the entire preparation procedure. Ultraviolet sterilization was performed up until the addition of reagent-grade chemicals. The 60-mL amber glass vials and teflon-faced rubber-lined caps were acid leached with 0.1N hydrochloric acid (HCl), deionized-water rinsed, and autoclave sterilized.

Nutrient constituents sample N-74 was prepared in a 190-L polypropylene drum using water collected from Clear Creek east of Blackhawk, Colorado. This SRS was prepared the week prior to sample distribution. The water was circulated through a 0.1- μm filter and kept chilled with ice (12 degrees Celsius) during the entire preparation procedure. Ultraviolet sterilization was performed up until the addition of reagent-grade chemicals. The 250-mL polyethylene bottles were acid leached with 0.1N HCl, deionized-water rinsed, and autoclave sterilized.

Low ionic-strength constituents sample P-38 was prepared in a 600-L polypropylene drum with snow collected west of Idledale, Colorado. The desired phosphate concentration was obtained by adding a reagent-grade chemical. Prior and during bottling, the sample was circulated through a 0.1- μm filter and an ultraviolet sterilizer. The 500-mL polypropylene bottles and caps were acid leached with 0.16N HNO_3 , deionized-water rinsed, and autoclave sterilized.

Mercury sample Hg-34 was prepared using deionized water that was filtered by a Nanopure system. The sample was prepared in a 45-L glass carboy. It was preserved with 5 mL/L 12 N HCl. The desired mercury concentration was obtained by adding a mercury standard solution. The 250-mL borosilicate glass bottles and teflon-lined caps were new, acid leached, and deionized-water rinsed.

LABORATORY ANALYSES

The participating laboratories were asked to determine constituents that are summarized in table 3. The number of analytes range from 28 in T-169 (trace constituents) to 1 in Hg-34 (mercury).

Table 3. Analytes determined in standard reference samples distributed in March 2002

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

Constituent or Property		Units	T-169	M-162	N-73	N-74	P-38	Hg-34
Acidity	Acidity as CaCO ₃	mg/L					X	
Alk	Alkalinity as CaCO ₃	mg/L		X				
Ag	Silver	µg/L	X					
Al	Aluminum	µg/L	X					
As	Arsenic	µg/L	X					
B	Boron	µg/L	X	X				
Ba	Barium	µg/L	X					
Be	Beryllium	µg/L	X					
Ca	Calcium	mg/L	X	X			X	
Cd	Cadmium	µg/L	X					
Cl	Chloride	mg/L		X			X	
Co	Cobalt	µg/L	X					
Cr	Chromium	µg/L	X					
Cu	Copper	µg/L	X					
ROE	Dissolved Solids	mg/L		X				
F	Fluoride	mg/L		X			X	
Fe	Iron	µg/L	X					
Hg	Mercury	µg/L						X
K	Potassium	mg/L	X	X			X	
Li	Lithium	µg/L	X					
Mg	Magnesium	mg/L	X	X			X	
Mn	Manganese	µg/L	X					
Mo	Molybdenum	µg/L	X					
Na	Sodium	mg/L	X	X			X	
NH ₃ as N	Ammonia	mg/L			X	X		
NH ₃ + Org N as N	Ammonia + Organic N	mg/L			X	X		
Ni	Nickel	µg/L	X					
NO ₃ as N	Nitrate	mg/L			X	X		
Pb	Lead	µg/L	X					
pH	pH	unit		X			X	
PO ₄ as P	Orthophosphate	mg/L			X	X	X	
total P as P	Phosphorus	mg/L		X	X	X		
Sb	Antimony	µg/L	X					
Se	Selenium	µg/L	X					
SiO ₂	Silica	mg/L	X	X				
SO ₄	Sulfate	mg/L		X			X	
Sp Cond	Specific Conductance	µS/cm		X			X	
Sr	Strontium	µg/L	X	X				
Tl	Thallium	µg/L	X					
U	Uranium	µg/L	X					
V	Vanadium	µg/L	X	X				
Zn	Zinc	µg/L	X					

Laboratories were requested to identify the method used for each constituent according to analytical method codes in the list of definitions, abbreviations, and symbols (page iv).

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.
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.

STATISTICAL PRESENTATION OF DATA

Data in this report are evaluated using nonparametric statistics as described by Hoaglin and others (1983). This statistical approach is a resistant statistic because outliers have less influence on the median, than does the mean in traditional parametric statistics. Analytical data for each analyte are presented in tabular and graphical forms in tables 11 - 16. Tabulated data for each analyte include the laboratory identification number; reported values; analytical method; most probable value (MPV); number of reported analyses, excluding less than values, (n); data range; the F-pseudostandard deviation; and the Z-value. The Z-value is equivalent to the Z-score of traditional statistics. The F-pseudostandard deviation approximates the standard deviation (σ) of traditional statistics when the data has a Gaussian distribution. If an analyte has at least five analyses by a given method, the median and F-pseudostandard deviation are reported in the block of data listed for each method.

The median value calculated from the reported results is the MPV. The F-pseudostandard deviation is calculated by dividing the fourth-spread (analogous to interquartile range) by 1.349; therefore the smaller the F-pseudostandard deviation the more precise the determinations. The 1.349 value is derived from the Empirical Rule that defines 1 standard deviation as 67.45% or 0.6745 of the data; 2 standard deviations contains 95% or 1.349. Based on an assessment of analyte data (Keith Long, Branch of Quality Systems, verbal comm., 1998), when the F-pseudostandard deviation is less than 5 percent of the MPV, the rating criterion is set to 5 percent of the MPV; as shown in table 11, T-169 Barium.

The graphical plot of the reported data is shown in figure 1. The upper and lower boundaries of the graphical plots are +3 and -3 F-pseudostandard deviation deviations from the median. Reported values are grouped by analytical method in ascending order of value.

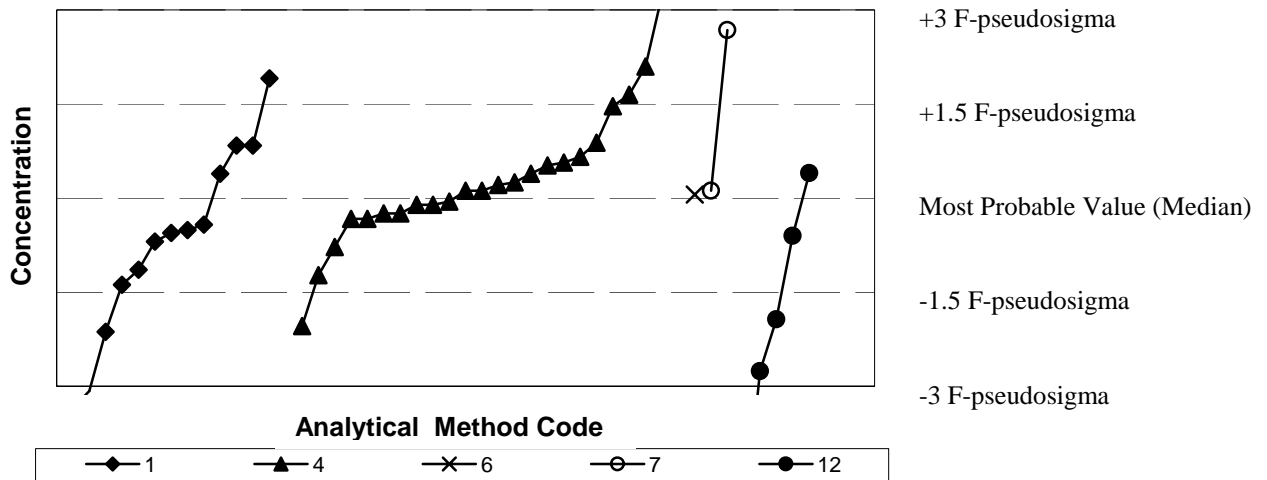
The term "inadequate data" is used when the number of analyses is less than seven or the calculated F-pseudostandard deviation is greater than the MPV.

LABORATORY PERFORMANCE RATINGS

To facilitate laboratory intercomparison, laboratory performance ratings are included in tables 4 - 16 in this report. For each SRS, averages of all the analyte ratings and the number of rated analyses are given for each participating laboratory. The actual reported values by all the laboratories were used to calculate the statistical results and performance ratings presented in this report. Laboratory determination of each analyte is rated on a scale 4 to 0, based on the absolute Z-value. The listing of ratings and Z-values are presented in the list of analytical methods, abbreviations, and symbols given on page iv and in tables 5 - 10.

Laboratories reporting "less than" values are not performance rated unless their less than value is less than the MPV and has a Z-value greater than 2. In this case, the laboratory would receive a rating of 0 for that analyte.

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.



NOTE: vertical scale is the concentration value of the individual analyte in appropriate units (see table 3). 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 as described on page iv. Laboratory-reported results outside ± 3 F-pseudostigma from the median are not shown on the graphs.

Figure 1. Statistical parameters shown on data graphs in tables 11-16

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 March 2002

[SRS, standard reference sample; Lab, laboratory identification number; OWR, overall weighted rating for all sample types; OLR, overall laboratory rating for sample type; V/66, number of rated analyses out of 66 from all sample types; V/28, V/16, V/5, V/5, V/11, and V/1 are number of rated analyses for each sample type (T-169, M-162, N-73, N-74, P-38, HG-34) respectively; NR, not rated; --, not reported.]

Lab	SRS=		T-169		M-162		N-73		N-74		P-38		HG-34	
	OWR	V/66	OLR	V/28	OLR	V/16	OLR	V/5	OLR	V/5	OLR	V/11	OLR	V/1
1	3.6	59	3.6	28	3.8	14	3.4	5	3.6	5	3.1	7	NR	0
2	3.6	7	--	--	--	--	--	--	--	--	3.6	7	--	--
4	0.3	3	--	--	0.3	3	--	--	--	--	--	--	--	--
5	1.9	60	2.2	26	1.7	16	2.0	5	1.8	5	1.3	8	NR	0
7	3.0	28	3.0	28	--	--	--	--	--	--	--	--	--	--
8	2.3	61	2.4	27	2.3	16	1.8	5	2.4	5	2.3	8	NR	0
10	3.1	31	2.2	9	3.7	12	3.6	5	3.0	5	--	--	--	--
12	1.8	24	1.1	9	1.9	10	2.6	5	--	--	--	--	--	--
16	2.7	51	2.7	26	2.4	15	3.2	5	2.8	5	--	--	--	--
21	3.5	6	2.0	1	--	--	3.8	5	--	--	--	--	--	--
23	2.5	47	2.9	19	2.9	11	0.2	5	2.0	5	2.7	7	NR	0
24	3.4	25	3.3	12	3.5	13	--	--	--	--	--	--	--	--
25	2.0	50	2.1	19	1.1	14	3.0	5	2.6	5	2.6	7	--	--
26	3.1	28	3.3	15	3.2	9	0.0	2	4.0	2	--	--	NR	0
30	3.5	2	--	--	--	--	--	--	3.5	2	--	--	--	--
31	4.0	5	--	--	--	--	4.0	5	--	--	--	--	--	--
32	3.0	43	2.9	27	3.2	16	--	--	--	--	--	--	NR	0
33	1.9	36	1.8	10	2.1	12	1.7	3	2.7	3	1.4	8	--	--
38	3.4	25	--	--	3.2	9	3.6	5	3.6	5	3.5	6	--	--
42	2.6	48	2.8	27	2.5	15	1.3	3	2.0	3	--	--	--	--
45	3.1	53	2.8	25	3.8	12	2.5	4	2.5	4	3.5	8	NR	0
46	3.2	32	2.8	11	3.8	12	2.5	4	3.4	5	--	--	NR	0
51	3.8	5	--	--	--	--	3.8	5	--	--	--	--	--	--
59	3.0	49	3.5	17	3.0	14	3.2	5	3.4	5	1.4	8	NR	0
64	3.1	31	3.4	5	3.1	10	2.8	4	3.3	4	3.1	8	--	--
70	2.8	43	2.8	20	3.6	13	1.4	5	2.4	5	--	--	--	--
72	2.0	10	--	--	--	--	0.8	5	3.2	5	--	--	--	--
76	3.9	18	3.9	13	4.0	5	--	--	--	--	--	--	--	--
80	2.0	3	--	--	--	--	--	--	2.0	3	--	--	--	--
85	3.0	34	--	--	2.4	16	3.6	5	3.8	5	3.3	8	--	--
86	2.9	46	2.9	19	3.2	13	1.3	3	2.3	3	3.1	8	--	--
89	2.8	53	2.5	21	3.3	14	2.8	5	3.0	5	2.5	8	NR	0
97	2.5	41	2.1	24	3.0	12	--	--	3.2	5	--	--	NR	0
102	2.3	21	--	--	2.0	12	2.0	4	3.2	5	--	--	--	--
105	2.8	51	3.0	21	3.0	14	1.3	4	2.0	5	3.3	7	NR	0
109	3.0	18	2.6	7	3.3	11	--	--	--	--	--	--	--	--
110	3.1	15	2.5	6	--	--	2.0	1	--	--	3.6	8	--	--
113	3.6	50	3.5	20	3.6	13	3.0	5	4.0	5	3.9	7	--	--
118	3.2	6	--	--	--	--	3.3	3	3.0	3	--	--	--	--
121	2.8	26	2.6	20	3.3	6	--	--	--	--	--	--	--	--
134	3.7	60	3.9	27	3.8	16	3.5	4	2.8	5	3.8	8	NR	0
138	3.5	59	3.4	25	3.5	16	3.8	5	3.6	5	3.8	8	NR	0
142	3.3	53	3.4	27	3.4	16	2.8	5	2.8	5	--	--	--	--
146	2.6	41	2.5	20	2.3	12	2.5	4	3.4	5	--	--	--	--
147	3.5	8	3.5	8	--	--	--	--	--	--	--	--	NR	0
149	3.4	31	3.5	24	3.0	7	--	--	--	--	--	--	--	--
180	2.8	55	2.4	24	2.8	13	3.4	5	3.6	5	2.9	8	NR	0
183	1.7	21	0.9	10	2.3	7	2.0	2	3.0	2	--	--	--	--
190	3.3	45	3.2	13	3.4	14	3.2	5	3.2	5	3.4	8	--	--
193	3.1	31	2.4	11	3.7	7	3.3	3	3.0	4	3.7	6	NR	0

Table 4. Overall laboratory performance ratings for standard reference samples distributed March 2002

--continued

[SRS, standard reference sample; Lab, laboratory identification number; OWR, overall weighted rating for all sample types; OLR, overall laboratory rating for sample type; V/66, number of rated analyses out of 66 from all sample types; V/28, V/16, V/5, V/5, V/11, and V/1 are number of rated analyses for each sample type (T-169, M-162, N-73, N-74, P-38, HG-34) respectively; NR, not rated; --, not reported.]

Lab	SRS=		T-169		M-162		N-73		N-74		P-38		HG-34	
	OWR	V/66	OLR	V/28	OLR	V/16	OLR	V/5	OLR	V/5	OLR	V/11	OLR	V/1
198	2.8	31	2.9	23	--	--	3.0	4	2.0	4	--	--	--	--
205	4.0	2	--	--	--	--	--	--	4.0	2	--	--	--	--
208	3.0	5	--	--	3.5	2	--	--	2.0	2	4.0	1	--	--
212	2.2	40	2.1	22	2.4	14	--	--	1.8	4	--	--	--	--
220	3.1	17	3.0	9	3.1	8	--	--	--	--	--	--	--	--
224	2.8	18	--	--	2.9	13	--	--	2.4	5	--	--	--	--
227	3.1	17	3.7	6	3.3	6	2.2	5	--	--	--	--	--	--
234	3.0	51	3.2	27	2.8	16	2.5	4	2.3	4	--	--	--	--
245	3.3	31	3.1	23	3.6	5	--	--	--	--	3.7	3	NR	0
247	2.6	57	2.6	24	2.3	15	3.0	5	3.6	5	2.1	8	NR	0
255	3.3	16	3.3	12	3.5	4	--	--	--	--	--	--	--	--
256	2.2	35	2.4	21	1.9	14	--	--	--	--	--	--	--	--
259	3.4	36	3.3	22	3.4	14	--	--	--	--	--	--	--	--
263	3.8	10	--	--	3.8	10	--	--	--	--	--	--	--	--
265	3.6	44	3.6	28	3.4	10	--	--	--	--	3.5	6	--	--
266	2.8	11	--	--	2.8	11	--	--	--	--	--	--	--	--
269	2.3	7	--	--	2.3	7	--	--	--	--	--	--	--	--
277	3.8	4	--	--	3.8	4	--	--	--	--	--	--	--	--
279	1.9	12	2.5	4	1.5	4	--	--	--	--	1.8	4	--	--
304	3.9	14	3.9	14	--	--	--	--	--	--	--	--	NR	0
305	2.6	34	2.5	22	2.2	9	--	--	3.7	3	--	--	--	--
306	1.0	8	--	--	--	--	0.5	4	1.5	4	--	--	--	--
313	3.8	10	--	--	--	--	3.6	5	4.0	5	--	--	--	--
315	3.1	18	2.7	6	3.5	6	--	--	--	--	3.2	6	--	--
316	1.6	5	--	--	--	--	1.6	5	--	--	--	--	--	--
318	3.8	5	--	--	--	--	3.8	5	--	--	--	--	--	--
319	3.0	2	--	--	3.0	2	--	--	--	--	--	--	--	--
320	3.2	10	--	--	--	--	3.0	5	3.4	5	--	--	--	--
321	1.5	23	--	--	0.9	11	2.5	4	--	--	1.9	8	--	--
328	2.0	62	2.1	28	2.1	16	1.6	5	1.2	5	2.4	8	--	--
330	2.5	34	2.7	24	2.1	10	--	--	--	--	--	--	--	--
333	2.9	17	--	--	2.5	8	2.0	2	--	--	3.6	7	--	--
336	0.2	16	--	--	0.0	8	--	--	--	--	0.4	8	--	--
341	3.0	24	--	--	2.9	14	3.4	5	3.0	5	--	--	--	--
356	2.9	35	2.7	24	3.8	6	--	--	3.0	5	--	--	NR	0
366	3.0	21	--	--	3.3	11	3.0	5	2.6	5	--	--	--	--
370	1.8	48	1.4	18	2.2	13	0.8	4	2.4	5	1.9	8	NR	0
372	1.9	58	1.9	25	2.1	15	1.4	5	2.4	5	1.6	8	NR	0
373	3.4	10	--	--	--	--	3.6	5	3.2	5	--	--	--	--
374	0.0	1	--	--	0.0	1	--	--	--	--	--	--	--	--
375	4.0	4	--	--	4.0	4	--	--	--	--	--	--	--	--
376	3.3	10	--	--	--	--	3.0	5	3.6	5	--	--	--	--
377	3.4	5	--	--	--	--	3.4	5	--	--	--	--	--	--

Table 5. Laboratory performance ratings for standard reference sample T-169 (trace constituents)

[MPV, most probable value; Lab, laboratory identification number; OLR, overall laboratory rating for all rated analyses; µg/L, micrograms per liter; mg/L, milligrams per liter; V/28, number of rated analyses out of 28 possible; RV, reported value; <, less than; NR, not rated; --, not reported.]

<u>Rating</u>	<u>Absolute Z-value</u>	<u>Rating</u>	<u>Absolute Z-value</u>
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 =			Silver		Aluminum		Arsenic		Boron		Barium	
MPV =			3.90 µg/L		33.6 µg/L		8.63 µg/L		24.5 µg/L		43.1 µg/L	
F-pseudosigma =			0.24		4.5		0.67		1.8		1.5	
Lab	OLR	V/28	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	3.6	28	3.97	4	33.31	4	9	3	25.41	3	42.94	4
5	2.2	26	6.35	0	49.9	0	9.38	2	24	4	44.1	4
7	3.0	28	<2	0	33.5	4	8.6	4	22.9	3	42.2	4
8	2.4	27	3.65	2	26.7	1	6.9	0	21.7	1	44.3	3
10	2.2	9	--	--	--	--	9.3	3	--	--	--	--
12	1.1	9	3.7	3	--	--	8	3	--	--	--	--
16	2.7	26	4	4	29	2	10	0	13	0	41	3
21	2.0	1	--	--	--	--	--	--	--	--	--	--
23	2.9	19	3.52	1	--	--	10.31	0	--	--	43.07	4
24	3.3	12	--	--	--	--	--	--	23.8	4	45.4	2
25	2.1	19	<17	NR	290	0	8.1	3	26	3	35	0
26	3.3	15	--	--	35.2	4	8.3	4	--	--	--	--
32	2.9	27	3.9	4	31.1	3	8.6	4	23.6	4	42.8	4
33	1.8	10	--	--	53	0	--	--	--	--	45.1	3
42	2.8	27	3.6	2	29.7	3	8.46	4	23.9	4	43.2	4
45	2.8	25	4.8	0	33.6	4	8.93	4	27.5	1	41.9	3
46	2.8	11	--	--	--	--	6.57	0	--	--	43.1	4
59	3.5	17	< 5	NR	< 50	NR	8.76	4	21.3	1	43.1	4
64	3.4	5	--	--	--	--	--	--	--	--	--	--
70	2.8	20	--	--	28.7	2	10.4	0	<100	NR	43.1	4
76	3.9	13	--	--	33.08	4	8.627	4	--	--	--	--
86	2.9	19	2.45	0	--	--	--	--	26.2	3	41.7	3
89	2.5	21	3.8	4	38	3	8.7	4	--	--	58.9	0
97	2.1	24	4.01	4	41	1	10.6	0	--	--	42.3	4
105	3.0	21	3.58	2	33.69	4	9.54	2	<200	NR	43	4
109	2.6	7	--	--	--	--	9.19	3	--	--	--	--
110	2.5	6	--	--	34.098	4	--	--	--	--	--	--
113	3.5	20	4.03	3	31.6	4	8.67	4	--	--	42.9	4
121	2.6	20	3.4	0	--	--	7	0	--	--	47	1
134	3.9	27	3.9	4	33.25	4	8.84	4	25.29	4	43.84	4
138	3.4	25	3.82	4	36.4	3	8.98	3	22.3	2	43.5	4
142	3.4	27	3.72	3	37.6	3	9.05	3	26.9	2	44.9	3
146	2.5	20	3.59	2	63.2	0	9.82	1	--	--	44	4
147	3.5	8	--	--	--	--	8.49	4	--	--	--	--
149	3.5	24	4.1	3	33.6	4	8.9	4	--	--	44.1	4
180	2.4	24	3.37	0	28.8	2	8.26	3	<3.25	0	41.5	3
183	0.9	10	--	--	--	--	6.09	0	--	--	43.1	4
190	3.2	13	3.93	4	32	4	7.5	1	--	--	--	--
193	2.4	11	4.24	2	--	--	8.07	3	--	--	--	--
198	2.9	23	3.73	3	28.7	2	8.59	4	--	--	41.7	3
212	2.1	22	4.1	3	20.3	0	8.8	4	--	--	46.2	2
220	3.0	9	--	--	--	--	8.2	3	--	--	47.06	1
227	3.7	6	--	--	--	--	--	--	--	--	--	--
234	3.2	27	3.77	3	40	2	8.74	4	27.9	1	43.9	4
245	3.1	23	3.568	2	33.8	4	8.64	4	--	--	41.29	3

Table 5. Laboratory performance ratings for standard reference sample T-169 (trace constituents) -- continued

[MPV, most probable value; Lab, laboratory identification number; OLR, overall laboratory rating for all rated analyses; µg/L, micrograms per liter; mg/L, milligrams per liter; V/28, number of rated analyses out of 28 possible; RV, reported value; <, less than; NR, not rated; --, not reported.]

<u>Rating</u>	<u>Absolute Z-value</u>	<u>Rating</u>	<u>Absolute Z-value</u>
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 =			Silver		Aluminum		Arsenic		Boron		Barium	
MPV =			3.90 µg/L		33.6 µg/L		8.63 µg/L		24.5 µg/L		43.1 µg/L	
F-pseudostigma =			0.24		4.5		0.67		1.8		1.5	
Lab	OLR	V/28	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
247	2.6	24	3.78	4	32.6	4	7.36	1	80	0	41.9	3
255	3.3	12	4	4	--	--	8.4	4	24.7	4	--	--
256	2.4	21	3.96	4	35.75	4	2.8	0	--	--	44.4	3
259	3.3	22	3.9	4	37	3	7.6	1	25.3	4	43.7	4
265	3.6	28	3.8	4	35	4	9.1	3	24.5	4	43	4
279	2.5	4	--	--	--	--	--	--	--	--	--	--
304	3.9	14	3.97	4	31.9	4	--	--	--	--	43.4	4
305	2.5	22	4.1	3	52	0	9	3	--	--	42	3
315	2.7	6	--	--	--	--	--	--	--	--	--	--
328	2.1	28	6.6	0	26	1	8.1	3	24	4	43	4
330	2.7	24	4	4	33.6	4	9.3	3	--	--	42.2	4
356	2.7	24	3.74	3	43	0	8.55	4	--	--	41.6	3
370	1.4	18	6.47	0	<100	NR	6.14	0	--	--	52.7	0
372	1.9	25	3	0	39	2	8	3	--	--	42	3

Table 5. Laboratory performance ratings for standard reference sample T-169 (trace constituents) -- continued

[MPV, most probable value; Lab, laboratory identification number; OLR, overall laboratory rating for all rated analyses; µg/L, micrograms per liter; mg/L, milligrams per liter; V/28, number of rated analyses out of 28 possible; RV, reported value; <, less than; NR, not rated; --, not reported.]

<u>Rating</u>	<u>Absolute Z-value</u>	<u>Rating</u>	<u>Absolute Z-value</u>
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)	

Lab	Beryllium		Calcium		Cadmium		Cobalt		Chromium	
	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
	MPV = 9.61 µg/L		37.6 mg/L		3.40 µg/L		1.91 µg/L		8.17 µg/L	
	F-pseudosigma = 0.56		0.9		0.21		0.17		0.39	
1	9.53	4	38.02	4	3.61	3	2.03	3	8.75	2
5	9.38	4	37.7	4	3.22	3	<3.00	NR	8.94	1
7	8.8	2	36.6	3	3.2	3	10.2	0	8.4	3
8	8.9	2	40.6	1	3.7	2	2	3	8.2	4
10	--	--	--	--	3.5	4	--	--	9.1	0
12	--	--	38	4	4	0	--	--	--	--
16	10	3	37	4	4	0	2.2	1	8	4
21	--	--	--	--	--	--	--	--	--	--
23	9.81	4	36.45	3	3.38	4	--	--	8	4
24	--	--	36.9	4	--	--	--	--	--	--
25	10	3	34.6	1	3.4	4	<4	NR	<15	NR
26	9.18	3	37.9	4	3.45	4	--	--	--	--
32	8.7	1	36.9	4	3.6	3	2	3	8.5	3
33	--	--	33.2	0	--	--	--	--	--	--
42	9.73	4	35.6	2	3.18	2	<2	NR	7.95	3
45	9.28	3	37.3	4	3.15	2	1.91	4	7.83	3
46	9.68	4	38.1	4	3.28	3	--	--	7.36	1
59	9.74	4	38	4	< 5	NR	< 5	NR	< 10	NR
64	--	--	38.6	3	--	--	--	--	--	--
70	10.3	2	37.7	4	3.51	3	<10	NR	8.27	4
76	--	--	37.89	4	3.404	4	--	--	--	--
86	9.08	3	37.6	4	3.08	2	--	--	6.7	0
89	8.3	0	39.6	2	4	0	1.9	4	8.3	4
97	9.88	4	37.9	4	3.51	3	2.65	0	8.96	1
105	9	2	35.2	2	3.32	4	<50	NR	8.13	4
109	--	--	36.42	3	--	--	--	--	--	--
110	--	--	36.553	3	--	--	--	--	--	--
113	10.1	3	37.3	4	3.24	3	--	--	8.17	4
121	9.4	4	38.2	4	2	0	0.35	0	8	4
134	9.23	3	37.65	4	3.33	4	1.84	4	7.76	3
138	9.58	4	36.6	3	3.57	3	1.95	4	7.5	1
142	9.82	4	36.8	4	3.67	2	1.88	4	8.04	4
146	9.11	3	36.6	3	3.22	3	2.38	0	8.1	4
147	--	--	--	--	3.19	3	1.71	2	--	--
149	9.7	4	37.4	4	3.4	4	1.9	4	8	4
180	9.07	3	38.9	3	3.29	3	1.73	2	7.52	1
183	9.14	3	--	--	3.83	0	--	--	8.79	1
190	--	--	--	--	3.28	3	--	--	8.5	3
193	9.5	4	41.1	1	3.39	4	--	--	8.64	2
198	9.72	4	37.7	4	3.62	2	1.8	3	7.53	1
212	9.5	4	36.8	4	3.1	2	1.1	0	8.7	2
220	9.63	4	38.51	4	--	--	--	--	--	--
227	--	--	38.4	4	3.39	4	--	--	--	--
234	9.93	3	38	4	3.3	4	1.95	4	8.49	3
245	10.02	3	37.6	4	3.654	2	2.24	1	8.29	4

Table 5. Laboratory performance ratings for standard reference sample T-169 (trace constituents) -- continued

[MPV, most probable value; Lab, laboratory identification number; OLR, overall laboratory rating for all rated analyses; µg/L, micrograms per liter; mg/L, milligrams per liter; V/28, number of rated analyses out of 28 possible; RV, reported value; <, less than; NR, not rated; --, not reported.]

<u>Rating</u>	<u>Absolute Z-value</u>	<u>Rating</u>	<u>Absolute Z-value</u>
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)	

Lab	Beryllium		Calcium		Cadmium		Cobalt		Chromium	
	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
Analyte =	Beryllium		Calcium		Cadmium		Cobalt		Chromium	
MPV =	9.61 µg/L		37.6 mg/L		3.40 µg/L		1.91 µg/L		8.17 µg/L	
F-pseudosigma =	0.56		0.9		0.21		0.17		0.39	
247	9.71	4	34.3	1	3.42	4	1.77	3	7.75	2
255	--	--	--	--	3.51	3	--	--	8.62	2
256	10.15	3	--	--	3.48	4	2	3	8.09	4
259	--	--	38	4	3.4	4	1.75	3	8.1	4
265	10.5	1	38.1	4	3.6	3	1.8	3	8	4
279	--	--	37.34	4	--	--	--	--	--	--
304	--	--	--	--	3.46	4	1.89	4	8.4	3
305	10.3	2	37.5	4	3.4	4	2	3	7.1	0
315	--	--	38.2	4	--	--	--	--	--	--
328	9.2	3	37	4	3.3	4	1.1	0	7.8	3
330	11	0	38.3	4	3.7	2	2.1	2	8.7	2
356	9.38	4	36.6	3	3.53	3	1.9	4	8.18	4
370	10	3	40.9	1	3.48	4	<500	NR	8.18	4
372	9	2	37	4	3	1	3	0	8.7	2

Table 5. Laboratory performance ratings for standard reference sample T-169 (trace constituents) -- continued

[MPV, most probable value; Lab, laboratory identification number; OLR, overall laboratory rating for all rated analyses; µg/L, micrograms per liter; mg/L, milligrams per liter; V/28, number of rated analyses out of 28 possible; RV, reported value; <, less than; NR, not rated; --, not reported.]

<u>Rating</u>	<u>Absolute Z-value</u>	<u>Rating</u>	<u>Absolute Z-value</u>
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)	

Lab	Copper		Iron		Potassium		Lithium		Magnesium	
	MPV =		MPV =		MPV =		MPV =		MPV =	
	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
	14.3 µg/L		11.1 µg/L		2.59 mg/L		9.60 µg/L		4.30 mg/L	
	F-pseudosigma = 0.8		F-pseudosigma = 3.6		F-pseudosigma = 0.11		F-pseudosigma = 0.61		F-pseudosigma = 0.13	
1	14.83	3	11.05	4	2.6	4	9.99	3	4.16	3
5	14.8	3	13.4	3	2.81	1	9.23	3	4.2	4
7	14.8	3	13.3	3	2.62	4	9.3	4	4.19	3
8	15.8	1	<50	NR	2.7	3	9.3	4	4.4	4
10	12.9	1	18	1	--	--	--	--	--	--
12	16	0	--	--	--	--	--	--	4.9	0
16	10	0	10	4	2.6	4	--	--	4.4	4
21	--	--	14.9	2	--	--	--	--	--	--
23	14.67	4	11.24	4	2.59	4	--	--	4.22	4
24	18.1	0	--	--	2.55	4	--	--	4.16	3
25	14	4	16	2	2.47	3	<4	0	4.37	4
26	13.8	3	13.2	3	2.48	3	7.61	0	4.32	4
32	14.2	4	--	--	2.45	2	8.8	2	4.3	4
33	--	--	10	4	2.69	3	--	--	4.48	3
42	13.4	2	16.1	2	2.32	0	9.28	3	4	2
45	14.3	4	12.8	4	2.57	4	--	--	4.27	4
46	13.1	2	--	--	--	--	--	--	4.19	3
59	14.2	4	< 100	NR	2.58	4	9.07	3	4.26	4
64	--	--	--	--	2.58	4	--	--	4.15	3
70	13.7	3	<20	NR	2.59	4	--	--	4.25	4
76	--	--	--	--	2.596	4	--	--	4.249	4
86	15.5	2	--	--	2.65	4	9.6	4	4.36	4
89	14.4	4	9.8	4	2.61	4	--	--	4.41	3
97	16	0	<1.8	0	2.52	3	--	--	4.33	4
105	15	3	<20.0	NR	2.65	4	42	0	4.3	4
109	--	--	<30	NR	2.3	0	--	--	4.37	4
110	--	--	--	--	2.786	1	--	--	4.825	0
113	15.2	2	11	4	2.48	3	--	--	4.19	3
121	14	4	15	2	--	--	--	--	4.2	4
134	13.91	4	10.35	4	2.56	4	9.6	4	4.18	3
138	13.6	3	10.4	4	2.47	3	--	--	4.32	4
142	13.4	2	--	--	2.44	2	9.45	4	4.17	3
146	13.3	2	<50.0	NR	2.99	0	--	--	4.32	4
147	14.2	4	--	--	--	--	--	--	--	--
149	14.9	3	111.8	0	2.6	4	--	--	4.4	4
180	13.3	2	10.5	4	2.5	3	--	--	4.33	4
183	--	--	--	--	--	--	--	--	--	--
190	14.2	4	9.34	4	--	--	--	--	--	--
193	16	0	<100	NR	2.66	3	--	--	4.23	4
198	13	1	17	1	2.61	4	--	--	4.33	4
212	12.4	0	<100	NR	2.8	1	--	--	4.3	4
220	--	--	--	--	--	--	--	--	4.372	4
227	13.2	2	--	--	--	--	--	--	4.25	4
234	14.6	4	12.6	4	2.56	4	10.1	3	4.4	4
245	15.64	1	--	--	2.584	4	--	--	4.409	4

Table 5. Laboratory performance ratings for standard reference sample T-169 (trace constituents) -- continued

[MPV, most probable value; Lab, laboratory identification number; OLR, overall laboratory rating for all rated analyses; µg/L, micrograms per liter; mg/L, milligrams per liter; V/28, number of rated analyses out of 28 possible; RV, reported value; <, less than; NR, not rated; --, not reported.]

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)	

Lab	Copper		Iron		Potassium		Lithium		Magnesium	
	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
	MPV =	14.3 µg/L		11.1 µg/L		2.59 mg/L		9.60 µg/L		4.30 mg/L
F-pseudosigma =	0.8		3.6		0.11		0.61		0.13	
247	13.9	4	--	--	2.37	1	9.67	4	3.94	1
255	14.5	4	14	3	--	--	--	--	--	--
256	18	0	10.85	4	--	--	10.5	2	--	--
259	14.4	4	9.4	4	2.09	0	10.7	1	4.3	4
265	14.4	4	10	4	2.6	4	9.8	4	4.2	4
279	--	--	--	--	2.65	4	--	--	4.85	0
304	14.3	4	--	--	--	--	--	--	--	--
305	14	4	10	4	3.09	0	--	--	4.38	4
315	--	--	138	0	2.6	4	--	--	4.2	4
328	23	0	2.9	0	2.5	3	11	0	4.3	4
330	14.8	3	<50	NR	2.54	4	--	--	4.23	4
356	14.7	4	--	--	2.71	3	--	--	4.65	1
370	<20.0	NR	<50.0	NR	3.09	0	--	--	4.25	4
372	14	4	11	4	1.88	0	--	--	4.09	3

Table 5. Laboratory performance ratings for standard reference sample T-169 (trace constituents) -- continued

[MPV, most probable value; Lab, laboratory identification number; OLR, overall laboratory rating for all rated analyses; µg/L, micrograms per liter; mg/L, milligrams per liter; V/28, number of rated analyses out of 28 possible; RV, reported value; <, less than; NR, not rated; --, not reported.]

<u>Rating</u>	<u>Absolute Z-value</u>	<u>Rating</u>	<u>Absolute Z-value</u>
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)	

Lab	Analyte =		Manganese		Molybdenum		Sodium		Nickel		Lead	
	MPV =		27.0 µg/L		70.6 µg/L		10.6 mg/L		10.3 µg/L		11.4 µg/L	
	F-pseudosigma =		0.9		1.7		0.3		0.7		0.7	
	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	27.1	4	70.31	4	10.16	3	10.57	4	11.4	4		
5	25.9	3	74.6	2	10.8	4	14.6	0	10	0		
7	26.3	3	65.5	2	10.5	4	1.9	0	11.3	4		
8	22.8	0	70.1	4	10.6	4	10.6	4	12.5	1		
10	28	3	--	--	--	--	--	--	11.5	4		
12	--	--	--	--	12	0	--	--	13	0		
16	27	4	70	4	10	2	10	4	11	3		
21	--	--	--	--	--	--	--	--	--	--		
23	26.69	4	74.4	2	10.5	4	10.14	4	10.23	1		
24	26.3	3	70.5	4	10.5	4	--	--	--	--		
25	25	2	--	--	9.92	2	12	0	11.5	4		
26	27.5	4	70.7	4	10.7	4	--	--	11.2	4		
32	28.4	2	74.8	2	9.82	2	10.9	3	10.4	2		
33	42	0	--	--	10.2	3	--	--	--	--		
42	25.6	2	68.5	3	9.47	0	10.6	4	11.3	4		
45	27	4	62.6	0	10.7	4	10	4	9.47	0		
46	27	4	--	--	10.9	3	--	--	11.8	3		
59	26.8	4	69.8	4	10.6	4	10	4	12.2	2		
64	--	--	--	--	10.55	4	--	--	--	--		
70	26.4	4	73.8	3	11.1	3	12.2	0	9.84	0		
76	--	--	70.58	4	10.97	3	10.45	4	11.68	4		
86	26.2	3	67.1	3	10.8	4	9.35	2	11.2	4		
89	24.8	1	--	--	11.1	3	10.9	3	11.6	4		
97	28	3	65.9	2	10.2	3	12.6	0	12.5	1		
105	27	4	74.65	2	10.34	4	<50	NR	10.96	3		
109	<50	NR	--	--	10.51	4	--	--	12.02	3		
110	--	--	--	--	10.092	3	--	--	--	--		
113	26.8	4	69.9	4	10.5	4	10.1	4	11.8	3		
121	27	4	--	--	10.7	4	--	--	10.8	3		
134	27.36	4	70.46	4	10.84	4	10.07	4	11.7	4		
138	27	4	71.2	4	10.6	4	10.6	4	11.1	4		
142	26	3	71.3	4	10.4	4	10.3	4	10.7	2		
146	26.6	4	68.5	3	10.8	4	10.1	4	12	3		
147	--	--	--	--	--	--	--	--	11.3	4		
149	26.6	4	71	4	11.2	2	10.3	4	11.5	4		
180	24.8	1	72.3	4	10.7	4	8.83	0	9.88	0		
183	--	--	--	--	--	--	23.2	0	15.1	0		
190	26.9	4	--	--	--	--	10.6	4	10.7	2		
193	--	--	--	--	10.9	3	<12.5	NR	13	0		
198	24.3	1	71.2	4	10.6	4	9.93	3	10.9	3		
212	27.5	4	69.4	4	10.9	3	8.6	0	13.9	0		
220	25.74	3	--	--	10.566	4	--	--	--	--		
227	--	--	--	--	--	--	--	--	11.3	4		
234	27.5	4	71.3	4	10.8	4	10.3	4	12.4	2		
245	27.93	3	70.79	4	--	--	11.08	2	12.22	2		

Table 5. Laboratory performance ratings for standard reference sample T-169 (trace constituents) -- continued

[MPV, most probable value; Lab, laboratory identification number; OLR, overall laboratory rating for all rated analyses; µg/L, micrograms per liter; mg/L, milligrams per liter; V/28, number of rated analyses out of 28 possible; RV, reported value; <, less than; NR, not rated; --, not reported.]

<u>Rating</u>	<u>Absolute Z-value</u>	<u>Rating</u>	<u>Absolute Z-value</u>
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)	

Lab	Analyte =		Manganese		Molybdenum		Sodium		Nickel		Lead	
	MPV =		27.0 µg/L		70.6 µg/L		10.6 mg/L		10.3 µg/L		11.4 µg/L	
	F-pseudosigma =		0.9		1.7		0.3		0.7		0.7	
	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
247	25.3	2	71.2	4	9.8	2	10.4	4	11.3	4		
255	26.8	4	--	--	--	--	11.4	1	12.2	2		
256	27.75	3	65.1	1	--	--	10.2	4	11.03	3		
259	27	4	71	4	10.9	3	10	4	11.5	4		
265	26.5	4	71.5	4	10.5	4	10	4	11	3		
279	--	--	--	--	11.23	2	--	--	--	--		
304	27.6	4	71	4	--	--	10.7	3	11.5	4		
305	27	4	61.7	0	10.9	3	10.3	4	12	3		
315	42	0	--	--	10.6	4	--	--	--	--		
328	30	0	71	4	11	3	9.9	3	11	3		
330	29.1	1	70.5	4	10.7	4	12.9	0	11.8	3		
356	27.3	4	71.1	4	11.1	3	10.4	4	5.74	0		
370	28.1	3	64	1	11.9	0	9.89	3	11.8	3		
372	27	4	61	0	8.56	0	11	2	9	0		

Table 5. Laboratory performance ratings for standard reference sample T-169 (trace constituents) -- continued

[MPV, most probable value; Lab, laboratory identification number; OLR, overall laboratory rating for all rated analyses; µg/L, micrograms per liter; mg/L, milligrams per liter; V/28, number of rated analyses out of 28 possible; RV, reported value; <, less than; NR, not rated; --, not reported.]

<u>Rating</u>	<u>Absolute Z-value</u>	<u>Rating</u>	<u>Absolute Z-value</u>
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)	

Lab	Antimony		Selenium		Silica		Strontium		Thallium	
	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	3.71	3	2.83	4	6.1	4	171.7	4	4.8	4
5	4.48	0	2.7	3	2.9	0	174	4	10.3	0
7	3.4	4	2.9	4	5.87	3	175	4	4.3	3
8	3.2	4	2.6	3	6.4	2	186	2	4.7	4
10	--	--	2.5	2	--	--	--	--	--	--
12	--	--	2	0	--	--	--	--	--	--
16	3.4	4	2.6	3	--	--	169	3	5.1	3
21	--	--	--	--	--	--	--	--	--	--
23	--	--	17.1	0	--	--	--	--	5.26	3
24	--	--	--	--	6.21	3	177	4	--	--
25	<50	NR	<16	NR	4.18	0	173	4	<10	NR
26	--	--	--	--	--	--	--	--	--	--
32	3.1	3	3.1	4	6.1	4	183	2	4.7	4
33	--	--	--	--	2.46	0	161.4	2	--	--
42	3.13	4	2.85	4	5.59	2	192	0	4.6	4
45	2.85	2	2.94	4	--	--	--	--	3.94	1
46	--	--	--	--	--	--	--	--	--	--
59	< 5	NR	< 5	NR	--	--	173	4	< 10	NR
64	--	--	--	--	5.8	3	--	--	--	--
70	7.43	0	<10	NR	6.26	3	--	--	4.67	4
76	--	--	2.987	4	--	--	175.1	4	4.903	4
86	--	--	--	--	--	--	174	4	--	--
89	<5.00	NR	2	0	--	--	--	--	4.9	4
97	3.32	4	2.89	4	6.59	1	170	4	5.72	1
105	3.13	4	<7	NR	6.056	4	174	4	4.84	4
109	--	--	--	--	--	--	158.9	1	--	--
110	--	--	--	--	6.0455	4	--	--	--	--
113	--	--	2.45	2	--	--	172.6	4	--	--
121	--	--	3.2	3	6	4	177	4	4.2	2
134	3.2	4	2.95	4	6.04	4	172.55	4	5.2	3
138	3	3	3.26	3	--	--	172	4	5	4
142	3.42	4	3.06	4	6.04	4	179	3	4.8	4
146	<20.0	NR	<10.0	NR	--	--	--	--	7.26	0
147	--	--	--	--	--	--	174	4	--	--
149	3.2	4	3.1	4	--	--	--	--	4.5	3
180	3.32	4	2.79	4	--	--	--	--	4.13	2
183	4.22	0	< 5.0	NR	--	--	--	--	5.62	1
190	--	--	2.2	1	6.1	4	--	--	--	--
193	<10	NR	<5	NR	--	--	--	--	--	--
198	3.68	3	3.36	2	--	--	--	--	4.7	4
212	3.8	2	<15	NR	6.1	4	182	3	<10	NR
220	--	--	1.8	0	6.11	4	--	--	--	--
227	--	--	--	--	--	--	--	--	--	--
234	2.79	2	2.2	1	5.97	4	177	4	4.96	4
245	3.328	4	3	4	--	--	180.3	3	5.182	3

Table 5. Laboratory performance ratings for standard reference sample T-169 (trace constituents) -- continued

[MPV, most probable value; Lab, laboratory identification number; OLR, overall laboratory rating for all rated analyses; µg/L, micrograms per liter; mg/L, milligrams per liter; V/28, number of rated analyses out of 28 possible; RV, reported value; <, less than; NR, not rated; --, not reported.]

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)	

Lab	Antimony		Selenium		Silica		Strontium		Thallium	
	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
Analyte =	Antimony		Selenium		Silica		Strontium		Thallium	
MPV =	3.33 µg/L		2.94 µg/L		6.04 mg/L		174 µg/L		4.80 µg/L	
F-pseudosigma =	0.44		0.37		0.23		6		0.51	
247	2.34	0	--	--	--	--	150	0	4.77	4
255	--	--	3.05	4	--	--	--	--	--	--
256	2.78	2	0.56	0	5.3	0	186	2	--	--
259	--	--	--	--	5.97	4	180	3	--	--
265	3.2	4	3	4	5.8	3	172	4	4.5	3
279	--	--	--	--	--	--	--	--	--	--
304	3.33	4	--	--	--	--	177	4	--	--
305	9	0	<5	NR	--	--	--	--	4.2	2
315	--	--	--	--	--	--	--	--	--	--
328	5.3	0	3.1	4	6.3	3	150	0	4.5	3
330	3.5	4	3.3	3	--	--	183	2	4.9	4
356	3.61	3	3.14	3	6.33	3	203	0	12.8	0
370	5.72	0	<5.00	NR	3	0	--	--	3.62	0
372	4	1	3	4	6.11	4	162	2	6	0

Table 5. Laboratory performance ratings for standard reference sample T-169 (trace constituents) -- continued

[MPV, most probable value; Lab, laboratory identification number; OLR, overall laboratory rating for all rated analyses; µg/L, micrograms per liter; mg/L, milligrams per liter; V/28, number of rated analyses out of 28 possible; RV, reported value; <, less than; NR, not rated; --, not reported.]

<u>Rating</u>	<u>Absolute Z-value</u>	<u>Rating</u>	<u>Absolute Z-value</u>
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)	

Lab	Analyte = Uranium		Vanadium		Zinc	
	RV	Rating	RV	Rating	RV	Rating
	MPV = F-pseudosigma =					
	1.71 µg/L		7.42 µg/L		19.2 µg/L	
	0.11		0.38		1.1	
1	1.73	4	7.59	4	19.6	4
5	--	--	7.1	3	18.4	3
7	1.6	3	7.8	3	19.9	3
8	1.6	3	7.6	4	24.2	0
10	--	--	--	--	18	2
12	--	--	--	--	--	--
16	1.9	1	7	2	19	4
21	--	--	--	--	--	--
23	--	--	--	--	20.93	1
24	--	--	--	--	19.6	4
25	--	--	<19	NR	14	0
26	--	--	--	--	18.1	2
32	1.79	3	7.7	3	16.6	0
33	--	--	--	--	--	--
42	1.75	4	7.24	4	18.7	4
45	1.34	0	7.14	3	19.2	4
46	--	--	--	--	--	--
59	--	--	7.21	3	19.9	3
64	--	--	--	--	--	--
70	<10.0	NR	7.56	4	19.7	4
76	--	--	--	--	--	--
86	--	--	7.2	3	18.7	4
89	--	--	10.2	0	17.3	1
97	--	--	<7.7	NR	12.2	0
105	--	--	<20	NR	<10.0	0
109	--	--	--	--	--	--
110	--	--	--	--	--	--
113	--	--	--	--	19.3	4
121	--	--	7.8	3	18	2
134	--	--	7.48	4	19.2	4
138	--	--	7.39	4	20	3
142	1.72	4	7.42	4	19	4
146	--	--	7.95	2	18.7	4
147	1.68	4	--	--	18.2	3
149	1.6	3	7.2	3	19.4	4
180	--	--	6.84	1	18.7	4
183	--	--	10.09	0	--	--
190	--	--	--	--	18.8	4
193	--	--	--	--	<25	NR
198	--	--	7.23	4	20.3	2
212	--	--	9	0	32	0
220	--	--	--	--	--	--
227	--	--	--	--	19	4
234	--	--	7.67	3	21.5	0
245	1.72	4	7.39	4	19.83	3

Table 5. Laboratory performance ratings for standard reference sample T-169 (trace constituents) -- continued

[MPV, most probable value; Lab, laboratory identification number; OLR, overall laboratory rating for all rated analyses; µg/L, micrograms per liter; mg/L, milligrams per liter; V/28, number of rated analyses out of 28 possible; RV, reported value; <, less than; NR, not rated; --, not reported.]

<u>Rating</u>	<u>Absolute Z-value</u>	<u>Rating</u>	<u>Absolute Z-value</u>
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 =	Uranium		Vanadium		Zinc	
	RV	Rating	RV	Rating	RV	Rating
MPV =	1.71 µg/L		7.42 µg/L		19.2 µg/L	
F-pseudosigma =	0.11		0.38		1.1	
Lab	RV	Rating	RV	Rating	RV	Rating
247	--	--	7.19	3	18.3	3
255	--	--	--	--	19.3	4
256	--	--	7.66	3	17.75	2
259	--	--	--	--	18.6	3
265	1.7	4	7.5	4	20	3
279	--	--	--	--	--	--
304	--	--	--	--	19.3	4
305	--	--	7.1	3	20.1	3
315	--	--	--	--	--	--
328	1.7	4	1.5	0	23	0
330	1.9	1	8.1	1	21	1
356	--	--	6.83	1	18.8	4
370	--	--	19	0	<30.0	NR
372	--	--	6	0	20	3

Table 6. Laboratory performance ratings for standard reference sample M-162 (major constituents)

[MPV, most probable value; Lab, laboratory identification number; OLR, overall laboratory rating for all rated analyses; mg/L, milligrams per liter; µg/L, micrograms per liter; µS/cm, microsiemens per centimeter at 25 degrees Celsius; V/16, number of rated analyses out of 16 possible; RV, reported value; <, less than; NR, not rated; --, not reported.]

<u>Rating</u>	<u>Absolute Z-value</u>	<u>Rating</u>	<u>Absolute Z-value</u>
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		Boron		Calcium		Chloride		Fluoride	
MPV =			11.0 mg/L		57.3 µg/L		15.8 mg/L		26.5 mg/L		1.05 mg/L	
F-pseudosigma =			1.7		6.2		0.5		1.0		0.09	
Lab	OLR	V/16	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	3.8	14	11.28	4	--	--	16.44	3	26.31	4	1.06	4
4	0.3	3	22	0	--	--	--	--	28.8	1	--	--
5	1.7	16	10.7	4	<10.0	0	6.26	0	26.51	4	0.99	3
8	2.3	16	13	2	45	1	16.3	3	25.9	4	0.88	1
10	3.7	12	10.7	4	--	--	15.8	4	26.8	4	1.14	2
12	1.9	10	11	4	--	--	16	4	25	2	--	--
16	2.4	15	10	3	47	1	16	4	21.7	0	1.03	4
23	2.9	11	12	3	0.21	0	15.52	4	--	--	1.08	4
24	3.5	13	11	4	56.7	4	16	4	26.8	4	1.06	4
25	1.1	14	16	0	50	2	13	0	24.9	2	0.04	0
26	3.2	9	--	--	--	--	16.3	3	26.6	4	0.88	1
32	3.2	16	10.8	4	57	4	15.4	4	25.9	4	1.03	4
33	2.1	12	9.1	2	--	--	16.1	4	24.98	2	1.17	2
38	3.2	9	10.61	4	--	--	17.6	0	--	--	--	--
42	2.5	15	14.1	1	54.3	4	15.5	4	27.4	3	1.05	4
45	3.8	12	11.4	4	55.8	4	15.7	4	27.5	3	0.97	3
46	3.8	12	11.4	4	--	--	16	4	26.7	4	1.1	3
59	3.0	14	8.77	2	50.7	2	16.2	4	24.7	2	1.13	3
64	3.1	10	--	--	--	--	16.5	3	27.3	3	--	--
70	3.6	13	11	4	<100	NR	16.2	4	27.9	2	1.05	4
76	4.0	5	--	--	--	--	16.04	4	--	--	--	--
85	2.4	16	12.8	2	37	0	16.6	2	26.5	4	1.05	4
86	3.2	13	--	--	58.1	4	16	4	27.2	3	1.1	3
89	3.3	14	10.4	4	--	--	15.7	4	26.3	4	1.06	4
97	3.0	12	10	3	--	--	16.1	4	27.7	3	1.11	3
102	2.0	12	--	--	--	--	15.9	4	28.2	2	<0.5	0
105	3.0	14	11.8	4	<200	NR	15.42	4	27	4	1.16	2
109	3.3	11	13.94	1	--	--	15.6	4	26	4	1	3
113	3.6	13	9.72	3	--	--	15.8	4	25.7	3	1.1	3
121	3.3	6	--	--	--	--	15.8	4	--	--	--	--
134	3.8	16	12	3	58.63	4	16.23	3	25.96	4	1.02	4
138	3.5	16	9.21	2	57.5	4	15.4	4	28.2	2	1.05	4
142	3.4	16	11.6	4	60.7	3	15.8	4	27.2	3	1.05	4
146	2.3	12	16.6	0	--	--	15.7	4	29.3	0	1.1	3
149	3.0	7	11	4	--	--	--	--	55.6	0	1.1	3
180	2.8	13	14.6	0	67.5	1	16	4	27.7	3	0.982	3
183	2.3	7	9	2	--	--	--	--	21.55	0	1.15	2
190	3.4	14	10.8	4	--	--	15.5	4	27.3	3	1.03	4
193	3.7	7	9.3	3	--	--	16.1	4	--	--	--	--
208	3.5	2	--	--	--	--	--	--	26	4	--	--
212	2.4	14	8.9	2	56.9	4	14.9	2	26.1	4	1.1	3
220	3.1	8	12.334	3	--	--	16.44	3	29.82	0	--	--
224	2.9	13	10	3	--	--	14.842	2	27.34	3	1.07	4
227	3.3	6	13.3	2	--	--	--	--	25.79	3	--	--
234	2.8	16	12.2	3	64	2	16.6	2	23.1	0	1.03	4

Table 6. Laboratory performance ratings for standard reference sample M-162 (major constituents) -- continued

[MPV, most probable value; Lab, laboratory identification number; OLR, overall laboratory rating for all rated analyses; mg/L, milligrams per liter; µg/L, micrograms per liter; µS/cm, microsiemens per centimeter at 25 degrees Celsius; V/16, number of rated analyses out of 16 possible; RV, reported value; <, less than; NR, not rated; --, not reported.]

<u>Rating</u>	<u>Absolute Z-value</u>	<u>Rating</u>	<u>Absolute Z-value</u>
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		Boron		Calcium		Chloride		Fluoride	
MPV =			11.0 mg/L		57.3 µg/L		15.8 mg/L		26.5 mg/L		1.05 mg/L	
F-pseudosigma =			1.7		6.2		0.5		1.0		0.09	
Lab	OLR	V/16	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
245	3.6	5	--	--	--	--	15.96	4	--	--	--	--
247	2.3	15	11	4	140	0	14.4	1	27	4	1.06	4
255	3.5	4	--	--	--	--	15.6	4	--	--	0.99	3
256	1.9	14	13.5	2	--	--	14.45	1	25.9	4	0.97	3
259	3.4	14	10.5	4	58	4	16.1	4	26.5	4	1.045	4
263	3.8	10	11.4	4	--	--	15.75	4	26.5	4	1.05	4
265	3.4	10	--	--	58	4	15.6	4	26	4	--	--
266	2.8	11	11.1	4	--	--	17	1	26.5	4	1	3
269	2.3	7	11	4	--	--	14	0	26	4	0.96	2
277	3.8	4	--	--	--	--	--	--	26.8	4	0.98	3
279	1.5	4	--	--	--	--	16.88	2	--	--	--	--
305	2.2	9	--	--	--	--	15.5	4	27.67	3	0.958	2
315	3.5	6	--	--	--	--	14.8	2	26.2	4	--	--
319	3.0	2	--	--	61.6	3	--	--	27.3	3	--	--
321	0.9	11	7	0	--	--	15.4	4	24.3	1	--	--
328	2.1	16	8	1	61	3	16	4	24	1	0.98	3
330	2.1	10	20	0	--	--	16.6	2	25	2	1.14	2
333	2.5	8	9.3	3	--	--	16.3	3	--	--	--	--
336	0.0	8	--	--	--	--	9.27	0	9.94	0	0.13	0
341	2.9	14	16	0	64.6	2	15.3	3	26.2	4	--	--
356	3.8	6	11.3	4	--	--	--	--	27	4	0.985	3
366	3.3	11	9.64	3	--	--	15.7	4	27.7	3	--	--
370	2.2	13	10	3	--	--	17.1	1	26	4	1.02	4
372	2.1	15	20.4	0	57	4	15.8	4	25.7	3	0.76	0
374	0.0	1	--	--	--	--	--	--	30	0	--	--
375	4.0	4	--	--	--	--	15.44	4	--	--	--	--

Table 6. Laboratory performance ratings for standard reference sample M-162 (major constituents) -- continued

[MPV, most probable value; Lab, laboratory identification number; OLR, overall laboratory rating for all rated analyses; mg/L, milligrams per liter; µg/L, micrograms per liter; µS/cm, microsiemens per centimeter at 25 degrees Celsius; V/16, number of rated analyses out of 16 possible; RV, reported value; <, less than; NR, not rated; --, not reported.]

<u>Rating</u>	<u>Absolute Z-value</u>	<u>Rating</u>	<u>Absolute Z-value</u>
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)	

Lab	Potassium		Magnesium		Sodium		pH		Residue on Evaporation	
	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
	3.20		5.80		24.0		6.60		188	
	0.17		0.23		0.8		0.21		17	
1	3.11	3	5.82	4	23.93	4	6.76	4	184	4
4	--	--	--	--	--	--	--	--	--	--
5	<1.00	0	1.1	0	1.76	0	6.68	4	196	4
8	3.4	2	6.2	2	24.1	4	7.27	0	189.2	4
10	3.3	3	5.8	4	24	4	6.5	4	174	3
12	--	--	6.8	0	26	1	6.6	4	58	0
16	3.2	4	6	3	23	3	6.43	4	119	0
23	3.12	4	5.76	4	23.9	4	6.8	3	--	--
24	3.32	3	5.85	4	24.3	4	6.4	3	--	--
25	0.99	0	1.09	0	1.65	0	6.79	3	272	0
26	3.12	4	5.93	4	24.3	4	--	--	178	3
32	2.98	2	5.6	3	22.1	1	6.52	4	214	1
33	3.29	3	6.35	1	23.4	4	6.99	2	--	--
38	3.31	3	5.74	4	23.7	4	6.8	3	--	--
42	3.01	2	5.46	2	21.8	1	6.55	4	--	--
45	3.25	4	5.82	4	23.9	4	6.48	4	--	--
46	3.05	3	5.6	3	24.1	4	6.67	4	186	4
59	3.3	3	5.5	2	23.9	4	6.53	4	197	3
64	3.23	4	5.88	4	24.1	4	6.9	3	--	--
70	3.18	4	5.78	4	24.6	4	6.55	4	190	4
76	3.26	4	--	--	--	--	--	--	--	--
85	3.47	1	6.04	3	24.5	4	6.54	4	163	2
86	3.41	2	6.05	3	25.3	2	6.59	4	--	--
89	3.37	3	5.93	4	24.2	4	6.5	4	166	2
97	3.2	4	5.94	4	23.2	3	6.7	4	--	--
102	1.54	0	5.54	3	76	0	--	--	--	--
105	3.45	2	6.08	3	23.8	4	6.4	3	220	1
109	3.2	4	5.85	4	21.75	1	6.48	4	189	4
113	3.16	4	5.73	4	23.2	3	--	--	185.7	4
121	--	--	5.6	3	23	3	--	--	--	--
134	3.25	4	5.807	4	23.87	4	6.623	4	194	4
138	3.12	4	5.86	4	23.8	4	6.7	4	178	3
142	3.16	4	5.71	4	23.9	4	5.9	0	173	3
146	3.83	0	5.9	4	24.9	3	6.47	4	208	2
149	--	--	--	--	--	--	6.7	4	--	--
180	3.14	4	5.82	4	24	4	6.78	3	--	--
183	--	--	--	--	--	--	6.36	3	--	--
190	3.28	4	5.92	4	24.6	4	6.21	2	197	3
193	3.32	3	5.85	4	24	4	6.75	4	--	--
208	--	--	--	--	--	--	--	--	--	--
212	3.6	0	5.5	2	23.5	4	6.7	4	180	4
220	--	--	5.99	3	24.101	4	--	--	--	--
224	2.986	2	6.106	2	25.046	3	6.64	4	217.5	1
227	--	--	--	--	--	--	6.78	3	188	4
234	3.15	4	5.97	3	24.4	4	6.4	3	123	0

Table 6. Laboratory performance ratings for standard reference sample M-162 (major constituents) -- continued

[MPV, most probable value; Lab, laboratory identification number; OLR, overall laboratory rating for all rated analyses; mg/L, milligrams per liter; µg/L, micrograms per liter; µS/cm, microsiemens per centimeter at 25 degrees Celsius; V/16, number of rated analyses out of 16 possible; RV, reported value; <, less than; NR, not rated; --, not reported.]

<u>Rating</u>	<u>Absolute Z-value</u>	<u>Rating</u>	<u>Absolute Z-value</u>
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)	

Lab	Potassium		Magnesium		Sodium		pH		Residue on Evaporation	
	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
Analyte =	3.071	3	5.672	4	--	--	--	--	--	--
MPV =	3.20 mg/L		5.80 mg/L		24.0 mg/L		6.60		188 mg/L	
F-pseudosigma =	0.17		0.23		0.8		0.21		17	
245	3.071	3	5.672	4	--	--	--	--	--	--
247	2.98	2	5.31	1	21.8	1	6.84	3	174	3
255	--	--	5.74	4	--	--	--	--	--	--
256	3.02	2	--	--	24.5	4	5.75	0	198	3
259	3.02	2	3	0	24.5	4	6.81	3	--	--
263	--	--	5.7	4	--	--	6.63	4	175	3
265	3.15	4	5.7	4	24	4	--	--	--	--
266	3.5	1	5.3	1	24.6	4	--	--	188	4
269	--	--	7.29	0	--	--	6.25	2	--	--
277	--	--	--	--	--	--	--	--	189	4
279	3.76	0	6.38	1	24.84	3	--	--	--	--
305	3.96	0	5.78	4	21.2	0	6.5	4	--	--
315	3.3	3	5.8	4	23.9	4	--	--	--	--
319	--	--	--	--	--	--	--	--	--	--
321	3.4	2	5.1	0	20.1	0	5.76	0	--	--
328	1.5	0	6	3	25	3	6.05	1	140	0
330	3.41	2	5.9	4	25.2	3	6.99	2	186	4
333	3.93	0	6.02	3	--	--	6.58	4	--	--
336	0.79	0	0.99	0	2.25	0	5.68	0	--	--
341	3.2	4	5.7	4	25	3	6.54	4	208	2
356	--	--	--	--	--	--	--	--	192.6	4
366	3.26	4	5.76	4	23.5	4	6.67	4	160	1
370	3.7	0	5.95	4	26.6	0	7.12	1	220	1
372	2.76	0	5.59	3	--	--	6.73	4	207	2
374	--	--	--	--	--	--	--	--	--	--
375	3.193	4	5.8	4	23.975	4	--	--	--	--

Table 6. Laboratory performance ratings for standard reference sample M-162 (major constituents) -- continued

[MPV, most probable value; Lab, laboratory identification number; OLR, overall laboratory rating for all rated analyses; mg/L, milligrams per liter; µg/L, micrograms per liter; µS/cm, microsiemens per centimeter at 25 degrees Celsius; V/16, number of rated analyses out of 16 possible; RV, reported value; <, less than; NR, not rated; --, not reported.]

<u>Rating</u>	<u>Absolute Z-value</u>	<u>Rating</u>	<u>Absolute Z-value</u>
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)	

Lab	Analyte =		Silica		Sulfate		Specific Conductance		Strontium		Phosphorus as P	
	MPV =		13.9 mg/L		13.4 mg/L		284 µS/cm		93.8 µg/L		0.510 mg/L	
	F-pseudosigma =		0.6		0.9		6		3.2		0.024	
	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	13.9	4	13.28	4	286	4	93.88	4	--	--	--	--
4	--	--	11.3	0	--	--	--	--	--	--	--	--
5	0.547	0	13.05	4	254	0	23.7	0	0.51	4	0.51	4
8	14.2	4	12.6	3	168.3	0	100	2	0.72	0	0.72	0
10	13.8	4	13.7	4	282	4	--	--	--	--	--	--
12	--	--	4	0	308	1	--	--	0.49	3	0.49	3
16	--	--	14.3	2	295	3	90	3	0.628	0	0.628	0
23	--	--	1.3	0	291	4	--	--	0.48	2	0.48	2
24	14.9	2	14.2	3	278	4	96.8	3	--	--	--	--
25	10.8	0	12.1	2	286	4	90	3	--	--	--	--
26	--	--	12.5	2	278	4	--	--	--	--	--	--
32	13.8	4	13.8	4	282	4	95	4	0.61	0	0.61	0
33	6.12	0	14.5	2	316.7	0	91.2	3	--	--	--	--
38	13.8	4	--	--	280.7	4	--	--	0.524	3	0.524	3
42	12.9	2	11.3	0	302	2	113	0	0.505	4	0.505	4
45	--	--	12.9	3	290	4	--	--	--	--	--	--
46	--	--	13.3	4	282	4	--	--	0.522	4	0.522	4
59	--	--	13.8	4	303	2	93.7	4	--	--	--	--
64	14.4	3	13.7	4	227	0	--	--	0.526	3	0.526	3
70	14.3	3	13.6	4	275	3	--	--	0.49	3	0.49	3
76	--	--	--	--	280	4	92.06	4	--	--	--	--
85	15.5	0	14	3	274	3	94	4	0.493	3	0.493	3
86	--	--	13.5	4	293	3	94	4	0.506	4	0.506	4
89	15	1	13.7	4	280	4	--	--	0.509	4	0.509	4
97	15.6	0	9.07	0	284	4	92.2	4	--	--	--	--
102	13.6	4	13.7	4	298	3	82	0	0.519	4	0.519	4
105	14.488	3	12.6	3	277	4	94	4	0.464	1	0.464	1
109	--	--	14.19	3	283	4	--	--	--	--	--	--
113	13.7	4	13.3	4	285	4	91.4	3	0.507	4	0.507	4
121	13.6	4	--	--	--	--	94	4	--	--	--	--
134	13.98	4	13.11	4	283	4	93.08	4	0.528	3	0.528	3
138	14.6	3	13.3	4	284	4	93.8	4	0.525	3	0.525	3
142	13.8	4	13.5	4	286	4	102	1	0.523	4	0.523	4
146	--	--	13.5	4	258	1	--	--	--	--	--	--
149	--	--	12.3	2	280	4	--	--	0.521	4	0.521	4
180	--	--	13.4	4	194	0	--	--	0.496	3	0.496	3
183	--	--	14.5	2	290	4	--	--	0.528	3	0.528	3
190	14.1	4	13.5	4	282	4	<0.01	0	0.505	4	0.505	4
193	--	--	--	--	285	4	--	--	--	--	--	--
208	--	--	12.6	3	--	--	--	--	--	--	--	--
212	10.2	0	12.7	3	256	1	--	--	0.45	0	0.45	0
220	14.21	4	13.072	4	--	--	--	--	0.513	4	0.513	4
224	13.73	4	13.41	4	280	4	--	--	0.484	2	0.484	2
227	--	--	--	--	282	4	--	--	0.503	4	0.503	4
234	13.9	4	13.4	4	278	4	94.5	4	0.55	1	0.55	1

Table 6. Laboratory performance ratings for standard reference sample M-162 (major constituents) -- continued

[MPV, most probable value; Lab, laboratory identification number; OLR, overall laboratory rating for all rated analyses; mg/L, milligrams per liter; µg/L, micrograms per liter; µS/cm, microsiemens per centimeter at 25 degrees Celsius; V/16, number of rated analyses out of 16 possible; RV, reported value; <, less than; NR, not rated; --, not reported.]

<u>Rating</u>	<u>Absolute Z-value</u>	<u>Rating</u>	<u>Absolute Z-value</u>
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)	

Lab	Analyte =		Silica		Sulfate		Specific Conductance		Strontium		Phosphorus as P	
	MPV =		13.9 mg/L		13.4 mg/L		284 µS/cm		93.8 µg/L		0.510 mg/L	
	F-pseudosigma =		0.6		0.9		6		3.2		0.024	
	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
245	--	--	--	--	--	--	89.5	3	--	--	--	--
247	15.1	1	12.7	3	288	4	80	0	0.51	4	--	--
255	--	--	14	3	--	--	--	--	--	--	--	--
256	11.88	0	16.43	0	285	4	88.7	2	0.57	0	--	--
259	13.8	4	13.4	4	284	4	98	3	0.506	4	--	--
263	13.6	4	13.9	3	286	4	--	--	--	--	--	--
265	13.9	4	14.5	2	--	--	94	4	--	--	--	--
266	14	4	15	1	290	4	--	--	--	--	--	--
269	--	--	--	--	284	4	--	--	--	--	--	--
277	--	--	13.2	4	--	--	--	--	--	--	--	--
279	--	--	--	--	--	--	--	--	--	--	--	--
305	--	--	12.57	3	--	--	--	--	--	--	--	--
315	--	--	13.7	4	--	--	--	--	--	--	--	--
319	--	--	--	--	--	--	--	--	--	--	--	--
321	12.9	2	11.64	1	247	0	--	--	0.437	0	--	--
328	14.9	2	13	4	284	4	86	1	0.49	3	--	--
330	--	--	18.2	0	--	--	--	--	--	--	--	--
333	15	1	--	--	266	2	94.2	4	--	--	--	--
336	--	--	0.999	0	--	--	--	--	--	--	--	--
341	--	--	10.5	0	285	4	94.6	4	0.533	3	--	--
356	--	--	13.1	4	284	4	--	--	--	--	--	--
366	--	--	13.9	3	271	3	--	--	0.493	3	--	--
370	6.9	0	14.6	2	288	4	--	--	0.52	4	--	--
372	14.3	3	11.4	0	286	4	87	2	0.59	0	--	--
374	--	--	--	--	--	--	--	--	--	--	--	--
375	--	--	--	--	--	--	--	--	--	--	--	--

Table 6. Laboratory performance ratings for standard reference sample M-162 (major constituents) -- continued

[MPV, most probable value; Lab, laboratory identification number; OLR, overall laboratory rating for all rated analyses; mg/L, milligrams per liter; µg/L, micrograms per liter; µS/cm, microsiemens per centimeter at 25 degrees Celsius; V/16, number of rated analyses out of 16 possible; RV, reported value; <, less than; NR, not rated; --, not reported.]

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 = Vanadium		RV	Rating
MPV = 9.74 µg/L			
F-pseudostigma = 1.04			
Lab		RV	Rating
1		10.36	3
4		--	--
5		<4.00	0
8		9.9	4
10		--	--
12		--	--
16		11	2
23		--	--
24		--	--
25		<19	NR
26		--	--
32		9.9	4
33		--	--
38		--	--
42		9.6	4
45		9.47	4
46		--	--
59		8.97	3
64		--	--
70		--	--
76		9.88	4
85		15	0
86		8.5	2
89		12	0
97		<7.8	NR
102		14	0
105		<20.0	NR
109		--	--
113		--	--
121		11	2
134		9.19	3
138		8.75	3
142		9.48	4
146		9.02	3
149		--	--
180		9.58	4
183		--	--
190		--	--
193		--	--
208		--	--
212		--	--
220		--	--
224		--	--
227		--	--
234		10.4	3

Analyte = Vanadium		RV	Rating
MPV = 9.74 µg/L			
F-pseudostigma = 1.04			
Lab		RV	Rating
245		10.1	4
247		--	--
255		--	--
256		8.65	2
259		--	--
263		--	--
265		14	0
266		--	--
269		--	--
277		--	--
279		--	--
305		3.2	0
315		--	--
319		--	--
321		--	--
328		8	1
330		--	--
333		--	--
336		--	--
341		9.9	4
356		--	--
366		--	--
370		--	--
372		9	3
374		--	--
375		--	--

Table 7. Laboratory performance ratings for standard reference sample N-73 (nutrient constituents)

[MPV, most probable value; Lab, laboratory identification number; OLR, overall laboratory rating for all rated analyses; mg/L, milligrams per liter; V/5, number of rated analyses out of 5 possible; RV, reported value; <, less than; NR, not rated; --, not reported.]

<u>Rating</u>	<u>Absolute Z-value</u>	<u>Rating</u>	<u>Absolute Z-value</u>
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)	

Lab	Analyte =		Ammonia as N		Ammonia + Organic N as N		Nitrate as N		Phosphorus as P		Orthophosphate as P	
	OLR	V/5	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
	MPV =	F-pseudosigma =	0.127 mg/L	0.010	0.140 mg/L	0.022	0.126 mg/L	0.007	0.132 mg/L	0.009	0.128 mg/L	0.004
1	3.4	5	0.119	3	0.119	3	0.122	3	0.129	4	0.128	4
5	2.0	5	0.154	0	0.16	3	0.153	0	0.136	4	0.133	3
8	1.8	5	0.17	0	0.17	2	0.12	3	0.15	0	0.13	4
10	3.6	5	0.13	4	0.13	4	0.13	3	0.134	4	0.132	3
12	2.6	5	0.12	3	0.23	0	0.12	3	0.126	3	0.127	4
16	3.2	5	0.12	3	0.15	4	0.12	3	0.134	4	0.119	2
21	3.8	5	0.118	3	0.15	4	0.129	4	0.132	4	0.129	4
23	0.2	5	0.098	0	0.308	0	0.141	0	0.105	0	0.116	1
25	3.0	5	0.13	4	0.14	4	0.113	1	0.12	2	0.128	4
26	0.0	2	<0.4	NR	--	--	0.11	0	--	--	0.11	0
31	4.0	5	0.124	4	0.146	4	0.128	4	0.133	4	0.129	4
33	1.7	3	0.132	4	--	--	0.14	1	--	--	0.15	0
38	3.6	5	0.133	3	0.13	4	0.121	3	0.134	4	0.126	4
42	1.3	3	--	--	--	--	0.103	0	0.131	4	0.142	0
45	2.5	4	0.136	3	--	--	0.15	0	0.14	3	0.129	4
46	2.5	4	0.116	2	--	--	0.126	4	0.135	4	0.151	0
51	3.8	5	0.13	4	0.131	4	0.12	3	0.13	4	0.126	4
59	3.2	5	0.12	3	0.135	4	0.128	4	0.131	4	0.138	1
64	2.8	4	0.14	2	--	--	0.12	3	0.12	2	0.126	4
70	1.4	5	0.118	3	0.181	1	0.144	0	0.244	0	0.122	3
72	0.8	5	0.1	0	0.114	2	0.113	1	0.115	1	0.101	0
85	3.6	5	0.13	4	0.11	2	0.125	4	0.132	4	0.128	4
86	1.3	3	0.129	4	--	--	0.107	0	0.114	0	--	--
89	2.8	5	0.118	3	0.17	2	0.13	3	0.123	2	0.13	4
102	2.0	4	0.16	0	<0.2	NR	0.105	0	0.132	4	0.131	4
105	1.3	4	0.12	3	<1.00	NR	0.15	0	0.122	2	0.099	0
110	2.0	1	0.139	2	--	--	--	--	--	--	--	--
113	3.0	5	0.099	0	0.14	4	0.129	4	0.139	3	0.127	4
118	3.3	3	0.118	3	--	--	0.133	3	--	--	0.127	4
134	3.5	4	0.126	4	<0.2	NR	0.127	4	0.12	2	0.13	4
138	3.8	5	0.122	4	0.137	4	0.123	4	0.14	3	0.129	4
142	2.8	5	0.126	4	0.104	1	0.132	3	0.13	4	0.119	2
146	2.5	4	0.142	2	<0.200	NR	0.128	4	0.142	2	0.137	2
180	3.4	5	0.127	4	0.139	4	0.121	3	0.128	4	0.136	2
183	2.0	2	--	--	< 1	NR	< 1	NR	0.143	2	0.119	2
190	3.2	5	0.118	3	0.14	4	0.125	4	0.121	2	0.122	3
193	3.3	3	0.116	2	<0.5	NR	0.126	4	0.135	4	--	--
198	3.0	4	0.131	4	--	--	0.126	4	0.121	2	0.12	2
227	2.2	5	0.172	0	0.16	3	0.157	0	0.128	4	0.128	4
234	2.5	4	0.12	3	--	--	0.13	3	0.155	0	0.125	4
247	3.0	5	0.13	4	0.15	4	0.13	3	0.15	0	0.13	4
306	0.5	4	0.14	2	0.651	0	0.315	0	0.167	0	--	--
313	3.6	5	0.119	3	0.119	3	0.124	4	0.13	4	0.129	4
316	1.6	5	0.1095	1	0.1607	3	0.1343	2	0.1444	2	0.152	0
318	3.8	5	0.125	4	0.13	4	0.13	3	0.136	4	0.131	4

Table 7. Laboratory performance ratings for standard reference sample N-73 (nutrient constituents) -- continued

[MPV, most probable value; Lab, laboratory identification number; OLR, overall laboratory rating for all rated analyses; mg/L, milligrams per liter; V/5, number of rated analyses out of 5 possible; RV, reported value; <, less than; NR, not rated; --, not reported.]

<u>Rating</u>	<u>Absolute Z-value</u>	<u>Rating</u>	<u>Absolute Z-value</u>
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)	

Lab	Analyte =		Ammonia as N		Ammonia + Organic N as N		Nitrate as N		Phosphorus as P		Orthophosphate as P	
	OLR	V/5	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
	MPV =	F-pseudostigma =	0.127 mg/L		0.140 mg/L		0.126 mg/L		0.132 mg/L		0.128 mg/L	
			0.010		0.022		0.007		0.009		0.004	
320	3.0	5	0.13	4	0.083	0	0.125	4	0.133	4	0.123	3
321	2.5	4	0.13	4	--	--	0.11	0	0.143	2	0.128	4
328	1.6	5	0.11	1	0.133	4	0.12	3	0.17	0	0.52	0
333	2.0	2	0.174	0	--	--	0.126	4	--	--	--	--
341	3.4	5	0.122	4	0.13	4	0.123	4	0.14	3	0.119	2
366	3.0	5	0.13	4	0.089	0	0.127	4	0.127	3	0.129	4
370	0.8	4	0.2	0	<0.5	NR	0.18	0	0.14	3	0.143	0
372	1.4	5	0.143	1	0.255	0	0.116	2	0.18	0	0.13	4
373	3.6	5	0.128	4	0.143	4	0.135	2	0.131	4	0.126	4
376	3.0	5	0.159	0	0.157	3	0.127	4	0.132	4	0.126	4
377	3.4	5	0.12	3	0.12	3	0.124	4	0.132	4	0.132	3

Table 8. Laboratory performance ratings for standard reference sample N-74 (nutrient constituents)

[MPV, most probable value; Lab, laboratory number; OLR, overall laboratory rating for all rated analyses; mg/L, milligrams per liter; V/5, number of rated analyses out of 5 possible; RV, reported value; <, less than; NR, not rated; --, not reported.]

<u>Rating</u>	<u>Absolute Z-value</u>	<u>Rating</u>	<u>Absolute Z-value</u>
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)	

Lab	Analyte =		Ammonia as N		Ammonia + Organic N as N		Nitrate as N		Phosphorus as P		Orthophosphate as P	
	OLR	V/5	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
	MPV =	F-pseudosigma =	0.760 mg/L	0.037	0.838 mg/L	0.113	0.711 mg/L	0.122	0.755 mg/L	0.031	0.741 mg/L	0.035
1	3.6	5	0.733	3	0.849	4	0.699	4	0.753	4	0.766	3
5	1.8	5	0.818	1	0.83	4	0.847	2	0.845	0	0.795	2
8	2.4	5	1	0	1	2	0.68	4	0.81	2	0.75	4
10	3.0	5	0.8	2	0.84	4	0.87	2	0.772	4	0.761	3
16	2.8	5	0.74	3	0.96	2	0.61	3	0.794	2	0.741	4
23	2.0	5	0.656	0	1.05	1	0.889	2	0.727	3	0.745	4
25	2.6	5	0.82	1	1.03	1	0.655	4	0.73	3	0.734	4
26	4.0	2	--	--	--	--	0.65	4	--	--	0.73	4
30	3.5	2	--	--	--	--	0.68	4	--	--	0.72	3
33	2.7	3	0.757	4	--	--	0.71	4	--	--	0.6	0
38	3.6	5	0.76	4	0.83	4	0.871	2	0.756	4	0.749	4
42	2.0	3	--	--	--	--	0.581	2	0.744	4	0.632	0
45	2.5	4	0.709	2	--	--	0.665	4	0.809	2	0.701	2
46	3.4	5	0.75	4	0.988	2	0.742	4	0.78	3	0.728	4
59	3.4	5	0.755	4	0.78	3	0.702	4	0.741	4	0.7	2
64	3.3	4	0.74	3	--	--	0.89	2	0.77	4	0.73	4
70	2.4	5	0.622	0	0.838	4	0.694	4	0.944	0	0.744	4
72	3.2	5	0.574	0	0.784	4	0.72	4	0.753	4	0.736	4
80	2.0	3	0.9	0	--	--	0.8	3	0.79	3	--	--
85	3.8	5	0.782	3	0.82	4	0.72	4	0.754	4	0.752	4
86	2.3	3	0.693	1	--	--	0.868	2	0.746	4	--	--
89	3.0	5	0.751	4	0.897	3	0.906	1	0.737	4	0.765	3
97	3.2	5	0.792	3	0.82	4	0.717	4	0.78	3	0.784	2
102	3.2	5	0.79	3	0.752	3	0.713	4	0.755	4	0.7	2
105	2.0	5	0.76	4	1.02	1	0.93	1	0.729	3	0.684	1
113	4.0	5	0.763	4	0.85	4	0.711	4	0.745	4	0.724	4
118	3.0	3	0.777	4	--	--	0.905	1	--	--	0.746	4
134	2.8	5	0.79	3	0.833	4	0.91	1	0.775	3	0.762	3
138	3.6	5	0.738	3	0.85	4	0.699	4	0.772	4	0.771	3
142	2.8	5	0.704	2	0.855	4	0.885	2	0.741	4	0.795	2
146	3.4	5	0.78	3	0.784	4	0.654	4	0.708	2	0.728	4
180	3.6	5	0.763	4	0.805	4	0.665	4	0.74	4	0.784	2
183	3.0	2	--	--	--	--	< 1	NR	0.738	4	0.686	2
190	3.2	5	0.694	1	0.754	3	0.731	4	0.747	4	0.734	4
193	3.0	4	0.743	4	0.929	3	0.882	2	0.723	3	--	--
198	2.0	4	0.824	1	--	--	0.696	4	0.692	1	0.69	2
205	4.0	2	0.777	4	--	--	0.734	4	--	--	--	--
208	2.0	2	--	--	--	--	0.69	4	--	--	0.58	0
212	1.8	4	0.73	3	0.58	0	0.71	4	--	--	1	0
224	2.4	5	0.834	1	0.762	3	0.72	4	0.536	0	0.753	4
234	2.3	4	0.77	4	--	--	0.649	4	0.825	1	0.626	0
247	3.6	5	0.75	4	0.79	4	0.65	4	0.79	3	0.77	3
305	3.7	3	0.774	4	--	--	0.71	4	--	--	0.705	3
306	1.5	4	0.731	3	1.45	0	1.04	0	0.721	3	--	--
313	4.0	5	0.746	4	0.823	4	0.679	4	0.763	4	0.759	4

Table 8. Laboratory performance ratings for standard reference sample N-74 (nutrient constituents) -- continued

[MPV, most probable value; Lab, laboratory number; OLR, overall laboratory rating for all rated analyses; mg/L, milligrams per liter; V/5, number of rated analyses out of 5 possible; RV, reported value; <, less than; NR, not rated; --, not reported.]

<u>Rating</u>	<u>Absolute Z-value</u>	<u>Rating</u>	<u>Absolute Z-value</u>
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)	

Lab	Analyte =		Ammonia as N		Ammonia + Organic N as N		Nitrate as N		Phosphorus as P		Orthophosphate as P	
	OLR	V/5	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
	MPV =	F-pseudostigma =	0.760 mg/L	0.037	0.838 mg/L	0.113	0.711 mg/L	0.122	0.755 mg/L	0.031	0.741 mg/L	0.035
320	3.4	5	0.792	3	0.899	3	0.697	4	0.773	4	0.715	3
328	1.2	5	0.84	0	1.53	0	0.85	2	0.76	4	2.33	0
341	3.0	5	0.766	4	0.84	4	0.69	4	0.776	3	0.65	0
356	3.0	5	0.68	0	0.795	4	0.714	4	0.784	3	0.754	4
366	2.6	5	0.74	3	0.61	0	0.711	4	0.702	2	0.733	4
370	2.4	5	0.9	0	0.7	2	0.715	4	0.73	3	0.775	3
372	2.4	5	0.758	4	1.97	0	0.682	4	1.05	0	0.75	4
373	3.2	5	0.7745	4	1.211	0	0.705	4	0.762	4	0.726	4
376	3.6	5	0.758	4	0.828	4	0.672	4	0.751	4	0.791	2

Table 9. Laboratory performance ratings for standard reference sample P-38 (low-ionic strength constituents)

[MPV, most probable value; Lab, laboratory identification number; OLR, overall laboratory rating for all rated analyses; mg/L, milligrams per liter; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; V/11, number of rated analyses out of 11 possible; RV, reported value; <, less than; NR, not rated; --, not reported.]

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)	

Lab	Analyte =		Acidity		Calcium		Chloride		Fluoride		Potassium	
	OLR	V/11	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	3.1	7	--	--	6.2	3	7.91	2	0.026	NR	0.79	4
2	3.6	7	--	--	6.472	4	--	--	0.037	NR	0.854	4
5	1.3	8	--	--	15.7	0	8.39	4	--	--	3.38	0
8	2.3	8	--	--	6.8	2	8.35	4	<0.3	NR	0.85	4
23	2.7	7	--	--	6.22	3	8.7	3	<0.15	NR	0.97	1
25	2.6	7	14	NR	5.92	2	8.4	4	0.04	NR	0.99	1
33	1.4	8	--	--	5.95	2	8.55	4	0.022	NR	0.64	0
38	3.5	6	2.96	NR	6.4	4	--	--	--	--	0.8	4
45	3.5	8	--	--	6.35	4	8.15	3	0.05	NR	0.819	4
59	1.4	8	--	--	7.48	0	7.73	1	0.28	NR	0.54	0
64	3.1	8	--	--	6.51	4	8.78	3	--	--	0.69	1
85	3.3	8	--	--	6.77	2	8.5	4	0.03	NR	0.9	3
86	3.1	8	--	--	6.27	4	8.98	2	0.22	NR	0.83	4
89	2.5	8	2.8	NR	6.88	2	8.56	4	<0.1	NR	0.865	4
105	3.3	7	6.8	NR	6.57	3	8	3	<0.20	NR	<1.00	NR
110	3.6	8	--	--	6.4034	4	8.168	4	--	--	0.8389	4
113	3.9	7	--	--	6.28	4	8.32	4	--	--	0.789	4
134	3.8	8	--	--	6.5	4	8.08	3	<0.1	NR	0.809	4
138	3.8	8	--	--	6.3	4	8.91	2	<0.050	NR	0.79	4
180	2.9	8	--	--	6.37	4	8.08	3	0.012	NR	0.747	2
190	3.4	8	--	--	6.21	3	8.52	4	0.01	NR	0.78	3
193	3.7	6	--	--	5.97	2	--	--	--	--	0.839	4
208	4.0	1	--	--	--	--	8.31	4	--	--	--	--
245	3.7	3	--	--	6.447	4	--	--	--	--	0.7702	3
247	2.1	8	5	NR	5.69	0	7.98	3	0.02	NR	0.72	2
265	3.5	6	--	--	6.5	4	7.7	1	--	--	0.83	4
279	1.8	4	--	--	7.37	0	--	--	--	--	0.86	4
315	3.2	6	--	--	6.3	4	8.3	4	--	--	0.97	1
321	1.9	8	--	--	6.26	4	8.44	4	--	--	0.75	3
328	2.4	8	4.5	NR	6.7	3	9	2	0.026	NR	1.63	0
333	3.6	7	--	--	6.52	4	--	--	--	--	0.87	4
336	0.4	8	--	--	16.12	0	29.82	0	0.93	NR	3.419	0
370	1.9	8	20	NR	6.89	2	8.71	3	0.062	NR	1.05	0
372	1.6	8	18.2	NR	6.2	3	8.14	3	0.1	NR	0.39	0

Table 9. Laboratory performance ratings for standard reference sample P-38 (low-ionic strength constituents)

-- continued

[MPV, most probable value; Lab, laboratory identification number; OLR, overall laboratory rating for all rated analyses; mg/L, milligrams per liter; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; V/11, number of rated analyses out of 11 possible; RV, reported value; <, less than; NR, not rated; --, not reported.]

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)	

Lab	Analyte = Magnesium		Sodium		pH		Orthophosphate as P		Sulfate	
	MPV = 1.15 mg/L		1.80 mg/L		6.01		inadequate data		2.99 mg/L	
	F-pseudosigma = 0.05		0.12		0.21				0.21	
	RV	Rating	RV	Rating	RV	Rating	RV	Rating	RV	Rating
1	1.17	4	1.78	4	--	--	--	--	2.75	2
2	1.158	4	1.915	3	6.034	4	--	--	3.086	4
5	5.67	0	24	0	5.66	2	--	--	2.87	3
8	1.2	3	1.9	3	6.73	0	<0.2	NR	3.21	2
23	1.11	3	1.76	4	6.32	2	0.001	NR	<5.0	NR
25	1.09	2	1.65	2	6.17	3	0.03	NR	<5.0	NR
33	0.795	0	0.676	0	6.21	3	0.139	NR	3.24	2
38	1.081	2	1.74	3	6.1	4	--	--	--	--
45	1.16	4	1.85	4	5.96	4	<0.1	NR	2.98	4
59	0.96	0	2	1	5.99	4	--	--	2.78	3
64	1.13	4	1.74	3	6.07	4	<0.002	NR	3.11	3
85	1.18	3	1.96	2	6.13	4	<0.001	NR	2.9	4
86	1.17	4	1.85	4	5.9	4	--	--	4.27	0
89	1.36	0	2.04	0	5.7	2	<0.003	NR	2.95	4
105	1.19	3	1.93	2	5.9	4	0.01	NR	3.01	4
110	1.1124	3	1.768	4	5.935	4	--	--	3.006	4
113	1.1	3	1.76	4	--	--	<0.004	NR	2.9	4
134	1.13	4	1.72	3	5.88	4	<0.01	NR	2.99	4
138	1.16	4	1.8	4	6.05	4	<0.004	NR	2.94	4
180	1.13	4	1.78	4	6.05	4	<0.005	NR	2.74	2
190	1.16	4	1.79	4	5.6	2	--	--	2.95	4
193	1.16	4	1.8	4	--	--	--	--	2.96	4
208	--	--	--	--	--	--	--	--	<3	NR
245	1.122	4	--	--	--	--	--	--	--	--
247	0.95	0	1.65	2	6.22	3	<0.01	NR	2.84	3
265	1.15	4	1.85	4	--	--	--	--	2.9	4
279	1.34	0	1.87	3	--	--	--	--	--	--
315	1.2	3	1.8	4	--	--	--	--	3.1	3
321	1.06	1	1.54	0	5.7	2	<0.001	NR	2.66	1
328	1.13	4	1.8	4	5.6	2	0.037	NR	4.44	0
333	1.17	4	1.9	3	5.92	4	--	--	3.17	3
336	4.34	0	25.5	0	6.23	3	--	--	10.86	0
370	1.06	1	1.92	2	5.77	3	<0.02	NR	3.32	1
372	1.06	1	1.07	0	6.36	2	<0.01	NR	3.95	0

Table 9. Laboratory performance ratings for standard reference sample P-38 (low-ionic strength constituents)

-- continued

[MPV, most probable value; Lab, laboratory identification number; OLR, overall laboratory rating for all rated analyses; mg/L, milligrams per liter; $\mu\text{S/cm}$, microsiemens per centimeter at 25 degrees Celsius; V/11, number of rated analyses out of 11 possible; RV, reported value; <, less than; NR, not rated; --, not reported.]

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)	

Lab	Specific Conductance	
	RV	Rating
	Analyte =	
	MPV = 65.0 $\mu\text{S/cm}$	
	F-pseudosigma = 3.3	
1	66.9	3
2	60.267	2
5	58.6	1
8	57.4	0
23	67.7	3
25	64	4
33	72.3	0
38	63.8	4
45	70	1
59	69	2
64	62.5	3
85	66	4
86	66.9	3
89	64.6	4
105	66.6	4
110	61.5	2
113	66.3	4
134	64.1	4
138	64.9	4
180	45	0
190	63.2	3
193	65	4
208	--	--
245	--	--
247	65	4
265	--	--
279	--	--
315	--	--
321	57.9	0
328	65	4
333	61.8	3
336	244.6	0
370	68	3
372	65	4

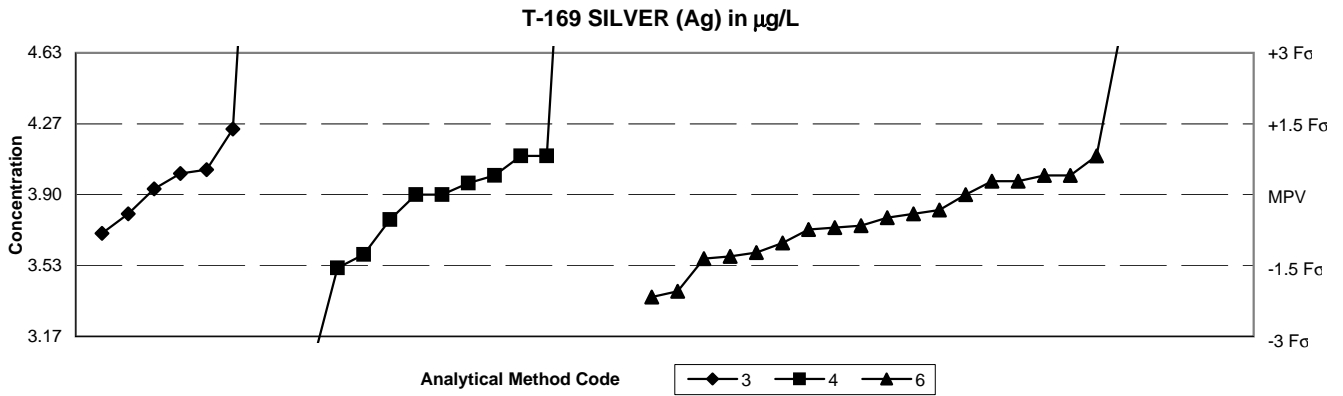
Table 10. Laboratory performance ratings for standard reference sample HG-34 (Mercury)

[MPV, most probable value; Lab, laboratory identification number; OLR, overall laboratory rating for all rated analyses; µg/L, micrograms per liter; V/1, number of rated analyses out of 1 possible; RV, reported value; <, less than; NR, not rated; --, not reported.]

<u>Rating</u>	<u>Absolute Z-value</u>	<u>Rating</u>	<u>Absolute Z-value</u>
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 =		Mercury		
MPV =		inadequate data		
F-pseudosigma =				
Lab	OLR	V/1	RV	Rating
1	NR	0	0.0266	NR
5	NR	0	1.63	NR
8	NR	0	0.15	NR
23	NR	0	0.1	NR
26	NR	0	<0.2	NR
32	NR	0	<0.05	NR
45	NR	0	0.0319	NR
46	NR	0	0.011	NR
59	NR	0	0.025	NR
89	NR	0	<0.2	NR
97	NR	0	<0.1	NR
105	NR	0	1.13	NR
134	NR	0	<0.1	NR
138	NR	0	0.028	NR
147	NR	0	0.0335	NR
180	NR	0	<0.050	NR
193	NR	0	0.0249	NR
245	NR	0	0.0248	NR
247	NR	0	<0.20	NR
304	NR	0	0.028	NR
356	NR	0	0.011	NR
370	NR	0	<100	NR
372	NR	0	<0.0002	NR

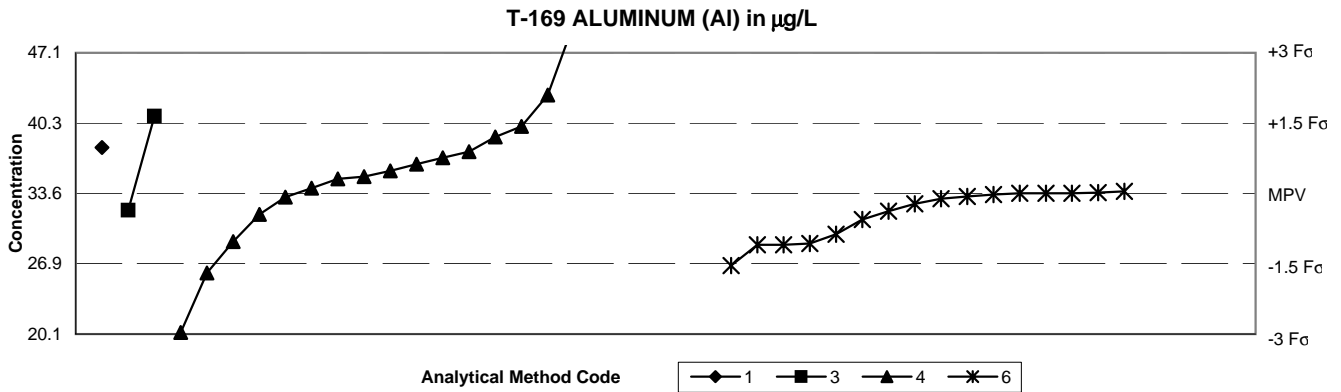
Table 11. Statistical summary of reported data for standard reference sample T-169 (trace constituents)



SUMMARY	Methods			Statistics
	3	4	6	
n =	7	13	19	MPV = 3.90 µg/L
Minimum =	3.7	2.45	3.37	F-pseudsigma = 0.24
Maximum =	6.47	6.6	4.8	n = 39
Median =	4.01	3.90	3.78	Uh = 4.01
F-pseudsigma =	0.20	0.38	0.26	Lh = 3.68
	Method Codes			
	03 Atomic absorption: graphite furnace			
	04 Inductively coupled plasma			
	06 Inductively coupled plasma/mass spectrometry			

Lab	Rating	Z-value	Method Codes			Lab	Rating	Z-value	Method Codes		
			3	4	6				3	4	6
1	4	0.29	--	--	3.97	370	0	10.51	6.47	--	--
5	0	10.02	--	6.35	--	372	0	-3.68	--	3	--
7	0	-7.77	--	--	<2						
8	2	-1.02	--	--	3.65						
12	3	-0.82	3.7	--	--						
16	4	0.41	--	4	--						
23	1	-1.55	--	3.52	--						
25	NR	--	--	<17	--						
32	4	0.00	--	--	3.9						
42	2	-1.23	--	--	3.6						
45	0	3.68	--	--	4.8						
59	NR	--	--	--	< 5						
86	0	-5.93	--	2.45	--						
89	4	-0.41	3.8	--	--						
97	4	0.45	4.01	--	--						
105	2	-1.31	--	--	3.58						
113	3	0.53	4.03	--	--						
121	0	-2.04	--	--	3.4						
134	4	0.00	--	3.9	--						
138	4	-0.33	--	--	3.82						
142	3	-0.74	--	--	3.72						
146	2	-1.27	--	3.59	--						
149	3	0.82	--	--	4.1						
180	0	-2.17	--	--	3.37						
190	4	0.12	3.93	--	--						
193	2	1.39	4.24	--	--						
198	3	-0.69	--	--	3.73						
212	3	0.82	--	4.1	--						
234	3	-0.53	--	3.77	--						
245	2	-1.36	--	--	3.568						
247	4	-0.49	--	--	3.78						
255	4	0.41	--	--	4						
256	4	0.25	--	3.96	--						
259	4	0.00	--	3.9	--						
265	4	-0.41	--	--	3.8						
304	4	0.29	--	--	3.97						
305	3	0.82	--	4.1	--						
328	0	11.04	--	6.6	--						
330	4	0.41	--	--	4						
356	3	-0.65	--	--	3.74						

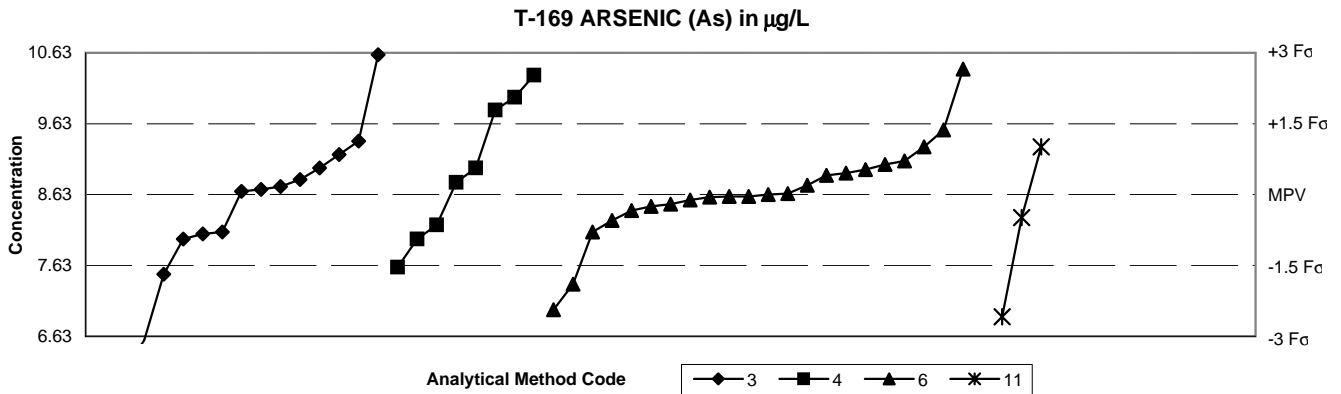
Table 11. Statistical summary of reported data for standard reference sample T-169 (trace constituents) -- continued



SUMMARY	Methods					Statistics	
	1	3	4	5	6	Method Codes	
n =	1	2	19	1	16	01 Atomic absorption: direct, air	MPV = 33.6 µg/L
Minimum =	38	32	20.3	53	26.7	03 Atomic absorption: graphite furnace	F-pseudosigma = 4.5
Maximum =		41	290		33.8	04 Inductively coupled plasma	n = 39
Median =			36.4		32.8	05 Direct current plasma	Uh = 37.8
F-pseudosigma =			5.8		3.2	06 Inductively coupled plasma/mass spectrometry	Lh = 31.8

Lab	Rating	Z-value	Method Codes					Lab	Rating	Z-value	Method Codes				
			1	3	4	5	6				1	3	4	5	6
1	4	-0.06	--	--	--	--	33.31	372	2	1.20	--	--	39	--	--
5	0	3.63	--	--	49.9	--	--								
7	4	-0.02	--	--	--	--	33.5								
8	1	-1.54	--	--	--	--	26.7								
16	2	-1.03	--	--	29	--	--								
25	0	57.17	--	--	290	--	--								
26	4	0.36	--	--	35.2	--	--								
32	3	-0.56	--	--	--	--	31.1								
33	0	4.33	--	--	--	53	--								
42	3	-0.87	--	--	--	--	29.7								
45	4	0.00	--	--	--	--	33.6								
59	NR	--	--	--	--	--	< 50								
70	2	-1.09	--	--	--	--	28.7								
76	4	-0.12	--	--	--	--	33.08								
89	3	0.98	38	--	--	--	--								
97	1	1.65	--	41	--	--	--								
105	4	0.02	--	--	--	--	33.69								
110	4	0.11	--	--	34.1	--	--								
113	4	-0.45	--	--	31.6	--	--								
134	4	-0.08	--	--	33.25	--	--								
138	3	0.62	--	--	36.4	--	--								
142	3	0.89	--	--	37.6	--	--								
146	0	6.60	--	--	63.2	--	--								
149	4	0.00	--	--	--	--	33.6								
180	2	-1.07	--	--	--	--	28.8								
190	4	-0.36	--	32	--	--	--								
198	2	-1.09	--	--	--	--	28.7								
212	0	-2.97	--	--	20.3	--	--								
234	2	1.43	--	--	40	--	--								
245	4	0.04	--	--	--	--	33.8								
247	4	-0.22	--	--	--	--	32.6								
256	4	0.48	--	--	35.75	--	--								
259	3	0.76	--	--	37	--	--								
265	4	0.31	--	--	35	--	--								
304	4	-0.38	--	--	--	--	31.9								
305	0	4.10	--	--	52	--	--								
328	1	-1.69	--	--	26	--	--								
330	4	0.00	--	--	--	--	33.6								
356	0	2.10	--	--	43	--	--								
370	NR	--	--	--	<100	--	--								

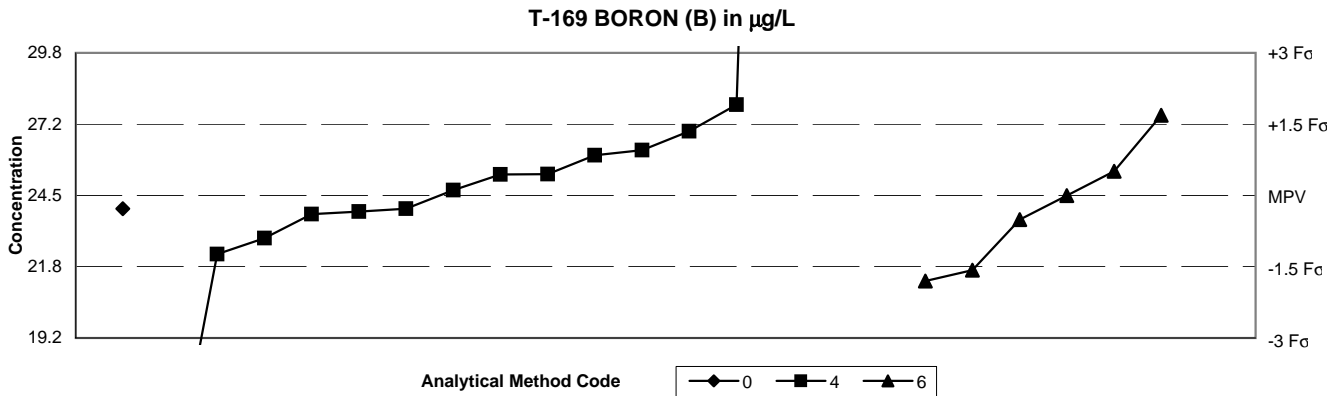
Table 11. Statistical summary of reported data for standard reference sample T-169 (trace constituents) -- continued



SUMMARY	Methods					Method Codes	Statistics	
	3	4	6	10	11			
n =	15	8	22	1	3	03 Atomic absorption: graphite furnace	MPV = 8.63 µg/L	
Minimum =	6.09	7.6	7	2.8	6.9	04 Inductively coupled plasma	F-pseudosigma = 0.67	
Maximum =	10.6	10.31	10.4		9.3	06 Inductively coupled plasma/mass spectrometry	n = 49	
Median =	8.67	8.90	8.61			10 Atomic absorption: extraction	Uh = 9.00	
F-pseudosigma =	0.87	1.34	0.39			11 Atomic absorption: hydride	Lh = 8.10	

Lab	Rating	Z-value	Method Codes					Lab	Rating	Z-value	Method Codes				
			3	4	6	10	11				3	4	6	10	11
1	3	0.56	9	--	--	--	--	256	0	-8.73	--	--	--	2.8	--
5	2	1.13	9.38	--	--	--	--	259	1	-1.54	--	7.6	--	--	--
7	4	-0.04	--	--	8.6	--	--	265	3	0.71	--	--	9.1	--	--
8	0	-2.59	--	--	--	--	6.9	305	3	0.56	--	9	--	--	--
10	3	1.01	--	--	--	--	9.3	328	3	-0.79	--	--	8.1	--	--
12	3	-0.94	8	--	--	--	--	330	3	1.01	--	--	9.3	--	--
16	0	2.06	--	10	--	--	--	356	4	-0.12	--	--	8.55	--	--
23	0	2.52	--	10.31	--	--	--	370	0	-3.73	6.14	--	--	--	--
25	3	-0.79	8.1	--	--	--	--	372	3	-0.94	--	8	--	--	--
26	4	-0.49	--	--	--	--	8.3								
32	4	-0.04	--	--	8.6	--	--								
42	4	-0.25	--	--	8.46	--	--								
45	4	0.45	--	--	8.93	--	--								
46	0	-3.08	6.57	--	--	--	--								
59	4	0.20	--	--	8.76	--	--								
70	0	2.66	--	--	10.4	--	--								
76	4	0.00	--	--	8.627	--	--								
89	4	0.11	8.7	--	--	--	--								
97	0	2.96	10.6	--	--	--	--								
105	2	1.37	--	--	9.54	--	--								
109	3	0.84	9.19	--	--	--	--								
113	4	0.06	8.67	--	--	--	--								
121	0	-2.44	--	--	7	--	--								
134	4	0.32	8.84	--	--	--	--								
138	3	0.53	--	--	8.98	--	--								
142	3	0.63	--	--	9.05	--	--								
146	1	1.79	--	9.82	--	--	--								
147	4	-0.21	--	--	8.49	--	--								
149	4	0.41	--	--	8.9	--	--								
180	3	-0.55	--	--	8.26	--	--								
183	0	-3.80	6.09	--	--	--	--								
190	1	-1.69	7.5	--	--	--	--								
193	3	-0.83	8.07	--	--	--	--								
198	4	-0.06	--	--	8.59	--	--								
212	4	0.26	--	8.8	--	--	--								
220	3	-0.64	--	8.2	--	--	--								
234	4	0.17	8.74	--	--	--	--								
245	4	0.02	--	--	8.64	--	--								
247	1	-1.90	--	--	7.36	--	--								
255	4	-0.34	--	--	8.4	--	--								

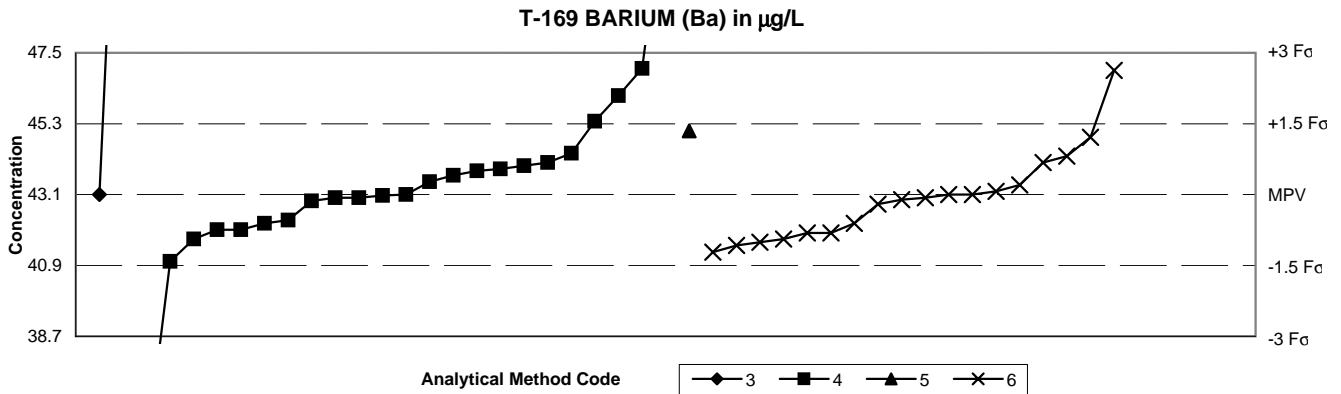
Table 11. Statistical summary of reported data for standard reference sample T-169 (trace constituents) -- continued



SUMMARY	Methods			Method Codes	Statistics	
	0	4	6			
n =	1	14	6	00 Other	MPV = 24.5 µg/L	
Minimum =	24	13	21.3	04 Inductively coupled plasma	F-pseudosigma = 1.8	
Maximum =		80	27.5	06 Inductively coupled plasma/mass spectrometry	n = 21	
Median =		25.0	24.1		Uh = 26.0	
F-pseudosigma =		1.8	2.8		Lh = 23.6	

Lab	Rating	Z-value	Method Codes		
			0	4	6
1	3	0.51	--	--	25.41
5	4	-0.28	--	24	--
7	3	-0.90	--	22.9	--
8	1	-1.57	--	--	21.7
16	0	-6.46	--	13	--
24	4	-0.39	--	23.8	--
25	3	0.84	--	26	--
32	4	-0.51	--	--	23.6
42	4	-0.34	--	23.9	--
45	1	1.69	--	--	27.5
59	1	-1.80	--	--	21.3
70	NR	--	--	<100	--
86	3	0.96	--	26.2	--
105	NR	--	--	--	<200
134	4	0.44	--	25.29	--
138	2	-1.24	--	22.3	--
142	2	1.35	--	26.9	--
180	0	-11.94	--	<3.25	--
234	1	1.91	--	27.9	--
247	0	31.20	--	80	--
255	4	0.11	--	24.7	--
259	4	0.45	--	25.3	--
265	4	0.00	--	--	24.5
328	4	-0.28	24	--	--

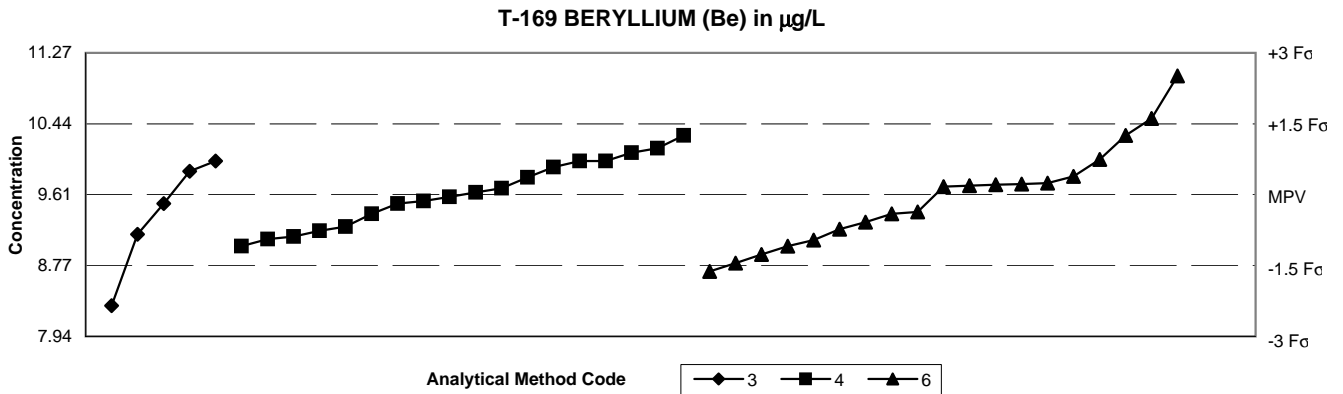
Table 11. Statistical summary of reported data for standard reference sample T-169 (trace constituents) -- continued



SUMMARY	Methods				Method Codes	Statistics	
	3	4	5	6			
n =	2	23	1	18	03 Atomic absorption: graphite furnace	MPV = 43.1 µg/L	
Minimum =	43.1	35	45.1	41.29	04 Inductively coupled plasma	F-pseudosigma = 1.5	
Maximum =	58.9	52.7		47	05 Direct current plasma	Rating criterion = 2.2	
Median =		43.1		43.0	06 Inductively coupled plasma/mass spectrometry	n = 44	
F-pseudosigma =		1.3		1.1		Uh = 44.1	
						Lh = 42.1	

Lab	Rating	Z-value	Method Codes				Lab	Rating	Z-value	Method Codes			
			3	4	5	6				3	4	5	6
1	4	-0.07	--	--	--	42.94	330	4	-0.42	--	--	--	42.2
5	4	0.46	--	44.1	--	--	356	3	-0.70	--	--	--	41.6
7	4	-0.42	--	42.2	--	--	370	0	4.45	--	52.7	--	--
8	3	0.56	--	--	--	44.3	372	3	-0.51	--	42	--	--
16	3	-0.97	--	41	--	--							
23	4	-0.01	--	43.07	--	--							
24	2	1.07	--	45.4	--	--							
25	0	-3.76	--	35	--	--							
32	4	-0.14	--	--	--	42.8							
33	3	0.93	--	--	45.1	--							
42	4	0.05	--	--	--	43.2							
45	3	-0.56	--	--	--	41.9							
46	4	0.00	--	43.1	--	--							
59	4	0.00	--	--	--	43.1							
70	4	0.00	--	--	--	43.1							
86	3	-0.65	--	41.7	--	--							
89	0	7.33	58.9	--	--	--							
97	4	-0.37	--	42.3	--	--							
105	4	-0.05	--	--	--	43							
113	4	-0.09	--	42.9	--	--							
121	1	1.81	--	--	--	47							
134	4	0.34	--	43.84	--	--							
138	4	0.19	--	43.5	--	--							
142	3	0.84	--	--	--	44.9							
146	4	0.42	--	44	--	--							
149	4	0.46	--	--	--	44.1							
180	3	-0.74	--	--	--	41.5							
183	4	0.00	43.1	--	--	--							
198	3	-0.65	--	--	--	41.7							
212	2	1.44	--	46.2	--	--							
220	1	1.84	--	47.06	--	--							
234	4	0.37	--	43.9	--	--							
245	3	-0.84	--	--	--	41.29							
247	3	-0.56	--	--	--	41.9							
256	3	0.60	--	44.4	--	--							
259	4	0.28	--	43.7	--	--							
265	4	-0.05	--	43	--	--							
304	4	0.14	--	--	--	43.4							
305	3	-0.51	--	42	--	--							
328	4	-0.05	--	43	--	--							

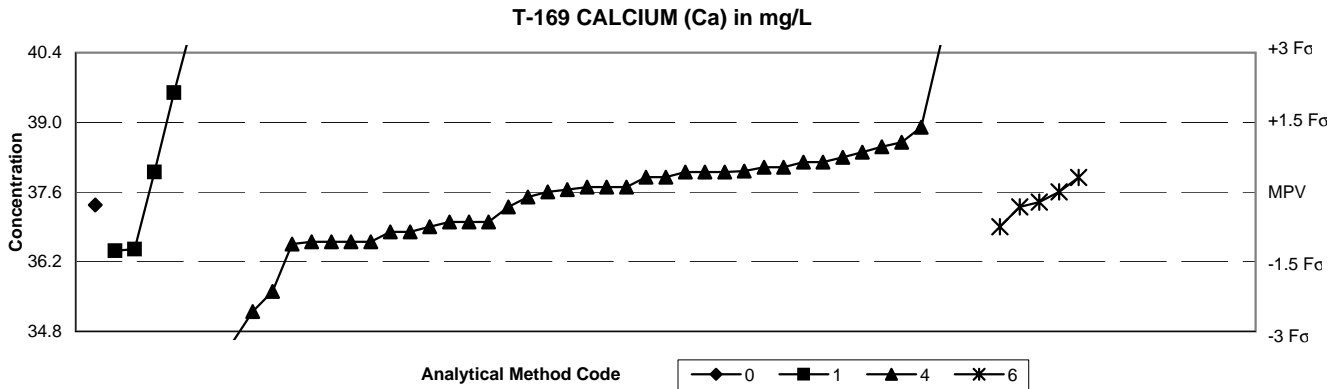
Table 11. Statistical summary of reported data for standard reference sample T-169 (trace constituents) -- continued



SUMMARY	Methods			Statistics
	3	4	6	
n =	5	18	19	MPV = 9.61 µg/L F-pseudosigma = 0.56 n = 42 Uh = 9.93 Lh = 9.18
Minimum =	8.3	9	8.7	
Maximum =	10	10.3	11	
Median =	9.50	9.61	9.70	
F-pseudosigma =	0.55	0.57	0.48	
	Method Codes 03 Atomic absorption: graphite furnace 04 Inductively coupled plasma 06 Inductively coupled plasma/mass spectrometry			

Lab	Rating	Z-value	Method Codes			Lab	Rating	Z-value	Method Codes		
			3	4	6				3	4	6
1	4	-0.13	--	9.53	--	370	3	0.71	10	--	--
5	4	-0.40	--	9.38	--	372	2	-1.09	--	9	--
7	2	-1.45	--	--	8.8						
8	2	-1.27	--	--	8.9						
16	3	0.71	--	10	--						
23	4	0.37	--	9.81	--						
25	3	0.71	--	10	--						
26	3	-0.76	--	9.18	--						
32	1	-1.63	--	--	8.7						
42	4	0.22	--	--	9.73						
45	3	-0.58	--	--	9.28						
46	4	0.13	--	9.68	--						
59	4	0.24	--	--	9.74						
70	2	1.25	--	--	10.3						
86	3	-0.94	--	9.08	--						
89	0	-2.35	8.3	--	--						
97	4	0.49	9.88	--	--						
105	2	-1.09	--	--	9						
113	3	0.89	--	10.1	--						
121	4	-0.37	--	--	9.4						
134	3	-0.67	--	9.23	--						
138	4	-0.04	--	9.58	--						
142	4	0.39	--	--	9.82						
146	3	-0.89	--	9.11	--						
149	4	0.17	--	--	9.7						
180	3	-0.96	--	--	9.07						
183	3	-0.84	9.14	--	--						
193	4	-0.19	9.5	--	--						
198	4	0.21	--	--	9.72						
212	4	-0.19	--	9.5	--						
220	4	0.04	--	9.63	--						
234	3	0.58	--	9.93	--						
245	3	0.75	--	--	10.02						
247	4	0.19	--	--	9.71						
256	3	0.98	--	10.15	--						
265	1	1.61	--	--	10.5						
305	2	1.25	--	10.3	--						
328	3	-0.73	--	--	9.2						
330	0	2.51	--	--	11						
356	4	-0.40	--	--	9.38						

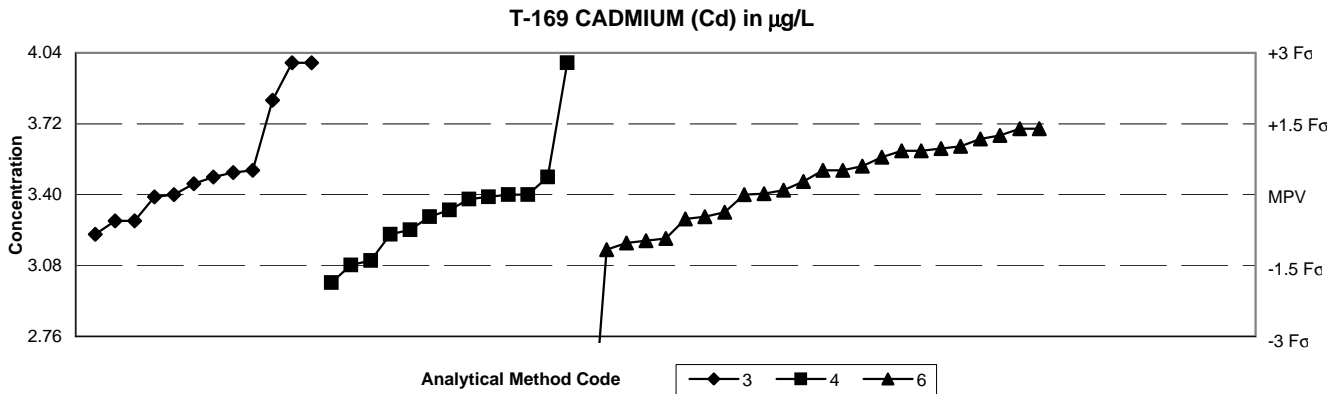
Table 11. Statistical summary of reported data for standard reference sample T-169 (trace constituents) -- continued



SUMMARY	Methods					Statistics
	0	1	4	5	6	
n =	1	5	39	1	5	00 Other
Minimum =	37.34	36.42	34.3	33.2	36.9	01 Atomic absorption: direct, air
Maximum =		41.1	40.9		37.89	04 Inductively coupled plasma
Median =		38.0	37.7		37.4	05 Direct current plasma
F-pseudosigma =		2.3	1.0		0.2	06 Inductively coupled plasma/mass spectrometry
						MPV = 37.6 mg/L
						F-pseudosigma = 0.9
						Rating criterion = 1.9
						n = 51
						Uh = 38.1
						Lh = 36.8

Lab	Rating	Z-value	Method Codes					Lab	Rating	Z-value	Method Codes				
			0	1	4	5	6				0	1	4	5	6
1	4	0.22	--	--	38.02	--	--	247	1	-1.76	--	--	34.3	--	--
5	4	0.05	--	--	37.7	--	--	259	4	0.21	--	--	38	--	--
7	3	-0.53	--	--	36.6	--	--	265	4	0.27	--	--	38.1	--	--
8	1	1.60	--	--	40.6	--	--	279	4	-0.14	37.34	--	--	--	--
12	4	0.21	--	--	38	--	--	305	4	-0.05	--	--	37.5	--	--
16	4	-0.32	--	--	37	--	--	315	4	0.32	--	--	38.2	--	--
23	3	-0.61	--	36.45	--	--	--	328	4	-0.32	--	--	37	--	--
24	4	-0.37	--	--	36.9	--	--	330	4	0.37	--	--	38.3	--	--
25	1	-1.60	--	--	34.6	--	--	356	3	-0.53	--	--	36.6	--	--
26	4	0.16	--	--	37.9	--	--	370	1	1.76	--	--	40.9	--	--
32	4	-0.37	--	--	--	--	36.9	372	4	-0.32	--	--	37	--	--
33	0	-2.34	--	--	--	33.2	--								
42	2	-1.06	--	--	35.6	--	--								
45	4	-0.16	--	--	--	--	37.3								
46	4	0.27	--	--	38.1	--	--								
59	4	0.21	--	38	--	--	--								
64	3	0.53	--	--	38.6	--	--								
70	4	0.05	--	--	37.7	--	--								
76	4	0.15	--	--	--	--	37.89								
86	4	0.00	--	--	37.6	--	--								
89	2	1.06	--	39.6	--	--	--								
97	4	0.16	--	--	37.9	--	--								
105	2	-1.28	--	--	35.2	--	--								
109	3	-0.63	--	36.42	--	--	--								
110	3	-0.56	--	--	36.55	--	--								
113	4	-0.16	--	--	37.3	--	--								
121	4	0.32	--	--	38.2	--	--								
134	4	0.03	--	--	37.65	--	--								
138	3	-0.53	--	--	36.6	--	--								
142	4	-0.43	--	--	36.8	--	--								
146	3	-0.53	--	--	36.6	--	--								
149	4	-0.11	--	--	--	--	37.4								
180	3	0.69	--	--	38.9	--	--								
193	1	1.86	--	41.1	--	--	--								
198	4	0.05	--	--	37.7	--	--								
212	4	-0.43	--	--	36.8	--	--								
220	4	0.48	--	--	38.51	--	--								
227	4	0.43	--	--	38.4	--	--								
234	4	0.21	--	--	38	--	--								
245	4	0.00	--	--	--	--	37.6								

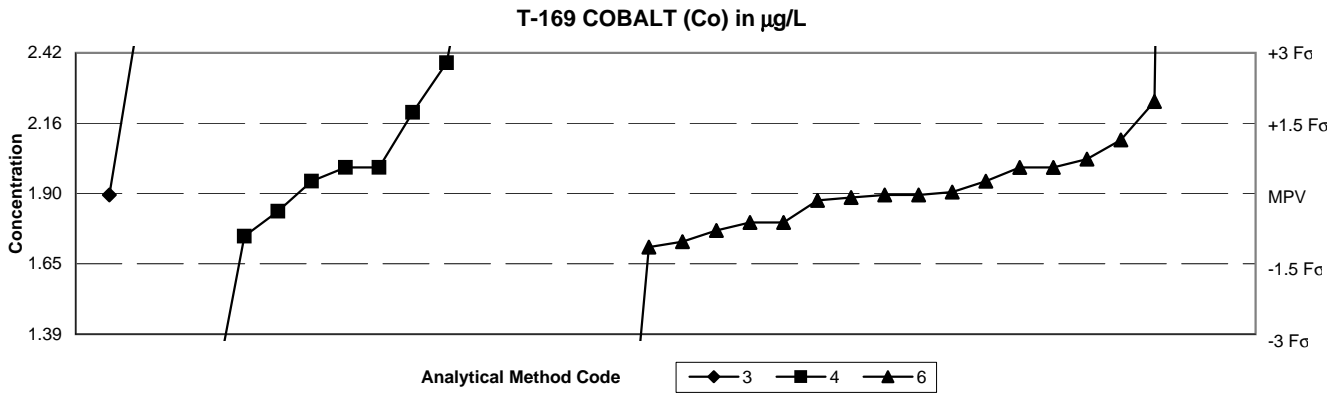
Table 11. Statistical summary of reported data for standard reference sample T-169 (trace constituents) -- continued



SUMMARY	Methods			Method Codes	Statistics	
	3	4	6			
n =	12	13	24	03 Atomic absorption: graphite furnace	MPV = 3.40 µg/L	
Minimum =	3.22	3	2	04 Inductively coupled plasma	F-pseudosigma = 0.21	
Maximum =	4	4	3.7	06 Inductively coupled plasma/mass spectrometry	n = 49	
Median =	3.47	3.33	3.49		Uh = 3.57	
F-pseudosigma =	0.25	0.13	0.23		Lh = 3.28	

Lab	Rating	Z-value	Method Codes			Lab	Rating	Z-value	Method Codes		
			3	4	6				3	4	6
1	3	0.98	--	--	3.61	256	4	0.37	--	3.48	--
5	3	-0.84	3.22	--	--	259	4	0.00	--	3.4	--
7	3	-0.93	--	--	3.2	265	3	0.93	--	--	3.6
8	2	1.40	--	--	3.7	304	4	0.28	--	--	3.46
10	4	0.47	3.5	--	--	305	4	0.00	--	3.4	--
12	0	2.79	4	--	--	328	4	-0.47	--	--	3.3
16	0	2.79	--	4	--	330	2	1.40	--	--	3.7
23	4	-0.09	--	3.38	--	356	3	0.60	--	--	3.53
25	4	0.00	3.4	--	--	370	4	0.37	3.48	--	--
26	4	0.23	3.45	--	--	372	1	-1.86	--	3	--
32	3	0.93	--	--	3.6						
42	2	-1.02	--	--	3.18						
45	2	-1.16	--	--	3.15						
46	3	-0.56	3.28	--	--						
59	NR	--	--	--	< 5						
70	3	0.51	--	--	3.51						
76	4	0.02	--	--	3.404						
86	2	-1.49	--	3.08	--						
89	0	2.79	4	--	--						
97	3	0.51	3.51	--	--						
105	4	-0.37	--	--	3.32						
113	3	-0.74	--	3.24	--						
121	0	-6.51	--	--	2						
134	4	-0.33	--	3.33	--						
138	3	0.79	--	--	3.57						
142	2	1.26	--	--	3.67						
146	3	-0.84	--	3.22	--						
147	3	-0.98	--	--	3.19						
149	4	0.00	--	--	3.4						
180	3	-0.51	--	--	3.29						
183	0	2.00	3.83	--	--						
190	3	-0.56	3.28	--	--						
193	4	-0.05	3.39	--	--						
198	2	1.02	--	--	3.62						
212	2	-1.40	--	3.1	--						
227	4	-0.05	--	3.39	--						
234	4	-0.47	--	3.3	--						
245	2	1.18	--	--	3.654						
247	4	0.09	--	--	3.42						
255	3	0.51	--	--	3.51						

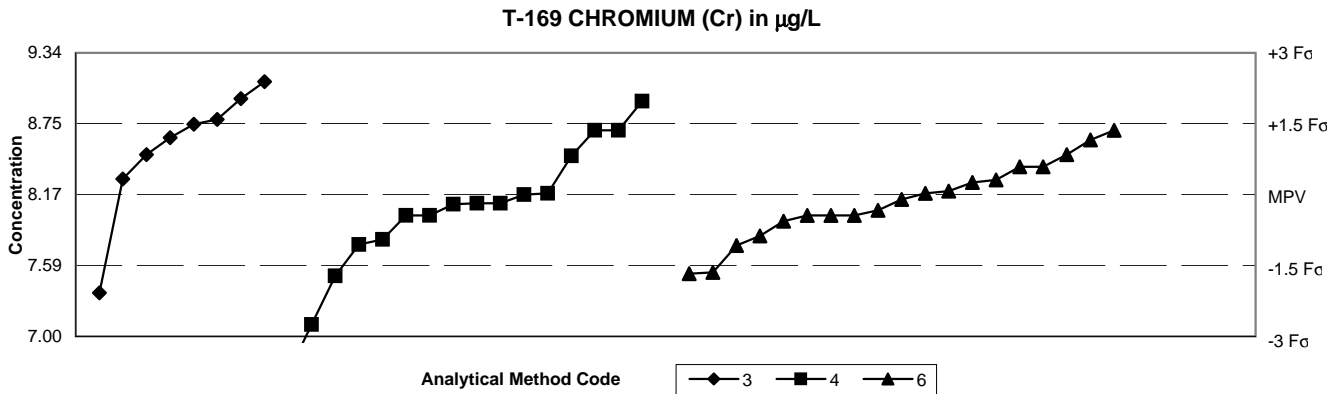
Table 11. Statistical summary of reported data for standard reference sample T-169 (trace constituents) -- continued



SUMMARY	Methods			Statistics
	3	4	6	
n =	2	10	18	MPV = 1.91 µg/L F-pseudosigma = 0.17 n = 30 Uh = 2.03 Lh = 1.80
Minimum =	1.9	1.1	0.35	
Maximum =	2.65	3	10.2	
Median =		1.98	1.90	
F-pseudosigma =		0.33	0.15	

Lab	Rating	Z-value	Method Codes		
			3	4	6
1	3	0.73	--	--	2.03
5	NR	--	--	<3.00	--
7	0	48.65	--	--	10.2
8	3	0.56	--	--	2
16	1	1.73	--	2.2	--
25	NR	--	--	<4	--
32	3	0.56	--	--	2
42	NR	--	--	--	<2
45	4	0.03	--	--	1.91
59	NR	--	--	--	<5
70	NR	--	--	--	<10
89	4	-0.03	1.9	--	--
97	0	4.37	2.65	--	--
105	NR	--	--	--	<50
121	0	-9.12	--	--	0.35
134	4	-0.38	--	1.84	--
138	4	0.26	--	--	1.95
142	4	-0.15	--	--	1.88
146	0	2.79	--	2.38	--
147	2	-1.14	--	--	1.71
149	4	-0.03	--	--	1.9
180	2	-1.03	--	--	1.73
198	3	-0.62	--	--	1.8
212	0	-4.72	--	1.1	--
234	4	0.26	--	1.95	--
245	1	1.96	--	--	2.24
247	3	-0.79	--	--	1.77
256	3	0.56	--	2	--
259	3	-0.91	--	1.75	--
265	3	-0.62	--	--	1.8
304	4	-0.09	--	--	1.89
305	3	0.56	--	2	--
328	0	-4.72	--	1.1	--
330	2	1.14	--	--	2.1
356	4	-0.03	--	--	1.9
370	NR	--	--	<500	--
372	0	6.42	--	3	--

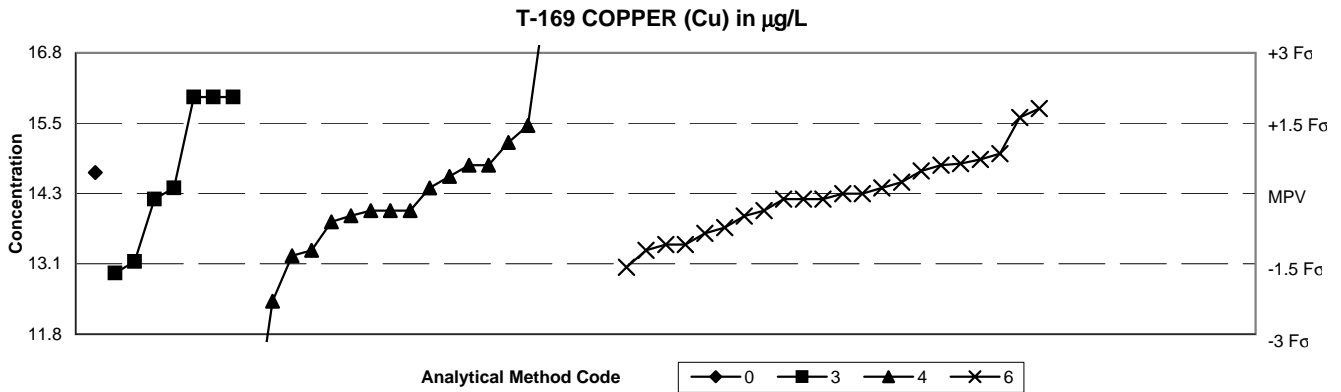
Table 11. Statistical summary of reported data for standard reference sample T-169 (trace constituents) -- continued



SUMMARY	Methods			Statistics
	3	4	6	
n =	8	16	19	MPV = 8.17 µg/L
Minimum =	7.36	6.7	7.52	F-pseudostigma = 0.39
Maximum =	9.1	8.94	8.7	Rating criterion = 0.41
Median =	8.70	8.10	8.13	n = 43
F-pseudostigma =	0.35	0.41	0.27	Uh = 8.50
				Lh = 7.98

Lab	Rating	Z-value	Method Codes			Lab	Rating	Z-value	Method Codes		
			3	4	6				3	4	6
1	2	1.42	8.75	--	--	328	3	-0.91	--	7.8	--
5	1	1.88	--	8.94	--	330	2	1.30	--	--	8.7
7	3	0.56	--	--	8.4	356	4	0.02	--	--	8.18
8	4	0.07	--	--	8.2	370	4	0.02	--	8.18	--
10	0	2.28	9.1	--	--	372	2	1.30	--	8.7	--
16	4	-0.42	--	8	--						
23	4	-0.42	--	8	--						
25	NR	--	--	<15	--						
32	3	0.81	--	--	8.5						
42	3	-0.54	--	--	7.95						
45	3	-0.83	--	--	7.83						
46	1	-1.98	7.36	--	--						
59	NR	--	--	--	< 10						
70	4	0.24	--	--	8.27						
86	0	-3.60	--	6.7	--						
89	4	0.32	8.3	--	--						
97	1	1.93	8.96	--	--						
105	4	-0.10	--	--	8.13						
113	4	0.00	--	8.17	--						
121	4	-0.42	--	--	8						
134	3	-1.00	--	7.76	--						
138	1	-1.64	--	7.5	--						
142	4	-0.32	--	--	8.04						
146	4	-0.17	--	8.1	--						
149	4	-0.42	--	--	8						
180	1	-1.59	--	--	7.52						
183	1	1.52	8.79	--	--						
190	3	0.81	8.5	--	--						
193	2	1.15	8.64	--	--						
198	1	-1.57	--	--	7.53						
212	2	1.30	--	8.7	--						
234	3	0.78	--	8.49	--						
245	4	0.29	--	--	8.29						
247	2	-1.03	--	--	7.75						
255	2	1.10	--	--	8.62						
256	4	-0.20	--	8.09	--						
259	4	-0.17	--	8.1	--						
265	4	-0.42	--	--	8						
304	3	0.56	--	--	8.4						
305	0	-2.62	--	7.1	--						

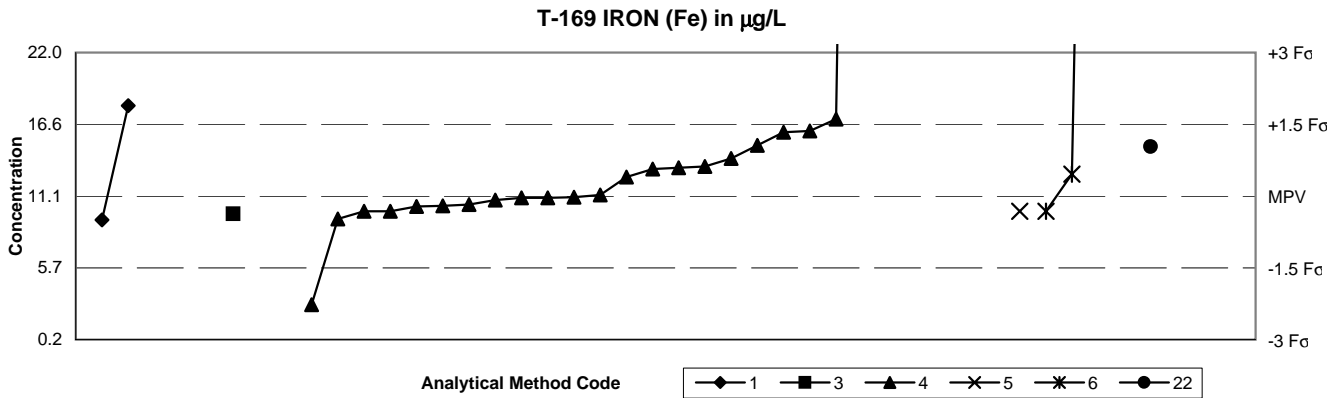
Table 11. Statistical summary of reported data for standard reference sample T-169 (trace constituents) -- continued



SUMMARY	Methods				Method Codes	Statistics	
	0	3	4	6			
n =	1	7	18	22	00 Other	MPV = 14.3 µg/L	
Minimum =	14.67	12.9	10	13	03 Atomic absorption: graphite furnace	F-pseudsigma = 0.8	
Maximum =		16	23	15.8	04 Inductively coupled plasma	n = 48	
Median =		14.4	14.2	14.3	06 Inductively coupled plasma/mass spectrometry	Uh = 14.9	
F-pseudsigma =		1.7	1.0	0.8		Lh = 13.8	

Lab	Rating	Z-value	Method Codes				Lab	Rating	Z-value	Method Codes			
			0	3	4	6				0	3	4	6
1	3	0.64	--	--	--	14.83	259	4	0.12	--	--	14.4	--
5	3	0.60	--	--	14.8	--	265	4	0.12	--	--	14.4	--
7	3	0.60	--	--	14.8	--	304	4	0.00	--	--	14.3	--
8	1	1.81	--	--	--	15.8	305	4	-0.36	--	--	14	--
10	1	-1.69	--	12.9	--	--	328	0	10.53	--	--	23	--
12	0	2.06	--	16	--	--	330	3	0.60	--	--	14.8	--
16	0	-5.20	--	--	10	--	356	4	0.48	--	--	14.7	--
23	4	0.45	14.67	--	--	--	370	NR	--	--	<20.0	--	--
24	0	4.60	--	--	18.1	--	372	4	-0.36	--	--	14	--
25	4	-0.36	--	--	14	--							
26	3	-0.60	--	--	13.8	--							
32	4	-0.12	--	--	--	14.2							
42	2	-1.09	--	--	--	13.4							
45	4	0.00	--	--	--	14.3							
46	2	-1.45	--	13.1	--	--							
59	4	-0.12	--	--	--	14.2							
70	3	-0.73	--	--	--	13.7							
86	2	1.45	--	--	15.5	--							
89	4	0.12	--	14.4	--	--							
97	0	2.06	--	16	--	--							
105	3	0.85	--	--	--	15							
113	2	1.09	--	--	15.2	--							
121	4	-0.36	--	--	--	14							
134	4	-0.47	--	--	13.91	--							
138	3	-0.85	--	--	--	13.6							
142	2	-1.09	--	--	--	13.4							
146	2	-1.21	--	--	13.3	--							
147	4	-0.12	--	--	--	14.2							
149	3	0.73	--	--	--	14.9							
180	2	-1.21	--	--	--	13.3							
190	4	-0.12	--	14.2	--	--							
193	0	2.06	--	16	--	--							
198	1	-1.57	--	--	--	13							
212	0	-2.30	--	--	12.4	--							
227	2	-1.33	--	--	13.2	--							
234	4	0.36	--	--	14.6	--							
245	1	1.62	--	--	--	15.64							
247	4	-0.48	--	--	--	13.9							
255	4	0.24	--	--	--	14.5							
256	0	4.48	--	--	18	--							

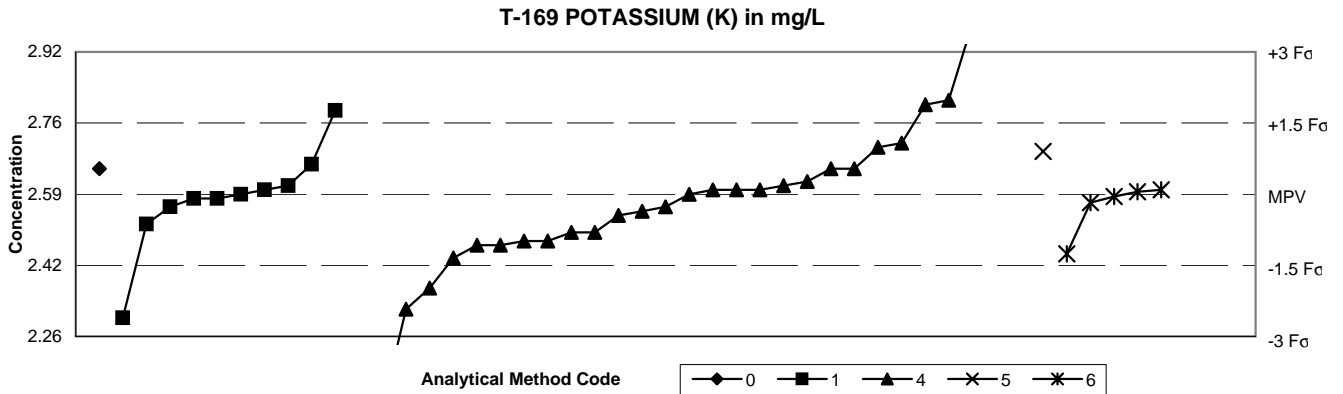
Table 11. Statistical summary of reported data for standard reference sample T-169 (trace constituents) -- continued



SUMMARY	Methods						Statistics	
	1	3	4	5	6	22	Method Codes	
n =	2	1	22	1	3	1	01 Atomic absorption: direct, air	MPV = 11.1 µg/L
Minimum =	9.34	9.8	2.9	10	10	14.9	03 Atomic absorption: graphite furnace	F-pseudosigma = 3.6
Maximum =	18		138		111.8		04 Inductively coupled plasma	n = 30
Median =			11.1				05 Direct current plasma	Uh = 14.9
F-pseudosigma =			2.7				06 Inductively coupled plasma/mass spectrometry	Lh = 10.0
							22 Colorimetric	

Lab	Rating	Z-value	Method Codes						Lab	Rating	Z-value	Method Codes					
			1	3	4	5	6	22				1	3	4	5	6	22
1	4	-0.03	--	--	11.05	--	--	--	372	4	-0.04	--	--	11	--	--	--
5	3	0.62	--	--	13.4	--	--	--									
7	3	0.59	--	--	13.3	--	--	--									
8	NR	--	--	--	<50	--	--	--									
10	1	1.89	18	--	--	--	--	--									
16	4	-0.32	--	--	10	--	--	--									
21	2	1.03	--	--	--	--	--	14.9									
23	4	0.03	--	--	11.24	--	--	--									
25	2	1.34	--	--	16	--	--	--									
26	3	0.57	--	--	13.2	--	--	--									
33	4	-0.32	--	--	--	10	--	--									
42	2	1.36	--	--	16.1	--	--	--									
45	4	0.46	--	--	--	--	12.8	--									
59	NR	--	--	--	--	--	< 100	--									
70	NR	--	<20	--	--	--	--	--									
89	4	-0.37	--	9.8	--	--	--	--									
97	0	-2.57	--	<1.8	--	--	--	--									
105	NR	--	--	--	<20.0	--	--	--									
109	NR	--	<30	--	--	--	--	--									
113	4	-0.04	--	--	11	--	--	--									
121	2	1.06	--	--	15	--	--	--									
134	4	-0.22	--	--	10.35	--	--	--									
138	4	-0.21	--	--	10.4	--	--	--									
146	NR	--	--	--	<50.0	--	--	--									
149	0	27.71	--	--	--	--	111.8	--									
180	4	-0.18	--	--	10.5	--	--	--									
190	4	-0.50	9.34	--	--	--	--	--									
193	NR	--	--	<100	--	--	--	--									
198	1	1.61	--	--	17	--	--	--									
212	NR	--	--	--	<100	--	--	--									
234	4	0.40	--	--	12.6	--	--	--									
255	3	0.79	--	--	14	--	--	--									
256	4	-0.08	--	--	10.85	--	--	--									
259	4	-0.48	--	--	9.4	--	--	--									
265	4	-0.32	--	--	--	--	10	--									
305	4	-0.32	--	--	10	--	--	--									
315	0	34.92	--	--	138	--	--	--									
328	0	-2.27	--	--	2.9	--	--	--									
330	NR	--	<50	--	--	--	--	--									
370	NR	--	--	--	<50.0	--	--	--									

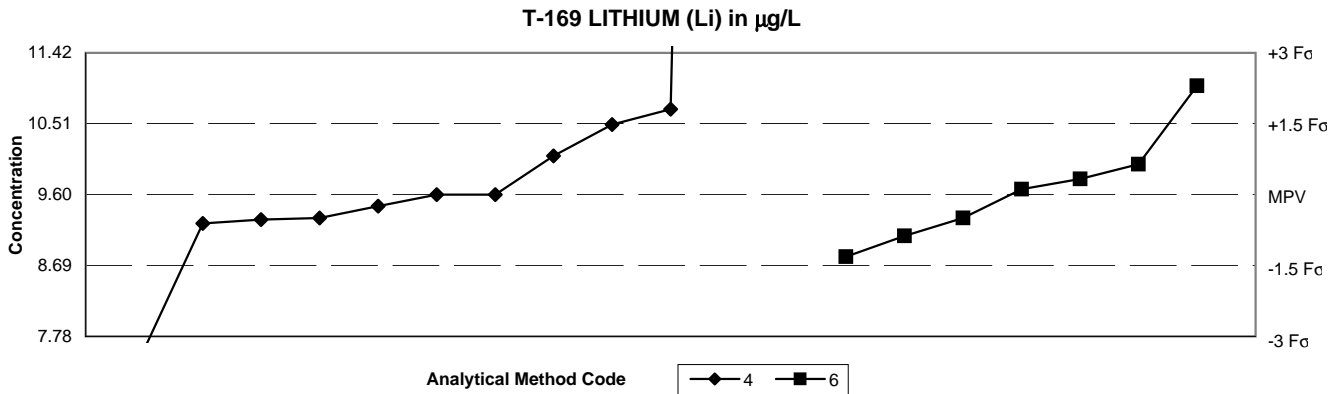
Table 11. Statistical summary of reported data for standard reference sample T-169 (trace constituents) -- continued



SUMMARY	Methods					Statistics	
	0	1	4	5	6	Method Codes	
n =	1	10	29	1	5	00 Other	MPV = 2.59 mg/L
Minimum =	2.65	2.3	1.88	2.69	2.45	01 Atomic absorption: direct, air	F-pseudostigma = 0.11
Maximum =		2.786	3.09		2.6	04 Inductively coupled plasma	Rating criterion = 0.13
Median =		2.59	2.59		2.58	05 Direct current plasma	n = 46
F-pseudostigma =		0.04	0.13		0.02	06 Inductively coupled plasma/mass spectrometry	Uh = 2.65
							Lh = 2.50

Lab	Rating	Z-value	Method Codes					Lab	Rating	Z-value	Method Codes				
			0	1	4	5	6				0	1	4	5	6
1	4	0.08	--	2.6	--	--	--	315	4	0.08	--	--	2.6	--	--
5	1	1.70	--	--	2.81	--	--	328	3	-0.69	--	--	2.5	--	--
7	4	0.23	--	--	2.62	--	--	330	4	-0.39	--	--	2.54	--	--
8	3	0.85	--	--	2.7	--	--	356	3	0.93	--	--	2.71	--	--
16	4	0.08	--	--	2.6	--	--	370	0	3.86	--	--	3.09	--	--
23	4	0.00	--	2.59	--	--	--	372	0	-5.48	--	--	1.88	--	--
24	4	-0.31	--	--	2.55	--	--								
25	3	-0.93	--	--	2.47	--	--								
26	3	-0.85	--	--	2.48	--	--								
32	2	-1.08	--	--	--	--	2.45								
33	3	0.77	--	--	--	2.69	--								
42	0	-2.08	--	--	2.32	--	--								
45	4	-0.15	--	--	--	--	2.57								
59	4	-0.08	--	2.58	--	--	--								
64	4	-0.08	--	2.58	--	--	--								
70	4	0.00	--	--	2.59	--	--								
76	4	0.05	--	--	--	--	2.596								
86	4	0.46	--	--	2.65	--	--								
89	4	0.15	--	2.61	--	--	--								
97	3	-0.54	--	2.52	--	--	--								
105	4	0.46	--	--	2.65	--	--								
109	0	-2.24	--	2.3	--	--	--								
110	1	1.51	--	2.786	--	--	--								
113	3	-0.85	--	--	2.48	--	--								
134	4	-0.23	--	2.56	--	--	--								
138	3	-0.93	--	--	2.47	--	--								
142	2	-1.16	--	--	2.44	--	--								
146	0	3.09	--	--	2.99	--	--								
149	4	0.08	--	--	--	--	2.6								
180	3	-0.69	--	--	2.5	--	--								
193	3	0.54	--	2.66	--	--	--								
198	4	0.15	--	--	2.61	--	--								
212	1	1.62	--	--	2.8	--	--								
234	4	-0.23	--	--	2.56	--	--								
245	4	-0.05	--	--	--	--	2.584								
247	1	-1.70	--	--	2.37	--	--								
259	0	-3.86	--	--	2.09	--	--								
265	4	0.08	--	--	2.6	--	--								
279	4	0.46	2.65	--	--	--	--								
305	0	3.86	--	--	3.09	--	--								

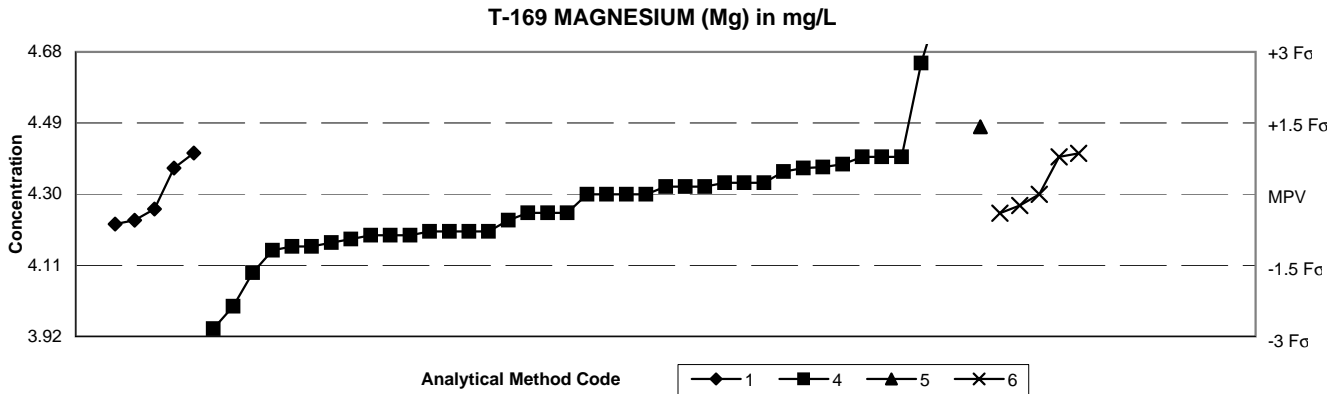
Table 11. Statistical summary of reported data for standard reference sample T-169 (trace constituents) -- continued



SUMMARY	Methods		Statistics
	4	6	
n =	11	7	MPV = 9.60 µg/L
Minimum =	7.61	8.8	F-pseudosigma = 0.61
Maximum =	42	11	n = 18
Median =	9.60	9.67	Uh = 10.10
F-pseudosigma =	0.75	0.53	Lh = 9.28

Lab	Rating	Z-value	Method Codes	
			4	6
1	3	0.64	--	9.99
5	3	-0.61	9.23	--
7	4	-0.49	9.3	--
8	4	-0.49	--	9.3
25	0	-9.21	<4	--
26	0	-3.27	7.61	--
32	2	-1.32	--	8.8
42	3	-0.53	9.28	--
59	3	-0.87	--	9.07
86	4	0.00	9.6	--
105	0	53.30	42	--
134	4	0.00	9.6	--
142	4	-0.25	9.45	--
234	3	0.82	10.1	--
247	4	0.12	--	9.67
256	2	1.48	10.5	--
259	1	1.81	10.7	--
265	4	0.33	--	9.8
328	0	2.30	--	11

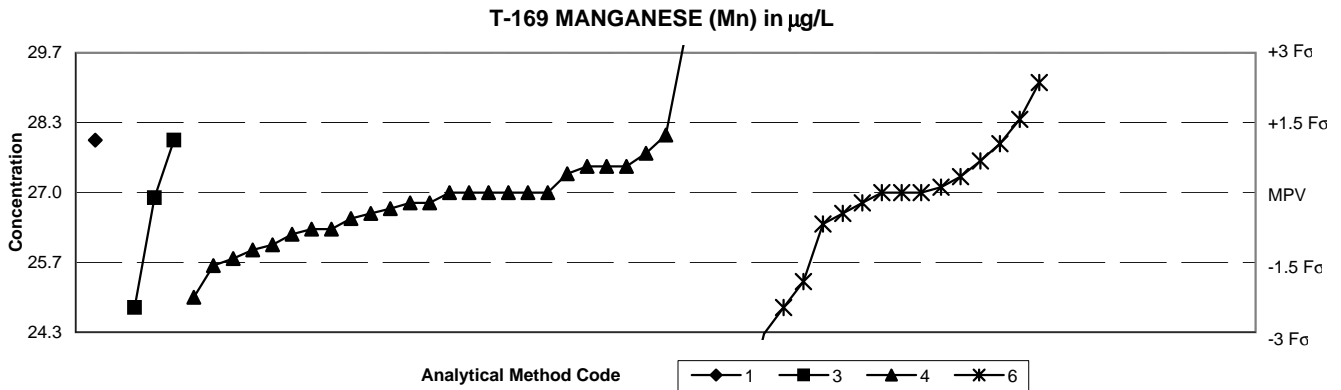
Table 11. Statistical summary of reported data for standard reference sample T-169 (trace constituents) -- continued



SUMMARY	Methods					Statistics	
	0	1	4	5	6	Method Codes	
n =	1	5	39	1	5	00 Other	MPV = 4.30 mg/L
Minimum =	4.85	4.22	3.94	4.48	4.249	01 Atomic absorption: direct, air	F-pseudostigma = 0.13
Maximum =		4.41	4.9		4.409	04 Inductively coupled plasma	Rating criterion = 0.22
Median =		4.26	4.30		4.30	05 Direct current plasma	n = 51
F-pseudostigma =		0.10	0.11		0.10	06 Inductively coupled plasma/mass spectrometry	Uh = 4.37
							Lh = 4.20

Lab	Rating	Z-value	Method Codes					Lab	Rating	Z-value	Method Codes				
			0	1	4	5	6				0	1	4	5	6
1	3	-0.65	--	--	4.16	--	--	247	1	-1.67	--	--	3.94	--	--
5	4	-0.47	--	--	4.2	--	--	259	4	0.00	--	--	4.3	--	--
7	3	-0.51	--	--	4.19	--	--	265	4	-0.47	--	--	4.2	--	--
8	4	0.47	--	--	4.4	--	--	279	0	2.56	4.85	--	--	--	--
12	0	2.79	--	--	4.9	--	--	305	4	0.37	--	--	4.38	--	--
16	4	0.47	--	--	4.4	--	--	315	4	-0.47	--	--	4.2	--	--
23	4	-0.37	--	4.22	--	--	--	328	4	0.00	--	--	4.3	--	--
24	3	-0.65	--	--	4.16	--	--	330	4	-0.33	--	--	4.23	--	--
25	4	0.33	--	--	4.37	--	--	356	1	1.63	--	--	4.65	--	--
26	4	0.09	--	--	4.32	--	--	370	4	-0.23	--	--	4.25	--	--
32	4	0.00	--	--	--	--	4.3	372	3	-0.98	--	--	4.09	--	--
33	3	0.84	--	--	--	4.48	--								
42	2	-1.40	--	--	4	--	--								
45	4	-0.14	--	--	--	--	4.27								
46	3	-0.51	--	--	4.19	--	--								
59	4	-0.19	--	4.26	--	--	--								
64	3	-0.70	--	--	4.15	--	--								
70	4	-0.23	--	--	4.25	--	--								
76	4	-0.24	--	--	--	--	4.249								
86	4	0.28	--	--	4.36	--	--								
89	3	0.51	--	4.41	--	--	--								
97	4	0.14	--	--	4.33	--	--								
105	4	0.00	--	--	4.3	--	--								
109	4	0.33	--	4.37	--	--	--								
110	0	2.44	--	--	4.825	--	--								
113	3	-0.51	--	--	4.19	--	--								
121	4	-0.47	--	--	4.2	--	--								
134	3	-0.56	--	--	4.18	--	--								
138	4	0.09	--	--	4.32	--	--								
142	3	-0.60	--	--	4.17	--	--								
146	4	0.09	--	--	4.32	--	--								
149	4	0.47	--	--	--	--	4.4								
180	4	0.14	--	--	4.33	--	--								
193	4	-0.33	--	4.23	--	--	--								
198	4	0.14	--	--	4.33	--	--								
212	4	0.00	--	--	4.3	--	--								
220	4	0.33	--	--	4.372	--	--								
227	4	-0.23	--	--	4.25	--	--								
234	4	0.47	--	--	4.4	--	--								
245	4	0.51	--	--	--	--	4.409								

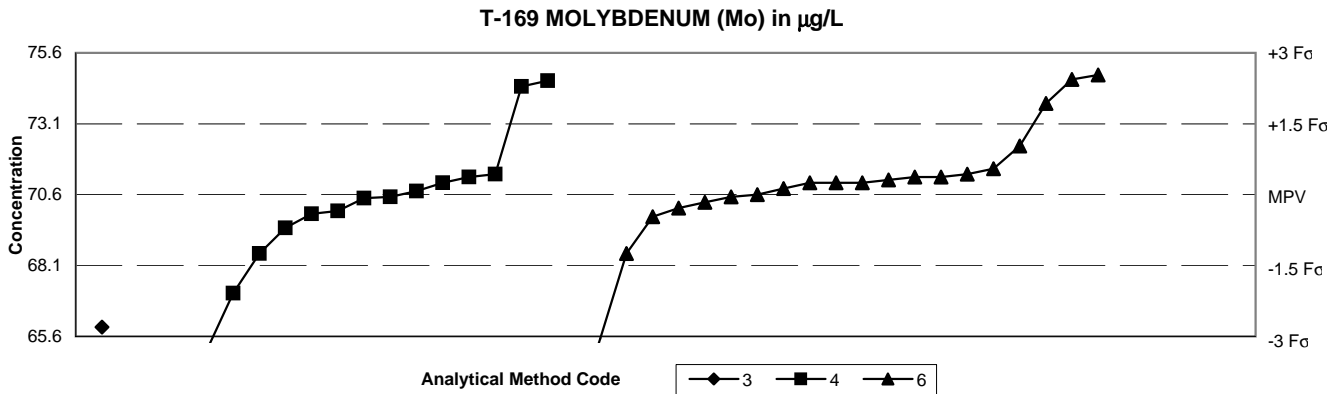
Table 11. Statistical summary of reported data for standard reference sample T-169 (trace constituents) -- continued



SUMMARY	Methods					Statistics	
	1	3	4	5	6	Method Codes	
n =	1	3	27	1	16	01 Atomic absorption: direct, air	MPV = 27.0 µg/L
Minimum =	28	24.8	25	42	22.8	03 Atomic absorption: graphite furnace	F-pseudosigma = 0.9
Maximum =		28	42		29.1	04 Inductively coupled plasma	Rating criterion = 1.4
Median =			27.0		27.0	05 Direct current plasma	n = 48
F-pseudosigma =			0.8		1.2	06 Inductively coupled plasma/mass spectrometry	Uh = 27.5
							Lh = 26.3

Lab	Rating	Z-value	Method Codes					
			1	3	4	5	6	
1	4	0.07	--	--	--	--	27.1	
5	3	-0.81	--	--	25.9	--	--	
7	3	-0.52	--	--	26.3	--	--	
8	0	-3.11	--	--	--	--	22.8	
10	3	0.74	28	--	--	--	--	
16	4	0.00	--	--	27	--	--	
23	4	-0.23	--	--	26.69	--	--	
24	3	-0.52	--	--	26.3	--	--	
25	2	-1.48	--	--	25	--	--	
26	4	0.37	--	--	27.5	--	--	
32	2	1.04	--	--	--	--	28.4	
33	0	11.11	--	--	--	42	--	
42	2	-1.04	--	--	25.6	--	--	
45	4	0.00	--	--	--	--	27	
46	4	0.00	--	--	27	--	--	
59	4	-0.15	--	--	--	--	26.8	
70	4	-0.44	--	--	--	--	26.4	
86	3	-0.59	--	--	26.2	--	--	
89	1	-1.63	--	24.8	--	--	--	
97	3	0.74	--	28	--	--	--	
105	4	0.00	--	--	--	--	27	
109	NR	--	<50	--	--	--	--	
113	4	-0.15	--	--	26.8	--	--	
121	4	0.00	--	--	--	--	27	
134	4	0.27	--	--	27.36	--	--	
138	4	0.00	--	--	27	--	--	
142	3	-0.74	--	--	26	--	--	
146	4	-0.30	--	--	26.6	--	--	
149	4	-0.30	--	--	--	--	26.6	
180	1	-1.63	--	--	--	--	24.8	
190	4	-0.07	--	26.9	--	--	--	
198	1	-2.00	--	--	--	--	24.3	
212	4	0.37	--	--	27.5	--	--	
220	3	-0.93	--	--	25.74	--	--	
234	4	0.37	--	--	27.5	--	--	
245	3	0.69	--	--	--	--	27.93	
247	2	-1.26	--	--	--	--	25.3	
255	4	-0.15	--	--	26.8	--	--	
256	3	0.56	--	--	27.75	--	--	
259	4	0.00	--	--	27	--	--	

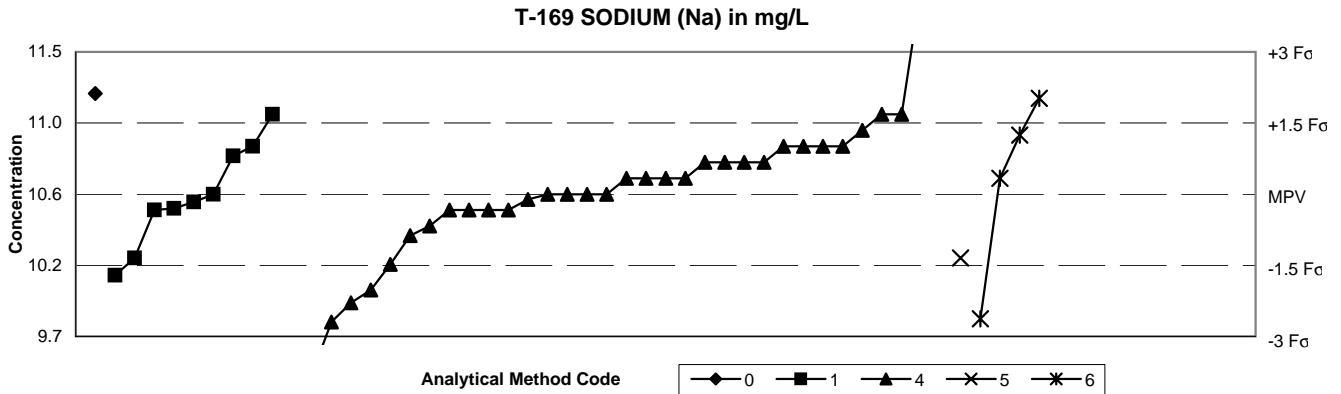
Table 11. Statistical summary of reported data for standard reference sample T-169 (trace constituents) -- continued



SUMMARY	Methods			Statistics
	3	4	6	
n =	1	17	21	MPV = 70.6 µg/L
Minimum =	65.9	61	62.6	F-pseudosigma = 1.7
Maximum =		74.6	74.8	Rating criterion = 3.5
Median =		70.0	71.0	n = 39
F-pseudosigma =		2.9	0.7	Uh = 71.2
				Lh = 69.0

Lab	Rating	Z-value	Method Codes		
			3	4	6
1	4	-0.08	--	--	70.31
5	2	1.14	--	74.6	--
7	2	-1.44	--	--	65.5
8	4	-0.14	--	--	70.1
16	4	-0.16	--	70	--
23	2	1.08	--	74.4	--
24	4	-0.02	--	70.5	--
26	4	0.03	--	70.7	--
32	2	1.20	--	--	74.8
42	3	-0.59	--	--	68.5
45	0	-2.26	--	--	62.6
59	4	-0.22	--	--	69.8
70	3	0.91	--	--	73.8
76	4	0.00	--	--	70.58
86	3	-0.99	--	67.1	--
97	2	-1.33	65.9	--	--
105	2	1.15	--	--	74.65
113	4	-0.19	--	69.9	--
134	4	-0.03	--	70.46	--
138	4	0.18	--	71.2	--
142	4	0.20	--	--	71.3
146	3	-0.59	--	68.5	--
149	4	0.12	--	--	71
180	4	0.49	--	--	72.3
198	4	0.18	--	--	71.2
212	4	-0.33	--	69.4	--
234	4	0.20	--	71.3	--
245	4	0.06	--	--	70.79
247	4	0.18	--	--	71.2
256	1	-1.55	--	65.1	--
259	4	0.12	--	71	--
265	4	0.26	--	--	71.5
304	4	0.12	--	--	71
305	0	-2.52	--	61.7	--
328	4	0.12	--	--	71
330	4	-0.02	--	--	70.5
356	4	0.15	--	--	71.1
370	1	-1.86	--	64	--
372	0	-2.71	--	61	--

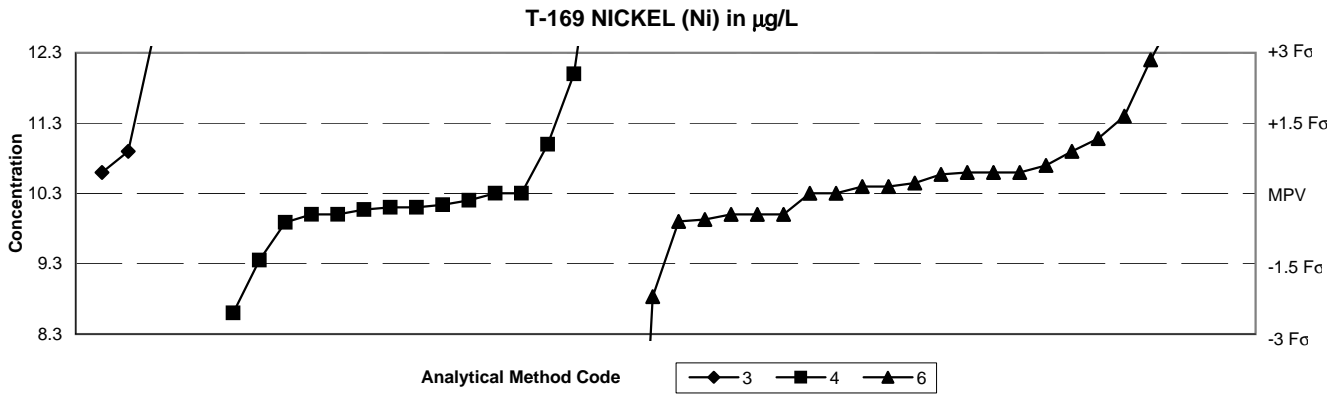
Table 11. Statistical summary of reported data for standard reference sample T-169 (trace constituents) -- continued



SUMMARY	Methods					Statistics	
	0	1	4	5	6	Method Codes	
n =	1	9	34	1	4	00 Other	MPV = 10.6 mg/L
Minimum =	11.23	10.09	8.56	10.2	9.82	01 Atomic absorption: direct, air	F-pseudosigma = 0.3
Maximum =		11.1	12		11.2	04 Inductively coupled plasma	Rating criterion = 0.5
Median =		10.6	10.7			05 Direct current plasma	n = 49
F-pseudosigma =		0.3	0.3			06 Inductively coupled plasma/mass spectrometry	Uh = 10.9
							Lh = 10.5

Method Codes							Method Codes								
Lab	Rating	Z-value	0	1	4	5	6	Lab	Rating	Z-value	0	1	4	5	6
1	3	-0.83	--	--	10.16	--	--	265	4	-0.19	--	--	10.5	--	--
5	4	0.38	--	--	10.8	--	--	279	2	1.19	11.23	--	--	--	--
7	4	-0.19	--	--	10.5	--	--	305	3	0.57	--	--	10.9	--	--
8	4	0.00	--	--	10.6	--	--	315	4	0.00	--	--	10.6	--	--
12	0	2.64	--	--	12	--	--	328	3	0.75	--	--	11	--	--
16	2	-1.13	--	--	10	--	--	330	4	0.19	--	--	10.7	--	--
23	4	-0.19	--	10.5	--	--	--	356	3	0.94	--	--	11.1	--	--
24	4	-0.19	--	--	10.5	--	--	370	0	2.45	--	--	11.9	--	--
25	2	-1.28	--	--	9.92	--	--	372	0	-3.85	--	--	8.56	--	--
26	4	0.19	--	--	10.7	--	--								
32	2	-1.47	--	--	--	--	9.82								
33	3	-0.75	--	--	--	10.2	--								
42	0	-2.13	--	--	9.47	--	--								
45	4	0.19	--	--	--	--	10.7								
46	3	0.57	--	--	10.9	--	--								
59	4	0.00	--	10.6	--	--	--								
64	4	-0.09	--	10.55	--	--	--								
70	3	0.94	--	--	11.1	--	--								
76	3	0.70	--	--	--	--	10.97								
86	4	0.38	--	--	10.8	--	--								
89	3	0.94	--	11.1	--	--	--								
97	3	-0.75	--	10.2	--	--	--								
105	4	-0.49	--	--	10.34	--	--								
109	4	-0.17	--	10.51	--	--	--								
110	3	-0.96	--	10.09	--	--	--								
113	4	-0.19	--	--	10.5	--	--								
121	4	0.19	--	--	10.7	--	--								
134	4	0.45	--	10.84	--	--	--								
138	4	0.00	--	--	10.6	--	--								
142	4	-0.38	--	--	10.4	--	--								
146	4	0.38	--	--	10.8	--	--								
149	2	1.13	--	--	--	--	11.2								
180	4	0.19	--	--	10.7	--	--								
193	3	0.57	--	10.9	--	--	--								
198	4	0.00	--	--	10.6	--	--								
212	3	0.57	--	--	10.9	--	--								
220	4	-0.06	--	--	10.57	--	--								
234	4	0.38	--	--	10.8	--	--								
247	2	-1.51	--	--	9.8	--	--								
259	3	0.57	--	--	10.9	--	--								

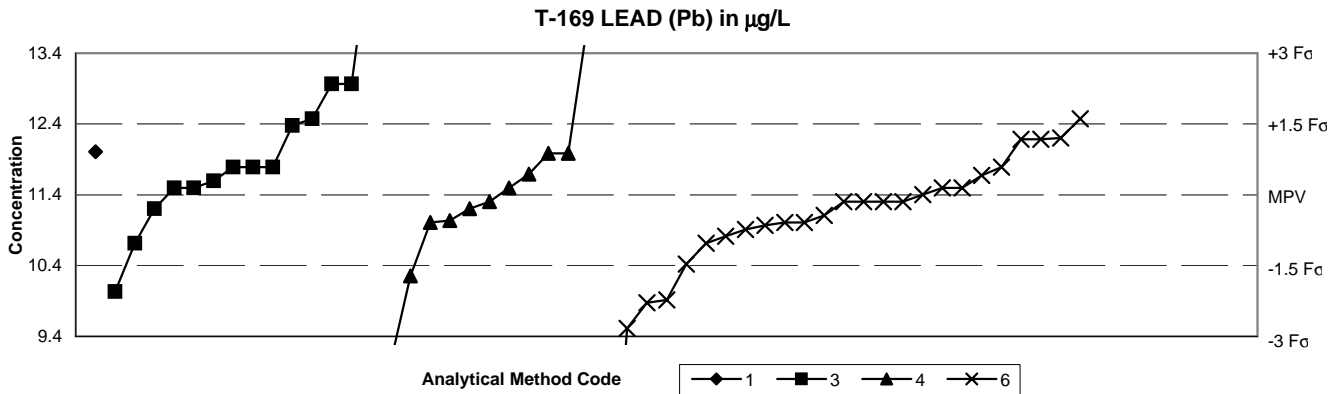
Table 11. Statistical summary of reported data for standard reference sample T-169 (trace constituents) -- continued



SUMMARY	Methods			Statistics
	3	4	6	
n =	4	15	22	MPV = 10.3 µg/L
Minimum =	10.6	8.6	1.9	F-pseudosigma = 0.7
Maximum =	23.2	14.6	12.9	n = 41
Median =		10.1	10.4	Uh = 10.9
F-pseudosigma =		0.2	0.5	Lh = 10.0
	Method Codes			
	03 Atomic absorption: graphite furnace			
	04 Inductively coupled plasma			
	06 Inductively coupled plasma/mass spectrometry			

Lab	Rating	Z-value	Method Codes			Lab	Rating	Z-value	Method Codes		
			3	4	6				3	4	6
1	4	0.40	--	--	10.57	356	4	0.15	--	--	10.4
5	0	6.45	--	14.6	--	370	3	-0.61	--	9.89	--
7	0	-12.59	--	--	1.9	372	2	1.05	--	11	--
8	4	0.45	--	--	10.6						
16	4	-0.45	--	10	--						
23	4	-0.24	--	10.14	--						
25	0	2.55	--	12	--						
32	3	0.90	--	--	10.9						
42	4	0.45	--	--	10.6						
45	4	-0.45	--	--	10						
59	4	-0.45	--	--	10						
70	0	2.85	--	--	12.2						
76	4	0.22	--	--	10.45						
86	2	-1.42	--	9.35	--						
89	3	0.90	10.9	--	--						
97	0	3.45	12.6	--	--						
105	NR	--	--	--	<50						
113	4	-0.30	--	10.1	--						
134	4	-0.34	--	10.07	--						
138	4	0.45	--	--	10.6						
142	4	0.00	--	--	10.3						
146	4	-0.30	--	10.1	--						
149	4	0.00	--	--	10.3						
180	0	-2.20	--	--	8.83						
183	0	19.34	23.2	--	--						
190	4	0.45	10.6	--	--						
193	NR	--	<12.5	--	--						
198	3	-0.55	--	--	9.93						
212	0	-2.55	--	8.6	--						
234	4	0.00	--	10.3	--						
245	2	1.17	--	--	11.08						
247	4	0.15	--	--	10.4						
255	1	1.65	--	--	11.4						
256	4	-0.15	--	10.2	--						
259	4	-0.45	--	10	--						
265	4	-0.45	--	--	10						
304	3	0.60	--	--	10.7						
305	4	0.00	--	10.3	--						
328	3	-0.60	--	--	9.9						
330	0	3.90	--	--	12.9						

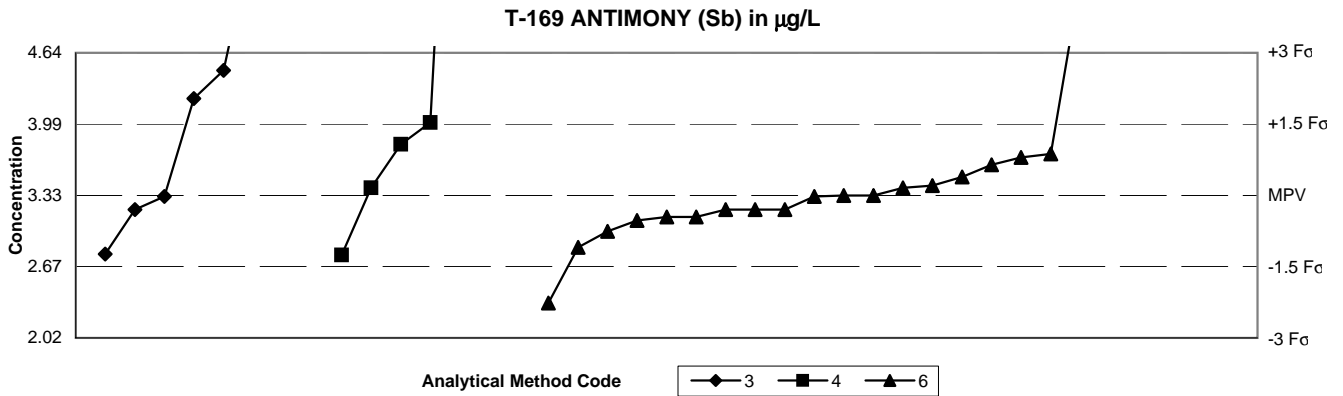
Table 11. Statistical summary of reported data for standard reference sample T-169 (trace constituents) -- continued



SUMMARY	Methods				Statistics
	1	3	4	6	
n =	1	14	11	25	MPV = 11.4 µg/L
Minimum =	12.02	10	9	5.74	F-pseudostandard = 0.7
Maximum =		15.1	13.9	12.5	n = 51
Median =		11.8	11.3	11.3	U _h = 11.9
F-pseudostandard =		0.7	0.6	0.5	L _h = 11.0

Lab	Rating	Z-value	Method Codes				Lab	Rating	Z-value	Method Codes			
			1	3	4	6				1	3	4	6
1	4	0.00	--	--	--	11.4	255	2	1.17	--	--	--	12.2
5	0	-2.05	--	10	--	--	256	3	-0.54	--	--	11.03	--
7	4	-0.15	--	--	--	11.3	259	4	0.15	--	--	11.5	--
8	1	1.61	--	--	--	12.5	265	3	-0.59	--	--	--	11
10	4	0.15	--	11.5	--	--	304	4	0.15	--	--	--	11.5
12	0	2.35	--	13	--	--	305	3	0.88	--	--	12	--
16	3	-0.59	--	--	11	--	328	3	-0.59	--	--	--	11
23	1	-1.72	--	--	10.23	--	330	3	0.59	--	--	--	11.8
25	4	0.15	--	11.5	--	--	356	0	-8.30	--	--	--	5.74
26	4	-0.29	--	11.2	--	--	370	3	0.59	--	11.8	--	--
32	2	-1.47	--	--	--	10.4	372	0	-3.52	--	--	9	--
42	4	-0.15	--	--	--	11.3							
45	0	-2.83	--	--	--	9.47							
46	3	0.59	--	11.8	--	--							
59	2	1.17	--	--	--	12.2							
70	0	-2.29	--	--	--	9.84							
76	4	0.41	--	--	--	11.68							
86	4	-0.29	--	--	11.2	--							
89	4	0.29	--	11.6	--	--							
97	1	1.61	--	12.5	--	--							
105	3	-0.65	--	--	--	10.96							
109	3	0.91	12.02	--	--	--							
113	3	0.59	--	11.8	--	--							
121	3	-0.88	--	--	--	10.8							
134	4	0.44	--	--	11.7	--							
138	4	-0.44	--	--	--	11.1							
142	2	-1.03	--	--	--	10.7							
146	3	0.88	--	--	12	--							
147	4	-0.15	--	--	--	11.3							
149	4	0.15	--	--	--	11.5							
180	0	-2.23	--	--	--	9.88							
183	0	5.43	--	15.1	--	--							
190	2	-1.03	--	10.7	--	--							
193	0	2.35	--	13	--	--							
198	3	-0.73	--	--	--	10.9							
212	0	3.67	--	--	13.9	--							
227	4	-0.15	--	--	11.3	--							
234	2	1.47	--	12.4	--	--							
245	2	1.20	--	--	--	12.22							
247	4	-0.15	--	--	--	11.3							

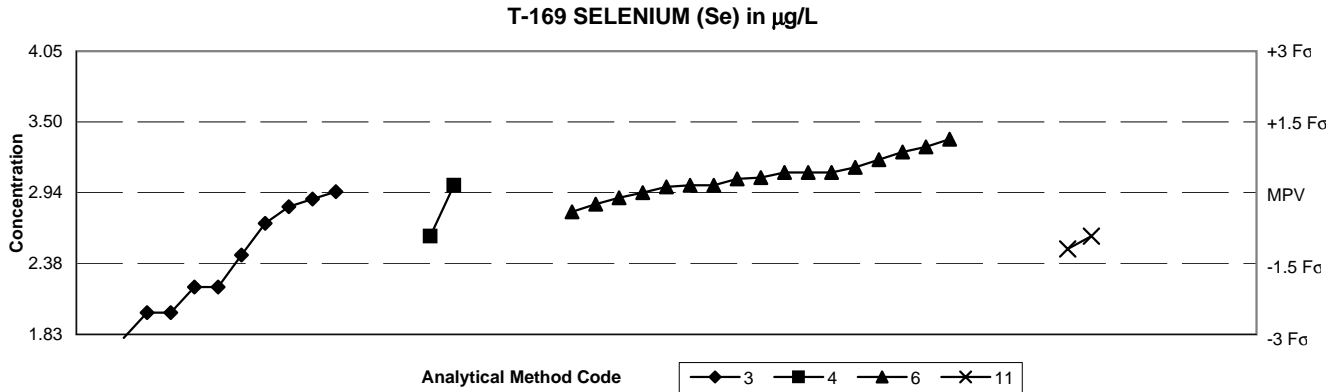
Table 11. Statistical summary of reported data for standard reference sample T-169 (trace constituents) -- continued



SUMMARY	Methods			Statistics
	3	4	6	
n =	6	5	20	MPV = 3.33 µg/L F-pseudosigma = 0.44 n = 31 Uh = 3.76 Lh = 3.17
Minimum =	2.79	2.78	2.34	
Maximum =	5.72	9	7.43	
Median =	3.77	3.80	3.32	
F-pseudosigma =	0.95	0.44	0.32	
	Method Codes 03 Atomic absorption: graphite furnace 04 Inductively coupled plasma 06 Inductively coupled plasma/mass spectrometry			

Lab	Rating	Z-value	Method Codes		
			3	4	6
1	3	0.87	--	--	3.71
5	0	2.63	4.48	--	--
7	4	0.16	--	--	3.4
8	4	-0.30	--	--	3.2
16	4	0.16	--	3.4	--
25	NR	--	--	<50	--
32	3	-0.53	--	--	3.1
42	4	-0.46	--	--	3.13
45	2	-1.10	--	--	2.85
59	NR	--	--	--	<5
70	0	9.37	--	--	7.43
89	NR	--	<5.00	--	--
97	4	-0.02	3.32	--	--
105	4	-0.46	--	--	3.13
134	4	-0.30	3.2	--	--
138	3	-0.75	--	--	3
142	4	0.21	--	--	3.42
146	NR	--	--	<20.0	--
149	4	-0.30	--	--	3.2
180	4	-0.02	--	--	3.32
183	0	2.03	4.22	--	--
193	NR	--	<10	--	--
198	3	0.80	--	--	3.68
212	2	1.07	--	3.8	--
234	2	-1.23	2.79	--	--
245	4	0.00	--	--	3.328
247	0	-2.26	--	--	2.34
256	2	-1.26	--	2.78	--
265	4	-0.30	--	--	3.2
304	4	0.00	--	--	3.33
305	0	12.96	--	9	--
328	0	4.50	--	--	5.3
330	4	0.39	--	--	3.5
356	3	0.64	--	--	3.61
370	0	5.46	5.72	--	--
372	1	1.53	--	4	--

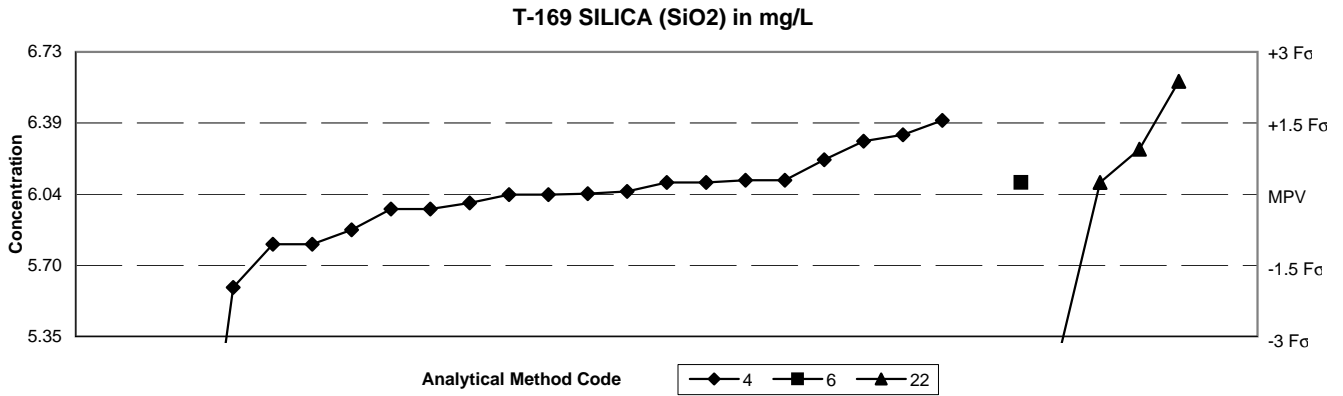
Table 11. Statistical summary of reported data for standard reference sample T-169 (trace constituents) -- continued



SUMMARY	Methods						Statistics	
	0	3	4	6	10	11	Method Codes	
n =	1	10	2	17	1	2	00 Other	
Minimum =	17.1	1.8	2.6	2.79	0.56	2.5	03 Atomic absorption: graphite furnace	MPV = 2.94 µg/L
Maximum =		2.95	3	3.36		2.6	04 Inductively coupled plasma	F-pseudostigma = 0.37
Median =		2.33		3.06			06 Inductively coupled plasma/mass spectrometry	n = 33
F-pseudostigma =		0.62		0.11			10 Atomic absorption: extraction	Uh = 3.10
							11 Atomic absorption: hydride	Lh = 2.60

Lab	Rating	Z-value	Method Codes						Lab	Rating	Z-value	Method Codes					
			0	3	4	6	10	11				0	3	4	6	10	11
1	4	-0.30	--	2.83	--	--	--	--	356	3	0.54	--	--	--	3.14	--	--
5	3	-0.65	--	2.7	--	--	--	--	370	NR	--	--	<5.00	--	--	--	--
7	4	-0.11	--	--	--	2.9	--	--	372	4	0.16	--	--	3	--	--	--
8	3	-0.92	--	--	--	--	--	2.6									
10	2	-1.19	--	--	--	--	--	2.5									
12	0	-2.54	--	2	--	--	--	--									
16	3	-0.92	--	--	2.6	--	--	--									
23	0	38.20	17.1	--	--	--	--	--									
25	NR	--	--	--	<16	--	--	--									
32	4	0.43	--	--	--	3.1	--	--									
42	4	-0.24	--	--	--	2.85	--	--									
45	4	0.00	--	--	--	2.94	--	--									
59	NR	--	--	--	--	<5	--	--									
70	NR	--	--	--	--	<10	--	--									
76	4	0.13	--	--	--	2.987	--	--									
89	0	-2.54	--	2	--	--	--	--									
97	4	-0.13	--	2.89	--	--	--	--									
105	NR	--	--	--	--	<7	--	--									
113	2	-1.32	--	2.45	--	--	--	--									
121	3	0.70	--	--	--	3.2	--	--									
134	4	0.03	--	2.95	--	--	--	--									
138	3	0.86	--	--	--	3.26	--	--									
142	4	0.32	--	--	--	3.06	--	--									
146	NR	--	--	--	--	<10.0	--	--									
149	4	0.43	--	--	--	3.1	--	--									
180	4	-0.40	--	--	--	2.79	--	--									
183	NR	--	--	<5.0	--	--	--	--									
190	1	-2.00	--	2.2	--	--	--	--									
193	NR	--	--	<5	--	--	--	--									
198	2	1.13	--	--	--	3.36	--	--									
212	NR	--	--	--	--	<15	--	--									
220	0	-3.08	--	1.8	--	--	--	--									
234	1	-2.00	--	2.2	--	--	--	--									
245	4	0.16	--	--	--	3	--	--									
255	4	0.30	--	--	--	3.05	--	--									
256	0	-6.42	--	--	--	0.56	--	--									
265	4	0.16	--	--	--	3	--	--									
305	NR	--	--	--	--	<5	--	--									
328	4	0.43	--	--	--	3.1	--	--									
330	3	0.97	--	--	--	3.3	--	--									

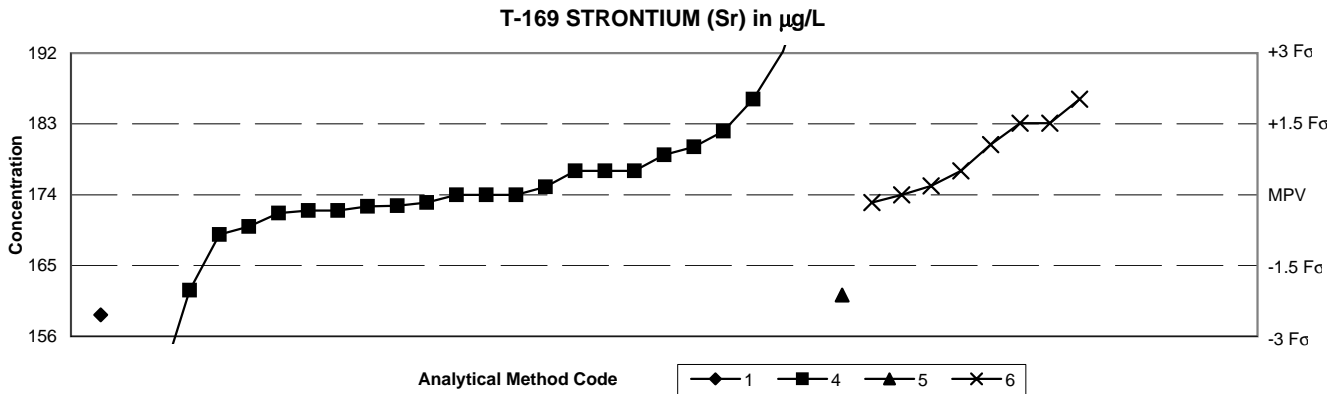
Table 11. Statistical summary of reported data for standard reference sample T-169 (trace constituents) -- continued



SUMMARY	Methods				Method Codes	Statistics	
	4	5	6	22			
n =	22	1	1	4	04 Inductively coupled plasma	MPV = 6.04 mg/L	
Minimum =	2.9	2.46	6.1	5.3	05 Direct current plasma	F-pseudosigma = 0.23	
Maximum =	6.4			6.59	06 Inductively coupled plasma/mass spectrometry	Rating criterion = 0.30	
Median =	6.04				22 Colorimetric	n = 28	
F-pseudosigma =	0.23					Uh = 6.11	
						Lh = 5.80	

Lab	Rating	Z-value	Method Codes			
			4	5	6	22
1	4	0.19	6.1	--	--	--
5	0	-10.40	2.9	--	--	--
7	3	-0.57	5.87	--	--	--
8	2	1.18	6.4	--	--	--
24	3	0.55	6.21	--	--	--
25	0	-6.17	4.18	--	--	--
32	4	0.19	--	--	6.1	--
33	0	-11.86	--	2.46	--	--
42	2	-1.50	5.59	--	--	--
64	3	-0.80	5.8	--	--	--
70	3	0.72	--	--	--	6.26
97	1	1.81	--	--	--	6.59
105	4	0.04	6.056	--	--	--
110	4	0.01	6.046	--	--	--
121	4	-0.14	6	--	--	--
134	4	-0.01	6.04	--	--	--
142	4	-0.01	6.04	--	--	--
190	4	0.19	--	--	--	6.1
212	4	0.19	6.1	--	--	--
220	4	0.22	6.11	--	--	--
234	4	-0.24	5.97	--	--	--
256	0	-2.46	--	--	--	5.3
259	4	-0.24	5.97	--	--	--
265	3	-0.80	5.8	--	--	--
328	3	0.85	6.3	--	--	--
356	3	0.95	6.33	--	--	--
370	0	-10.07	3	--	--	--
372	4	0.22	6.11	--	--	--

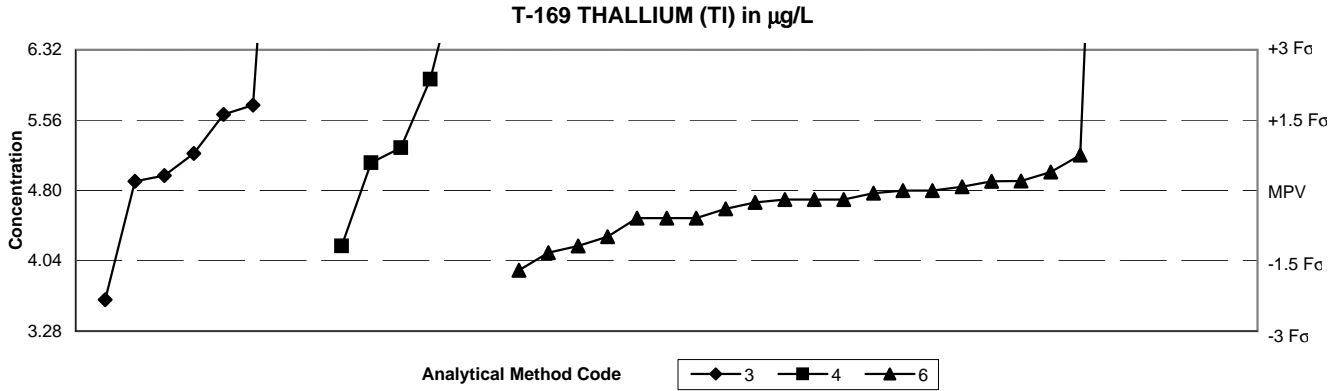
Table 11. Statistical summary of reported data for standard reference sample T-169 (trace constituents) -- continued



SUMMARY	Methods				Method Codes	Statistics	
	1	4	5	6			
n =	1	24	1	8	01 Atomic absorption: direct, air	MPV = 174 µg/L	
Minimum =	158.9	150	161.4	173	04 Inductively coupled plasma	F-pseudosigma =	6
Maximum =		203		186	05 Direct current plasma	Rating criterion =	9
Median =		174		179	06 Inductively coupled plasma/mass spectrometry	n =	34
F-pseudosigma =		5		6		Uh =	180
						Lh =	172

Lab	Rating	Z-value	Method Codes			
			1	4	5	6
1	4	-0.26	--	171.7	--	--
5	4	0.00	--	174	--	--
7	4	0.11	--	175	--	--
8	2	1.38	--	--	--	186
16	3	-0.57	--	169	--	--
24	4	0.34	--	177	--	--
25	4	-0.11	--	173	--	--
32	2	1.03	--	--	--	183
33	2	-1.45	--	--	161.4	--
42	0	2.07	--	192	--	--
59	4	-0.11	--	--	--	173
76	4	0.13	--	--	--	175.1
86	4	0.00	--	174	--	--
97	4	-0.46	--	170	--	--
105	4	0.00	--	174	--	--
109	1	-1.74	158.9	--	--	--
113	4	-0.16	--	172.6	--	--
121	4	0.34	--	177	--	--
134	4	-0.17	--	172.6	--	--
138	4	-0.23	--	172	--	--
142	3	0.57	--	179	--	--
147	4	0.00	--	--	--	174
212	3	0.92	--	182	--	--
234	4	0.34	--	177	--	--
245	3	0.72	--	--	--	180.3
247	0	-2.76	--	150	--	--
256	2	1.38	--	186	--	--
259	3	0.69	--	180	--	--
265	4	-0.23	--	172	--	--
304	4	0.34	--	--	--	177
328	0	-2.76	--	150	--	--
330	2	1.03	--	--	--	183
356	0	3.33	--	203	--	--
372	2	-1.38	--	162	--	--

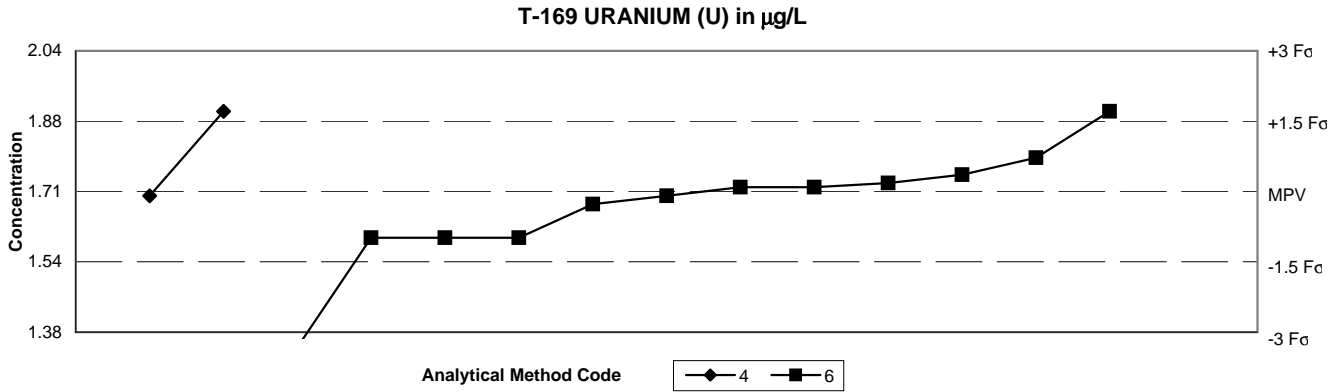
Table 11. Statistical summary of reported data for standard reference sample T-169 (trace constituents) -- continued



SUMMARY	Methods			Statistics
	3	4	6	
n =	7	5	21	MPV = 4.80 µg/L
Minimum =	3.62	4.2	3.94	F-pseudsigma = 0.51
Maximum =	10.3	7.26	12.8	n = 33
Median =	5.20	5.26	4.70	Uh = 5.18
F-pseudsigma =	0.55	0.67	0.25	Lh = 4.50
	Method Codes			
	03 Atomic absorption: graphite furnace			
	04 Inductively coupled plasma			
	06 Inductively coupled plasma/mass spectrometry			

Lab	Rating	Z-value	Method Codes		
			3	4	6
1	4	0.00	--	--	4.8
5	0	10.88	10.3	--	--
7	3	-0.99	--	--	4.3
8	4	-0.20	--	--	4.7
16	3	0.59	--	5.1	--
23	3	0.91	--	5.26	--
25	NR	--	<10	--	--
32	4	-0.20	--	--	4.7
42	4	-0.40	--	--	4.6
45	1	-1.70	--	--	3.94
59	NR	--	--	--	< 10
70	4	-0.26	--	--	4.67
76	4	0.20	--	--	4.903
89	4	0.20	4.9	--	--
97	1	1.82	5.72	--	--
105	4	0.08	--	--	4.84
121	2	-1.19	--	--	4.2
134	3	0.79	5.2	--	--
138	4	0.40	--	--	5
142	4	0.00	--	--	4.8
146	0	4.87	--	7.26	--
149	3	-0.59	--	--	4.5
180	2	-1.33	--	--	4.13
183	1	1.62	5.62	--	--
198	4	-0.20	--	--	4.7
212	NR	--	--	<10	--
234	4	0.32	4.96	--	--
245	3	0.76	--	--	5.182
247	4	-0.06	--	--	4.77
265	3	-0.59	--	--	4.5
305	2	-1.19	--	4.2	--
328	3	-0.59	--	--	4.5
330	4	0.20	--	--	4.9
356	0	15.82	--	--	12.8
370	0	-2.33	3.62	--	--
372	0	2.37	--	6	--

Table 11. Statistical summary of reported data for standard reference sample T-169 (trace constituents) -- continued

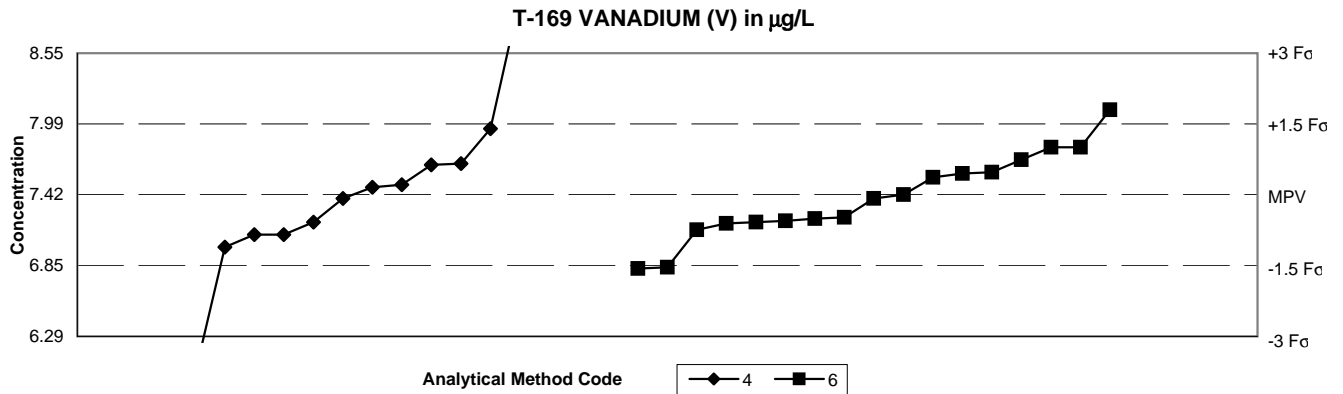


SUMMARY	Methods		Statistics
	4	6	
n =	2	12	MPV = 1.71 µg/L
Minimum =	1.7	1.34	F-pseudosigma = 0.11
Maximum =	1.9	1.9	n = 14
Median =	1.71		Uh = 1.75
F-pseudosigma =	0.10		Lh = 1.60

Method Codes

Lab	Rating	Z-value	4	6
1	4	0.18	--	1.73
7	3	-0.99	--	1.6
8	3	-0.99	--	1.6
16	1	1.71	1.9	--
32	3	0.72	--	1.79
42	4	0.36	--	1.75
45	0	-3.33	--	1.34
70	NR	--	--	<10.0
142	4	0.09	--	1.72
147	4	-0.27	--	1.68
149	3	-0.99	--	1.6
245	4	0.09	--	1.72
265	4	-0.09	--	1.7
328	4	-0.09	1.7	--
330	1	1.71	--	1.9

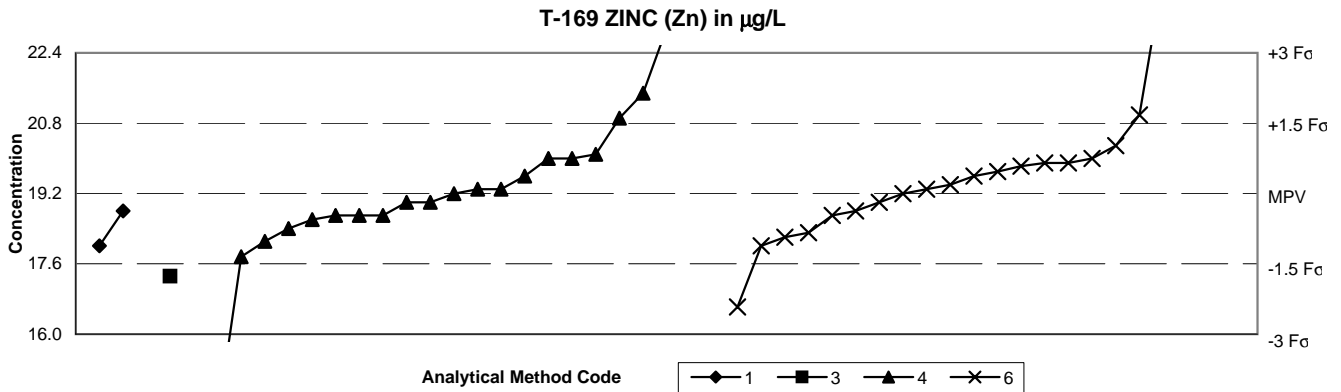
Table 11. Statistical summary of reported data for standard reference sample T-169 (trace constituents) -- continued



SUMMARY	Methods			Method Codes	Statistics	
	3	4	6			
n =	2	14	17	03 Atomic absorption: graphite furnace	MPV = 7.42 µg/L	
Minimum =	10.09	1.5	6.83	04 Inductively coupled plasma	F-pseudosigma = 0.38	
Maximum =	10.2	19	8.1	06 Inductively coupled plasma/mass spectrometry	n = 33	
Median =		7.44	7.39		Uh = 7.70	
F-pseudosigma =		0.42	0.30		Lh = 7.19	

Lab	Rating	Z-value	Method Codes		
			3	4	6
1	4	0.45	--	--	7.59
5	3	-0.85	--	7.1	--
7	3	1.01	--	--	7.8
8	4	0.48	--	--	7.6
16	2	-1.11	--	7	--
25	NR	--	--	<19	--
32	3	0.74	--	--	7.7
42	4	-0.48	--	--	7.24
45	3	-0.74	--	--	7.14
59	3	-0.56	--	--	7.21
70	4	0.37	--	--	7.56
86	3	-0.58	--	7.2	--
89	0	7.35	10.2	--	--
97	NR	--	--	<7.7	--
105	NR	--	--	--	<20
121	3	1.01	--	--	7.8
134	4	0.16	--	7.48	--
138	4	-0.08	--	7.39	--
142	4	0.00	--	--	7.42
146	2	1.40	--	7.95	--
149	3	-0.58	--	--	7.2
180	1	-1.53	--	--	6.84
183	0	7.06	10.09	--	--
198	4	-0.50	--	--	7.23
212	0	4.18	--	9	--
234	3	0.66	--	7.67	--
245	4	-0.08	--	--	7.39
247	3	-0.61	--	--	7.19
256	3	0.63	--	7.66	--
265	4	0.21	--	7.5	--
305	3	-0.85	--	7.1	--
328	0	-15.66	--	1.5	--
330	1	1.80	--	--	8.1
356	1	-1.56	--	--	6.83
370	0	30.63	--	19	--
372	0	-3.76	--	6	--

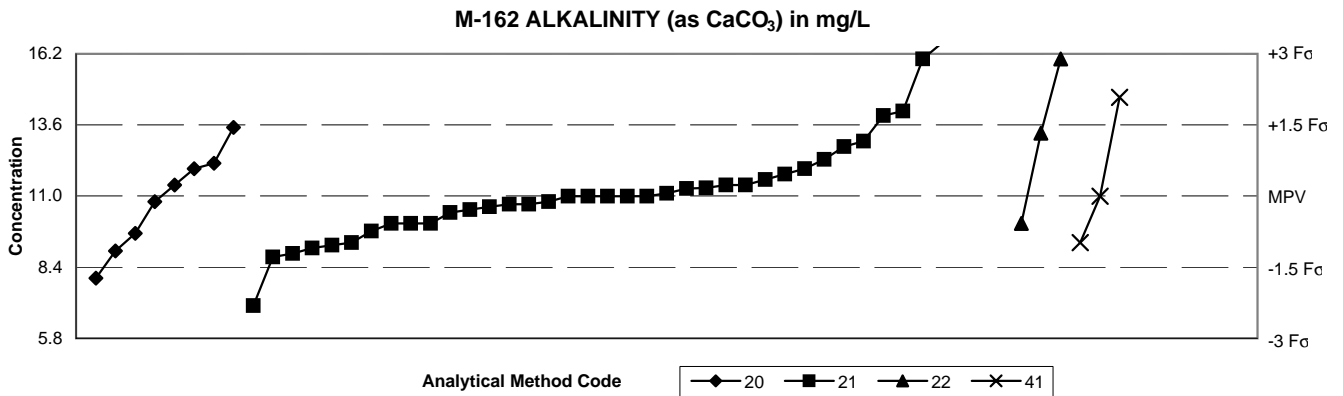
Table 11. Statistical summary of reported data for standard reference sample T-169 (trace constituents) -- continued



SUMMARY	Methods				Method Codes	Statistics	
	1	3	4	6			
n =	2	1	22	19	01 Atomic absorption: direct, air	MPV = 19.2 µg/L	
Minimum =	18	17.3	12.2	16.6	03 Atomic absorption: graphite furnace	F-pseudosigma = 1.1	
Maximum =	18.8		32	24.2	04 Inductively coupled plasma	n = 44	
Median =			19.1	19.4	06 Inductively coupled plasma/mass spectrometry	Uh = 20.0	
F-pseudosigma =			1.0	0.9		Lh = 18.5	

Lab	Rating	Z-value	Method Codes				Lab	Rating	Z-value	Method Codes			
			1	3	4	6				1	3	4	6
1	4	0.37	--	--	--	19.6	304	4	0.09	--	--	--	19.3
5	3	-0.74	--	--	18.4	--	305	3	0.84	--	--	20.1	--
7	3	0.65	--	--	--	19.9	328	0	3.54	--	--	23	--
8	0	4.65	--	--	--	24.2	330	1	1.67	--	--	--	21
10	2	-1.12	18	--	--	--	356	4	-0.37	--	--	--	18.8
16	4	-0.19	--	--	19	--	370	NR	--	--	--	<30.0	--
23	1	1.61	--	--	20.93	--	372	3	0.74	--	--	20	--
24	4	0.37	--	--	19.6	--							
25	0	-4.84	--	--	14	--							
26	2	-1.02	--	--	18.1	--							
32	0	-2.42	--	--	--	16.6							
42	4	-0.47	--	--	18.7	--							
45	4	0.00	--	--	--	19.2							
59	3	0.65	--	--	--	19.9							
70	4	0.47	--	--	--	19.7							
86	4	-0.47	--	--	18.7	--							
89	1	-1.77	--	17.3	--	--							
97	0	-6.51	--	--	12.2	--							
105	0	-8.56	--	--	--	<10.0							
113	4	0.09	--	--	19.3	--							
121	2	-1.12	--	--	--	18							
134	4	0.00	--	--	19.2	--							
138	3	0.74	--	--	--	20							
142	4	-0.19	--	--	--	19							
146	4	-0.47	--	--	18.7	--							
147	3	-0.93	--	--	--	18.2							
149	4	0.19	--	--	--	19.4							
180	4	-0.47	--	--	--	18.7							
190	4	-0.37	18.8	--	--	--							
193	NR	--	<25	--	--	--							
198	2	1.02	--	--	--	20.3							
212	0	11.91	--	--	32	--							
227	4	-0.19	--	--	19	--							
234	0	2.14	--	--	21.5	--							
245	3	0.59	--	--	--	19.83							
247	3	-0.84	--	--	--	18.3							
255	4	0.09	--	--	19.3	--							
256	2	-1.35	--	--	17.75	--							
259	3	-0.56	--	--	18.6	--							
265	3	0.74	--	--	20	--							

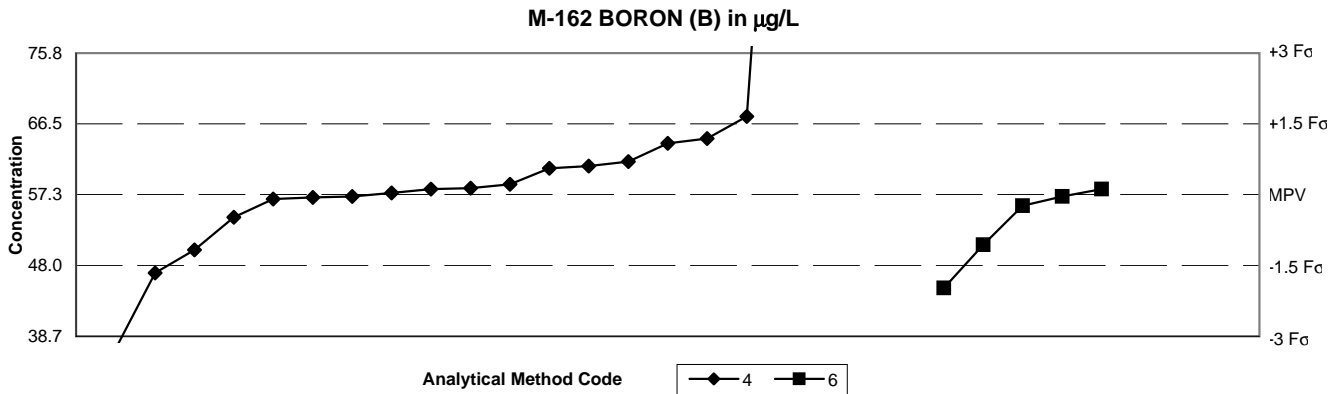
Table 12. Statistical summary of reported data for standard reference sample M-162 (major constituents)



SUMMARY	Methods				Statistics	
	20	21	22	41	Method Codes	
n =	8	39	3	3	20 Titration: colorimetric	MPV = 11.0 mg/L
Minimum =	8	7	10	9.3	21 Titration: electrometric	F-pseudosigma = 1.7
Maximum =	13.5	22	16	14.6	22 Colorimetric	n = 53
Median =	11.1	11.0			41 Electrometric	Uh = 12.3
F-pseudosigma =	2.1	1.5				Lh = 10.0

Lab	Rating	Z-value	Method Codes				Lab	Rating	Z-value	Method Codes			
			20	21	22	41				20	21	22	41
1	4	0.16	--	11.28	--	--	259	4	-0.29	--	10.5	--	--
4	0	6.36	--	22	--	--	263	4	0.23	--	11.4	--	--
5	4	-0.17	--	10.7	--	--	266	4	0.06	--	11.1	--	--
8	2	1.16	--	13	--	--	269	4	0.00	--	11	--	--
10	4	-0.17	--	10.7	--	--	321	0	-2.31	--	7	--	--
12	4	0.00	--	11	--	--	328	1	-1.73	8	--	--	--
16	3	-0.58	--	--	10	--	330	0	5.20	--	20	--	--
23	3	0.58	12	--	--	--	333	3	-0.98	--	9.3	--	--
24	4	0.00	--	11	--	--	341	0	2.89	--	--	16	--
25	0	2.89	--	16	--	--	356	4	0.17	--	11.3	--	--
32	4	-0.12	10.8	--	--	--	366	3	-0.79	9.64	--	--	--
33	2	-1.10	--	9.1	--	--	370	3	-0.58	--	10	--	--
38	4	-0.23	--	10.61	--	--	372	0	5.43	--	20.4	--	--
42	1	1.79	--	14.1	--	--							
45	4	0.23	--	11.4	--	--							
46	4	0.23	11.4	--	--	--							
59	2	-1.29	--	8.77	--	--							
70	4	0.00	--	--	--	11							
85	2	1.04	--	12.8	--	--							
89	4	-0.35	--	10.4	--	--							
97	3	-0.58	--	10	--	--							
105	4	0.46	--	11.8	--	--							
109	1	1.70	--	13.94	--	--							
113	3	-0.74	--	9.72	--	--							
134	3	0.58	--	12	--	--							
138	2	-1.03	--	9.21	--	--							
142	4	0.35	--	11.6	--	--							
146	0	3.24	--	16.6	--	--							
149	4	0.00	--	11	--	--							
180	0	2.08	--	--	--	14.6							
183	2	-1.16	9	--	--	--							
190	4	-0.12	--	10.8	--	--							
193	3	-0.98	--	--	--	9.3							
212	2	-1.21	--	8.9	--	--							
220	3	0.77	--	12.33	--	--							
224	3	-0.58	--	10	--	--							
227	2	1.33	--	--	13.3	--							
234	3	0.69	12.2	--	--	--							
247	4	0.00	--	11	--	--							
256	2	1.44	13.5	--	--	--							

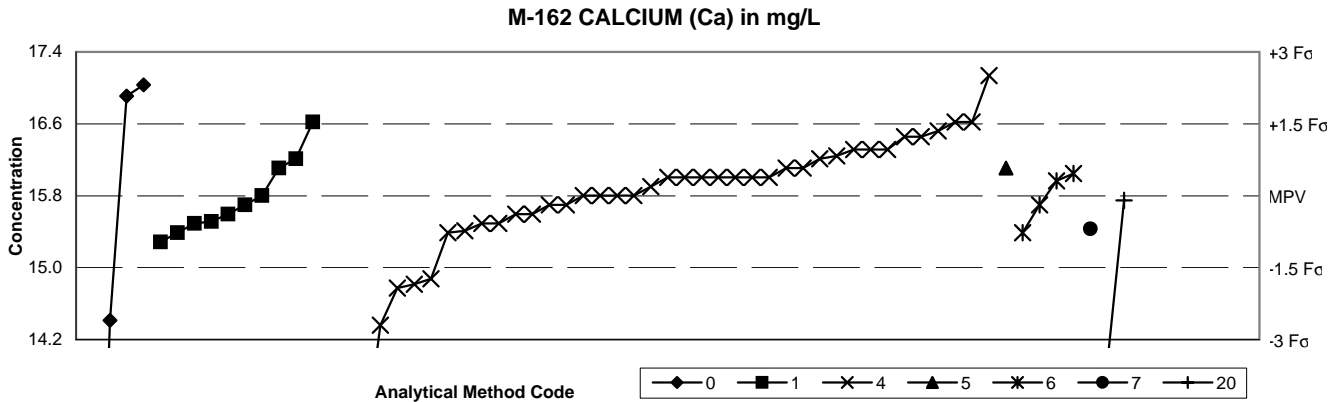
Table 12. Statistical summary of reported data for standard reference sample M-162 (major constituents) -- continued



SUMMARY	Methods			Statistics
	4	6	22	
n =	18	5	1	MPV = 57.3 µg/L F-pseudosigma = 6.2 n = 24 Uh = 60.9 Lh = 52.5
Minimum =	37	45	0.21	
Maximum =	140	58		
Median =	58.1	55.8		
F-pseudosigma =	3.6	4.7		
	Method Codes			
	04 Inductively coupled plasma 06 Inductively coupled plasma/mass spectrometry 22 Colorimetric			

Lab	Rating	Z-value	Method Codes		
			4	6	22
5	0	-7.63	<10.0	--	--
8	1	-1.98	--	45	--
16	1	-1.66	47	--	--
23	0	-9.22	--	--	0.21
24	4	-0.09	56.7	--	--
25	2	-1.17	50	--	--
32	4	-0.04	--	57	--
42	4	-0.48	54.3	--	--
45	4	-0.23	--	55.8	--
59	2	-1.06	--	50.7	--
70	NR	--	<100	--	--
85	0	-3.27	37	--	--
86	4	0.14	58.1	--	--
105	NR	--	<200	--	--
134	4	0.22	58.63	--	--
138	4	0.04	57.5	--	--
142	3	0.56	60.7	--	--
180	1	1.66	67.5	--	--
212	4	-0.06	56.9	--	--
234	2	1.09	64	--	--
247	0	13.37	140	--	--
259	4	0.12	58	--	--
265	4	0.12	--	58	--
319	3	0.70	61.6	--	--
328	3	0.61	61	--	--
341	2	1.19	64.6	--	--
372	4	-0.04	57	--	--

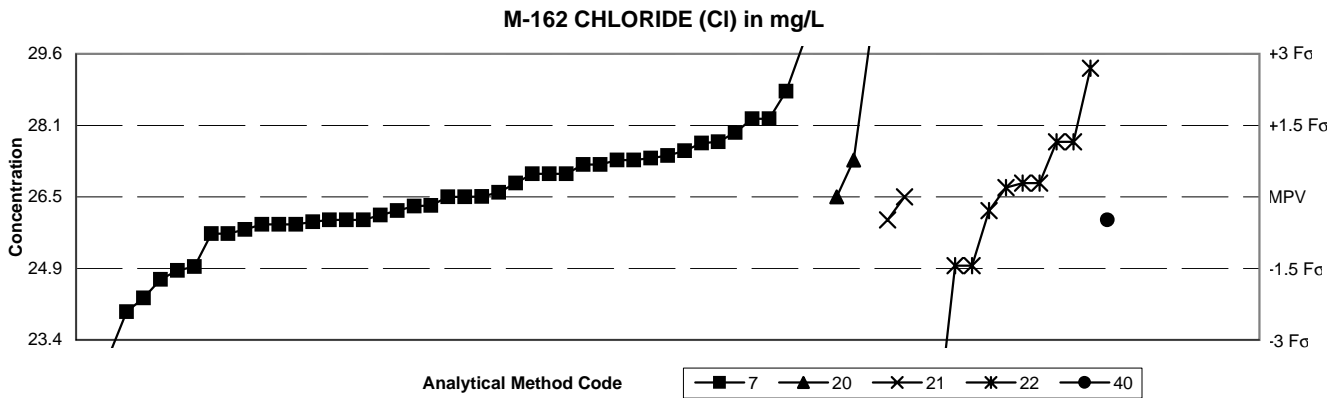
Table 12. Statistical summary of reported data for standard reference sample M-162 (major constituents) -- continued



SUMMARY	Methods								Statistics	
	0	1	2	4	5	6	7	20	Method Codes	
n =	4	10	1	39	1	4	1	2 00	Other	MPV = 15.8 mg/L
Minimum =	9.27	15.3	17.6	6.26	16.1	15.4	15.44	14 01	Atomic absorption: direct, air	F-pseudosigma = 0.5
Maximum =	17	16.6		17.1		16.04		15.75	02 Atomic absorption: direct, nitrous oxide	Rating criterion = 0.8
Median =		15.7		16.0					04 Inductively coupled plasma	n = 62
F-pseudosigma =		0.4		0.5					05 Direct current plasma	Uh = 16.2
									06 Inductively coupled plasma/mass spectrometry	Lh = 15.5
									07 Ion chromatography	
									20 Titration: colorimetric	

Lab	Rating	Z-value	Method Codes							Lab	Rating	Z-value	Method Codes							
			0	1	2	4	5	6	7				20	0	1	2	4	5	6	7
1	3	0.81	--	--	--	16.44	--	--	--	245	4	0.20	--	--	--	--	--	15.96	--	--
5	0	-12.08	--	--	--	6.26	--	--	--	247	1	-1.77	--	--	--	14.4	--	--	--	--
8	3	0.63	--	--	--	16.3	--	--	--	255	4	-0.25	--	--	--	15.6	--	--	--	--
10	4	0.00	--	15.8	--	--	--	--	--	256	1	-1.71	14.45	--	--	--	--	--	--	--
12	4	0.25	--	--	--	16	--	--	--	259	4	0.38	--	--	--	16.1	--	--	--	--
16	4	0.25	--	--	--	16	--	--	--	263	4	-0.06	--	--	--	--	--	--	15.75	--
23	4	-0.35	--	15.52	--	--	--	--	--	265	4	-0.25	--	--	--	15.6	--	--	--	--
24	4	0.25	--	--	--	16	--	--	--	266	1	1.52	17	--	--	--	--	--	--	--
25	0	-3.54	--	--	--	13	--	--	--	269	0	-2.28	--	--	--	--	--	--	--	14
26	3	0.63	--	--	--	16.3	--	--	--	279	2	1.37	16.88	--	--	--	--	--	--	--
32	4	-0.51	--	--	--	--	--	15.4	--	305	4	-0.38	--	--	--	15.5	--	--	--	--
33	4	0.38	--	--	--	--	16.1	--	--	315	2	-1.27	--	--	--	14.8	--	--	--	--
38	0	2.28	--	--	17.6	--	--	--	--	321	4	-0.51	--	15.4	--	--	--	--	--	--
42	4	-0.38	--	--	--	15.5	--	--	--	328	4	0.25	--	--	--	16	--	--	--	--
45	4	-0.13	--	--	--	--	--	15.7	--	330	2	1.01	--	--	--	16.6	--	--	--	--
46	4	0.25	--	--	--	16	--	--	--	333	3	0.63	--	--	--	16.3	--	--	--	--
59	4	0.51	--	16.2	--	--	--	--	--	336	0	-8.27	9.27	--	--	--	--	--	--	--
64	3	0.89	--	--	--	16.5	--	--	--	341	3	-0.63	--	15.3	--	--	--	--	--	--
70	4	0.51	--	--	--	16.2	--	--	--	366	4	-0.13	--	--	--	15.7	--	--	--	--
76	4	0.30	--	--	--	--	--	16.04	--	370	1	1.65	--	--	--	17.1	--	--	--	--
85	2	1.01	--	16.6	--	--	--	--	--	372	4	0.00	--	--	--	15.8	--	--	--	--
86	4	0.25	--	--	--	16	--	--	--	375	4	-0.46	--	--	--	--	--	15.44	--	--
89	4	-0.13	--	15.7	--	--	--	--	--											
97	4	0.38	--	--	--	16.1	--	--	--											
102	4	0.13	--	--	--	15.9	--	--	--											
105	4	-0.48	--	--	--	15.42	--	--	--											
109	4	-0.25	--	15.6	--	--	--	--	--											
113	4	0.00	--	--	--	15.8	--	--	--											
121	4	0.00	--	--	--	15.8	--	--	--											
134	3	0.54	--	--	--	16.23	--	--	--											
138	4	-0.51	--	--	--	15.4	--	--	--											
142	4	0.00	--	--	--	15.8	--	--	--											
146	4	-0.13	--	--	--	15.7	--	--	--											
180	4	0.25	--	--	--	16	--	--	--											
190	4	-0.38	--	15.5	--	--	--	--	--											
193	4	0.38	--	16.1	--	--	--	--	--											
212	2	-1.14	--	--	--	14.9	--	--	--											
220	3	0.81	--	--	--	16.44	--	--	--											
224	2	-1.21	--	--	--	14.84	--	--	--											
234	2	1.01	--	--	--	16.6	--	--	--											

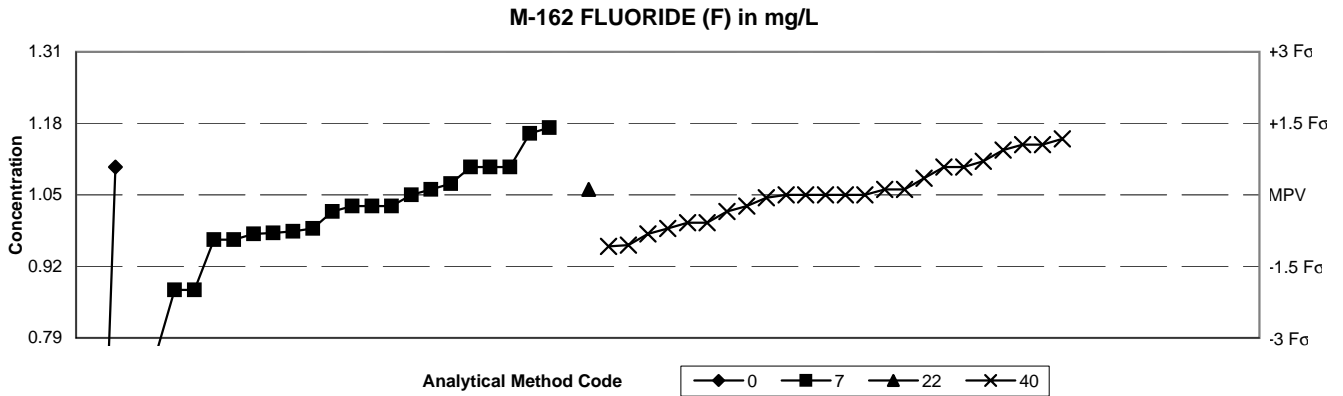
Table 12. Statistical summary of reported data for standard reference sample M-162 (major constituents) -- continued



SUMMARY	Methods						Statistics	
	0	7	20	21	22	40	Method Codes	
n =	1	43	3	2	11	1	00 Other	MPV = 26.5 mg/L
Minimum =	9.94	23.1	26.5	26	21.55	26	07 Ion chromatography	F-pseudosigma = 1.0
Maximum =		55.6	30	26.5	29.3		20 Titration: colorimetric	Rating criterion = 1.3
Median =		26.5			26.7		21 Titration: electrometric	n = 61
F-pseudosigma =		1.1			1.7		22 Colorimetric	Uh = 27.3
							40 Ion selective electrode	Lh = 25.9

Lab	Rating	Z-value	Method Codes						Lab	Rating	Z-value	Method Codes						
			0	7	20	21	22	40				0	7	20	21	22	40	
1	4	-0.14	--	26.31	--	--	--	--	247	4	0.38	--	--	27	--	--	--	--
4	1	1.74	--	28.8	--	--	--	--	256	4	-0.45	--	--	25.9	--	--	--	--
5	4	0.01	--	26.51	--	--	--	--	259	4	0.00	--	--	26.5	--	--	--	--
8	4	-0.45	--	25.9	--	--	--	--	263	4	0.00	--	--	26.5	--	--	--	--
10	4	0.23	--	--	--	--	26.8	--	265	4	-0.38	--	--	26	--	--	--	--
12	2	-1.13	--	--	--	--	25	--	266	4	0.00	--	--	--	26.5	--	--	--
16	0	-3.62	--	--	--	--	21.7	--	269	4	-0.38	--	--	--	--	--	26	--
24	4	0.23	--	--	--	--	26.8	--	277	4	0.23	--	--	26.8	--	--	--	--
25	2	-1.21	--	24.9	--	--	--	--	305	3	0.88	--	--	27.67	--	--	--	--
26	4	0.08	--	26.6	--	--	--	--	315	4	-0.23	--	--	26.2	--	--	--	--
32	4	-0.45	--	25.9	--	--	--	--	319	3	0.60	--	--	27.3	--	--	--	--
33	2	-1.15	--	24.98	--	--	--	--	321	1	-1.66	--	--	24.3	--	--	--	--
42	3	0.68	--	27.4	--	--	--	--	328	1	-1.89	--	--	24	--	--	--	--
45	3	0.75	--	27.5	--	--	--	--	330	2	-1.13	--	--	--	--	--	25	--
46	4	0.15	--	--	--	--	26.7	--	336	0	-12.50	9.94	--	--	--	--	--	--
59	2	-1.36	--	24.7	--	--	--	--	341	4	-0.23	--	--	--	--	--	26.2	--
64	3	0.60	--	27.3	--	--	--	--	356	4	0.38	--	--	27	--	--	--	--
70	2	1.06	--	27.9	--	--	--	--	366	3	0.91	--	--	--	--	--	27.7	--
85	4	0.00	--	26.5	--	--	--	--	370	4	-0.38	--	--	26	--	--	--	--
86	3	0.53	--	27.2	--	--	--	--	372	3	-0.60	--	--	25.7	--	--	--	--
89	4	-0.15	--	26.3	--	--	--	--	374	0	2.64	--	--	30	--	--	--	--
97	3	0.91	--	--	--	--	27.7	--										
102	2	1.28	--	28.2	--	--	--	--										
105	4	0.38	--	27	--	--	--	--										
109	4	-0.38	--	--	--	--	26	--										
113	3	-0.60	--	25.7	--	--	--	--										
134	4	-0.41	--	25.96	--	--	--	--										
138	2	1.28	--	28.2	--	--	--	--										
142	3	0.53	--	27.2	--	--	--	--										
146	0	2.11	--	--	--	--	29.3	--										
149	0	21.96	--	55.6	--	--	--	--										
180	3	0.91	--	27.7	--	--	--	--										
183	0	-3.74	--	--	--	--	21.55	--										
190	3	0.60	--	27.3	--	--	--	--										
208	4	-0.38	--	26	--	--	--	--										
212	4	-0.30	--	26.1	--	--	--	--										
220	0	2.51	--	29.82	--	--	--	--										
224	3	0.63	--	27.34	--	--	--	--										
227	3	-0.54	--	25.79	--	--	--	--										
234	0	-2.57	--	23.1	--	--	--	--										

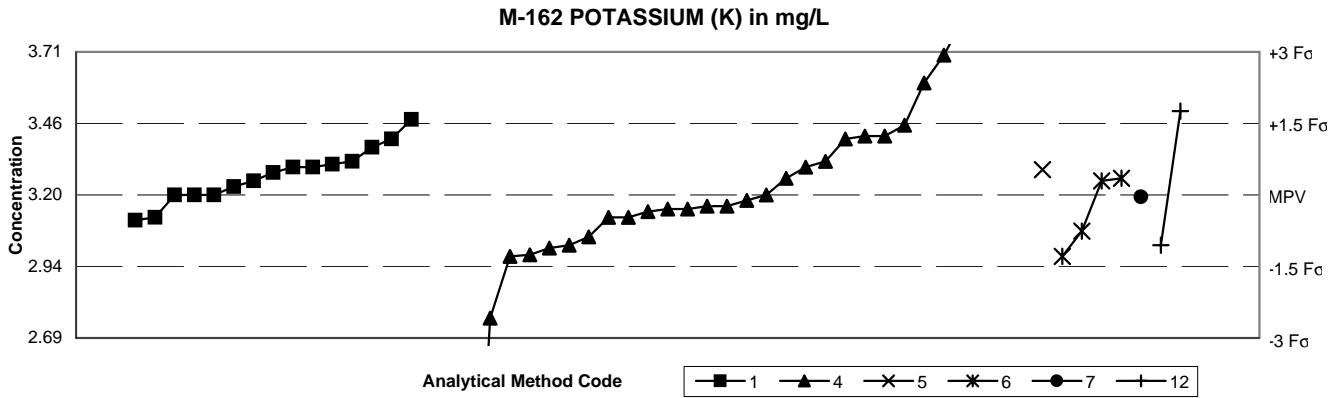
Table 12. Statistical summary of reported data for standard reference sample M-162 (major constituents) -- continued



SUMMARY	Methods				Method Codes	Statistics	
	0	7	22	40			
n =	2	22	1	24	00 Other	MPV = 1.05 mg/L	
Minimum =	0.13	0.04	1.06	0.958	07 Ion chromatography	F-pseudosigma = 0.09	
Maximum =	1.1	1.17		1.15	22 Colorimetric	n = 49	
Median =		1.03		1.05	40 Ion selective electrode	U _h = 1.10	
F-pseudosigma =		0.07		0.07		L _h = 0.99	

Lab	Rating	Z-value	Method Codes				Lab	Rating	Z-value	Method Codes			
			0	7	22	40				0	7	22	40
1	4	0.12	--	--	--	1.06	266	3	-0.59	--	--	--	1
5	3	-0.70	--	0.99	--	--	269	2	-1.06	--	--	--	0.96
8	1	-1.99	--	0.88	--	--	277	3	-0.82	--	0.98	--	--
10	2	1.06	--	--	--	1.14	305	2	-1.08	--	--	--	0.958
16	4	-0.23	--	1.03	--	--	328	3	-0.82	--	--	--	0.98
23	4	0.35	--	--	--	1.08	330	2	1.06	--	--	--	1.14
24	4	0.12	--	--	--	1.06	336	0	-10.79	0.13	--	--	--
25	0	-11.85	--	0.04	--	--	356	3	-0.76	--	0.985	--	--
26	1	-1.99	--	0.88	--	--	370	4	-0.35	--	1.02	--	--
32	4	-0.23	--	1.03	--	--	372	0	-3.40	--	0.76	--	--
33	2	1.41	--	1.17	--	--							
42	4	0.00	--	1.05	--	--							
45	3	-0.94	--	0.97	--	--							
46	3	0.59	1.1	--	--	--							
59	3	0.94	--	--	--	1.13							
70	4	0.00	--	--	--	1.05							
85	4	0.00	--	--	--	1.05							
86	3	0.59	--	1.1	--	--							
89	4	0.12	--	--	1.06	--							
97	3	0.70	--	--	--	1.11							
102	0	-6.45	--	<0.5	--	--							
105	2	1.29	--	1.16	--	--							
109	3	-0.59	--	--	--	1							
113	3	0.59	--	--	--	1.1							
134	4	-0.35	--	--	--	1.02							
138	4	0.00	--	--	--	1.05							
142	4	0.00	--	--	--	1.05							
146	3	0.59	--	1.1	--	--							
149	3	0.59	--	1.1	--	--							
180	3	-0.80	--	0.982	--	--							
183	2	1.17	--	--	--	1.15							
190	4	-0.23	--	--	--	1.03							
212	3	0.59	--	--	--	1.1							
224	4	0.23	--	1.07	--	--							
234	4	-0.23	--	1.03	--	--							
247	4	0.12	--	1.06	--	--							
255	3	-0.70	--	--	--	0.99							
256	3	-0.94	--	0.97	--	--							
259	4	-0.06	--	--	--	1.045							
263	4	0.00	--	--	--	1.05							

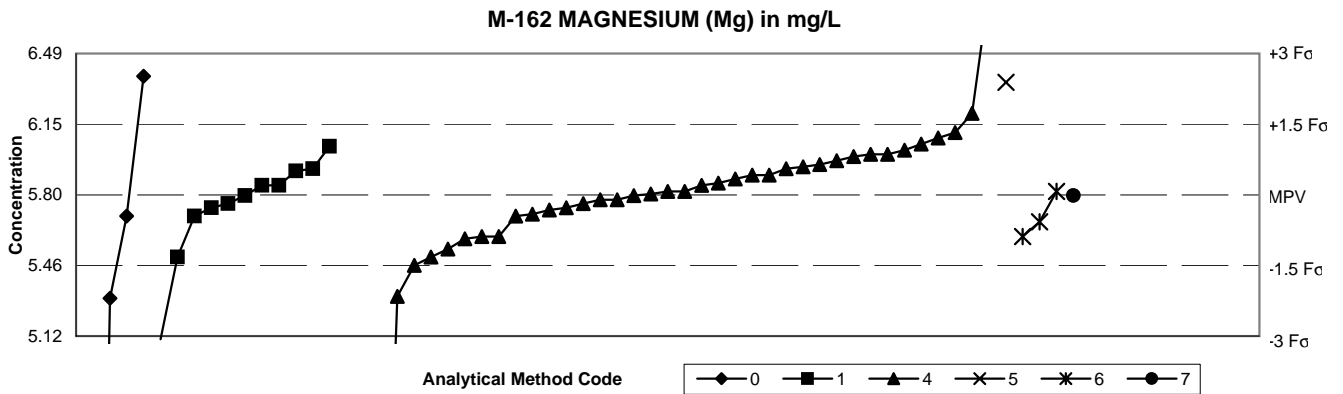
Table 12. Statistical summary of reported data for standard reference sample M-162 (major constituents) -- continued



SUMMARY	Methods							Method Codes	Statistics	
	0	1	4	5	6	7	12			
n =	2	15	30	1	4	1	2	00 Other	MPV =	3.20 mg/L
Minimum =	0.79	3.11	0.99	3.29	2.98	3.193	3.02	01 Atomic absorption: direct, air	F-pseudsigma =	0.17
Maximum =	3.76	3.47	3.96		3.26		3.5	04 Inductively coupled plasma	n =	55
Median =		3.28	3.16					05 Direct current plasma	Uh =	3.35
F-pseudsigma =		0.09	0.29					06 Inductively coupled plasma/mass spectrometry	Lh =	3.12
								07 Ion chromatography		
								12 Flame emission		

Lab	Rating	Z-value	Method Codes							Lab	Rating	Z-value	Method Codes						
			0	1	4	5	6	7	12				0	1	4	5	6	7	12
1	3	-0.53	--	3.11	--	--	--	--	--	259	2	-1.06	--	--	3.02	--	--	--	--
5	0	-12.90	--	--	<1.00	--	--	--	--	265	4	-0.29	--	--	3.15	--	--	--	--
8	2	1.17	--	--	3.4	--	--	--	--	266	1	1.76	--	--	--	--	--	--	3.5
10	3	0.59	--	3.3	--	--	--	--	--	279	0	3.28	3.76	--	--	--	--	--	--
16	4	0.00	--	--	3.2	--	--	--	--	305	0	4.46	--	--	3.96	--	--	--	--
23	4	-0.47	--	3.12	--	--	--	--	--	315	3	0.59	--	--	3.3	--	--	--	--
24	3	0.70	--	--	3.32	--	--	--	--	321	2	1.17	--	3.4	--	--	--	--	--
25	0	-12.96	--	--	0.99	--	--	--	--	328	0	-9.97	--	--	1.5	--	--	--	--
26	4	-0.47	--	--	3.12	--	--	--	--	330	2	1.23	--	--	3.41	--	--	--	--
32	2	-1.29	--	--	--	--	2.98	--	--	333	0	4.28	--	--	3.93	--	--	--	--
33	3	0.53	--	--	--	3.29	--	--	--	336	0	-14.14	0.79	--	--	--	--	--	--
38	3	0.65	--	3.31	--	--	--	--	--	341	4	0.00	--	3.2	--	--	--	--	--
42	2	-1.11	--	--	3.01	--	--	--	--	366	4	0.35	--	--	3.26	--	--	--	--
45	4	0.29	--	--	--	--	3.25	--	--	370	0	2.93	--	--	3.7	--	--	--	--
46	3	-0.88	--	--	3.05	--	--	--	--	372	0	-2.58	--	--	2.76	--	--	--	--
59	3	0.59	--	3.3	--	--	--	--	--	375	4	-0.04	--	--	--	--	--	3.193	--
64	4	0.18	--	3.23	--	--	--	--	--										
70	4	-0.12	--	--	3.18	--	--	--	--										
76	4	0.35	--	--	--	--	3.26	--	--										
85	1	1.58	--	3.47	--	--	--	--	--										
86	2	1.23	--	--	3.41	--	--	--	--										
89	3	1.00	--	3.37	--	--	--	--	--										
97	4	0.00	--	3.2	--	--	--	--	--										
102	0	-9.74	--	--	1.54	--	--	--	--										
105	2	1.47	--	--	3.45	--	--	--	--										
109	4	0.00	--	3.2	--	--	--	--	--										
113	4	-0.23	--	--	3.16	--	--	--	--										
134	4	0.29	--	3.25	--	--	--	--	--										
138	4	-0.47	--	--	3.12	--	--	--	--										
142	4	-0.23	--	--	3.16	--	--	--	--										
146	0	3.70	--	--	3.83	--	--	--	--										
180	4	-0.35	--	--	3.14	--	--	--	--										
190	4	0.47	--	3.28	--	--	--	--	--										
193	3	0.70	--	3.32	--	--	--	--	--										
212	0	2.35	--	--	3.6	--	--	--	--										
224	2	-1.26	--	--	2.986	--	--	--	--										
234	4	-0.29	--	--	3.15	--	--	--	--										
245	3	-0.76	--	--	--	--	3.071	--	--										
247	2	-1.29	--	--	2.98	--	--	--	--										
256	2	-1.06	--	--	--	--	--	--	3.02										

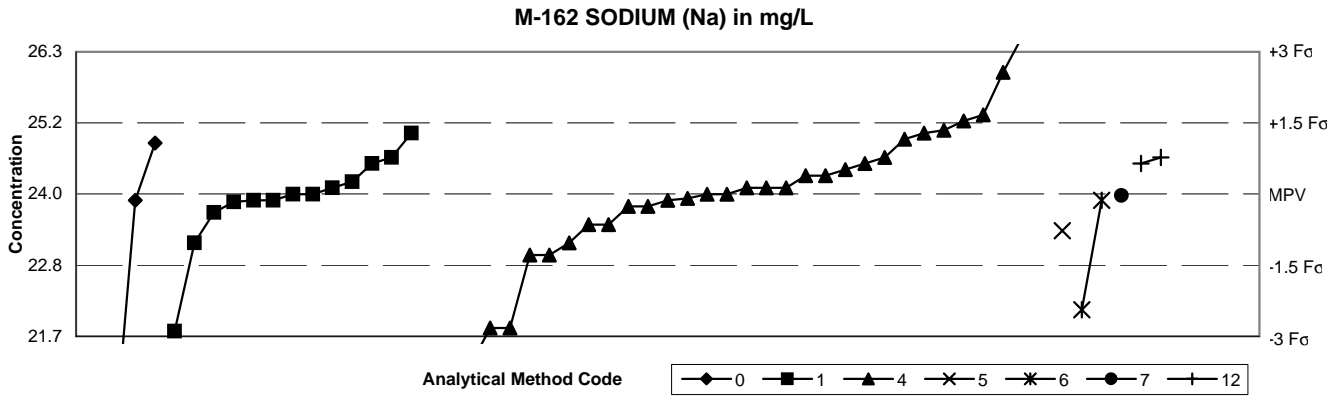
Table 12. Statistical summary of reported data for standard reference sample M-162 (major constituents) -- continued



SUMMARY	Methods							Statistics	
	0	1	4	5	6	7	20	Method Codes	
n =	4	11	39	1	3	1	1	00 Other	MPV = 5.80 mg/L
Minimum =	0.99	5.1	1.09	6.35	5.6	5.8	7.29	01 Atomic absorption: direct, air	F-pseudosigma = 0.23
Maximum =	6.38	6.04	6.8		5.82			04 Inductively coupled plasma	Rating criterion = 0.29
Median =		5.80	5.82					05 Direct current plasma	n = 60
F-pseudosigma =		0.12	0.23					06 Inductively coupled plasma/mass spectrometry	Uh = 5.95
								07 Ion chromatography	Lh = 5.64
								20 Titration: colorimetric	

Lab	Rating	Z-value	Method Codes							Lab	Rating	Z-value	Method Codes						
			0	1	4	5	6	7	20				0	1	4	5	6	7	20
1	4	0.06	--	--	5.82	--	--	--	--	247	1	-1.70	--	--	5.31	--	--	--	--
5	0	-16.21	--	--	1.1	--	--	--	--	255	4	-0.22	--	--	5.74	--	--	--	--
8	2	1.37	--	--	6.2	--	--	--	--	259	0	-9.66	--	--	3	--	--	--	--
10	4	-0.01	--	5.8	--	--	--	--	--	263	4	-0.36	5.7	--	--	--	--	--	--
12	0	3.43	--	--	6.8	--	--	--	--	265	4	-0.36	--	--	5.7	--	--	--	--
16	3	0.68	--	--	6	--	--	--	--	266	1	-1.74	5.3	--	--	--	--	--	--
23	4	-0.15	--	5.76	--	--	--	--	--	269	0	5.12	--	--	--	--	--	--	7.29
24	4	0.16	--	--	5.85	--	--	--	--	279	1	1.99	6.38	--	--	--	--	--	--
25	0	-16.24	--	--	1.09	--	--	--	--	305	4	-0.08	--	--	5.78	--	--	--	--
26	4	0.44	--	--	5.93	--	--	--	--	315	4	-0.01	--	--	5.8	--	--	--	--
32	3	-0.70	--	--	--	--	5.6	--	--	321	0	-2.42	--	5.1	--	--	--	--	--
33	1	1.88	--	--	--	6.35	--	--	--	328	3	0.68	--	--	6	--	--	--	--
38	4	-0.22	--	5.74	--	--	--	--	--	330	4	0.33	--	--	5.9	--	--	--	--
42	2	-1.18	--	--	5.46	--	--	--	--	333	3	0.75	--	--	6.02	--	--	--	--
45	4	0.06	--	--	--	--	5.82	--	--	336	0	-16.59	0.99	--	--	--	--	--	--
46	3	-0.70	--	--	5.6	--	--	--	--	341	4	-0.36	--	5.7	--	--	--	--	--
59	2	-1.05	--	5.5	--	--	--	--	--	366	4	-0.15	--	--	5.76	--	--	--	--
64	4	0.26	--	--	5.88	--	--	--	--	370	4	0.50	--	--	5.95	--	--	--	--
70	4	-0.08	--	--	5.78	--	--	--	--	372	3	-0.74	--	--	5.59	--	--	--	--
85	3	0.82	--	6.04	--	--	--	--	--	375	4	-0.01	--	--	--	--	--	5.8	--
86	3	0.85	--	--	6.05	--	--	--	--										
89	4	0.44	--	5.93	--	--	--	--	--										
97	4	0.47	--	--	5.94	--	--	--	--										
102	3	-0.91	--	--	5.54	--	--	--	--										
105	3	0.95	--	--	6.08	--	--	--	--										
109	4	0.16	--	5.85	--	--	--	--	--										
113	4	-0.25	--	--	5.73	--	--	--	--										
121	3	-0.70	--	--	5.6	--	--	--	--										
134	4	0.01	--	--	5.807	--	--	--	--										
138	4	0.19	--	--	5.86	--	--	--	--										
142	4	-0.32	--	--	5.71	--	--	--	--										
146	4	0.33	--	--	5.9	--	--	--	--										
180	4	0.06	--	--	5.82	--	--	--	--										
190	4	0.40	--	5.92	--	--	--	--	--										
193	4	0.16	--	5.85	--	--	--	--	--										
212	2	-1.05	--	--	5.5	--	--	--	--										
220	3	0.64	--	--	5.99	--	--	--	--										
224	2	1.04	--	--	6.106	--	--	--	--										
234	3	0.57	--	--	5.97	--	--	--	--										
245	4	-0.45	--	--	--	--	5.672	--	--										

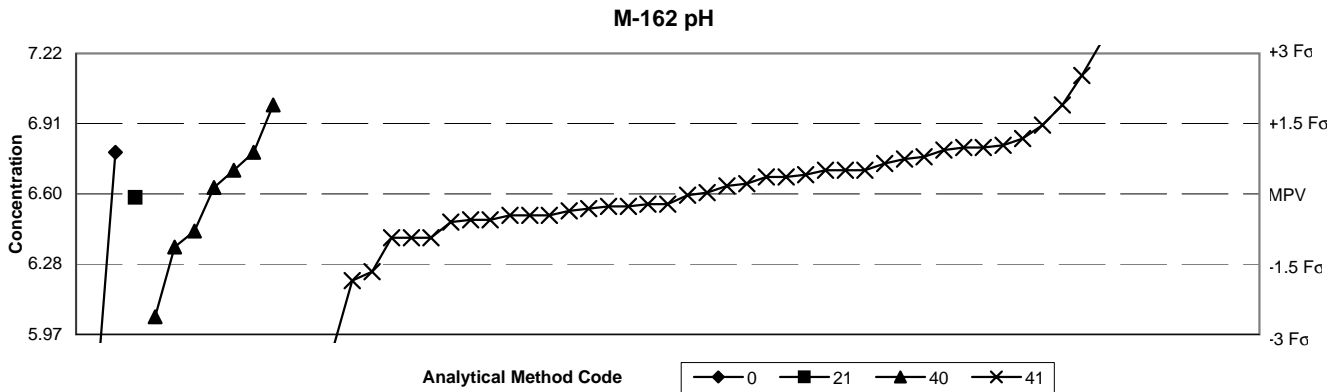
Table 12. Statistical summary of reported data for standard reference sample M-162 (major constituents) -- continued



SUMMARY	Methods							Statistics	
	0	1	4	5	6	7	12	Method Codes	
n =	4	13	32	1	2	1	2	00 Other	MPV = 24.0 mg/L
Minimum =	2.25	21.75	1.65	23.4	22.1	23.98	24.5	01 Atomic absorption: direct, air	F-pseudosigma = 0.8
Maximum =	24.84	25	76		23.9		24.6	04 Inductively coupled plasma	Rating criterion = 1.2
Median =		24.0	24.1					05 Direct current plasma	n = 55
F-pseudosigma =		0.2	1.0					06 Inductively coupled plasma/mass spectrometry	Uh = 24.5
								07 Ion chromatography	Lh = 23.5
								12 Flame emission	

Lab	Rating	Z-value	Method Codes							Lab	Rating	Z-value	Method Codes						
			0	1	4	5	6	7	12				0	1	4	5	6	7	12
1	4	-0.06	--	--	23.93	--	--	--	--	256	4	0.42	--	--	--	--	--	--	24.5
5	0	-18.53	--	--	1.76	--	--	--	--	259	4	0.42	--	--	24.5	--	--	--	--
8	4	0.08	--	--	24.1	--	--	--	--	265	4	0.00	--	--	24	--	--	--	--
10	4	0.00	--	24	--	--	--	--	--	266	4	0.50	--	--	--	--	--	--	24.6
12	1	1.67	--	--	26	--	--	--	--	279	3	0.70	24.84	--	--	--	--	--	--
16	3	-0.83	--	--	23	--	--	--	--	305	0	-2.33	--	--	21.2	--	--	--	--
23	4	-0.08	--	23.9	--	--	--	--	--	315	4	-0.08	23.9	--	--	--	--	--	--
24	4	0.25	--	--	24.3	--	--	--	--	321	0	-3.25	20.1	--	--	--	--	--	--
25	0	-18.63	--	--	1.65	--	--	--	--	328	3	0.83	--	--	25	--	--	--	--
26	4	0.25	--	--	24.3	--	--	--	--	330	3	1.00	--	--	25.2	--	--	--	--
32	1	-1.58	--	--	--	--	22.1	--	--	336	0	-18.13	2.25	--	--	--	--	--	--
33	4	-0.50	--	--	--	23.4	--	--	--	341	3	0.83	--	25	--	--	--	--	--
38	4	-0.25	--	23.7	--	--	--	--	--	366	4	-0.42	--	--	23.5	--	--	--	--
42	1	-1.83	--	--	21.8	--	--	--	--	370	0	2.17	--	--	26.6	--	--	--	--
45	4	-0.08	--	--	--	--	23.9	--	--	375	4	-0.02	--	--	--	--	--	23.98	--
46	4	0.08	--	--	24.1	--	--	--	--										
59	4	-0.08	--	23.9	--	--	--	--	--										
64	4	0.08	--	24.1	--	--	--	--	--										
70	4	0.50	--	--	24.6	--	--	--	--										
85	4	0.42	--	24.5	--	--	--	--	--										
86	2	1.08	--	--	25.3	--	--	--	--										
89	4	0.17	--	24.2	--	--	--	--	--										
97	3	-0.67	--	23.2	--	--	--	--	--										
102	0	43.33	--	--	76	--	--	--	--										
105	4	-0.17	--	--	23.8	--	--	--	--										
109	1	-1.88	--	21.75	--	--	--	--	--										
113	3	-0.67	--	--	23.2	--	--	--	--										
121	3	-0.83	--	--	23	--	--	--	--										
134	4	-0.11	--	23.87	--	--	--	--	--										
138	4	-0.17	--	--	23.8	--	--	--	--										
142	4	-0.08	--	--	23.9	--	--	--	--										
146	3	0.75	--	--	24.9	--	--	--	--										
180	4	0.00	--	--	24	--	--	--	--										
190	4	0.50	--	24.6	--	--	--	--	--										
193	4	0.00	--	24	--	--	--	--	--										
212	4	-0.42	--	--	23.5	--	--	--	--										
220	4	0.08	--	--	24.1	--	--	--	--										
224	3	0.87	--	--	25.05	--	--	--	--										
234	4	0.33	--	--	24.4	--	--	--	--										
247	1	-1.83	--	--	21.8	--	--	--	--										

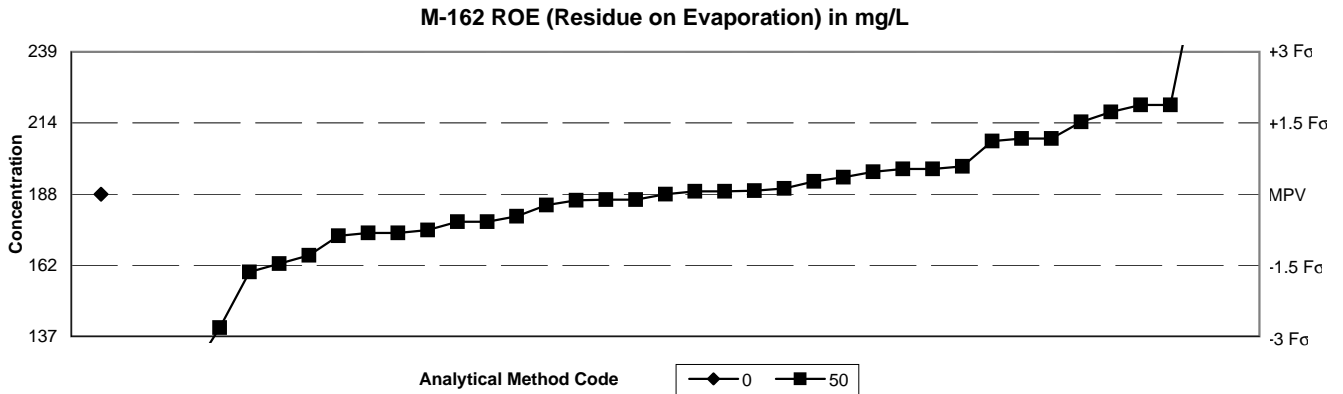
Table 12. Statistical summary of reported data for standard reference sample M-162 (major constituents) -- continued



SUMMARY	Methods				Method Codes	Statistics	
	0	21	40	41			
n =	2	1	7	42	00 Other	MPV = 6.60	
Minimum =	5.68	6.58	6.05	5.75	21 Titration: electrometric	F-pseudosigma = 0.21	
Maximum =	6.78		6.99	7.27	40 Ion selective electrode	Rating criterion = 0.33	
Median =			6.62	6.60	41 Electrometric	n = 52	
F-pseudosigma =			0.26	0.20		Uh = 6.76	
						Lh = 6.48	

Lab	Rating	Z-value	Method Codes				Lab	Rating	Z-value	Method Codes			
			0	21	40	41				0	21	40	41
1	4	0.50	--	--	--	6.76	263	4	0.11	--	--	--	6.63
5	4	0.26	--	--	--	6.68	269	2	-1.05	--	--	--	6.25
8	0	2.05	--	--	--	7.27	305	4	-0.29	--	--	--	6.5
10	4	-0.29	--	--	--	6.5	321	0	-2.53	--	--	--	5.76
12	4	0.02	--	--	--	6.6	328	1	-1.65	--	--	6.05	--
16	4	-0.50	--	--	6.43	--	330	2	1.20	--	--	6.99	--
23	3	0.62	--	--	--	6.8	333	4	-0.05	--	6.58	--	--
24	3	-0.59	--	--	--	6.4	336	0	-2.77	5.68	--	--	--
25	3	0.59	--	--	--	6.79	341	4	-0.17	--	--	--	6.54
32	4	-0.23	--	--	--	6.52	366	4	0.23	--	--	--	6.67
33	2	1.20	--	--	--	6.99	370	1	1.59	--	--	--	7.12
38	3	0.62	--	--	--	6.8	372	4	0.41	--	--	--	6.73
42	4	-0.14	--	--	--	6.55							
45	4	-0.35	--	--	--	6.48							
46	4	0.23	--	--	--	6.67							
59	4	-0.20	--	--	--	6.53							
64	3	0.92	--	--	--	6.9							
70	4	-0.14	--	--	--	6.55							
85	4	-0.17	--	--	--	6.54							
86	4	-0.02	--	--	--	6.59							
89	4	-0.29	--	--	--	6.5							
97	4	0.32	--	--	--	6.7							
105	3	-0.59	--	--	--	6.4							
109	4	-0.35	--	--	--	6.48							
134	4	0.08	--	--	6.623	--							
138	4	0.32	--	--	--	6.7							
142	0	-2.11	--	--	--	5.9							
146	4	-0.38	--	--	--	6.47							
149	4	0.32	--	--	6.7	--							
180	3	0.56	--	--	6.78	--							
183	3	-0.71	--	--	6.36	--							
190	2	-1.17	--	--	--	6.21							
193	4	0.47	--	--	--	6.75							
212	4	0.32	--	--	--	6.7							
224	4	0.14	--	--	--	6.64							
227	3	0.56	6.78	--	--	--							
234	3	-0.59	--	--	--	6.4							
247	3	0.74	--	--	--	6.84							
256	0	-2.56	--	--	--	5.75							
259	3	0.65	--	--	--	6.81							

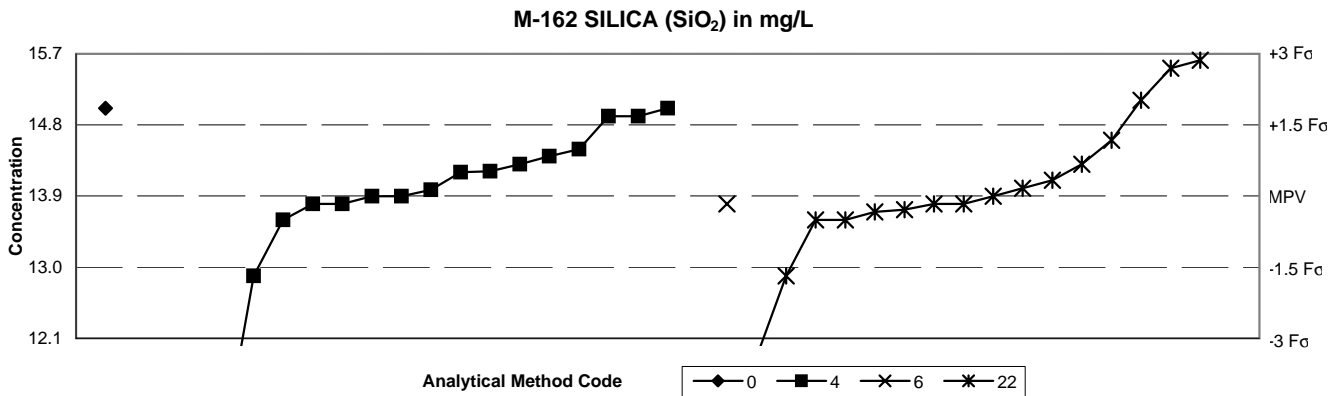
Table 12. Statistical summary of reported data for standard reference sample M-162 (major constituents) -- continued



SUMMARY	Methods		Statistics
	0	50	
n =	1	37	MPV = 188 mg/L
Minimum =	188	58	F-pseudosigma = 17
Maximum =		272	n = 38
Median =		188	U _h = 197
F-pseudosigma =		17	L _h = 174

Lab	Rating	Z-value	Method Codes	
			0	50
1	4	-0.23	--	184
5	4	0.47	--	196
8	4	0.07	--	189.2
10	3	-0.82	--	174
12	0	-7.62	--	58
16	0	-4.05	--	119
25	0	4.93	--	272
26	3	-0.59	--	178
32	1	1.52	--	214
46	4	-0.12	--	186
59	3	0.53	--	197
70	4	0.12	--	190
85	2	-1.47	--	163
89	2	-1.29	--	166
105	1	1.88	--	220
109	4	0.06	--	189
113	4	-0.13	--	185.7
134	4	0.35	--	194
138	3	-0.59	--	178
142	3	-0.88	--	173
146	2	1.17	--	208
190	3	0.53	--	197
212	4	-0.47	--	180
224	1	1.73	--	217.5
227	4	0.00	--	188
234	0	-3.81	--	123
247	3	-0.82	--	174
256	3	0.59	--	198
263	3	-0.76	--	175
266	4	0.00	188	--
277	4	0.06	--	189
328	0	-2.82	--	140
330	4	-0.12	--	186
341	2	1.17	--	208
356	4	0.27	--	192.6
366	1	-1.64	--	160
370	1	1.88	--	220
372	2	1.11	--	207

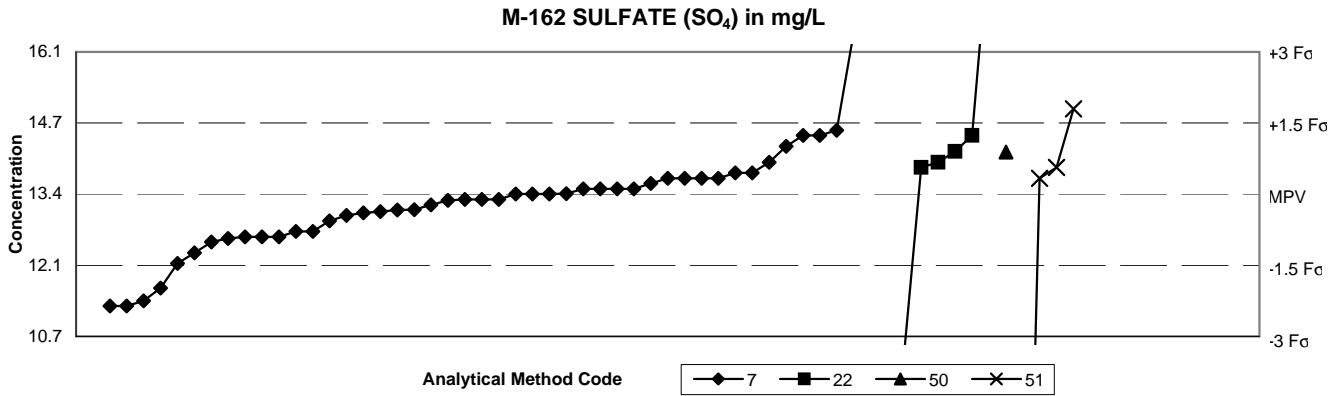
Table 12. Statistical summary of reported data for standard reference sample M-162 (major constituents) -- continued



SUMMARY	Methods					Method Codes	Statistics	
	0	4	5	6	22			
n =	1	19	1	1	16	00 Other	MPV = 13.9 mg/L	
Minimum =	15	0.547	6.12	13.8	11.88	04 Inductively coupled plasma	F-pseudosigma = 0.6	
Maximum =		15			15.6	05 Direct current plasma	Rating criterion = 0.7	
Median =		13.9			13.9	06 Inductively coupled plasma/mass spectrometry	n = 38	
F-pseudosigma =		0.8			0.6	22 Colorimetric	Uh = 14.4	
							Lh = 13.6	

Lab	Rating	Z-value	Method Codes				
			0	4	5	6	22
1	4	0.00	--	--	--	--	13.9
5	0	-19.21	--	0.547	--	--	--
8	4	0.43	--	14.2	--	--	--
10	4	-0.14	--	--	--	--	13.8
24	2	1.44	--	14.9	--	--	--
25	0	-4.46	--	10.8	--	--	--
32	4	-0.14	--	--	--	13.8	--
33	0	-11.19	--	--	6.12	--	--
38	4	-0.14	--	--	--	--	13.8
42	2	-1.44	--	12.9	--	--	--
64	3	0.72	--	14.4	--	--	--
70	3	0.58	--	--	--	--	14.3
85	0	2.30	--	--	--	--	15.5
89	1	1.58	15	--	--	--	--
97	0	2.45	--	--	--	--	15.6
102	4	-0.43	--	--	--	--	13.6
105	3	0.85	--	14.49	--	--	--
113	4	-0.29	--	--	--	--	13.7
121	4	-0.43	--	13.6	--	--	--
134	4	0.12	--	13.98	--	--	--
138	3	1.01	--	--	--	--	14.6
142	4	-0.14	--	13.8	--	--	--
190	4	0.29	--	--	--	--	14.1
212	0	-5.32	--	10.2	--	--	--
220	4	0.45	--	14.21	--	--	--
224	4	-0.24	--	--	--	--	13.73
234	4	0.00	--	13.9	--	--	--
247	1	1.73	--	--	--	--	15.1
256	0	-2.91	--	--	--	--	11.88
259	4	-0.14	--	13.8	--	--	--
263	4	-0.43	--	--	--	--	13.6
265	4	0.00	--	13.9	--	--	--
266	4	0.14	--	--	--	--	14
321	2	-1.44	--	--	--	--	12.9
328	2	1.44	--	14.9	--	--	--
333	1	1.58	--	15	--	--	--
370	0	-10.07	--	6.9	--	--	--
372	3	0.58	--	14.3	--	--	--

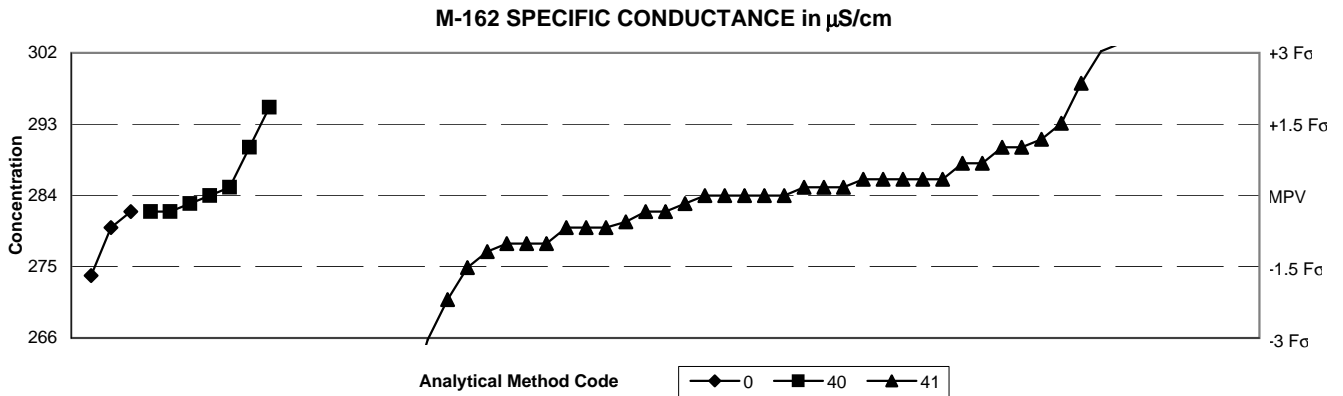
Table 12. Statistical summary of reported data for standard reference sample M-162 (major constituents) -- continued



SUMMARY	Methods					Method Codes	Statistics	
	0	7	22	50	51			
n =	1	45	8	1	4	00 Other	MPV =	13.4 mg/L
Minimum =	0.999	11.3	4	14.19	1.3	07 Ion chromatography	F-pseudosigma =	0.9
Maximum =		16.43	18.2		15	22 Colorimetric	n =	59
Median =		13.3	14.0			50 Gravimetric	Uh =	13.8
F-pseudosigma =		0.7	3.4			51 Turbidimetric	Lh =	12.6

Lab	Rating	Z-value	Method Codes					Lab	Rating	Z-value	Method Codes				
			0	7	22	50	51				0	7	22	50	51
1	4	-0.13	--	13.28	--	--	--	247	3	-0.79	--	12.7	--	--	--
4	0	-2.36	--	11.3	--	--	--	255	3	0.67	--	--	14	--	--
5	4	-0.39	--	13.05	--	--	--	256	0	3.41	--	16.43	--	--	--
8	3	-0.90	--	12.6	--	--	--	259	4	0.00	--	13.4	--	--	--
10	4	0.34	--	--	--	--	13.7	263	3	0.56	--	--	--	--	13.9
12	0	-10.57	--	--	4	--	--	265	2	1.24	--	14.5	--	--	--
16	2	1.01	--	14.3	--	--	--	266	1	1.80	--	--	--	--	15
23	0	-13.60	--	--	--	--	1.3	277	4	-0.22	--	13.2	--	--	--
24	3	0.90	--	--	14.2	--	--	305	3	-0.93	--	12.57	--	--	--
25	2	-1.46	--	12.1	--	--	--	315	4	0.34	--	13.7	--	--	--
26	2	-1.01	--	12.5	--	--	--	321	1	-1.98	--	11.64	--	--	--
32	4	0.45	--	13.8	--	--	--	328	4	-0.45	--	13	--	--	--
33	2	1.24	--	14.5	--	--	--	330	0	5.40	--	--	18.2	--	--
42	0	-2.36	--	11.3	--	--	--	336	0	-13.94	0.999	--	--	--	--
45	3	-0.56	--	12.9	--	--	--	341	0	-3.26	--	--	10.5	--	--
46	4	-0.11	--	13.3	--	--	--	356	4	-0.34	--	13.1	--	--	--
59	4	0.45	--	13.8	--	--	--	366	3	0.56	--	--	13.9	--	--
64	4	0.34	--	13.7	--	--	--	370	2	1.35	--	14.6	--	--	--
70	4	0.22	--	13.6	--	--	--	372	0	-2.25	--	11.4	--	--	--
85	3	0.67	--	14	--	--	--								
86	4	0.11	--	13.5	--	--	--								
89	4	0.34	--	13.7	--	--	--								
97	0	-4.87	--	--	9.07	--	--								
102	4	0.34	--	13.7	--	--	--								
105	3	-0.90	--	12.6	--	--	--								
109	3	0.89	--	--	--	14.19	--								
113	4	-0.11	--	13.3	--	--	--								
134	4	-0.33	--	13.11	--	--	--								
138	4	-0.11	--	13.3	--	--	--								
142	4	0.11	--	13.5	--	--	--								
146	4	0.11	--	13.5	--	--	--								
149	2	-1.24	--	12.3	--	--	--								
180	4	0.00	--	13.4	--	--	--								
183	2	1.24	--	--	14.5	--	--								
190	4	0.11	--	13.5	--	--	--								
208	3	-0.90	--	12.6	--	--	--								
212	3	-0.79	--	12.7	--	--	--								
220	4	-0.37	--	13.07	--	--	--								
224	4	0.01	--	13.41	--	--	--								
234	4	0.00	--	13.4	--	--	--								

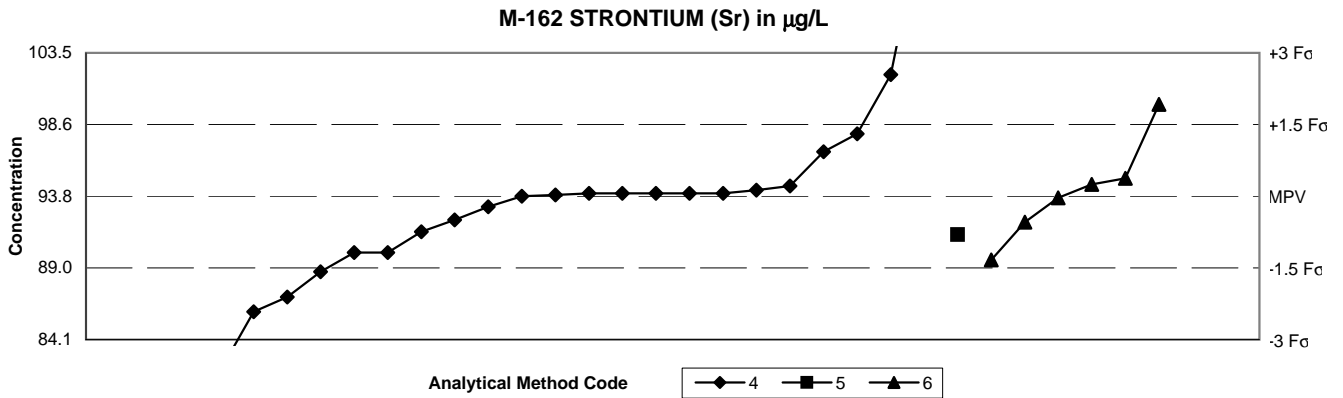
Table 12. Statistical summary of reported data for standard reference sample M-162 (major constituents) -- continued



SUMMARY	Methods			Statistics	
	0	40	41	Method Codes	
n =	3	7	45	00 Other	MPV = 284 µS/cm
Minimum =	274	282	168.3	40 Ion selective electrode	F-pseudosigma = 6
Maximum =	282	295	316.7	41 Electrometric	Rating criterion = 14
Median =		284	284		n = 55
F-pseudosigma =		4	6		Uh = 286
					Lh = 278

Method Codes						Method Codes					
Lab	Rating	Z-value	0	40	41	Lab	Rating	Z-value	0	40	41
1	4	0.14	--	--	286	234	4	-0.42	--	--	278
5	0	-2.11	--	--	254	247	4	0.28	--	--	288
8	0	-8.15	--	--	168.3	256	4	0.07	--	--	285
10	4	-0.14	--	--	282	259	4	0.00	--	--	284
12	1	1.69	--	--	308	263	4	0.14	--	--	286
16	3	0.77	--	295	--	266	4	0.42	--	--	290
23	4	0.49	--	--	291	269	4	0.00	--	--	284
24	4	-0.42	--	--	278	321	0	-2.61	--	--	247
25	4	0.14	--	--	286	328	4	0.00	--	--	284
26	4	-0.42	--	--	278	333	2	-1.27	--	--	266
32	4	-0.14	--	--	282	341	4	0.07	--	285	--
33	0	2.30	--	--	316.7	356	4	0.00	--	284	--
38	4	-0.23	--	--	280.7	366	3	-0.92	--	--	271
42	2	1.27	--	--	302	370	4	0.28	--	--	288
45	4	0.42	--	--	290	372	4	0.14	--	--	286
46	4	-0.14	--	282	--						
59	2	1.34	--	--	303						
64	0	-4.01	--	--	227						
70	3	-0.63	--	--	275						
76	4	-0.28	--	--	280						
85	3	-0.70	274	--	--						
86	3	0.63	--	--	293						
89	4	-0.28	--	--	280						
97	4	0.00	--	--	284						
102	3	0.99	--	--	298						
105	4	-0.49	--	--	277						
109	4	-0.07	--	--	283						
113	4	0.07	--	--	285						
134	4	-0.07	--	283	--						
138	4	0.00	--	--	284						
142	4	0.14	--	--	286						
146	1	-1.83	--	--	258						
149	4	-0.28	--	--	280						
180	0	-6.34	--	--	194						
183	4	0.42	--	290	--						
190	4	-0.14	--	282	--						
193	4	0.07	--	--	285						
212	1	-1.97	--	--	256						
224	4	-0.28	280	--	--						
227	4	-0.14	282	--	--						

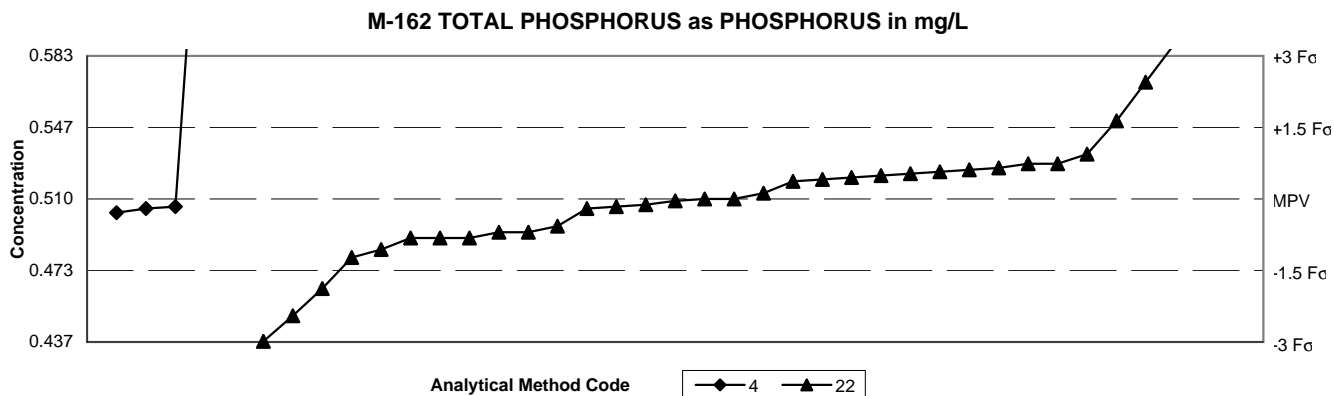
Table 12. Statistical summary of reported data for standard reference sample M-162 (major constituents) -- continued



SUMMARY	Methods				Method Codes	Statistics	
	2	4	5	6			
n =	0	24	1	6	02 Atomic absorption: direct, nitrous oxide	MPV = 93.8 µg/L	
Minimum =	0	23.7	91.2	89.5	04 Inductively coupled plasma	F-pseudosigma = 3.2	
Maximum =		113		100	05 Direct current plasma	Rating criterion = 4.7	
Median =		93.8		94.2	06 Inductively coupled plasma/mass spectrometry	n = 31	
F-pseudosigma =		3.5		2.2		Uh = 94.4	
						Lh = 90.0	

Lab	Rating	Z-value	Method Codes			
			2	4	5	6
1	4	0.02	--	93.88	--	--
5	0	-14.95	--	23.7	--	--
8	2	1.32	--	--	--	100
16	3	-0.81	--	90	--	--
24	3	0.64	--	96.8	--	--
25	3	-0.81	--	90	--	--
32	4	0.26	--	--	--	95
33	3	-0.55	--	--	91.2	--
42	0	4.09	--	113	--	--
59	4	-0.02	--	--	--	93.7
76	4	-0.37	--	--	--	92.06
85	4	0.04	--	94	--	--
86	4	0.04	--	94	--	--
97	4	-0.34	--	92.2	--	--
102	0	-2.52	--	82	--	--
105	4	0.04	--	94	--	--
113	3	-0.51	--	91.4	--	--
121	4	0.04	--	94	--	--
134	4	-0.15	--	93.08	--	--
138	4	0.00	--	93.8	--	--
142	1	1.75	--	102	--	--
190	0	-20.00	<0.01	--	--	--
234	4	0.15	--	94.5	--	--
245	3	-0.92	--	--	--	89.5
247	0	-2.94	--	80	--	--
256	2	-1.09	--	88.7	--	--
259	3	0.90	--	98	--	--
265	4	0.04	--	94	--	--
328	1	-1.66	--	86	--	--
333	4	0.09	--	94.2	--	--
341	4	0.17	--	--	--	94.6
372	2	-1.45	--	87	--	--

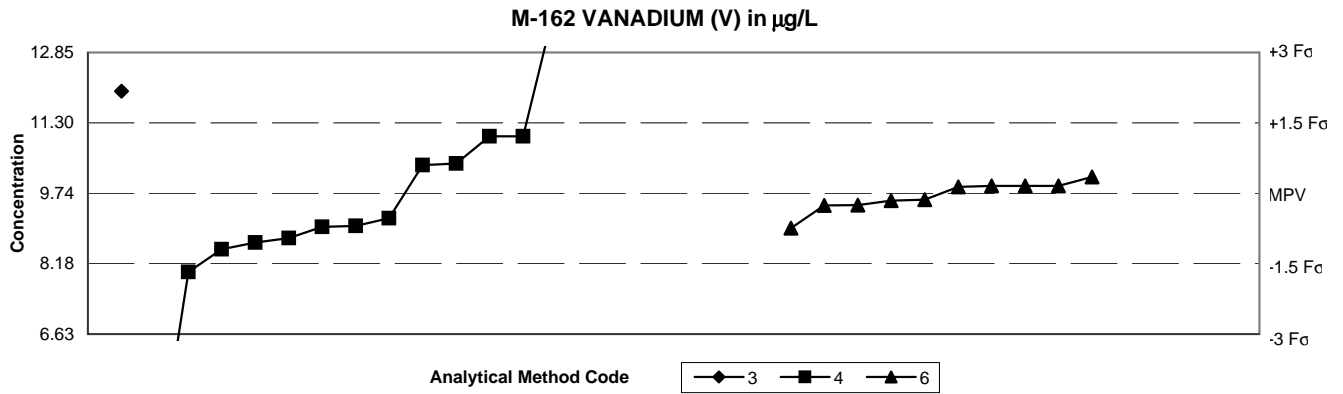
Table 12. Statistical summary of reported data for standard reference sample M-162 (major constituents) -- continued



SUMMARY	Methods			Method Codes	Statistics	
	4	20	22			
n =	4	1	33	04 Inductively coupled plasma	MPV = 0.510 mg/L	
Minimum =	0.503	0.61	0.437	20 Titration: colorimetric	F-pseudosigma = 0.024	
Maximum =	0.72		0.628	22 Colorimetric	Rating criterion = 0.026	
Median =			0.510		n = 38	
F-pseudosigma =			0.024		Uh = 0.526	
					Lh = 0.493	

Lab	Rating	Z-value	Method Codes		
			4	20	22
5	4	0.00	--	--	0.51
8	0	8.24	0.72	--	--
12	3	-0.78	--	--	0.49
16	0	4.63	--	--	0.628
23	2	-1.18	--	--	0.48
32	0	3.92	--	0.61	--
38	3	0.55	--	--	0.524
42	4	-0.20	0.505	--	--
46	4	0.47	--	--	0.522
64	3	0.63	--	--	0.526
70	3	-0.78	--	--	0.49
85	3	-0.67	--	--	0.493
86	4	-0.16	0.506	--	--
89	4	-0.04	--	--	0.509
102	4	0.35	--	--	0.519
105	1	-1.80	--	--	0.464
113	4	-0.12	--	--	0.507
134	3	0.71	--	--	0.528
138	3	0.59	--	--	0.525
142	4	0.51	--	--	0.523
149	4	0.43	--	--	0.521
180	3	-0.55	--	--	0.496
183	3	0.71	--	--	0.528
190	4	-0.20	--	--	0.505
212	0	-2.35	--	--	0.45
220	4	0.12	--	--	0.513
224	2	-1.02	--	--	0.484
227	4	-0.27	0.503	--	--
234	1	1.57	--	--	0.55
247	4	0.00	--	--	0.51
256	0	2.35	--	--	0.57
259	4	-0.16	--	--	0.506
321	0	-2.86	--	--	0.437
328	3	-0.78	--	--	0.49
341	3	0.90	--	--	0.533
366	3	-0.67	--	--	0.493
370	4	0.39	--	--	0.52
372	0	3.14	--	--	0.59

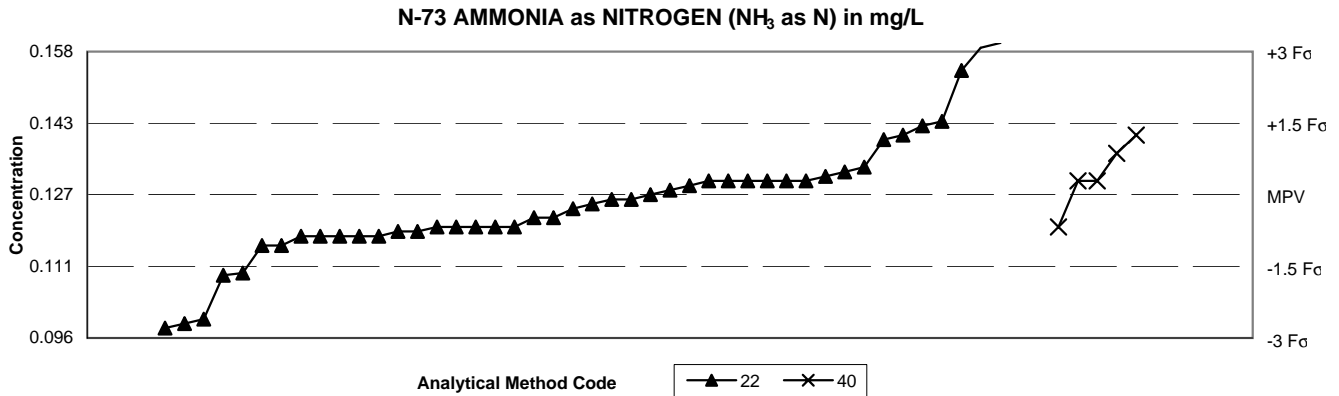
Table 12. Statistical summary of reported data for standard reference sample M-162 (major constituents) -- continued



SUMMARY	Methods			Statistics
	3	4	6	
n =	1	15	10	MPV = 9.74 µg/L
Minimum =	12	3.2	8.97	F-pseudosigma = 1.04
Maximum =	15	10.1		n = 26
Median =		9.19	9.74	Uh = 10.40
F-pseudosigma =		1.70	0.31	Lh = 9.00

Lab	Rating	Z-value	Method Codes		
			3	4	6
1	3	0.60	--	10.36	--
5	0	-5.53	--	<4.00	--
8	4	0.15	--	--	9.9
16	2	1.21	--	11	--
25	NR	--	--	<19	--
32	4	0.15	--	--	9.9
42	4	-0.13	--	--	9.6
45	4	-0.26	--	--	9.47
59	3	-0.74	--	--	8.97
76	4	0.13	--	--	9.88
85	0	5.07	--	15	--
86	2	-1.19	--	8.5	--
89	0	2.18	12	--	--
97	NR	--	--	<7.8	--
102	0	4.10	--	14	--
105	NR	--	--	<20.0	--
121	2	1.21	--	11	--
134	3	-0.53	--	9.19	--
138	3	-0.95	--	8.75	--
142	4	-0.25	--	--	9.48
146	3	-0.69	--	9.02	--
180	4	-0.15	--	--	9.58
234	3	0.64	--	10.4	--
245	4	0.35	--	--	10.1
256	2	-1.05	--	8.65	--
265	0	4.10	--	14	--
305	0	-6.30	--	3.2	--
328	1	-1.68	--	8	--
341	4	0.15	--	--	9.9
372	3	-0.71	--	9	--

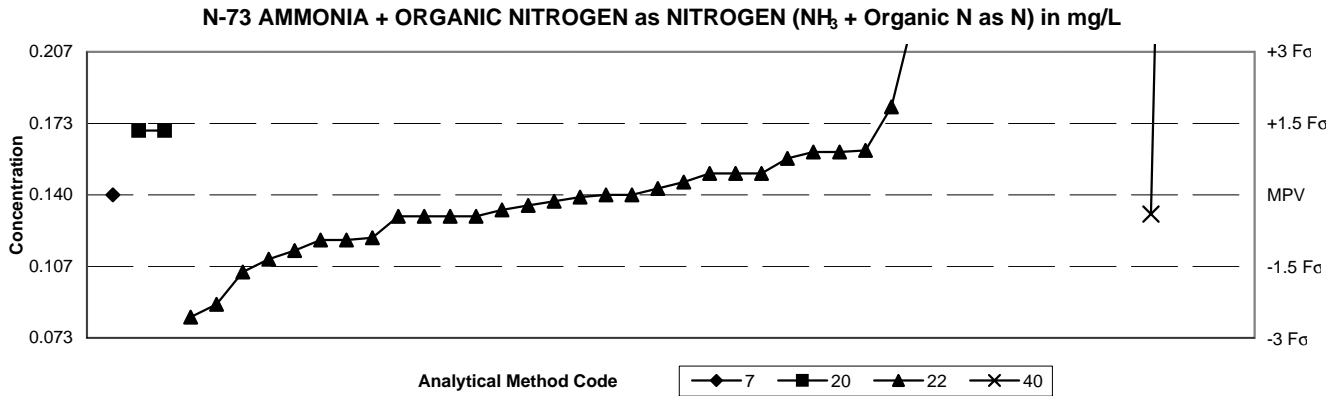
Table 13. Statistical summary of reported data for standard reference sample N-73 (nutrient constituents)



SUMMARY	Methods				Method Codes	Statistics	
	7	20	22	40			
n =	1	1	46	5	07 Ion chromatography	MPV = 0.127 mg/L	
Minimum =	0.174	0.17	0.098	0.12	20 Titration: colorimetric	F-pseudosigma = 0.010	
Maximum =			0.2	0.14	22 Colorimetric	n = 53	
Median =			0.126	0.130	40 Ion selective electrode	Uh = 0.133	
F-pseudosigma =			0.010	0.004		Lh = 0.119	

Lab	Rating	Z-value	Method Codes				Lab	Rating	Z-value	Method Codes			
			7	20	22	40				7	20	22	40
1	3	-0.77	--	--	0.119	--	313	3	-0.77	--	--	0.119	--
5	0	2.60	--	--	0.154	--	316	1	-1.69	--	--	0.11	--
8	0	4.14	--	0.17	--	--	318	4	-0.19	--	--	0.125	--
10	4	0.29	--	--	--	0.13	320	4	0.29	--	--	0.13	--
12	3	-0.67	--	--	0.12	--	321	4	0.29	--	--	0.13	--
16	3	-0.67	--	--	0.12	--	328	1	-1.64	--	--	0.11	--
21	3	-0.87	--	--	0.118	--	333	0	4.53	0.174	--	--	--
23	0	-2.79	--	--	0.098	--	341	4	-0.48	--	--	0.122	--
25	4	0.29	--	--	0.13	--	366	4	0.29	--	--	0.13	--
26	NR	--	<0.4	--	--	--	370	0	7.03	--	--	0.2	--
31	4	-0.29	--	--	0.124	--	372	1	1.54	--	--	0.143	--
33	4	0.48	--	--	0.132	--	373	4	0.10	--	--	0.128	--
38	3	0.58	--	--	0.133	--	376	0	3.08	--	--	0.159	--
45	3	0.87	--	--	--	0.136	377	3	-0.67	--	--	0.12	--
46	2	-1.06	--	--	0.116	--							
51	4	0.29	--	--	--	0.13							
59	3	-0.67	--	--	0.12	--							
64	2	1.25	--	--	0.14	--							
70	3	-0.87	--	--	0.118	--							
72	0	-2.60	--	--	0.1	--							
85	4	0.29	--	--	0.13	--							
86	4	0.19	--	--	0.129	--							
89	3	-0.87	--	--	0.118	--							
102	0	3.18	--	--	0.16	--							
105	3	-0.67	--	--	0.12	--							
110	2	1.16	--	--	0.139	--							
113	0	-2.70	--	--	0.099	--							
118	3	-0.87	--	--	0.118	--							
134	4	-0.10	--	--	0.126	--							
138	4	-0.48	--	--	0.122	--							
142	4	-0.10	--	--	0.126	--							
146	2	1.45	--	--	0.142	--							
180	4	0.00	--	--	0.127	--							
190	3	-0.87	--	--	0.118	--							
193	2	-1.06	--	--	0.116	--							
198	4	0.39	--	--	0.131	--							
227	0	4.34	--	--	0.172	--							
234	3	-0.67	--	--	--	0.12							
247	4	0.29	--	--	0.13	--							
306	2	1.25	--	--	--	0.14							

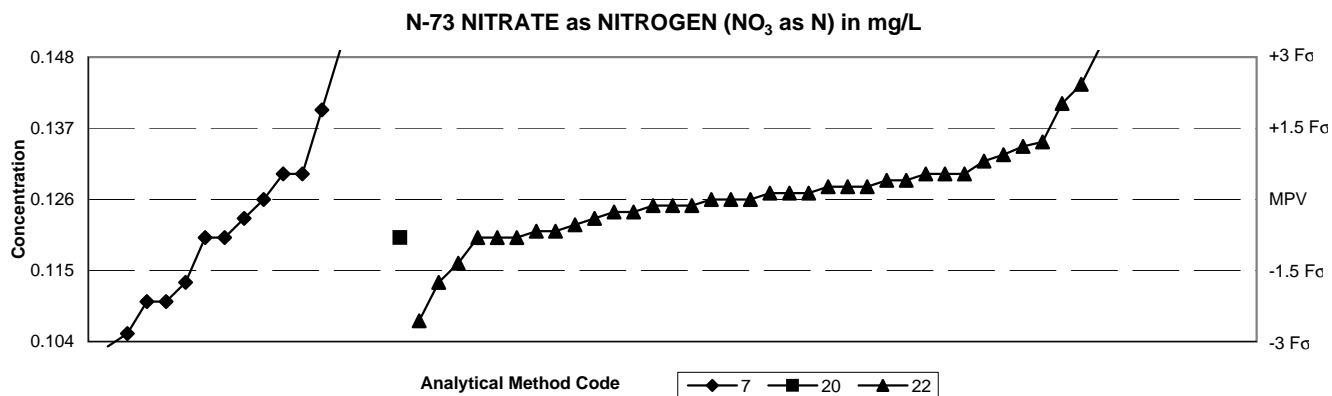
Table 13. Statistical summary of reported data for standard reference sample N-73 (nutrient constituents) -- continued



SUMMARY	Methods				Method Codes	Statistics	
	7	20	22	40			
n =	1	2	31	2	07 Ion chromatography	MPV = 0.140 mg/L	
Minimum =	0.14	0.17	0.083	0.131	20 Titration: colorimetric	F-pseudosigma = 0.022	
Maximum =		0.17	0.308	0.651	22 Colorimetric	n = 36	
Median =			0.139		40 Ion selective electrode	Uh = 0.160	
F-pseudosigma =			0.021			Lh = 0.130	

Lab	Rating	Z-value	Method Codes				Lab	Rating	Z-value	Method Codes			
			7	20	22	40				7	20	22	40
1	3	-0.94	--	--	0.119	--	373	4	0.13	--	--	0.143	--
5	3	0.90	--	--	0.16	--	376	3	0.76	--	--	0.157	--
8	2	1.35	--	0.17	--	--	377	3	-0.90	--	--	0.12	--
10	4	-0.45	--	--	0.13	--							
12	0	4.05	--	--	0.23	--							
16	4	0.45	--	--	0.15	--							
21	4	0.45	--	--	0.15	--							
23	0	7.55	--	--	0.308	--							
25	4	0.00	0.14	--	--	--							
31	4	0.27	--	--	0.146	--							
38	4	-0.45	--	--	0.13	--							
51	4	-0.40	--	--	--	0.131							
59	4	-0.22	--	--	0.135	--							
70	1	1.84	--	--	0.181	--							
72	2	-1.17	--	--	0.114	--							
85	2	-1.35	--	--	0.11	--							
89	2	1.35	--	0.17	--	--							
102	NR	--	--	--	<0.2	--							
105	NR	--	--	--	<1.00	--							
113	4	0.00	--	--	0.14	--							
134	NR	--	--	--	<0.2	--							
138	4	-0.13	--	--	0.137	--							
142	1	-1.62	--	--	0.104	--							
146	NR	--	--	--	<0.200	--							
180	4	-0.04	--	--	0.139	--							
183	NR	--	--	--	--	<1							
190	4	0.00	--	--	0.14	--							
193	NR	--	--	--	<0.5	--							
227	3	0.90	--	--	0.16	--							
247	4	0.45	--	--	0.15	--							
306	0	22.98	--	--	--	0.651							
313	3	-0.94	--	--	0.119	--							
316	3	0.93	--	--	0.161	--							
318	4	-0.45	--	--	0.13	--							
320	0	-2.56	--	--	0.083	--							
328	4	-0.31	--	--	0.133	--							
341	4	-0.45	--	--	0.13	--							
366	0	-2.29	--	--	0.089	--							
370	NR	--	--	--	<0.5	--							
372	0	5.17	--	--	0.255	--							

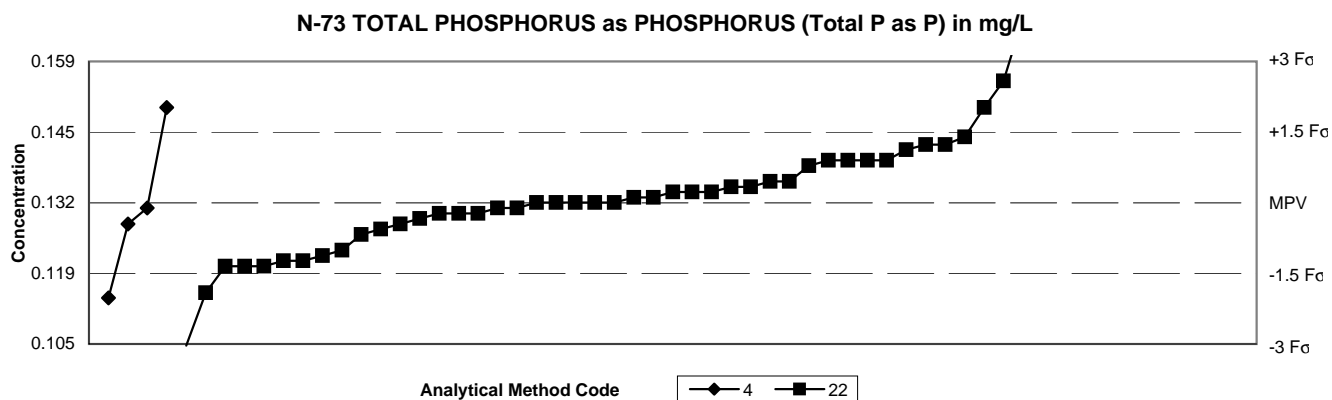
Table 13. Statistical summary of reported data for standard reference sample N-73 (nutrient constituents) -- continued



SUMMARY	Methods				Method Codes	Statistics	
	7	20	22	40			
n =	15	1	38	0	07 Ion chromatography	MPV = 0.126 mg/L	
Minimum =	0.103	0.12	0.107	0	20 Titration: colorimetric	F-pseudsigma = 0.007	
Maximum =	0.18		0.315		22 Colorimetric	n = 54	
Median =	0.123		0.127		40 Ion selective electrode	Uh = 0.130	
F-pseudsigma =	0.017		0.005			Lh = 0.120	

Lab	Rating	Z-value	Method Codes				Lab	Rating	Z-value	Method Codes			
			7	20	22	40				7	20	22	40
1	3	-0.54	--	--	0.122	--	306	0	25.50	--	--	0.315	--
5	0	3.64	--	--	0.153	--	313	4	-0.27	--	--	0.124	--
8	3	-0.81	0.12	--	--	--	316	2	1.12	--	--	0.134	--
10	3	0.54	--	--	0.13	--	318	3	0.54	--	--	0.13	--
12	3	-0.81	--	--	0.12	--	320	4	-0.13	--	--	0.125	--
16	3	-0.81	--	--	0.12	--	321	0	-2.16	0.11	--	--	--
21	4	0.40	--	--	0.129	--	328	3	-0.81	--	0.12	--	--
23	0	2.02	--	--	0.141	--	333	4	0.00	0.126	--	--	--
25	1	-1.75	0.113	--	--	--	341	4	-0.40	--	--	0.123	--
26	0	-2.16	0.11	--	--	--	366	4	0.13	--	--	0.127	--
31	4	0.27	--	--	0.128	--	370	0	7.28	0.18	--	--	--
33	1	1.89	0.14	--	--	--	372	2	-1.35	--	--	0.116	--
38	3	-0.67	--	--	0.121	--	373	2	1.21	--	--	0.135	--
42	0	-3.10	0.103	--	--	--	376	4	0.13	--	--	0.127	--
45	0	3.24	0.15	--	--	--	377	4	-0.27	--	--	0.124	--
46	4	0.00	--	--	0.126	--							
51	3	-0.81	0.12	--	--	--							
59	4	0.27	--	--	0.128	--							
64	3	-0.81	--	--	0.12	--							
70	0	2.43	--	--	0.144	--							
72	1	-1.75	--	--	0.113	--							
85	4	-0.13	--	--	0.125	--							
86	0	-2.56	--	--	0.107	--							
89	3	0.54	--	--	0.13	--							
102	0	-2.83	0.105	--	--	--							
105	0	3.24	--	--	0.15	--							
113	4	0.40	--	--	0.129	--							
118	3	0.94	--	--	0.133	--							
134	4	0.13	--	--	0.127	--							
138	4	-0.40	0.123	--	--	--							
142	3	0.81	--	--	0.132	--							
146	4	0.27	--	--	0.128	--							
180	3	-0.67	--	--	0.121	--							
183	NR	--	--	--	--	< 1							
190	4	-0.13	--	--	0.125	--							
193	4	0.00	--	--	0.126	--							
198	4	0.00	--	--	0.126	--							
227	0	4.18	0.157	--	--	--							
234	3	0.54	0.13	--	--	--							
247	3	0.54	0.13	--	--	--							

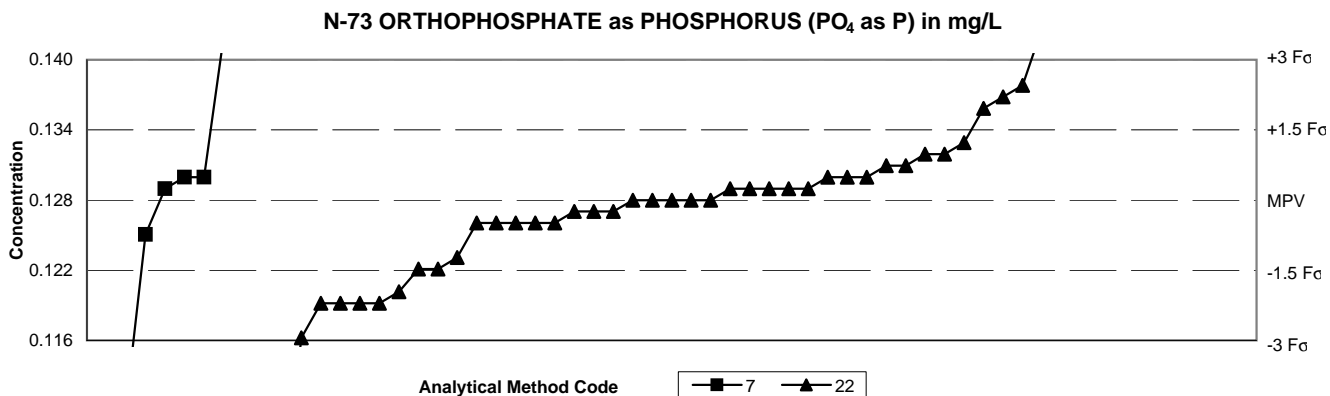
Table 13. Statistical summary of reported data for standard reference sample N-73 (nutrient constituents) -- continued



SUMMARY	Methods		Statistics
	4	22	
n =	4	47	MPV = 0.132 mg/L
Minimum =	0.114	0.105	F-pseudosigma = 0.009
Maximum =	0.15	0.244	n = 51
Median =	0.133		Uh = 0.140
F-pseudosigma =	0.009		Lh = 0.128

Method Codes				Method Codes			
Lab	Rating	Z-value		Lab	Rating	Z-value	
1	4	-0.34	-- 0.129	318	4	0.45	-- 0.136
5	4	0.45	-- 0.136	320	4	0.11	-- 0.133
8	0	2.02	0.15 --	321	2	1.24	-- 0.143
10	4	0.22	-- 0.134	328	0	4.27	-- 0.17
12	3	-0.67	-- 0.126	341	3	0.90	-- 0.14
16	4	0.22	-- 0.134	366	3	-0.56	-- 0.127
21	4	0.00	-- 0.132	370	3	0.90	-- 0.14
23	0	-3.04	-- 0.105	372	0	5.40	-- 0.18
25	2	-1.35	-- 0.12	373	4	-0.11	-- 0.131
31	4	0.11	-- 0.133	376	4	0.00	-- 0.132
38	4	0.22	-- 0.134	377	4	0.00	-- 0.132
42	4	-0.11	0.131 --				
45	3	0.90	-- 0.14				
46	4	0.34	-- 0.135				
51	4	-0.22	-- 0.13				
59	4	-0.11	-- 0.131				
64	2	-1.35	-- 0.12				
70	0	12.59	-- 0.244				
72	1	-1.91	-- 0.115				
85	4	0.00	-- 0.132				
86	0	-2.02	0.114 --				
89	2	-1.01	-- 0.123				
102	4	0.00	-- 0.132				
105	2	-1.12	-- 0.122				
113	3	0.79	-- 0.139				
134	2	-1.35	-- 0.12				
138	3	0.90	-- 0.14				
142	4	-0.22	-- 0.13				
146	2	1.12	-- 0.142				
180	4	-0.45	-- 0.128				
183	2	1.24	-- 0.143				
190	2	-1.24	-- 0.121				
193	4	0.34	-- 0.135				
198	2	-1.24	-- 0.121				
227	4	-0.45	0.128 --				
234	0	2.59	-- 0.155				
247	0	2.02	-- 0.15				
306	0	3.93	-- 0.167				
313	4	-0.22	-- 0.13				
316	2	1.39	-- 0.144				

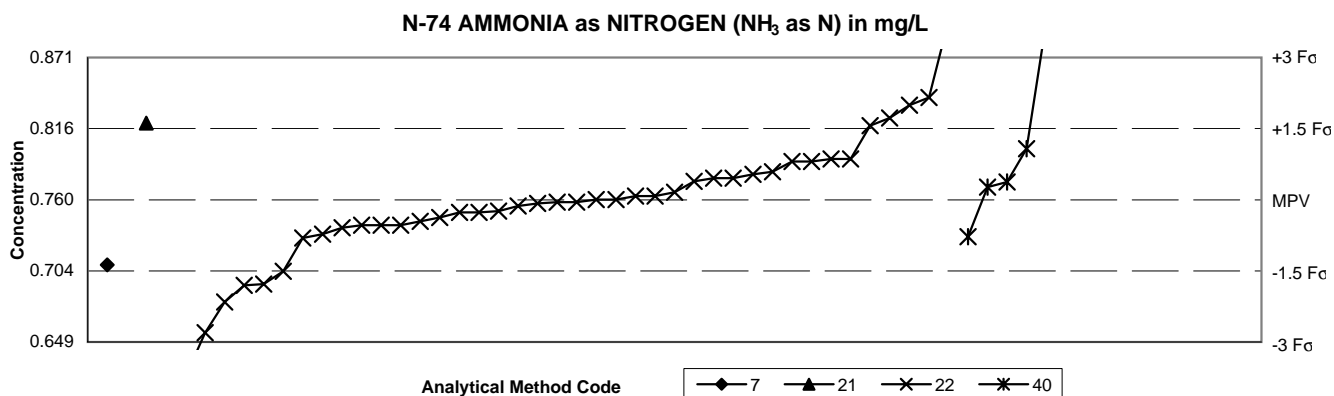
Table 13. Statistical summary of reported data for standard reference sample N-73 (nutrient constituents) -- continued



SUMMARY	Methods			Method Codes	Statistics	
	0	7	22			
n =	1	7	43	00 Other	MPV = 0.128 mg/L	
Minimum =	0.52	0.11	0.099	07 Ion chromatography	F-pseudsigma = 0.004	
Maximum =		0.15	0.152	22 Colorimetric	Rating criterion = 0.006	
Median =		0.130	0.128		n = 51	
F-pseudsigma =		0.007	0.004		Uh = 0.131	
					Lh = 0.126	

Lab	Rating	Z-value	Method Codes			Lab	Rating	Z-value	Method Codes		
			0	7	22				0	7	22
1	4	0.00	--	--	0.128	318	4	0.47	--	--	0.131
5	3	0.78	--	--	0.133	320	3	-0.78	--	--	0.123
8	4	0.31	--	0.13	--	321	4	0.00	--	--	0.128
10	3	0.63	--	--	0.132	328	0	61.25	0.52	--	--
12	4	-0.16	--	--	0.127	341	2	-1.41	--	--	0.119
16	2	-1.41	--	--	0.119	366	4	0.16	--	--	0.129
21	4	0.16	--	--	0.129	370	0	2.34	--	--	0.143
23	1	-1.88	--	--	0.116	372	4	0.31	--	--	0.13
25	4	0.00	--	--	0.128	373	4	-0.31	--	--	0.126
26	0	-2.81	--	0.11	--	376	4	-0.31	--	--	0.126
31	4	0.16	--	--	0.129	377	3	0.63	--	--	0.132
33	0	3.44	--	0.15	--						
38	4	-0.31	--	--	0.126						
42	0	2.19	--	0.142	--						
45	4	0.16	--	0.129	--						
46	0	3.59	--	--	0.151						
51	4	-0.31	--	--	0.126						
59	1	1.56	--	--	0.138						
64	4	-0.31	--	--	0.126						
70	3	-0.94	--	--	0.122						
72	0	-4.22	--	--	0.101						
85	4	0.00	--	--	0.128						
89	4	0.31	--	--	0.13						
102	4	0.47	--	--	0.131						
105	0	-4.53	--	--	0.099						
113	4	-0.16	--	--	0.127						
118	4	-0.16	--	--	0.127						
134	4	0.31	--	--	0.13						
138	4	0.16	--	--	0.129						
142	2	-1.41	--	--	0.119						
146	2	1.41	--	--	0.137						
180	2	1.25	--	--	0.136						
183	2	-1.41	--	--	0.119						
190	3	-0.94	--	--	0.122						
198	2	-1.25	--	--	0.12						
227	4	0.00	--	--	0.128						
234	4	-0.47	--	0.125	--						
247	4	0.31	--	0.13	--						
313	4	0.16	--	--	0.129						
316	0	3.75	--	--	0.152						

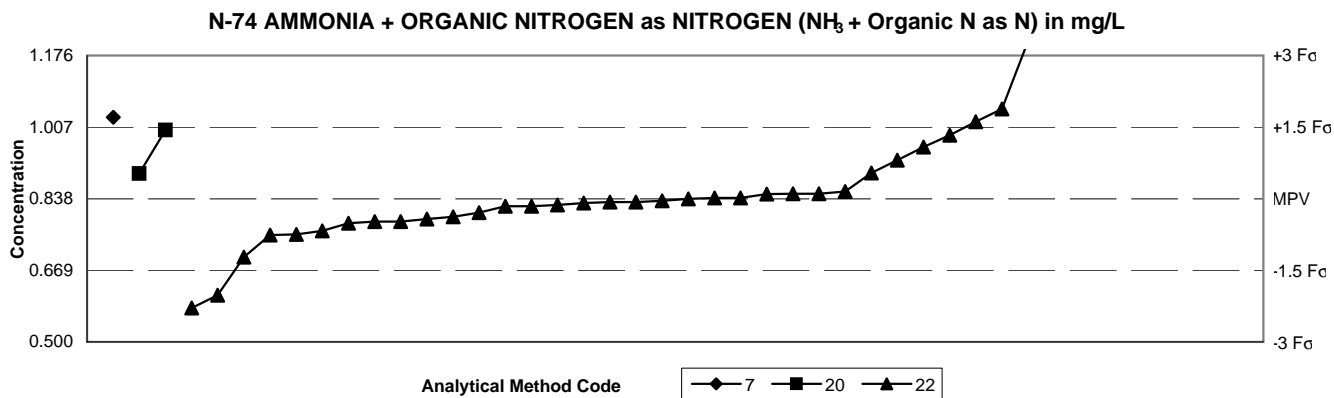
Table 14. Statistical summary of reported data for standard reference sample N-74 (nutrient constituents)



SUMMARY	Methods					Method Codes		Statistics	
	7	20	21	22	40				
n =	1	1	1	41	5	07	Ion chromatography	MPV =	0.760 mg/L
Minimum =	0.709	1	0.82	0.574	0.731	20	Titration: colorimetric	F-pseudosigma =	0.037
Maximum =				0.9	0.9	21	Titration: electrometric	Rating criterion =	0.038
Median =				0.758	0.774	22	Colorimetric	n =	49
F-pseudosigma =				0.030	0.022	40	Ion selective electrode	Uh =	0.790
								Lh =	0.740

Lab	Rating	Z-value	Method Codes					Lab	Rating	Z-value	Method Codes				
			7	20	21	22	40				7	20	21	22	40
1	3	-0.71	--	--	--	0.733	--	320	3	0.84	--	--	--	0.792	--
5	1	1.53	--	--	--	0.818	--	328	0	2.11	--	--	--	0.84	--
8	0	6.32	--	1	--	--	--	341	4	0.16	--	--	--	0.766	--
10	2	1.05	--	--	--	--	0.8	356	0	-2.11	--	--	--	0.68	--
16	3	-0.53	--	--	--	0.74	--	366	3	-0.53	--	--	--	0.74	--
23	0	-2.74	--	--	--	0.656	--	370	0	3.68	--	--	--	0.9	--
25	1	1.58	--	--	0.82	--	--	372	4	-0.05	--	--	--	0.758	--
33	4	-0.08	--	--	--	0.757	--	373	4	0.38	--	--	--	0.775	--
38	4	0.00	--	--	--	0.76	--	376	4	-0.05	--	--	--	0.758	--
45	2	-1.34	0.709	--	--	--	--								
46	4	-0.26	--	--	--	0.75	--								
59	4	-0.13	--	--	--	0.755	--								
64	3	-0.53	--	--	--	0.74	--								
70	0	-3.63	--	--	--	0.622	--								
72	0	-4.89	--	--	--	0.574	--								
80	0	3.68	--	--	--	--	0.9								
85	3	0.58	--	--	--	0.782	--								
86	1	-1.76	--	--	--	0.693	--								
89	4	-0.24	--	--	--	0.751	--								
97	3	0.84	--	--	--	0.792	--								
102	3	0.79	--	--	--	0.79	--								
105	4	0.00	--	--	--	0.76	--								
113	4	0.08	--	--	--	0.763	--								
118	4	0.45	--	--	--	0.777	--								
134	3	0.79	--	--	--	0.79	--								
138	3	-0.58	--	--	--	0.738	--								
142	2	-1.47	--	--	--	0.704	--								
146	3	0.53	--	--	--	0.78	--								
180	4	0.08	--	--	--	0.763	--								
190	1	-1.74	--	--	--	0.694	--								
193	4	-0.45	--	--	--	0.743	--								
198	1	1.68	--	--	--	0.824	--								
205	4	0.45	--	--	--	0.777	--								
212	3	-0.79	--	--	--	0.73	--								
224	1	1.95	--	--	--	0.834	--								
234	4	0.26	--	--	--	0.77	--								
247	4	-0.26	--	--	--	0.75	--								
305	4	0.37	--	--	--	0.774	--								
306	3	-0.76	--	--	--	0.731	--								
313	4	-0.37	--	--	--	0.746	--								

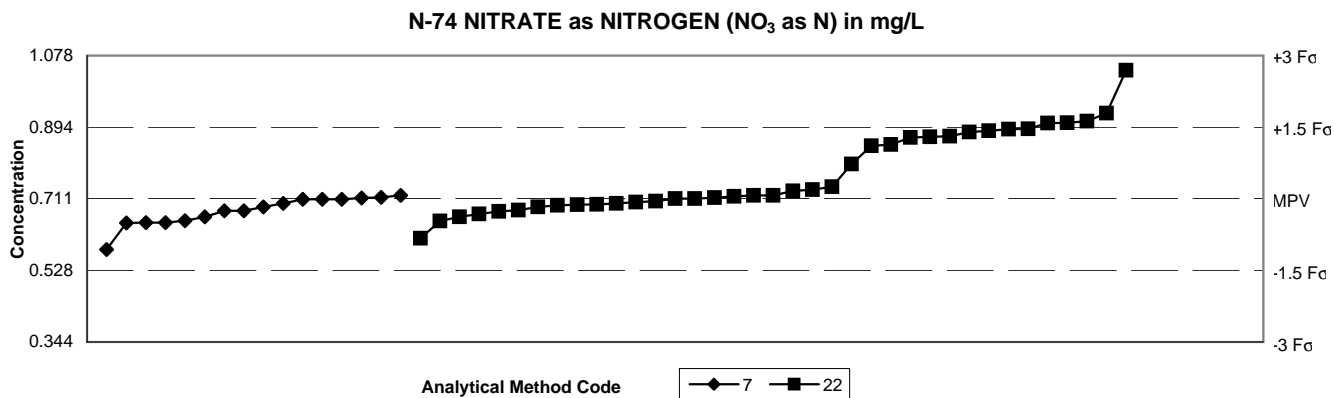
Table 14. Statistical summary of reported data for standard reference sample N-74 (nutrient constituents) -- continued



SUMMARY	Methods			Method Codes	Statistics	
	7	20	22			
n =	1	2	36	07 Ion chromatography	MPV = 0.838 mg/L	
Minimum =	1.03	0.897	0.58	20 Titration: colorimetric	F-pseudosigma = 0.113	
Maximum =		1	1.97	22 Colorimetric	n = 39	
Median =			0.832		Uh = 0.945	
F-pseudosigma =			0.094		Lh = 0.793	

Lab	Rating	Z-value	Method Codes		
			7	20	22
1	4	0.10	--	--	0.849
5	4	-0.07	--	--	0.83
8	2	1.44	--	1	--
10	4	0.02	--	--	0.84
16	2	1.08	--	--	0.96
23	1	1.88	--	--	1.05
25	1	1.70	1.03	--	--
38	4	-0.07	--	--	0.83
46	2	1.33	--	--	0.988
59	3	-0.51	--	--	0.78
70	4	0.00	--	--	0.838
72	4	-0.48	--	--	0.784
85	4	-0.16	--	--	0.82
89	3	0.52	--	0.897	--
97	4	-0.16	--	--	0.82
102	3	-0.76	--	--	0.752
105	1	1.62	--	--	1.02
113	4	0.11	--	--	0.85
134	4	-0.04	--	--	0.833
138	4	0.11	--	--	0.85
142	4	0.15	--	--	0.855
146	4	-0.48	--	--	0.784
180	4	-0.29	--	--	0.805
190	3	-0.75	--	--	0.754
193	3	0.81	--	--	0.929
212	0	-2.29	--	--	0.58
224	3	-0.67	--	--	0.762
247	4	-0.43	--	--	0.79
306	0	5.43	--	--	1.45
313	4	-0.13	--	--	0.823
320	3	0.54	--	--	0.899
328	0	6.14	--	--	1.53
341	4	0.02	--	--	0.84
356	4	-0.38	--	--	0.795
366	0	-2.02	--	--	0.61
370	2	-1.22	--	--	0.7
372	0	10.05	--	--	1.97
373	0	3.31	--	--	1.211
376	4	-0.09	--	--	0.828

Table 14. Statistical summary of reported data for standard reference sample N-74 (nutrient constituents) -- continued

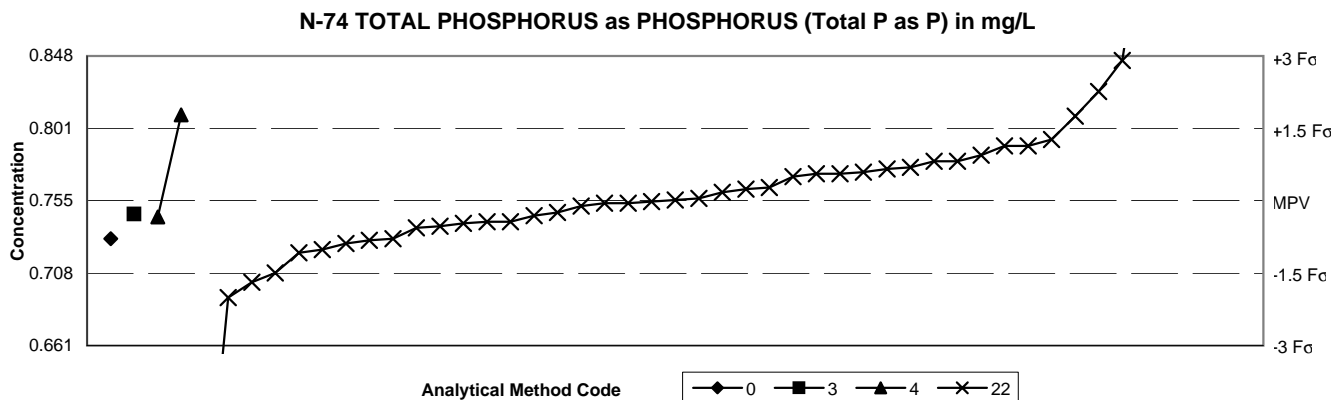


SUMMARY	Methods			Method Codes		Statistics	
	7	22	40	7	22		
n =	16	37	0	07	Ion chromatography		MPV = 0.711 mg/L
Minimum =	0.581	0.61	0	22	Colorimetric		F-pseudosigma = 0.122
Maximum =	0.72	1.04		40	Ion selective electrode		n = 53
Median =	0.685	0.720					Uh = 0.847
F-pseudosigma =	0.043	0.129					Lh = 0.682

Note: It appears that some laboratories submitted results for NO₂+NO₃; the true MPV -0.699 mg/L and Fc -0.031 mg/L.

Lab	Rating	Z-value	Method Codes			Lab	Rating	Z-value	Method Codes		
			7	22	40				7	22	40
1	4	-0.10	--	0.699	--	234	4	-0.51	0.649	--	--
5	2	1.11	--	0.847	--	247	4	-0.50	0.65	--	--
8	4	-0.25	0.68	--	--	305	4	-0.01	0.71	--	--
10	2	1.30	--	0.87	--	306	0	2.69	--	1.04	--
16	3	-0.83	--	0.61	--	313	4	-0.26	--	0.679	--
23	2	1.46	--	0.889	--	320	4	-0.11	--	0.697	--
25	4	-0.46	0.655	--	--	328	2	1.14	--	0.85	--
26	4	-0.50	0.65	--	--	341	4	-0.17	--	0.69	--
30	4	-0.25	0.68	--	--	356	4	0.02	--	0.714	--
33	4	-0.01	0.71	--	--	366	4	0.00	--	0.711	--
38	2	1.31	--	0.871	--	370	4	0.03	0.715	--	--
42	2	-1.06	0.581	--	--	372	4	-0.24	--	0.682	--
45	4	-0.38	0.665	--	--	373	4	-0.05	--	0.705	--
46	4	0.25	--	0.742	--	376	4	-0.32	--	0.672	--
59	4	-0.07	--	0.702	--						
64	2	1.46	--	0.89	--						
70	4	-0.14	--	0.694	--						
72	4	0.07	--	0.72	--						
80	3	0.73	--	0.8	--						
85	4	0.07	--	0.72	--						
86	2	1.28	--	0.868	--						
89	1	1.59	--	0.906	--						
97	4	0.05	--	0.717	--						
102	4	0.02	0.713	--	--						
105	1	1.79	--	0.93	--						
113	4	0.00	--	0.711	--						
118	1	1.59	--	0.905	--						
134	1	1.63	--	0.91	--						
138	4	-0.10	0.699	--	--						
142	2	1.42	--	0.885	--						
146	4	-0.47	--	0.654	--						
180	4	-0.38	--	0.665	--						
183	NR	--	--	--	< 1						
190	4	0.16	--	0.731	--						
193	2	1.40	--	0.882	--						
198	4	-0.12	--	0.696	--						
205	4	0.19	--	0.734	--						
208	4	-0.17	0.69	--	--						
212	4	-0.01	0.71	--	--						
224	4	0.07	0.72	--	--						

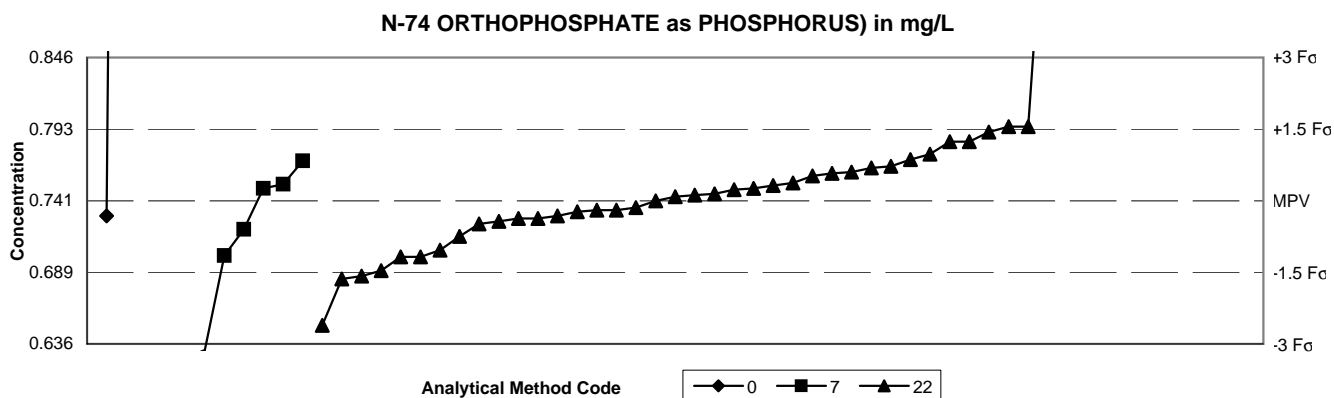
Table 14. Statistical summary of reported data for standard reference sample N-74 (nutrient constituents) -- continued



SUMMARY	Methods				Method Codes	Statistics	
	0	3	4	22			
n =	1	1	2	42	00 Other	MPV = 0.755 mg/L	
Minimum =	0.73	0.746	0.744	0.536	03 Atomic absorption: graphite furnace	F-pseudosigma = 0.031	
Maximum =			0.81	1.05	04 Inductively coupled plasma	Rating criterion = 0.038	
Median =				0.756	22 Colorimetric	n = 46	
F-pseudosigma =				0.031		Uh = 0.780	
						Lh = 0.738	

Lab	Rating	Z-value	Method Codes				Lab	Rating	Z-value	Method Codes			
			0	3	4	22				0	3	4	22
1	4	-0.04	--	--	--	0.753	356	3	0.78	--	--	--	0.784
5	0	2.40	--	--	--	0.845	366	2	-1.39	--	--	--	0.702
8	2	1.47	--	--	0.81	--	370	3	-0.65	--	--	--	0.73
10	4	0.46	--	--	--	0.772	372	0	7.83	--	--	--	1.05
16	2	1.05	--	--	--	0.794	373	4	0.20	--	--	--	0.762
23	3	-0.73	--	--	--	0.727	376	4	-0.09	--	--	--	0.751
25	3	-0.65	0.73	--	--	--							
38	4	0.04	--	--	--	0.756							
42	4	-0.28	--	--	0.744	--							
45	2	1.44	--	--	--	0.809							
46	3	0.68	--	--	--	0.78							
59	4	-0.36	--	--	--	0.741							
64	4	0.41	--	--	--	0.77							
70	0	5.02	--	--	--	0.944							
72	4	-0.04	--	--	--	0.753							
80	3	0.94	--	--	--	0.79							
85	4	-0.01	--	--	--	0.754							
86	4	-0.23	--	0.746	--	--							
89	4	-0.46	--	--	--	0.737							
97	3	0.68	--	--	--	0.78							
102	4	0.01	--	--	--	0.755							
105	3	-0.68	--	--	--	0.729							
113	4	-0.25	--	--	--	0.745							
134	3	0.54	--	--	--	0.775							
138	4	0.46	--	--	--	0.772							
142	4	-0.36	--	--	--	0.741							
146	2	-1.23	--	--	--	0.708							
180	4	-0.38	--	--	--	0.74							
183	4	-0.44	--	--	--	0.738							
190	4	-0.20	--	--	--	0.747							
193	3	-0.83	--	--	--	0.723							
198	1	-1.66	--	--	--	0.692							
224	0	-5.79	--	--	--	0.536							
234	1	1.87	--	--	--	0.825							
247	3	0.94	--	--	--	0.79							
306	3	-0.89	--	--	--	0.721							
313	4	0.23	--	--	--	0.763							
320	4	0.49	--	--	--	0.773							
328	4	0.15	--	--	--	0.76							
341	3	0.57	--	--	--	0.776							

Table 14. Statistical summary of reported data for standard reference sample N-74 (nutrient constituents) -- continued



SUMMARY	Methods			Method Codes	Statistics	
	0	7	22			
n =	2	9	38	00 Other	MPV = 0.741 mg/L	
Minimum =	0.73	0.58	0.65	07 Ion chromatography	F-pseudosigma = 0.035	
Maximum =	2.33	0.77	1	22 Colorimetric	Rating criterion = 0.037	
Median =		0.701	0.745		n = 49	
F-pseudosigma =		0.092	0.029		Uh = 0.762	
					Lh = 0.715	

Lab	Rating	Z-value	Method Codes			Lab	Rating	Z-value	Method Codes		
			0	7	22				0	7	22
1	3	0.67	--	--	0.766	320	3	-0.70	--	--	0.715
5	2	1.46	--	--	0.795	328	0	42.89	2.33	--	--
8	4	0.24	--	0.75	--	341	0	-2.46	--	--	0.65
10	3	0.54	--	--	0.761	356	4	0.35	--	--	0.754
16	4	0.00	--	--	0.741	366	4	-0.22	--	--	0.733
23	4	0.11	--	--	0.745	370	3	0.92	--	--	0.775
25	4	-0.19	--	--	0.734	372	4	0.24	--	--	0.75
26	4	-0.30	0.73	--	--	373	4	-0.40	--	--	0.726
30	3	-0.57	--	0.72	--	376	2	1.35	--	--	0.791
33	0	-3.81	--	0.6	--						
38	4	0.22	--	--	0.749						
42	0	-2.94	--	0.632	--						
45	2	-1.08	--	0.701	--						
46	4	-0.35	--	--	0.728						
59	2	-1.11	--	--	0.7						
64	4	-0.30	--	--	0.73						
70	4	0.08	--	--	0.744						
72	4	-0.13	--	--	0.736						
85	4	0.30	--	--	0.752						
89	3	0.65	--	--	0.765						
97	2	1.16	--	--	0.784						
102	2	-1.11	--	--	0.7						
105	1	-1.54	--	--	0.684						
113	4	-0.46	--	--	0.724						
118	4	0.13	--	--	0.746						
134	3	0.57	--	--	0.762						
138	3	0.81	--	--	0.771						
142	2	1.46	--	--	0.795						
146	4	-0.35	--	--	0.728						
180	2	1.16	--	--	0.784						
183	2	-1.48	--	--	0.686						
190	4	-0.19	--	--	0.734						
198	2	-1.38	--	--	0.69						
208	0	-4.35	--	0.58	--						
212	0	6.99	--	--	1						
224	4	0.32	--	0.753	--						
234	0	-3.10	--	0.626	--						
247	3	0.78	--	0.77	--						
305	3	-0.97	--	--	0.705						
313	4	0.49	--	--	0.759						

Table 15. Statistical summary of reported data for standard reference sample P-38 (low ionic strength constituents)

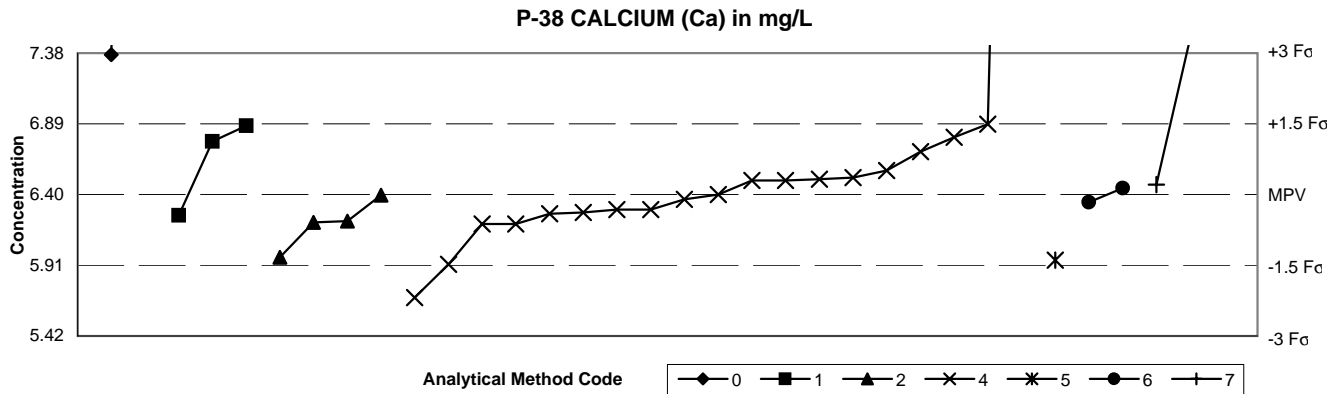
P-38 ACIDITY (as CaCO₃) in mg/L

SUMMARY	Methods		Statistics
	20	21	
n =	1	7	inadequate data (Fc > MPV)
Minimum =	4.5	2.8	
Maximum =		20	
Median =		6.80	
F-pseudosigma =		8.98	

Method Codes

Lab	Rating	Z-value	20	21
25	NR	0.88	--	14
38	NR	-0.32	--	2.96
89	NR	-0.34	--	2.8
105	NR	0.10	--	6.8
247	NR	-0.10	--	5
328	NR	-0.15	4.5	--
370	NR	1.54	--	20
372	NR	1.34	--	18.2

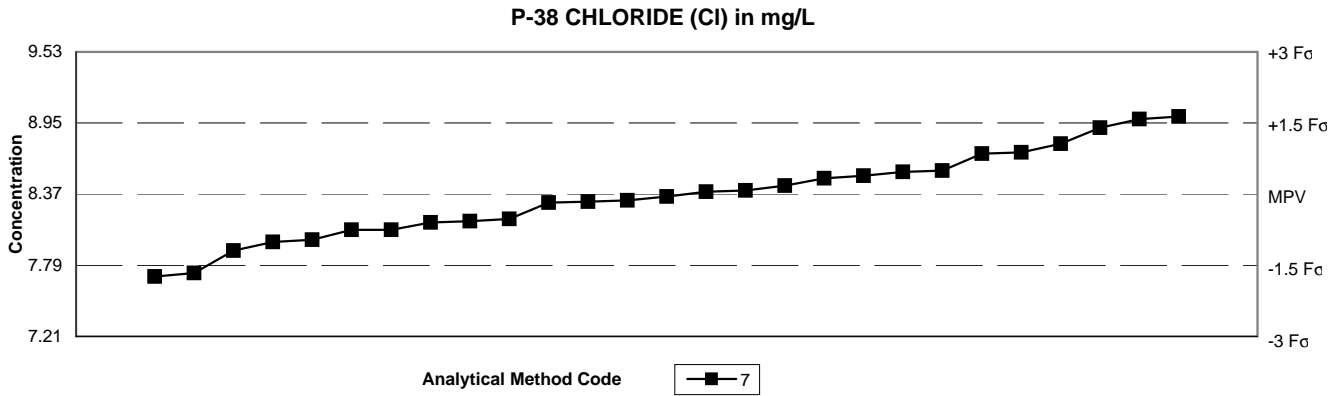
Table 15. Statistical summary of reported data for standard reference sample P-38 (low ionic strength constituents)
 -- continued



SUMMARY	Methods							Method Codes	Statistics	
	0	1	2	4	5	6	7			
n =	2	3	4	19	1	2	2	00 Other	MPV = 6.40 mg/L	
Minimum =	7.37	6.26	5.97	5.69	5.95	6.35	6.472	01 Atomic absorption: direct, air	F-pseudosigma = 0.33	
Maximum =	16.12	6.88	6.4	15.7		6.447	7.48	02 Atomic absorption: direct, nitrous oxide	n = 33	
Median =				6.40				04 Inductively coupled plasma	Uh = 6.70	
F-pseudosigma =				0.20				05 Direct current plasma	Lh = 6.26	
								06 Inductively coupled plasma/mass spectrometry		
								07 Ion chromatography		

Lab	Rating	Z-value	Method Codes						
			0	1	2	4	5	6	7
1	3	-0.62	--	--	--	6.2	--	--	--
2	4	0.21	--	--	--	--	--	--	6.472
5	0	28.50	--	--	--	15.7	--	--	--
8	2	1.22	--	--	--	6.8	--	--	--
23	3	-0.56	--	--	6.22	--	--	--	--
25	2	-1.48	--	--	--	5.92	--	--	--
33	2	-1.39	--	--	--	--	5.95	--	--
38	4	-0.01	--	--	6.4	--	--	--	--
45	4	-0.16	--	--	--	--	--	6.35	--
59	0	3.30	--	--	--	--	--	--	7.48
64	4	0.33	--	--	--	6.51	--	--	--
85	2	1.12	--	6.77	--	--	--	--	--
86	4	-0.41	--	--	--	6.27	--	--	--
89	2	1.46	--	6.88	--	--	--	--	--
105	3	0.51	--	--	--	6.57	--	--	--
110	4	0.00	--	--	--	6.403	--	--	--
113	4	-0.38	--	--	--	6.28	--	--	--
134	4	0.30	--	--	--	6.5	--	--	--
138	4	-0.32	--	--	--	6.3	--	--	--
180	4	-0.10	--	--	--	6.37	--	--	--
190	3	-0.59	--	--	6.21	--	--	--	--
193	2	-1.33	--	--	5.97	--	--	--	--
245	4	0.13	--	--	--	--	--	6.447	--
247	0	-2.19	--	--	--	5.69	--	--	--
265	4	0.30	--	--	--	6.5	--	--	--
279	0	2.96	7.37	--	--	--	--	--	--
315	4	-0.32	--	--	--	6.3	--	--	--
321	4	-0.44	--	6.26	--	--	--	--	--
328	3	0.91	--	--	--	6.7	--	--	--
333	4	0.36	--	--	--	6.52	--	--	--
336	0	29.79	16.12	--	--	--	--	--	--
370	2	1.49	--	--	--	6.89	--	--	--
372	3	-0.62	--	--	--	6.2	--	--	--

Table 15. Statistical summary of reported data for standard reference sample P-38 (low ionic strength constituents)
 -- continued



SUMMARY	Methods		Method Codes	Statistics	
	0	7			
n =	1	27	00 Other	MPV = 8.37 mg/L	
Minimum =	29.82	7.7	07 Ion chromatography	F-pseudosigma = 0.39	
Maximum =		9		Rating criterion = 0.42	
Median =		8.35		n = 28	
F-pseudosigma =		0.33		Uh = 8.63	
				Lh = 8.11	

Method Codes					
Lab	Rating	Z-value	0	7	
1	2	-1.10	--	7.91	
5	4	0.05	--	8.39	
8	4	-0.05	--	8.35	
23	3	0.79	--	8.7	
25	4	0.07	--	8.4	
33	4	0.43	--	8.55	
45	3	-0.53	--	8.15	
59	1	-1.53	--	7.73	
64	3	0.98	--	8.78	
85	4	0.31	--	8.5	
86	2	1.46	--	8.98	
89	4	0.45	--	8.56	
105	3	-0.88	--	8	
110	4	-0.48	--	8.168	
113	4	-0.12	--	8.32	
134	3	-0.69	--	8.08	
138	2	1.29	--	8.91	
180	3	-0.69	--	8.08	
190	4	0.36	--	8.52	
208	4	-0.14	--	8.31	
247	3	-0.93	--	7.98	
265	1	-1.60	--	7.7	
315	4	-0.17	--	8.3	
321	4	0.17	--	8.44	
328	2	1.51	--	9	
336	0	51.25	29.82	--	
370	3	0.81	--	8.71	
372	3	-0.55	--	8.14	

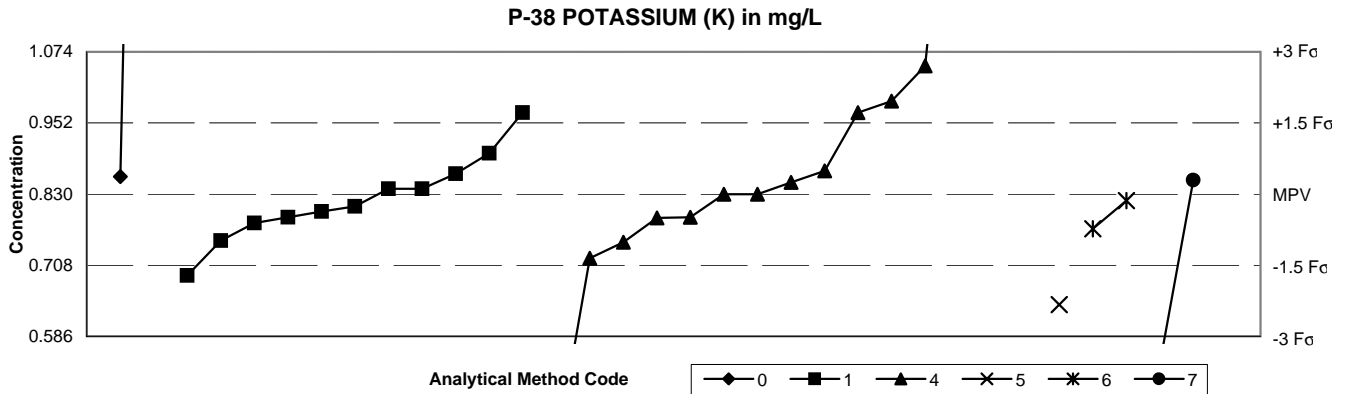
Table 15. Statistical summary of reported data for standard reference sample P-38 (low ionic strength constituents)
 -- continued

P-38 Fluoride (F) in mg/L

SUMMARY	Methods				Method Codes	Statistics
	0	7	22	40		
n =	1	9	1	4	00 Other	inadequate data (F _c > MPV)
Minimum =	0.93	0.012	0.026	0.01	07 Ion chromatography	
Maximum =		0.22		0.28	22 Colorimetric	
Median =		0.040			40 Ion selective electrode	
F-pseudosigma =		0.030				

Lab	Rating	Z-value	Method Codes			
			0	7	22	40
1	NR	-0.26	--	--	0.026	--
2	NR	0.00	--	0.037	--	--
8	NR	--	--	<0.3	--	--
23	NR	--	--	<0.15	--	--
25	NR	0.07	--	0.04	--	--
33	NR	-0.36	--	0.022	--	--
45	NR	0.31	--	0.05	--	--
59	NR	5.75	--	--	--	0.28
85	NR	-0.17	--	--	--	0.03
86	NR	4.33	--	0.22	--	--
89	NR	--	--	--	<0.1	--
105	NR	--	--	<0.20	--	--
134	NR	--	--	--	--	<0.1
138	NR	--	--	--	--	<0.050
180	NR	-0.59	--	0.012	--	--
190	NR	-0.64	--	--	--	0.01
247	NR	-0.40	--	0.02	--	--
328	NR	-0.26	--	--	--	0.026
336	NR	21.13	0.93	--	--	--
370	NR	0.59	--	0.062	--	--
372	NR	1.49	--	0.1	--	--

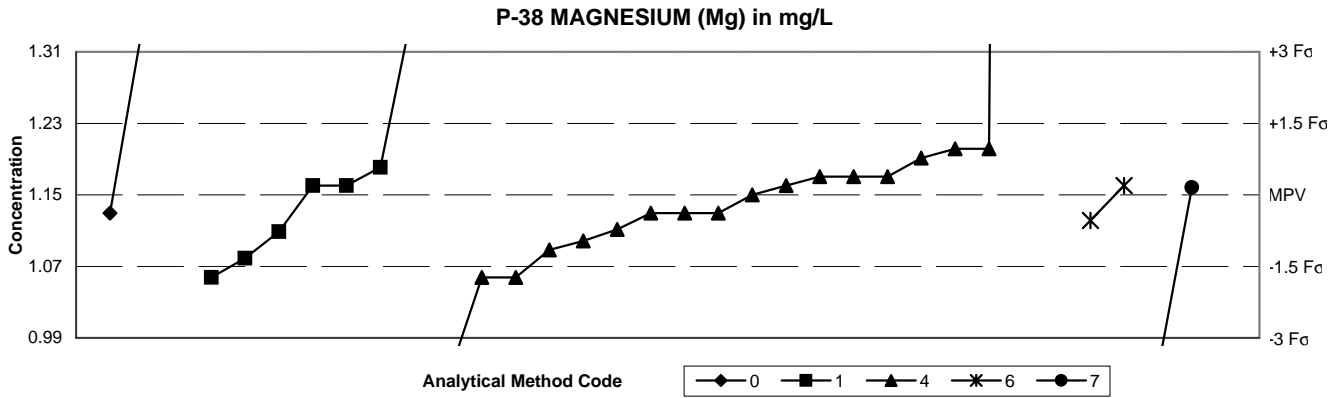
Table 15. Statistical summary of reported data for standard reference sample P-38 (low ionic strength constituents)
 -- continued



SUMMARY	Methods						Statistics	
	0	1	4	5	6	7	Method Codes	
n =	2	11	14	1	2	2	00 Other	MPV = 0.830 mg/L
Minimum =	0.86	0.69	0.39	0.64	0.77	0.54	01 Atomic absorption: direct, air	F-pseudsigma = 0.081
Maximum =	3.419	0.97	3.38		0.819	0.854	04 Inductively coupled plasma	n = 32
Median =		0.809	0.840				05 Direct current plasma	Uh = 0.885
F-pseudsigma =		0.050	0.149				06 Inductively coupled plasma/mass spectrometry	Lh = 0.775
							07 Ion chromatography	

Lab	Rating	Z-value	Method Codes						
			0	1	4	5	6	7	
1	4	-0.49	--	0.79	--	--	--	--	--
2	4	0.29	--	--	--	--	--	0.854	--
5	0	31.30	--	--	3.38	--	--	--	--
8	4	0.25	--	--	0.85	--	--	--	--
23	1	1.72	--	0.97	--	--	--	--	--
25	1	1.96	--	--	0.99	--	--	--	--
33	0	-2.33	--	--	--	0.64	--	--	--
38	4	-0.37	--	0.8	--	--	--	--	--
45	4	-0.14	--	--	--	--	0.819	--	--
59	0	-3.56	--	--	--	--	--	0.54	--
64	1	-1.72	--	0.69	--	--	--	--	--
85	3	0.86	--	0.9	--	--	--	--	--
86	4	0.00	--	--	0.83	--	--	--	--
89	4	0.43	--	0.865	--	--	--	--	--
105	NR	--	--	--	<1.00	--	--	--	--
110	4	0.11	--	0.839	--	--	--	--	--
113	4	-0.50	--	--	0.789	--	--	--	--
134	4	-0.26	--	0.809	--	--	--	--	--
138	4	-0.49	--	--	0.79	--	--	--	--
180	2	-1.02	--	--	0.747	--	--	--	--
190	3	-0.61	--	0.78	--	--	--	--	--
193	4	0.11	--	0.839	--	--	--	--	--
245	3	-0.73	--	--	--	--	0.77	--	--
247	2	-1.35	--	--	0.72	--	--	--	--
265	4	0.00	--	--	0.83	--	--	--	--
279	4	0.37	0.86	--	--	--	--	--	--
315	1	1.72	--	--	0.97	--	--	--	--
321	3	-0.98	--	0.75	--	--	--	--	--
328	0	9.82	--	--	1.63	--	--	--	--
333	4	0.49	--	--	0.87	--	--	--	--
336	0	31.78	3.419	--	--	--	--	--	--
370	0	2.70	--	--	1.05	--	--	--	--
372	0	-5.40	--	--	0.39	--	--	--	--

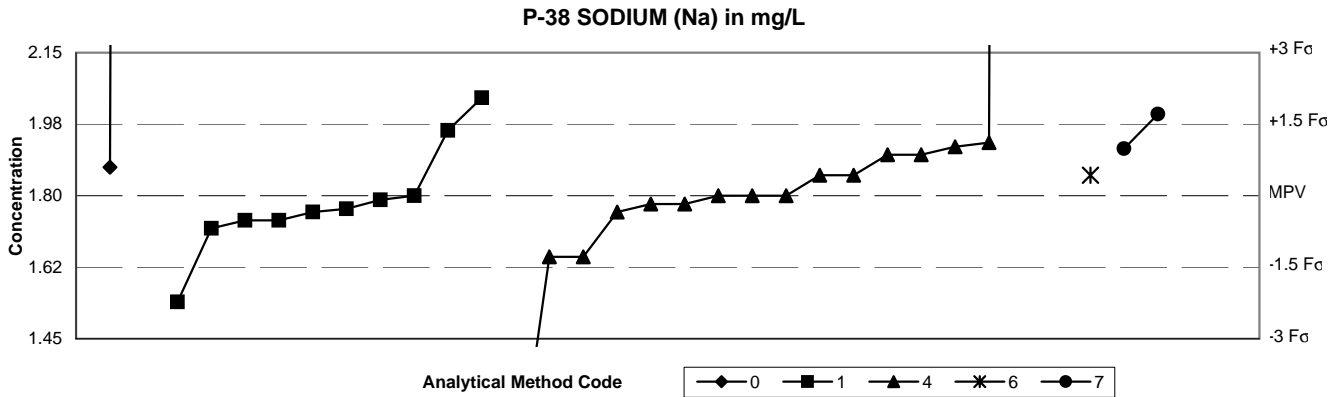
Table 15. Statistical summary of reported data for standard reference sample P-38 (low ionic strength constituents)
 -- continued



SUMMARY	Methods							Statistics	
	0	1	4	5	6	7	Method Codes		
n =	3	7	18	1	2	2	00 Other	MPV =	1.15 mg/L
Minimum =	1.13	1.06	0.95	0.795	1.122	0.96	01 Atomic absorption: direct, air	F-pseudostigma =	0.05
Maximum =	4.34	1.36	5.67		1.16	1.158	04 Inductively coupled plasma	Rating criterion =	0.06
Median =		1.16	1.14				05 Direct current plasma	n =	33
F-pseudostigma =		0.06	0.05				06 Inductively coupled plasma/mass spectrometry	Uh =	1.17
							07 Ion chromatography	Lh =	1.10

Lab	Rating	Z-value	Method Codes						
			0	1	4	5	6	7	
1	4	0.35	--	--	1.17	--	--	--	
2	4	0.14	--	--	--	--	--	1.158	
5	0	78.61	--	--	5.67	--	--	--	
8	3	0.87	--	--	1.2	--	--	--	
23	3	-0.70	--	1.11	--	--	--	--	
25	2	-1.04	--	--	1.09	--	--	--	
33	0	-6.17	--	--	--	0.795	--	--	
38	2	-1.20	--	1.081	--	--	--	--	
45	4	0.17	--	--	--	--	1.16	--	
59	0	-3.30	--	--	--	--	--	0.96	
64	4	-0.35	--	--	1.13	--	--	--	
85	3	0.52	--	1.18	--	--	--	--	
86	4	0.35	--	--	1.17	--	--	--	
89	0	3.65	--	1.36	--	--	--	--	
105	3	0.70	--	--	1.19	--	--	--	
110	3	-0.65	--	--	1.112	--	--	--	
113	3	-0.87	--	--	1.1	--	--	--	
134	4	-0.35	--	--	1.13	--	--	--	
138	4	0.17	--	--	1.16	--	--	--	
180	4	-0.35	--	--	1.13	--	--	--	
190	4	0.17	--	1.16	--	--	--	--	
193	4	0.17	--	1.16	--	--	--	--	
245	4	-0.49	--	--	--	--	1.122	--	
247	0	-3.48	--	--	0.95	--	--	--	
265	4	0.00	--	--	1.15	--	--	--	
279	0	3.30	1.34	--	--	--	--	--	
315	3	0.87	--	--	1.2	--	--	--	
321	1	-1.57	--	1.06	--	--	--	--	
328	4	-0.35	1.13	--	--	--	--	--	
333	4	0.35	--	--	1.17	--	--	--	
336	0	55.48	4.34	--	--	--	--	--	
370	1	-1.57	--	--	1.06	--	--	--	
372	1	-1.57	--	--	1.06	--	--	--	

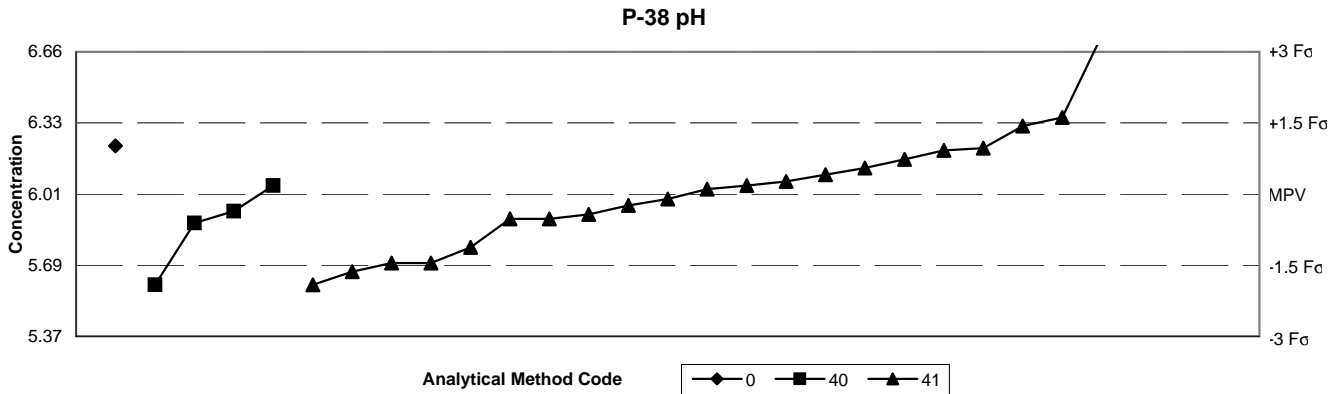
Table 15. Statistical summary of reported data for standard reference sample P-38 (low ionic strength constituents)
 -- continued



SUMMARY	Methods							Statistics	
	0	1	4	5	6	7	Method Codes		
n =	2	10	16	1	1	2	00 Other	MPV = 1.80 mg/L	
Minimum =	1.87	1.54	1.07	0.676	1.85	1.915	01 Atomic absorption: direct, air	F-pseudosigma = 0.12	
Maximum =	25.5	2.04	24			2	04 Inductively coupled plasma	n = 32	
Median =	1.76	1.80					05 Direct current plasma	Uh = 1.91	
F-pseudosigma =		0.04	0.10				06 Inductively coupled plasma/mass spectrometry	Lh = 1.75	
							07 Ion chromatography		

Lab	Rating	Z-value	Method Codes						
			0	1	4	5	6	7	
1	4	-0.17	--	--	1.78	--	--	--	
2	3	0.98	--	--	--	--	--	1.915	
5	0	190.14	--	--	24	--	--	--	
8	3	0.86	--	--	1.9	--	--	--	
23	4	-0.34	--	1.76	--	--	--	--	
25	2	-1.28	--	--	1.65	--	--	--	
33	0	-9.63	--	--	0.676	--	--	--	
38	3	-0.51	--	1.74	--	--	--	--	
45	4	0.43	--	--	--	1.85	--	--	
59	1	1.71	--	--	--	--	--	2	
64	3	-0.51	--	1.74	--	--	--	--	
85	2	1.37	--	1.96	--	--	--	--	
86	4	0.43	--	--	1.85	--	--	--	
89	0	2.06	--	2.04	--	--	--	--	
105	2	1.11	--	--	1.93	--	--	--	
110	4	-0.27	--	1.768	--	--	--	--	
113	4	-0.34	--	--	1.76	--	--	--	
134	3	-0.69	--	1.72	--	--	--	--	
138	4	0.00	--	--	1.8	--	--	--	
180	4	-0.17	--	--	1.78	--	--	--	
190	4	-0.09	--	1.79	--	--	--	--	
193	4	0.00	--	1.8	--	--	--	--	
247	2	-1.28	--	--	1.65	--	--	--	
265	4	0.43	--	--	1.85	--	--	--	
279	3	0.60	1.87	--	--	--	--	--	
315	4	0.00	--	--	1.8	--	--	--	
321	0	-2.23	--	1.54	--	--	--	--	
328	4	0.00	--	--	1.8	--	--	--	
333	3	0.86	--	--	1.9	--	--	--	
336	0	202.99	25.5	--	--	--	--	--	
370	2	1.03	--	--	1.92	--	--	--	
372	0	-6.25	--	--	1.07	--	--	--	

Table 15. Statistical summary of reported data for standard reference sample P-38 (low ionic strength constituents)
 -- continued



SUMMARY	Methods			Method Codes	Statistics	
	0	40	41			
n =	1	4	21	00 Other	MPV = 6.01	
Minimum =	6.23	5.6	5.6	40 Ion selective electrode	F-pseudosigma = 0.21	
Maximum =		6.05	6.73	41 Electrometric	Rating criterion = 0.30	
Median =			6.03		n = 26	
F-pseudosigma =			0.20		Uh = 6.17	
					Lh = 5.88	

Lab	Rating	Z-value	Method Codes		
			0	40	41
2	4	0.07	--	--	6.034
5	2	-1.17	--	--	5.66
8	0	2.39	--	--	6.73
23	2	1.02	--	--	6.32
25	3	0.53	--	--	6.17
33	3	0.66	--	--	6.21
38	4	0.29	--	--	6.1
45	4	-0.17	--	--	5.96
59	4	-0.07	--	--	5.99
64	4	0.19	--	--	6.07
85	4	0.39	--	--	6.13
86	4	-0.37	--	--	5.9
89	2	-1.04	--	--	5.7
105	4	-0.37	--	--	5.9
110	4	-0.26	--	5.935	--
134	4	-0.44	--	5.88	--
138	4	0.13	--	--	6.05
180	4	0.13	--	6.05	--
190	2	-1.37	--	--	5.6
247	3	0.69	--	--	6.22
321	2	-1.04	--	--	5.7
328	2	-1.37	--	5.6	--
333	4	-0.31	--	--	5.92
336	3	0.73	6.23	--	--
370	3	-0.81	--	--	5.77
372	2	1.16	--	--	6.36

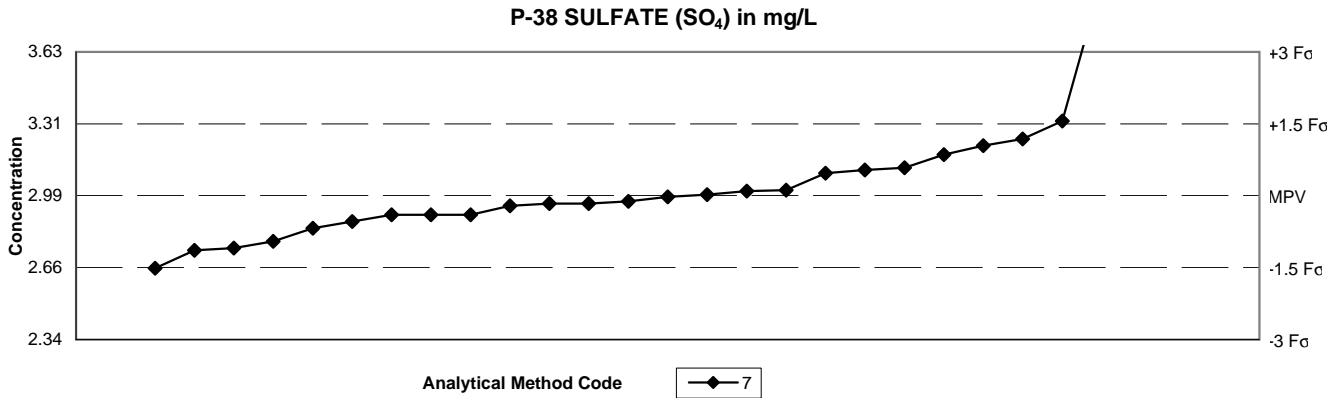
Table 15. Statistical summary of reported data for standard reference sample P-38 (low ionic strength constituents)
 -- continued

P-38 ORTHOPHOSPHATE as ORTHOPHOSPHORUS (PO4 as P) in mg/L

SUMMARY	Methods			Method Codes	Statistics
	7	20	22		
n =	1	0	4	07 Ion chromatography	inadequate data (n < 7)
Minimum =	0.139	0	0.001	20 Titration: colorimetric	
Maximum =			0.037	22 Colorimetric	
Median =					
F-pseudosigma =					

Lab	Rating	Z-value	Method Codes		
			7	20	22
8	NR	--	<0.2	--	--
23	NR	-1.45	--	--	0.001
25	NR	0.00	--	--	0.03
33	NR	5.45	0.139	--	--
45	NR	--	<0.1	--	--
64	NR	--	--	--	<0.002
85	NR	--	--	--	<0.001
89	NR	--	--	<0.003	--
105	NR	-1.00	--	--	0.01
113	NR	--	--	--	<0.004
134	NR	--	--	--	<0.01
138	NR	--	--	--	<0.004
180	NR	--	--	--	<0.005
247	NR	--	<0.01	--	--
321	NR	--	--	--	<0.001
328	NR	0.35	--	--	0.037
370	NR	--	--	--	<0.02
372	NR	--	--	--	<0.01

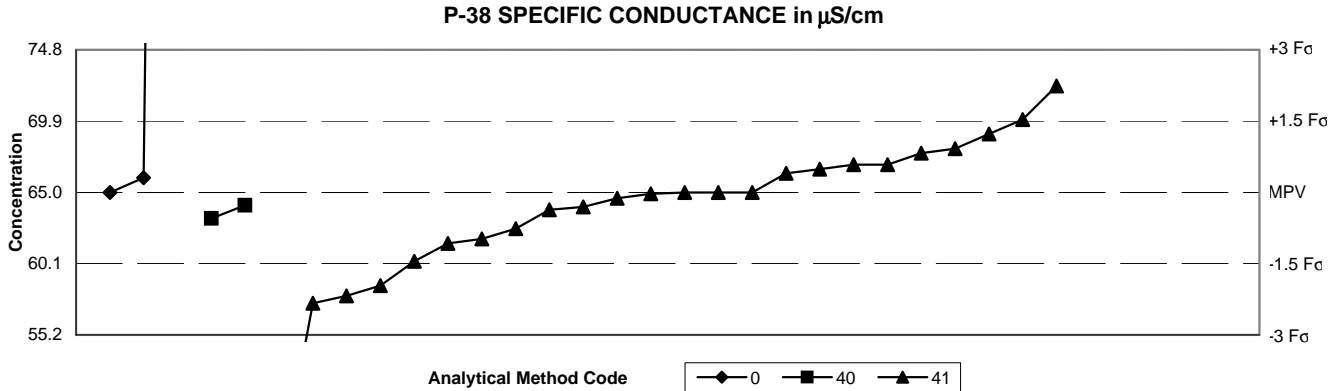
Table 15. Statistical summary of reported data for standard reference sample P-38 (low ionic strength constituents)
 -- continued



SUMMARY	Methods		Statistics
	0	7	
n =	1	27	MPV = 2.99 mg/L
Minimum =	10.86	2.66	F-pseudosigma = 0.21
Maximum =		4.44	n = 28
Median =		2.98	Uh = 3.19
F-pseudosigma =		0.18	Lh = 2.90
	Method Codes		
		00 Other	
		07 Ion chromatography	

Lab	Rating	Z-value	Method Codes	
			0	7
1	2	-1.09	--	2.75
2	4	0.47	--	3.086
5	3	-0.53	--	2.87
8	2	1.05	--	3.21
23	NR	--	--	<5.0
25	NR	--	--	<5.0
33	2	1.19	--	3.24
45	4	-0.02	--	2.98
59	3	-0.95	--	2.78
64	3	0.58	--	3.11
85	4	-0.40	--	2.9
86	0	5.98	--	4.27
89	4	-0.16	--	2.95
105	4	0.12	--	3.01
110	4	0.10	--	3.006
113	4	-0.40	--	2.9
134	4	0.02	--	2.99
138	4	-0.21	--	2.94
180	2	-1.14	--	2.74
190	4	-0.16	--	2.95
193	4	-0.12	--	2.96
208	NR	--	--	<3
247	3	-0.67	--	2.84
265	4	-0.40	--	2.9
315	3	0.53	--	3.1
321	1	-1.51	--	2.66
328	0	6.77	--	4.44
333	3	0.86	--	3.17
336	0	36.63	10.86	--
370	1	1.56	--	3.32
372	0	4.49	--	3.95

Table 15. Statistical summary of reported data for standard reference sample P-38 (low ionic strength constituents)
 -- continued



SUMMARY	Methods			Method Codes	Statistics	
	0	40	41			
n =	3	2	24	00 Other	MPV = 65.0 $\mu\text{S}/\text{cm}$	
Minimum =	65	63.2	45	40 Ion selective electrode	F-pseudostandard = 3.3	
Maximum =	244.6	64.1	72.3	41 Electrometric	n = 29	
Median =		65.0			U _h = 66.9	
F-pseudostandard =		3.9			L _h = 62.5	

Lab	Rating	Z-value	Method Codes		
			0	40	41
1	3	0.58	--	--	66.9
2	2	-1.45	--	--	60.27
5	1	-1.96	--	--	58.6
8	0	-2.33	--	--	57.4
23	3	0.83	--	--	67.7
25	4	-0.31	--	--	64
33	0	2.24	--	--	72.3
38	4	-0.37	--	--	63.8
45	1	1.53	--	--	70
59	2	1.23	--	--	69
64	3	-0.77	--	--	62.5
85	4	0.31	66	--	--
86	3	0.58	--	--	66.9
89	4	-0.12	--	--	64.6
105	4	0.49	--	--	66.6
110	2	-1.07	--	--	61.5
113	4	0.40	--	--	66.3
134	4	-0.28	--	64.1	--
138	4	-0.03	--	--	64.9
180	0	-6.13	--	--	45
190	3	-0.55	--	63.2	--
193	4	0.00	--	--	65
247	4	0.00	--	--	65
321	0	-2.18	--	--	57.9
328	4	0.00	65	--	--
333	3	-0.98	--	--	61.8
336	0	55.06	244.6	--	--
370	3	0.92	--	--	68
372	4	0.00	--	--	65

Table 16. Statistical summary of reported data for standard reference sample HG-34 (mercury)

Hg-34 MERCURY (Hg) in µg/L

SUMMARY	Methods			Statistics
	6	8	9	
n =	2	5	7	inadequate data (Fc > MPV)
Minimum =	0.032	0.011	0.011	
Maximum =	0.15	1.63	0.034	
Median =		0.100	0.027	
F-pseudosigma =		0.819	0.002	
			Method Codes	
			06 Inductively coupled plasma/mass spectrometry	
			08 Atomic absorption: cold vapor	
			09 Atomic fluorescence	

Lab	Rating	Z-value	Method Codes		
			6	8	9
1	NR	-0.03	--	--	0.027
5	NR	28.78	--	1.63	--
8	NR	2.19	0.15	--	--
23	NR	1.29	--	0.1	--
26	NR	--	--	<0.2	--
32	NR	--	<0.05	--	--
45	NR	0.07	0.032	--	--
46	NR	-0.31	--	--	0.011
59	NR	-0.05	--	--	0.025
89	NR	--	--	<0.2	--
97	NR	--	--	<0.1	--
105	NR	19.79	--	1.13	--
134	NR	--	--	<0.1	--
138	NR	0.00	--	--	0.028
147	NR	0.10	--	--	0.034
180	NR	--	--	<0.050	--
193	NR	-0.06	--	0.025	--
245	NR	-0.06	--	--	0.025
247	NR	--	--	<0.20	--
304	NR	0.00	--	--	0.028
356	NR	-0.31	--	0.011	--
370	NR	--	--	<100	--
372	NR	--	--	0.0002	--

Table 17. Most probable values for constituents and properties in standard reference samples distributed in March 2002

[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; () rating criterion]

T-169

Analyte =	Silver	Aluminum	Arsenic	Boron	Barium
MPV =	3.90 µg/L	33.6 µg/L	8.63 µg/L	24.5 µg/L	43.1 µg/L
F-pseudostigma =	0.24	4.5	0.67	1.8	1.5 (2.2)
n =	39	39	49	21	44
Analyte =	Beryllium	Calcium	Cadmium	Cobalt	Chromium
MPV =	9.61 µg/L	37.6 mg/L	3.40 µg/L	1.91 µg/L	8.17 µg/L
F-pseudostigma =	0.56	0.9 (1.88)	0.21	0.17	0.39 (0.41)
n =	42	51	49	30	43
Analyte =	Copper	Iron	Potassium	Lithium	Magnesium
MPV =	14.3 µg/L	11.1 µg/L	2.59 mg/L	9.60 µg/L	4.30 mg/L
F-pseudostigma =	0.8	3.6	0.11 (0.13)	0.61	0.13 (0.22)
n =	48	30	46	18	51
Analyte =	Manganese	Molybdenum	Sodium	Nickel	Lead
MPV =	27.0 µg/L	70.6 µg/L	10.6 mg/L	10.3 µg/L	11.4 µg/L
F-pseudostigma =	0.9 (1.4)	1.7 (3.5)	0.3 (0.5)	0.7	0.7
n =	48	39	49	41	51
Analyte =	Antimony	Selenium	Silica	Strontium	Thallium
MPV =	3.33 µg/L	2.94 µg/L	6.04 mg/L	174 µg/L	4.80 µg/L
F-pseudostigma =	0.44	0.37	0.23 (0.30)	6 (9)	0.51
n =	31	33	28	34	33
Analyte =	Uranium	Vanadium	Zinc		
MPV =	1.71 µg/L	7.42 µg/L	19.2 µg/L		
F-pseudostigma =	0.11	0.38	1.1		
n =	14	33	44		

M-162

Analyte =	Alkalinity	Boron	Calcium	Chloride	Fluoride
MPV =	11.0 mg/L	57.3 µg/L	15.8 mg/L	26.5 mg/L	1.05 mg/L
F-pseudostigma =	1.7	6.2	0.5 (0.8)	1.0 (1.3)	0.09
n =	53	24	62	61	49
Analyte =	Potassium	Magnesium	Sodium	pH	Residue on Evaporation
MPV =	3.20 mg/L	5.80 mg/L	24.0 mg/L	6.60	188 mg/L
F-pseudostigma =	0.17	0.23 (0.29)	0.8 (1.2)	0.21 (0.33)	17
n =	55	60	55	52	38
Analyte =	Silica	Sulfate	Specific Conductance	Strontium	Total Phosphorus as P
MPV =	13.9 mg/L	13.4 mg/L	284 µS/cm	93.8 µg/L	0.510 mg/L
F-pseudostigma =	0.6 (0.7)	0.9	6 (14)	3.2 (4.7)	0.024 (0.026)
n =	38	59	55	31	38
Analyte =	Vanadium				
MPV =	9.74 µg/L				
F-pseudostigma =	1.04				
n =	26				

Table 17. Most probable values for constituents and properties in standard reference samples distributed in March 2002 -- continued

[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; () rating criterion]

N-73	Analyte =	Ammonia as N	Ammonia + Organic N as N	Nitrate as N	Total Phosphorus as P	Orthophosphate as P
	MPV =	0.127 mg/L	0.140 mg/L	0.126 mg/L	0.132 mg/L	0.128 mg/L
	F-pseudosigma =	0.010	0.022	0.007	0.009	0.004 (0.006)
	n =	53	36	54	51	51

N-74	Analyte =	Ammonia as N	Ammonia + Organic N as N	Nitrate as N	Total Phosphorus as P	Orthophosphate as P
	MPV =	0.760 mg/L	0.838 mg/L	0.711 mg/L	0.755 mg/L	0.741 mg/L
	F-pseudosigma =	0.037 (0.038)	0.113	0.122	0.031 (0.038)	0.035 (0.037)
	n =	49	39	53	46	49

P-38	Analyte =	Acidity	Calcium	Chloride	Fluoride	Potassium
	MPV =	inadequate data	6.40 mg/L	8.37 mg/L	inadequate data	0.830 mg/L
	F-pseudosigma =		0.33	0.39 (0.42)		0.081
	n =		33	28		32

	Analyte =	Magnesium	Sodium	pH	Orthophosphate as P	Sulfate
	MPV =	1.15 mg/L	1.80 mg/L	6.01	inadequate data	2.99 mg/L
	F-pseudosigma =	0.05 (0.06)	0.12	0.21 (0.30)		0.21
	n =	33	32	26		28

	Analyte =	Specific Conductance
	MPV =	65.0 µS/cm
	F-pseudosigma =	3.3
	n =	29

HG-34	Analyte =	Mercury
	MPV =	inadequate data
	F-pseudosigma =	
	n =	