1993 compilation of analytical data for major elements in seventeen GSJ geochemical reference samples, "Igneous rock series"

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Abstract: Analytical data for major elements received by September 1993, have been compiled on seventeen GSJ(Geological Survey of Japan) geochemical reference samples, "Igneous rock series". All the reported data including personal communication were evaluated and tabulated. No significant difference has been observed between the values obtained by the different analytical methods for most reference samples. Based on the selected available data, 1993 recommended or preferable values for fourteen major elements were proposed.

1. Introduction

The Geological Survey of Japan(GSJ) has issued 17 Geochemical reference samples, "Igneous rock series", which have been analyzed for major and minor elements, isotopic compositions and radiometric ages by many research laboratories worldwide. This project was started in 1967 and completed in 1986, and recent compilations of the analytical data for major elements on the 17 samples have been published by Ando et al.(1987; 1989a, b) and Govindaraju (1989). Among these compilations, however, concentration of some elements were remained uncertain, being due to the insufficient accumulation of analytical data, especially for the samples recently issued. In addition, the individual data reported were not shown except for K₂O (Ando et al., 1989b).

In this paper, we evaluate all analytical results received by September 1993 for major ele-

ments(Table A-1 to A-17), and a new set of 1993 recommended or preferable values is proposed for the 17 reference samples(Table 1). All raw data are given with references.

2. Note on the samples

The 17 GSJ geochemical reference samples, "Igneous rock series" include three andesites (JA-1, JA-2 and JA-3); four basalts(JB-1, JB-la, JB-2 and JB-3); two feldspars(JF-1 and JF-2); four granitic rocks(JG-1, JG-1a, JG-2 and JG-3); one gabbro(JGb-1); one peridotite(JP-1); and two rhyolites(JR-1 and JR-2). The sample description and sampling location of these reference samples are summarized in Table 2. Method of sample processing and recent compilation values of major and minor elements have been reported elsewhere(Ando *et al.*, 1987 and 1989a,b; Govindaraju, 1989; and Itoh *et al.*, 1992).

The older four reference samples, JA-l, JB-l, JB-1a and JG-l, have already been exhausted. JB-1a and JG-1a are replacement

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Keywords: rock reference sample, compilation value, major element

Table 1 1993 recommended values and preferable data(asterisked) for major elements in 17 GSJ geochemical reference samples (in %).

geochemical reference samples (in %).										
	JA-1	JA-2	JA-3	JВ-1	ЈВ-1а	JB-2	JB-3	JF-1	JF-2	
SiO2	63.97	56.42	62.27	52.37	52.41	53.25	50.96	66.69	65.30	
TiO2	0.85	0.66	0.70	1.32	1.28	1.19	1.44	0.005	0.005	
Al2O3	15.22	15.41	15.56	14.53	14.45	14.64	17.20	18.08	18.52	
Fe2O3	2.59	2.16	1.15	2.33	2.55	3.33	3.20	0.06	0.06	
FeO	3.98	3.69	4.83	5.99	5.78	9.98	7.85	<0.04*	<0.03*	
MnO	0.157	0.108	0.104	0.153	0.148	0.218	0.177	0.001	0.001	
MgO	1.57	7.60	3.72	7.71	7.83	4.62	5.19	0.006	0.004*	
CaO	5.70	6.29	6.24	9.25	9.31	9.82	9.79	0.93	0.09	
Na2O	3.84	3.11	3.19	2.77	2.73	2.04	2.73	3.37	2.39	
K2O	0.77	1.81	1.41	1.43	1.40	0.42	0.78	9.99	12.94	
P2O5	0.165	0.146	0.116	0.255	0.260	0.101	0.294	0.01	0.003*	
H2O+	0.72	1.12	0.20	1.02	0.92	0.25	0.18	0.23	0.24	
H ₂ O-	0.30	1.25	0.11	0.95	0.92	0.13	0.07	0.13	0.18	
Total	99.832	99.774	99.600	100.078	99.988	99.989	99.861	99.502	99.733	
T-Fe2O3	7.07	6.21	6.60	8.99	9.05	14.25	11.82	0.08	0.06	
		W				···				
	JG-1	JG-1a	JG-2	JG-3	JGb-1	JP-1	JR-1	JR-2		
SiO2	72.30	72.30	76.83	67.29	43.66	42.38	75.45	75.69		
TiO2	0.26	0.25	0.044	0.48	1.60	0.006*	0.11	0.07		
Al2O3	14.24	14.30	12.47	15.48	17.49	0.66	12.83	12.72		
Fe2O3	0.38	0.51	0.33	1.62	4.79	1.98	0.35	0.27		
FeO	1.61	1.36	0.57	1.83	9.43	5.99	0.49	0.44		
MnO	0.063	0.057	0.016	0.071	0.189	0.121	0.099	0.112		
MgO	0.74	0.69	0.037	1.79	7.85	44.60	0.12	0.04		
CaO	2.20	2.13	0.70	3.69	11.90	0.55	0.67	0.50		
Na ₂ O	3.38	3.39	3.54	3.96	1.20	0.021	4.02	3.99		

samples for JB-1 and JG-l, respectively. JB-1a was prepared from the same rock chip that for JB-1. While, JG-1a was prepared by resampling a rock specimen in the same quarry but at different sampling point from that for JG-1(Ando *et al.*, 1989b).

3.98

0.099

0.54

0.07

99.862

2.18

3.96

0.083

0.59

0.12

99.740

2.00

4.71

0.002

0.33

0.12

99.699

0.97

2.64

0.122

0.67

0.17

99.813

3.69

0.24

0.056

1.28

0.13

99.815

15.06

0.003

0.002*

2.39

0.44

99.147

8.37

4.41

0.021

1.16

0.20

99.930

0.89

4.45

0.012

1.19

0.22

99.704

0.77

K₂O

P2O5

H₂O+

H₂O-

Total

T-Fe2O3

3. Evaluation of the reported data

We have collected the analytical data from

277 laboratories worldwide(110 publications and 167 personal communications) on major elements of 17 GSJ reference samples. All reported data are tabulated in the appendix(Table A-1 to 17) together with references. Analytical method codes being used in the appendix are shown in Table 3.

Consensus or recommended values for all elements were generally proposed by calculating the mean, after eliminating data lying out

Table 2 List of 17 GSJ geochemical reference samples. Taken from Ando et al. (1989b).

Name	Rock	Issued Year	Note	Latitude	Longitude
JA-1	Andesite	(1982)	Hakone volcano, Old Somma lava (Augite- hypersthene andesite), Quaternary, Manazuru-machi, Kanagawa Prefecture.	35° 09′ 44″ N	139° 08′ 04″ E
JA-2	Andesite	(1985)	Goshikidai sanukitoid (Olivine andesite), 13 Ma, Sakaide, Kagawa Prefecture.	34° 18′ 30″ N	133° 55′ 37″ E
JA-3	Andesite	(1986)	Asama volcano (Olivine-bearing augite- hypersthene andesite) erupted in 1783, Oni- Oshidashi, Tsumagoi-mura, Gunma Pre- fecture.	36° 26′ 25″ N	138° 31′ 85″ E
JB-1	Basalt	(1968)	Kitamatsuura basalt (Alkali basalt, Titanaugite-olivine basalt), 7.6 Ma, Myo- kanji Toge, Sasebo, Nagasaki Prefecture.	33° 13′ 58″ N	129° 41′ 41″ E
JB-1a JB-2	Basalt Basalt	(1984) (1982)	Replacement sample of JB-1. Ö-shima volcano (Tholeiitic basalt, Augite- bronzite basalt) erupted in 1950-1951, northern rim of Mihara crater, Ö-shima, Tokyo.	34° 43′ 41″ N	139° 23′ 46″ E
JB-3	Basalt	(1983)	Fuji volcano (High alumina basalt, Hypersthene-augite-olivine basalt) erupted in 864, Aokigahara lava flow, Narusawamura, Yamanashi Prefecture.	35° 28′ 31″ N	138° 41′ 58″ E
JF-1	Feldspar	(1985)	Ö-hira feldspar (Mixture of orthoclase and albite), Nagiso-machi, Nagano Prefecture.	35° 33′ 37″ N	137° 40′ 16″ E
JF-2	Feldspar	(1986)	Kurosaka feldspar (Orthoclase), Kurosaka, Ibaraki Prefecture.	36° 41′ 33″ N	140° 32′ 36″ E
JG-1	Granodiorite		Sori granodiorite (Biotite granodiorite), 85 Ma, Azuma-mura, Gunma Prefecture.	36° 34′ 13″ N	139° 23′ 30″ E
JG-1a JG-2	Granodiorite Granite	(1984) (1985)	Replacement sample of JG-1. Naegi granite (Biotite granite), Cretaceous, Hirukawa-mura, Gifu Prefecture.	35° 29′ 22″ N	137° 24′ 65″ E
JG-3	Granodiorite	(1986)	Mitoya granodiorite (Hornblende-biotite granodiorite), Cretaceous-Paleogene, Mitoya-cho, Shimane Prefecture.	35° 16′ 41″ N	132° 52′ 19″ E
JGb-1	Gabbro	(1983)	Utsushigatake (Augite-hypersthene horn- blende gabbro), 86 Ma, Funehikimachi, Fukushima Prefecture.	37° 28′ 53″ N	140° 36′ 48″ E
JP-1	Peridotite	(1984)	Horoman peridotite (Dunite). Horoman, Hokkaido.	42° 04′ 43″ N	143° 02′ 31″ E
JR-1	Rhyolite	(1982)	Wada Toge obsidian, 0.8 Ma, north of Wada Toge, Wada-mura, Nagano Prefecture.	36° 09′ 04″ N	138° 08′ 43″ E
JR-2	Rhyolite	(1983)	Wada Toge obsidian, south of Wada Toge, Shimosuwa-machi, Nagano Prefecture.	36° 08′ 08″ N	138° 08′ 36″ E

of the range which are two times greater than the standard deviation(Gladney *et al.*, 1991; Ando *et al.*, 1989a). In some cases, however, the method gives unreasonable values for several elements especially in very low concentrations.

For example, collected all the values for Na_2O and K_2O in JP-1 peridotite are listed in Table 4. Large disagreements are seen for both the elements. In this case, therefore, as an arbitrarily chosen procedure, values for the statistical cal-

Table 3 Code for analytical mathods.

Code	Method
AAS	Atomic absorption spectrometry
Calc.	Calculated
Chem.	Conventional chemical method
Color	Colorimetry
Coul.	Coulometry
EPMA	Electron-probe micro-analyzer
Fl.phot.	Flame photometry
Grav.	Gravimetry
ICP	Inductively coupled plasma atomic emission spectroscopy
ICP-MS	Inductively coupled plasma mass spectrometry
IDMS	Isotope dilution mass spectrometry
INAA	Instrumental neutron activation analysis
KF	Karl Fischer method
NAA	Neutron activation analysis
OES	Optical emission spectrometry
PAA	Photon activation analysis
Photom.	Absorption spectrophotometry
γ cntg.	γ -ray counting
SIMS	Secondary ion mass spectrometry
Vol.	Volumetry
XRF	X-ray fluorescence spectrometry

culation were selected after eliminating data lying out of the range 40% greater or smaller than our values; 0.021% for Na₂O, and 0.003% for K₂O(Terashima and Ando, 1987; Table 4). The same procedure was adopted for MnO and MgO in the two reference samples JF-1 and JF-2. Our analytical results indicate that TiO₂ in JP-1, and P₂O₅ in JP-1 and JF-2 are certainly less than 0.01%(Terashima and Ando, 1987). Therefore the data only smaller than 0.01% were selected for statistical calculation.

The 1993 compilation values listed in Table 5 are the mean and standard deviation which are calculated when the number of available data is more than two after the elimination described above. The data for carbon, sulfur and loss on ignition are not evaluated in this study because the insufficient accumulation of reported data, but the individual values are listed in the appendix tables.

4. Comparison of the method means

In order to examine the variation among analytical methods, analytical results for eleven major elements in the three samples, JG-1, JB-1 and JB-2, are given in Table 6. Very small deviation among the mean values of the methods suggests that significant difference has not been observed between different analytical methods such as conventional chemical method, x-ray fluorescence spectrometry, inductively coupled plasma atomic emission spectroscopy and atomic absorption spectrometry. It is generally known that analytical errors are increased toward lower elemental concentration region. As shown in Fig. 1, the same increasing tendency is recognized in this compilation data. The analytical errors in the determination of Fe₂O₃, FeO, H₂O+ and H₂O- are significantly larger than those of other elements(Fig. 1).

Table 4 Comparison of Na₂O and K₂O values in GSJ JP-1 peridotite. Asterisked values were selected for calculation of recommended values.

Na2O (%)	Method	Ref.	K2O (%)	Method	Ref.
0.01	Chem	B-39	0.003*	AAS	B-167
0.015*	XRF	B-40	0.003*	AAS	B-224
0.018*	AAS	B-216	0.003*	AAS	B-328
0.02*	XRF	B-129	0.003*	XRF	B-247
0.02*	AAS	B-15	0.004*	F1.Phot.	B-279
0.02*	ICP	B-476	0.006	XRF	B-34
0.021*	AAS	B-167	0.006	XRF	B-270
0.021*	AAS	B-328	0.0075	AAS	B-216
0.021*	XRF	B-247	0.009	XRF	B-40
0.022*	INAA	B-270	0.01	XRF	B-16
0.026*	AAS	B-224	0.01	Chem.	B-39
0.027*	F1.Phot.	B-279	0.01	XRF	B-70
0.03	XRF	B-44	0.015	AAS	B-134
0.03	XRF	B-64	0.02	XRF	B-19
0.035	NAA	B-277	0.02	XRF	B-25
0.04	XRF	B-31	0.02	AAS	B-312
0.05	XRF	B-201	0.03	XRF	B-15
0.051	INAA	B-447	0.03	XRF	B-64
0.06	AAS	B-312	0.044	γcntg.	B-41
0.07	AAS	B-134	< 0.01	XRF	B-36
0.07	XRF	B-270	< 0.01	XRF	B-44
0.10	XRF	B-70	< 0.01	XRF	B-201
0.30	XRF	B-25	< 0.01	ICP	B-476
< 0.01	XRF	B-43	<0.1	Chem.	B-52
< 0.08	XRF	B-16	<0.48	INAA	B-270
< 0.1	Chem.	B-52			
<0.10	XRF	B-36			
Avg.	0.047 ± 0.059	(n=23)	Avg.	0.013 ± 0.011	(n=19)
Recom.	0.021 ± 0.003	(n=11)	Recom.	0.003 ± 0.0004	(n=5)

Ref. B-167: Terashima and Ando (1987).

5. Presentation of the recommended and preferable values

In the 1993 compilation values, the mean values calculated from the available data of more than five are considered to be the recommended values. The mean value calculated from less than four data is proposed as the preferable value. The recommended and preferable values which agreed with compiled mean values listed in Table 5, are presented in Table 1 for the convenience of the users of the reference samples.

Geologists, geochemists or analytical chemists who are interested in participating in our program are invited to write to Dr. Noboru Imai, Geochemistry Section, Geological Survey of Japan, 1-1-3 Higashi, Tsukuba, 305 Japan.

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References

Ando, A., Mita, N. and Terashima, S. (1987)

Table 5 1993 compilation values for major elements in 17 GSJ geochemical reference samples(in %). Mean values are givin with standard deviation. Number of dataavailable is indicated in parentheses.

	JA-1	JA-2	JA-3	ЈВ-1	ЈВ-1а	JB-2
SiO ₂	63.97±0.60(66)	56.42±0.63(26)	62.27±0.34(19)	52.37±0.44(59)	52.41±0.70(32)	53.25±0.35(61)
TiO ₂	0.85±0.04(70)	0.66±0.04(27)	0.70±0.06(22)	1.32±0.06(59)	1.28±0.04(33)	1.19±0.05(66)
Al ₂ O ₃	15.22±0.34(72)	15.41±0.36(27)	15.56±0.20(20)	14.53±0.20(63)	14.45±0.39(34)	14.64±0.27(68)
Fe ₂ O ₃	2.59±0.20(31)	2.16±0.14(13)	1.15±0.18(10)	2.33±0.13(28)	2.55±0.21(17)	3.33±0.27(31)
FeO	3.98±0.20(29)	3.69±0.12(14)	4.83±0.18(13)	5.99±0.16(33)	5.78±0.24(21)	9.98±0.31(37)
MnO	0.157±0.011(67)	0.108±0.007(27)	0.104±0.010(22)	0.153±0.011(59)	0.148±0.008(33)	` '
MgO	1.57±0.07(68)	7.60±0.27(25)	3.72±0.09(21)	7.71±0.16(64)	7.83±0.12(31)	4.62±0.16(64)
CaO	5.70±0.16(70)	6.29±0.19(27)	6.24±0.16(23)	9.25±0.12(57)	9.31±0.40(33)	9.82±0.24(67)
Na ₂ O	3.84±0.16(67)	3.11±0.12(30)	3.19±0.10(21)	2.77±0.12(59)	2.73±0.13(35)	2.04±0.11(64)
K ₂ O	0.77±0.11(74)	1.81±0.06(34)	1.41±0.06(28)	1.43±0.07(63)	1.40±0.12(37)	0.42±0.03(70)
P ₂ O ₅	0.165±0.021(59)		0.116±0.019(15)	0.255±0.022(52)	0.260±0.015(27)	0.101±0.017(54)
H ₂ O+	0.72±0.13(15)	1.12±0.20(9)	0.20±0.09(6)	1.02±0.21(21)	0.92±0.15(11)	0.25±0.04(11)
H ₂ O-	0.30±0.06(18)	1.25±0.17(9)	0.11±0.04(6)	0.95±0.11(21)	0.92±0.11(12)	0.13±0.03(17)
T-Fe ₂ O ₃	7.07±0.23(70)	6.21±0.18(31)	6.60±0.18(25)	8.99±0.16(60)	9.05±0.14(37)	14.25±0.37(65)
		3.21-0.10(31)	3.00=0.10(23)	3.77=0.10(00)	5.05-0.17(51)	. 1.25.20.57(05)
	ЈВ-3	JF-1	JF-2	JG-1	JG-1a	JG-2
SiO ₂	50.96±0.30(39)	66.69±0.77(27)	65.30±0.49(19)	72.30±0.38(60)	72.30±0.51(35)	76.83±0.57(29)
TiO2	1.44±0.06(44)	0.005±0.002(8)	0.005±0.002(6)	0.26±0.02(60)	0.25±0.03(35)	0.044±0.009(28)
Al ₂ O ₃	17.20±0.36(44)	18.08±0.32(27)	18.52±0.26(19)	14.24±0.24(62)	14.30±0.41(36)	12.47±0.32(32)
Fe ₂ O ₃	3.20±0.40(18)	0.06±0.03(13)	0.06±0.01(7)	0.38±0.09(32)	0.51±0.14(16)	0.33±0.08(13)
FeO	7.85±0.24(21)	0.04±0.02(3)	0.03±0.02(3)	1.61±0.15(39)	1.36±0.19(20)	0.57±0.07(13)
MnO	0.177±0.011(42)	0.001±0.0001(7)	0.001±0.0003(9)	0.063±0.009(65)	0.057±0.007(35)	0.016±0.003(31)
MgO	5.19±0.10(42)	0.006±0.001(9)	0.004±0.002(4)	0.74±0.08(65)	0.69±0.07(34)	0.037±0.012(21)
CaO	9.79±0.12(43)	0.93±0.06(28)	0.09±0.03(16)	2.20±0.08(63)	2.13±0.08(36)	0.70±0.05(31)
Na ₂ O	2.73±0.11(46)	3.37±0.18(27)	2.39±0.11(23)	3.38±0.10(62)	3.39±0.13(35)	3.54±0.11(33)
K ₂ O	0.78±0.04(50)	9.99±0.22(31)	12.94±0.29(26)	3.98±0.09(69)	3.96±0.16(40)	4.71±0.09(35)
P ₂ O ₅	0.294±0.028(35)	` ,	0.003±0.001(3)	0.099±0.019(52)	0.083±0.009(28)	0.002±0.000(5)
H ₂ O+	0.18±0.04(10)	0.23±0.06(8)	0.24±0.08(7)	0.54±0.13(28)	0.59±0.13(11)	0.33±0.08(8)
H ₂ O-	0.07±0.02(14)	0.13±0.06(9)	0.18±0.04(6)	0.07±0.02(24)	0.12±0.04(12)	0.12±0.05(11)
_	11.82±0.28(43)	$0.08\pm0.01(19)$	0.06±0.01(15)	2.18±0.13(64)	2.00±0.10(34)	0.12±0.05(11) 0.97±0.06(33)
1-1-6203	11.82±0.28(43)	0.08±0.01(19)	0.00±0.01(13)	2.18±0.13(04)	2.00±0.10(34)	0.97±0.00(33)
	JG-3	JGb-1	JP-1	JR-1	JR-2	
SiO ₂	67.29±0.55(20)	43.66±0.32(37)	42.38±0.49(24)	75.45±0.57(39)	75.69±0.37(29)	
TiO ₂	0.48±0.03(22)	1.60±0.08(42)	0.006±0.004(3)	0.11±0.02(38)	0.07±0.01(28)	
Al ₂ O ₃	15.48±0.20(21)	17.49±0.42(44)	0.66±0.13(28)	12.83±0.40(43)	12.72±0.28(34)	
Fe ₂ O ₃	1.62±0.18(8)	4.79±0.46(21)	1.98±0.56(11)	0.35±0.09(15)	0.27±0.12(14)	
FeO	1.83±0.20(11)	9.43±0.47(23)	5.99±0.40(13)	0.49±0.10(21)	0.44±0.09(17)	
MnO	0.071±0.004(22)	0.189±0.015(40)	0.121±0.010(28)	0.099±0.007(42)	0.112±0.007(31)	
MgO	1.79±0.06(22)	7.85±0.18(41)	44.60±0.64(24)	0.12±0.03(32)	0.04±0.01(25)	
CaO	3.69±0.09(22)	11.90±0.20(44)	0.55±0.05(27)	0.67±0.06(40)	0.50±0.06(33)	
Na ₂ O	3.96±0.15(24)	1.20±0.08(41)	0.021±0.003(11)	4.02±0.21(43)	3.99±0.18(36)	
K ₂ O	2.64±0.04(28)	0.24±0.03(42)	0.003±0.0004(5)	4.41±0.12(46)	4.45±0.12(39)	
P ₂ O ₅	0.122±0.011(14)	0.056±0.014(32)	0.002±0.001(3)	0.021±0.008(29)	0.012±0.005(17)	
H ₂ O+	0.67±0.12(8)	1.28±0.17(12)	2.39±0.14(6)	1.16±0.15(12)	1.19±0.14(11)	
H ₂ O-	0.17±0.07(8)	0.13±0.06(17)	0.44±0.07(7)	0.20±0.08(13)	0.22±0.06(11)	
T-Fe ₂ O ₃	3.69±0.12(23)	15.06±0.37(39)	8.37±0.22(25)	0.89±0.07(36)	0.77±0.06(31)	

1986 values for fifteen GSJ rock reference samples, "Igneous rock series". *Geost. Newsletter*, vol.11, p. 159–166.

, Kamioka, H., Terashima, S. and

Itoh, S. (1989a) 1988 values for GSJ rock reference samples, "Igneous rock series" .*Geochem. Jour.*, vol.23, p.143–148.

-, Mita, N. and Matsumoto, A.

Table 6 Comparson of average values of different analytical methods and recommended values from this study(in %).

Element	Method	JG-1	JB-1	JB-2	Element	Method	JG-1	ЈВ-1	JB-2
SiO2	Chem.	72.30±0.34(27)	52.06±0.23(15)	53.33±0.16(11)	MgO	AAS	0.72±0.04(12)	7.68±0.15(15)	4.56±0.13(4)
	XRF	72.27±0.49(12)	52.69±0.45(18)	53.29±0.30(22)	1	ICP	0.71±0.06(5)	7.75±0.20(6)	4.63±0.07(12)
	ICP	72.33±0.30(4)	52.19±0.08(3)	53.17(1)		Recom.	0.74	7.71	4.62
	Recom.	72.30	52.37	53.25	CaO	Chem.	2.19±0.09(24)	9.26±0.12(15)	9.73±0.25(13)
TiO2	Chem.	0.25±0.03(28)	1.35±0.08(14)	1.23±0.05(10)		XRF	2.18±0.05(11)	9.26±0.14(15)	9.84±0.13(24)
	XRF	0.27±0.02(13)	1.31±0.03(19)	1.17±0.04(24)		AAS	2.16±0.02(7)	9.24±0.10(8)	9.75±0.16(9)
	ICP	0.25±0.02(5)	1.30±0.04(6)	1.13±0.04(5)		ICP	2.20±0.04(5)	9.23±0.09(5)	9.92±0.41(5)
	Recom.	0.26	1.32	1.19		Recom.	2.20	9.25	9.82
Al2O3	Chem.	14.26±0.20(27)	14.51±0.19(15)	14.63±0.19(13)	Na2O	Chem.	3.39±0.08(15)	2.79±0.08(8)	2.06±0.06(11)
	XRF	14.17±0.16(10)	14.53±0.24(17)	14.64±0.29(24)		XRF	3.40±0.16(6)	2.75±0.10(8)	2.02±0.15(17)
	ICP	14.16±0.30(5)	14.57±0.21(6)	14.62±0.35(4)		AAS	3.38±0.06(14)	2.77±0.16(16)	2.04±0.09(13)
	AAS	14.24±0.18(5)	14.49±0.17(8)	14.60±0.13(7)		ICP	3.41±0.14(4)	2.66±0.11(5)	1.98±0.13(3)
	Recom.	14.24	14.53	14.64		Fl.Phot.	3.36±0.09(13)	2.79±0.08(10)	1.99±0.06(5)
T-Fe2O3	Chem.	2.19±0.12(24)	9.05±0.13(13)	14.45±0.21(8)		Recom.	3.38	2.77	2.04
	XRF	2.21±0.18(13)	8.99±0.15(16)	14.21±0.36(23)	K2O	Chem.	3.96±0.11(16)	1.37±0.12(8)	0.43±0.04(11)
	ICP	2.10±0.07(5)	8.98±0.09(6)	14.66±0.34(3)		XRF	3.96±0.05(11)	1.45±0.07(15)	0.41±0.03(22)
	AAS	2.18±0.08(8)	8.95±0.12(6)	14.21±0.12(6)		AAS	3.98±0.07(12)	1.45±0.05(13)	$0.42\pm0.02(12)$
	Recom.	2.18	8.99	14.25		ICP	4.04±0.03(4)	1.40±0.09(5)	0.37±0.03(4)
MnO	Chem.	0.061±0.008(27)	0.157±0.009(15)	0.216±0.018(13)		Fl.Phot.	3.96±0.09(14)	1.40±0.04(10)	$0.43\pm0.01(4)$
	XRF	0.062±0.011(11)	0.148±0.011(13)	0.220±0.011(19)		Recom.	3.98	1.43	0.42
	ICP	0.063±0.007(5)	0.153±0.011(6)	0.210±0.014(5)	P2O5	Chem.	0.097±0.017(27)	0.258±0.019(15)	0.099±0.010(10)
	AAS	0.063±0.005(13)	0.154±0.012(15)	0.216±0.008(13)		XRF	0.104±0.029(10)	0.264±0.027(15)	0.100±0.015(19)
	Recom.	0.063	0.153	0.218		Photom.	0.103±0.014(7)	0.248±0.019(11)	0.103±0.026(10)
MgO	Chem.	0.75±0.09(23)	7.67±0.14(15)	4.57±0.18(13)		ICP	0.104±0.016(2)	0.241±0.011(4)	0.113±0.026(3)
-	XRF	0.74±0.05(10)	7.75±0.14(13)	4.64±0.15(20)		Recom.	0.099	0.255	0.101

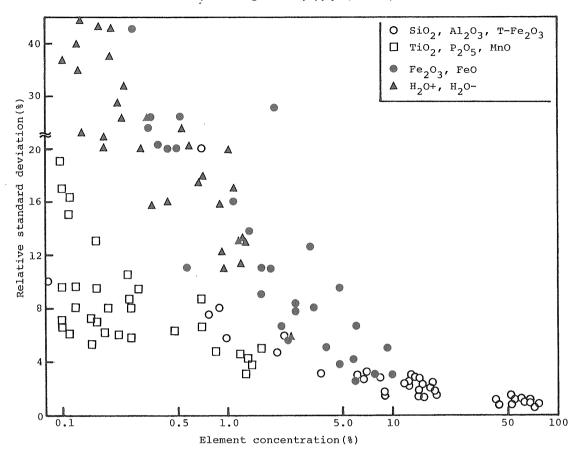


Fig. 1 Analytical errors vs major element concentration for GSJ reference samples

(1989b) 1987 compilation of K₂O concentration in seventeen GSJ rock reference samples, "Igneous rock series". *Bull. Geol. Surv. Japan*, vol.40, p.19-45.

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地質調査所岩石標準試料"火成岩シリーズ"中の主成分分析値の編集

寺島 滋・今井 登・伊藤司郎・安藤 厚・三田直樹

要 旨

地質調査所から発行された岩石標準試料"火成岩シリーズ"17試料の主成分について,1993年9月までに入手した全報告277件(公表論文110,未公表文書167)について検討し,全分析データを一覧表にして提示した。異常値を除外した後に元素別,分析方法別の平均値,標準偏差を算出した。分析データ数の多いJG-1,JB-1,JB-2中の11成分について分析方法別の値を比較した結果,有意差は認められなかった。

各成分について信頼できる分析値が5個以上ある場合を推せん値とし、"火成岩シリーズ" 17試料中のほとんどの成分について推せん値を設定することができた。しかし、JF-1中のFeO、JF-2中のFeO、MgO、 P_2O_5 、JP-1中のTiO₂、 P_2O_5 は主成分としては低含有量であるため信頼できる分析値が5個未満で、これらについては参考値を提示した。

(受付:1993年10月22日;受理:1994年3月3日)

Table A-1 Individual data for JA-1

*	Method	Code No.	%	Method	Code No.	%	Method	Code No.
SiO2			64. 25	XRF(Dry basis)	R-129	0.86	XRF	B-16
- 5102	_		64. 3	XRF(fusion)	B-70	0.87	XRF	B-19
63. 7	AAS	B-216	01.0	(. 45.01)	2 .0	0. 87	XRF	B-247
63. 7	AAS	B-109	Si			0. 88	XRF	B-125
64.06	AAS	B-134		-		0. 88	XRF	B-84
65.39	AAS	B-312	28. 4	AAS(microwave)	B-433	0.89	XRF	S-26'
63.78	AAS	T-23'	29. 956	SIMS	B-337	0.89	XRF	B-44, B-73
64. 15	AAS & others	T-41'				0.90	XRF	0-3'
62.79	AAS & Photom.	C-4	Ti02			0.90	XRF	T-13'
63. 16	AAS & Photom.	C-5'		_		0.94	XRF	B-43
65. 12	Chem	B-482	0.75	AAS	B-312	0. 83	XRF	S-24'
63. 31	Chem.	A-10'	0.81	AAS	B-134	0.80	XRF & Chem.	B-6'
63. 47	Chem.	K-11'	0.83	AAS	B-216	0. 85	XRF(Dry basis)	
63. 61	Chem.	A-2'	0. 86	AAS	B-109	0. 85	XRF(fusion)	B-70
63. 61	Chem.	K-11'	0. 86	AAS	T-23'			
63. 63	Chem.	B-39	0. 86	AAS	T-41'	Ti	_	
63. 64	Chem.	K-11'	0. 89	AAS & Photom.	C-4		1.00	D ===
63. 79	Chem.	B-56, B-221	0. 95	AAS & Photom.	C-5'	0. 4430		B-77
63. 87	Chem.	0-3'	0. 79	Chem.	B-39	0. 5175		B-337
63. 98	Chem.	S-23	0. 82	Chem.	A-2'	0. 6259	AKF	B-111
64.06	Chem.	0-11' A-10	0.82	Chem.	A-10'	41000		
64. 28	Chem.	B-45	0. 83	Chem.	B-45	A1203	-	
64. 31	Chem.	G-7	0.84	Chem.	0-3'	15.0	110	D 100
64. 32	Chem.	P-5'	0. 87	Chem.	0-11' A-10	15. 0	AAS	B-109
64. 06	FI-Photom.	B-253	0.89	Chem.	B-56, B-221	15. 13	AAS	B-134
63. 34	Grav.	B-80, B-94	0.90	Chem.	G-7	15. 29	AAS	B-312
63. 71 63. 72	Grav.	B-93	0. 91	Chem.	K-11'	15. 35	AAS	B-216 B-93
	Grav.	B-14, B-91	0. 92	Chem.	K-11'	15. 36 15. 5	AAS	B-93 B-279
63. 79 63. 91	Grav.	B-153	0. 95 0. 79	Chem.	K-11' B-192	15. 5	AAS AAS	T-41'
64. 31	Grav.	B-224	0. 79	ICP	B-192 B-482	15. 10	AAS	T-23'
64.77	Grav. & Photom. ICP	В-130	0. 79	ICP ICP	B-196	15. 42	AAS & Photom.	C-5'
63. 24	ICP	K-18'	0. 86	ICP	B-180	15. 40	AAS & Photom.	C-4
63. 98	ICP & AAS	B-5'	0.80	ICP	B-122	13. 33	Chem.	P-5'
63. 70	IDMS	B-48	0. 87	ICP	K-18'	14. 71	Chem.	B-45
62. 4	INAA	B-447	0. 84	ICP & AAS	B-5'	14. 97	Chem.	B-56, B-221
64.7	INAA(\gamma-ray)	B-18	0.87	ICP-MS	B-320	14. 98	Chem.	0-11' A-10
63. 48	Micro wave plas		0. 73	INAA	B-447	15. 09	Chem.	G-7
62. 4	NAA	B-277	0. 77	INAA	B-270	15. 39	Chem.	B-39
64. 37	Photom.	B-279	0. 82	INAA(\gamma-ray)	B-18	15. 41	Chem.	K-11'
62. 30	XRF	B-109	0.90	Micro wave pla		15. 46	Chem.	K-11'
63. 23	XRF	B-75	0. 83	PAA	B-55	15. 50	Chem.	0-3'
63. 62	XRF	B-134	0.85	Photm(FI)	B-462	15. 63	Chem.	A-2'
63.77	XRF	B-31	0. 84	Photom.	B-224	15. 63	Chem.	A-10'
63. 90	XRF	0-3'	0. 85	Photom.	B-153	15. 80	Chem.	K-11'
63. 91	XRF	S-26'	0. 85	Photom.	B-93	14. 64	Grav.	B-153
63. 95	XRF	B-16	0. 86	Photom.	B-80, B-94	15. 18	Grav.	B-80, B-94
63.97	XRF	B-18	0. 86	Photom.	B-14, B-91	15. 89	Grav.	B-14, B-91
64.04	XRF	B-125	0.88	Photom.	B-279	14. 92	ICP	B-482
64.06	XRF	B-247	0.89	Photom.	B-130	15. 24	ICP	B-192
64.06	XRF	B-25	0.82	Various	P-5'	15. 27	ICP	B-196
64.11	XRF	B-67	0. 87	Various	S-23	15. 67	ICP	B-122
64.14	XRF	Y-8'	0. 81	XRF	Y-8'	16. 07	ICP	K-18'
64. 18	XRF	B-15	0.83	XRF	B-90	15. 11	ICP & AAS	B-5'
64. 20	XRF	B-84	0.83	XRF	B-40	14. 85	ICP-MS	B-320
64. 22	XRF	B-44, B-73	0. 835	XRF	B-134	14. 4	INAA	B-447
64. 25	XRF	B-87	0.84	XRF	B-15	14.84	INAA	B-18
64. 42	XRF	T-13'	0.84	XRF	B-87	15. 3	INAA	B-270
64. 57	XRF	B-19	0.84	XRF	B-36	15. 10	Micro wave pla	
64. 59	XRF	B-36	0.85	XRF	B-18	14. 5	NAA	B-277
64. 74	XRF	B-40	0.85	XRF	B-31	15.6	NAA	B-55
64. 79	XRF	B-270	0. 85	XRF	B-109	15. 09	Photom.	B-130
65. 00	XRF	B-43	0. 85	XRF	B-270	15. 4	Photom.	B-95
65. 11	XRF	B-90	0.86	XRF	B-67	15. 4	Photom.	B-51
64. 56	XRF & Chem.	B-6'	0.86	XRF	B-75	14.87	Various	S-23
64. 37	XRF & others	S-24'	0.86	XRF	B-25	15.00	Vol.	B-130

Table A-1 Individual data for JA-1

15.00 Vol.		%	Method	Code No.	*	Method	Code No.	%	Method	Code No.
14.49 XRF B-109		15. 08	Vol.	B-224	6. 90	INAA	B-18	2. 58	Chem.	B-56, B-221
14.61 XBF									Chem.	
14.63 XBF B-247					6. 93	Micro wave plas	sG-6'	2. 66	Chem.	B-39
15.00					6. 52	NAA	B-3		Chem.	G-7
15. 15				B-247	6. 95	NAA	B-24	2.83	ICP	K-18'
15.15 XRF B-16 6.97 Photon(FI) B-462 2.49 XBF B-134		15.00	XRF	B-25		NAA	B-234, B-277		Photm	
15.17 XRF B-15 6.97 Photn(F1) B-462 2.49 XRF B-134		15.09	XRF	B-44, B-73						
15. 20		15. 15	XRF							
15.21										
15.23 XEF										
15.24 RFF								3. 10	XRF & Chem.	B-6,
15. 24 RFF								n. 0		
15.25 RFF								reu	-	
15.27 XPF								2 66	Chom	R-20
15.28 XRF										
15.28 XRF										
15. 33										
15. 35										
15, 39										
15.43										
15. 77										
15.80										
15. 12							B-15	4. 09	Photm	B-467
14.96 XRF & Chem. B-6' 7.14 XRF B-19 4.32 Photom. B-123					7.03	XRF	B-90	4. 00	Photom.	B-270
15.29 XRF (Dry basis) B-129 7. 15 XRF B-31 4. 33 Photom. B-123 15.40 XRF (fusion) B-70 7. 15 XRF B-109 4. 00 Vol B-482 A1		15. 12	XRF	S-24'	7.08	XRF	B-36	4. 15	Photom.	B-216
Total Tota		14.96								
T. 19			XRF(Dry basis)							
A1		15. 40	XRF(fusion)	B-70						
7. 8500 ICP B-77										
7. 8500 ICP B-77	_	Al	-							
T. 86		7 0500	LOD	D 77						
R. 2417 SIMS										
T-Fe203										
T-Fe203		8. 2417	21W2	B-331						
T. 48		т г.,909								
6. 54	-	1-re203	-							
6. 8 AAS B-279		6 54		R-146						
6. 95 AAS B-134			244							
7. 03 AAS B-328										
7. 36 AAS B-109										
7. 03 AAS T-41' 7. 29 AAS Photom. C-5' 6. 85 AAS & Photom. C-4 8. 87 Chem. P-5' 8. 83 Chem. G-7 8. 81 Chem. S-23 8. 95 Chem. O-11' A-10 8. 95 Chem. A-10' 8. 18 Chem. A-2' 8. 18 Chem. K-11' 8.										
7. 29 AAS T-23' Fe203 6. 29 AAS & Photom. C-5' 6. 85 AAS & Photom. C-4 2. 52 AAS B-312 4. 69 AAS (microwave) B-433 6. 79 Chem. P-5' 2. 58 AAS B-134 4. 5800 ICP B-77 6. 83 Chem. G-7 2. 61 AAS T-41' 4. 85 INAA B-289, B-300 6. 91 Chem. S-23 2. 84 AAS B-80, B-94 4. 86 INAA B-289, B-300 6. 95 Chem. O-11' A-10 2. 89 AAS B-93 5. 05 INAA B-324 7. 18 Chem. A-10' 2. 68 AAS T-23' 5. 14 INAA B-324 7. 18 Chem. A-2' 2. 34 Calc. B-482 4. 7100 NAA B-126 7. 26 Chem. A-2' 2. 35 Calc. B-216 4. 95 NAA B-11 7. 31 Chem. K-11' 2. 55 Calc. B-31 5. 01 NA										
6.85 AAS & Photom. C-4 6.79 Chem. P-5' 6.83 Chem. G-7 6.91 Chem. S-23 6.95 Chem. O-11' A-10 7.18 Chem. A-10' 7.26 Chem. A-2' 7.31 Chem. K-11' 7.31 Chem. K-11' 7.32 Chem. K-11' 7.34 Chem. K-11' 7.35 Chem. K-11' 7.36 Chem. K-11' 7.37 Chem. K-11' 7.38 Chem. K-11' 7.39 Chem. K-11' 7.30 Chem. K-11' 7.31 Chem. K-11' 7.31 Chem. K-11' 7.32 Chem. K-11' 7.33 Chem. K-11' 7.34 Chem. K-11' 7.35 Chem. K-11' 7.36 Chem. K-11' 7.37 Chem. K-11' 7.38 Chem. K-11' 7.39 Chem. K-11' 7.30 Chem. K-11' 7.31 Chem. K-11' 7.31 Chem. K-11' 7.32 Chem. K-11' 7.35 Chem. K-11' 7.36 Chem. K-11' 7.37 Chem. K-11' 7.38 Chem. K-11' 7.49 Decom. (at R. T.) B-123 7.40 Calc. B-25 7.41 Chem. K-11' 7.42 Calc. B-25 7.43 Chem. K-11' 7.44 Chem. K-11' 7.45 Chem. K-11' 7.47 Chem. K-11' 7.48 Chem. K-11' 7.49 ICP B-192 7.40 Calc. B-36 7.41 Chem. K-11' 7.41 Chem				T-23'	Fe203			Fe	_	
6. 79 Chem. P-5'										
6.83 Chem. G-7			AAS & Photom.		2. 52					
6. 91 Chem. S-23										
6. 95 Chem. O-11' A-10										
7. 18 Chem. A-10' 2. 68 AAS T-23' 5. 14 INAA B-58 7. 18 Chem. A-2' 2. 34 Calc B-482 4. 7100 NAA B-126 7. 26 Chem. 0-3' 2. 35 Calc. B-216 4. 95 NAA B-11 7. 31 Chem. K-11' 2. 44 Calc. B-31 5. 01 NAA B-287 7. 32 Chem. K-11' 2. 55 Calc. B-15 4. 89 Photom. B-51 7. 41 Chem. K-11' 2. 72 Calc. B-25 4. 8551 SIMS B-337 7. 27 Decom. (at R. T.) B-123 2. 79 Calc. B-25 4. 8551 SIMS B-337 7. 27 Decom. (at R. T.) B-123 2. 79 Calc. B-270 5. 22 XRF B-11 6. 96 ICP B-192 2. 80 Calc. B-36 5. 25 XRF B-84 7. 05 ICP B-196 2. 33 Chem. K-11' 5. 921 XRF B-11 7. 27 ICP B-122 2. 35 Chem. A-10' 7. 69 ICP K-18' 2. 35 Chem. A-10' 6. 89 ICP & AAS B-5' 2. 41 Chem. K-11' 7. 08 ICP-MS B-320 2. 42 Chem. B-45 0. 18 B-146 6. 60 INAA B-447 2. 42 Chem. O-11' A-10 0. 12 AAS B-312										
7. 18 Chem. A-2' 2. 34 Calc B-482 4. 7100 NAA B-126 7. 26 Chem. 0-3' 2. 35 Calc. B-216 4. 95 NAA B-11 7. 31 Chem. K-11' 2. 44 Calc. B-31 5. 01 NAA B-287 7. 32 Chem. K-11' 2. 55 Calc. B-15 4. 89 Photom. B-51 7. 41 Chem. K-11' 2. 72 Calc. B-25 4. 8551 SIMS B-337 7. 27 Decom. (at R. T.) B-123 2. 79 Calc. B-270 5. 22 XRF B-11 6. 96 ICP B-192 2. 80 Calc. B-36 5. 25 XRF B-84 7. 05 ICP B-196 2. 33 Chem. K-11' 5. 921 XRF B-11 7. 27 ICP B-122 2. 35 Chem. A-10' 7. 69 ICP K-18' 2. 35 Chem. A-2' 6. 89 ICP & AAS B-5' 2. 41 Chem. K-11' 7. 08 ICP-MS B-320 2. 42 Chem. B-45 0. 18 B-146 6. 60 INAA B-447 2. 42 Chem. O-11' A-10 0. 12 AAS B-312										
7. 26 Chem. 0-3' 2. 35 Calc. B-216 4. 95 NAA B-11 7. 31 Chem. K-11' 2. 44 Calc. B-31 5. 01 NAA B-287 7. 32 Chem. K-11' 2. 55 Calc. B-15 4. 89 Photom. B-51 7. 41 Chem. K-11' 2. 72 Calc. B-25 4. 8551 SIMS B-337 7. 27 Decom. (at R. T.) B-123 2. 79 Calc. B-270 5. 22 XRF B-11 6. 96 ICP B-192 2. 80 Calc. B-36 5. 25 XRF B-84 7. 05 ICP B-196 2. 33 Chem. K-11' 5. 921 XRF B-11 7. 27 ICP B-122 2. 35 Chem. A-10' 7. 69 ICP K-18' 2. 35 Chem. A-2' 6. 89 ICP & AAS B-5' 2. 41 Chem. K-11' 7. 08 ICP-MS B-320 2. 42 Chem. B-45 0. 18 B-146 6. 60 INAA B-447 2. 42 Chem. 0-11' A-10 0. 12 AAS B-312										
7. 31 Chem. K-11' 2. 44 Calc. B-31 5. 01 NAA B-287 7. 32 Chem. K-11' 2. 55 Calc. B-15 4. 89 Photom. B-51 7. 41 Chem. K-11' 2. 72 Calc. B-25 4. 8551 SIMS B-337 7. 27 Decom. (at R.T.)B-123 2. 79 Calc. B-270 5. 22 XRF B-11 6. 96 ICP B-192 2. 80 Calc. B-36 5. 25 XRF B-84 7. 05 ICP B-196 2. 33 Chem. K-11' 5. 921 XRF B-11 7. 27 ICP B-122 2. 35 Chem. A-10' 7. 69 ICP K-18' 2. 35 Chem. A-2' Mn0 6. 89 ICP & AAS B-5' 2. 41 Chem. K-11' 7. 08 ICP-MS B-320 2. 42 Chem. B-45 0. 18 B-146 6. 60 INAA B-447 2. 42 Chem. O-11' A-10 0. 12 AAS B-312										
7. 32 Chem. K-11' 2. 55 Ca1c. B-15 4. 89 Photom. B-51 7. 41 Chem. K-11' 2. 72 Ca1c. B-25 4. 8551 SIMS B-337 7. 27 Decom. (at R.T.)B-123 2. 79 Ca1c. B-270 5. 22 XRF B-11 6. 96 ICP B-192 2. 80 Ca1c. B-36 5. 25 XRF B-84 7. 05 ICP B-196 2. 33 Chem. K-11' 5. 921 XRF B-111 7. 27 ICP B-122 2. 35 Chem. A-10' 7. 69 ICP K-18' 2. 35 Chem. A-2' 6. 89 ICP & AAS B-5' 2. 41 Chem. K-11' 7. 08 ICP-MS B-320 2. 42 Chem. B-45 0. 18 B-146 6. 60 INAA B-447 2. 42 Chem. O-11' A-10 0. 12 AAS B-312										
7. 41 Chem. K-11' 2. 72 Calc. B-25 4. 8551 SIMS B-337 7. 27 Decom. (at R.T.)B-123 2. 79 Calc. B-270 5. 22 XRF B-11 6. 96 ICP B-192 2. 80 Calc. B-36 5. 25 XRF B-84 7. 05 ICP B-196 2. 33 Chem. K-11' 5. 921 XRF B-111 7. 27 ICP B-122 2. 35 Chem. A-10' 7. 69 ICP K-18' 2. 35 Chem. A-2' MnO 6. 89 ICP & AAS B-5' 2. 41 Chem. K-11' 7. 08 ICP-MS B-320 2. 42 Chem. B-45 0. 18 B-146 6. 60 INAA B-447 2. 42 Chem. 0-11' A-10 0. 12 AAS B-312										
7. 27 Decom. (at R. T.) B-123										
6. 96 ICP B-192 2. 80 Ca1c. B-36 5. 25 XRF B-84 7. 05 ICP B-196 2. 33 Chem. K-11' 5. 921 XRF B-111 7. 27 ICP B-122 2. 35 Chem. A-10' 7. 69 ICP K-18' 2. 35 Chem. A-2' MnO 6. 89 ICP & AAS B-5' 2. 41 Chem. K-11' N-11' 7. 08 ICP-MS B-320 2. 42 Chem. B-45 0. 18 B-146 6. 60 INAA B-447 2. 42 Chem. 0-11' A-10' 0. 12 AAS B-312										
7. 05 ICP B-196 2. 33 Chem. K-11' 5. 921 XRF B-111 7. 27 ICP B-122 2. 35 Chem. A-10' 7. 69 ICP K-18' 2. 35 Chem. A-2' MnO 6. 89 ICP & AAS B-5' 2. 41 Chem. K-11' 7. 08 ICP-MS B-320 2. 42 Chem. B-45 0. 18 B-146 6. 60 INAA B-447 2. 42 Chem. 0-11' A-10 0. 12 AAS B-312										
7. 27 ICP B-122 2. 35 Chem. A-10' 7. 69 ICP K-18' 2. 35 Chem. A-2' MnO 6. 89 ICP & AAS B-5' 2. 41 Chem. K-11' 7. 08 ICP-MS B-320 2. 42 Chem. B-45 0. 18 B-146 6. 60 INAA B-447 2. 42 Chem. 0-11' A-10' 0. 12 AAS B-312										
7. 69 ICP K-18' 2. 35 Chem. A-2' MnO 6. 89 ICP & AAS B-5' 2. 41 Chem. K-11' 7. 08 ICP-MS B-320 2. 42 Chem. B-45 0. 18 B-146 6. 60 INAA B-447 2. 42 Chem. 0-11' A-10 0. 12 AAS B-312								1		
6.89 ICP & AAS B-5' 2.41 Chem. K-11' 7.08 ICP-MS B-320 2.42 Chem. B-45 0.18 B-146 6.60 INAA B-447 2.42 Chem. 0-11' A-10 0.12 AAS B-312								MnO		
7.08 ICP-MS B-320 2.42 Chem. B-45 0.18 B-146 6.60 INAA B-447 2.42 Chem. 0-11' A-10 0.12 AAS B-312									_	
6.60 INAA B-447 2.42 Chem. 0-11'A-10 0.12 AAS B-312							B-45	0.18		
6.74 INAA B-270 2.55 Chem. 0-3' 0.15 AAS B-224								0.12	AAS	
		6.74	INAA	B-270	2. 55	Chem.	0-3'	0.15	AAS	B-224

Table A-1 Individual data for JA-1

%	Method	Code No.	<u> </u>	Method	Code No.	%	Method	Code No.
0. 15	AAS	B-279	Mn			1.51	XRF	B-67
0. 15	AAS	B-80, B-94		-		1. 52	XRF	B-18
0. 154	AAS	B-134	0. 1180	AAS	B-25	1. 52	XRF	B-87
0. 157	AAS	B-93	0. 1250		B-325	1.54	XRF	B-31
0. 157		B-84	0. 1230			1. 54		B-43
	AAS				B-128		XRF	
0.16	AAS	B-216		AAS(microwave)		1. 57	XRF	B-16
0.16	AAS	T-41'	0. 1137		B-77	1.58	XRF	B-40
0.16	AAS	B-328	0. 118	INAA	B-58	1. 59	XRF	0-3'
0.17	AAS	B-109	0.12	NAA	B-11	1.60	XRF	B-25
0.17	AAS	B-15	0, 121		B-287	1.61	XRF	B-247
0.17	AAS	T-23'	0. 1078		B-337	1.61	XRF	B-270
0. 15	AAS & Photom.	C-4	0. 1159		B-130	1. 62	XRF	S-26'
0. 15				XRF	B-11	1. 62	XRF	S-24'
	Chem.	K-11'	0. 12	AUL.				
0. 15	Chem.	A-10'	0. 1375		B-111	1.63	XRF	B-90
0. 15	Chem.	A-2'		XRF(fusion)	B-36	1.67	XRF	B-125
0. 15	Chem.	0-11' A-10	0. 1189	XRF(powder)	B-36	1.68	XRF	Y-8'
0.16	Chem.	B-39				1. 71	XRF	B-75
0.16	Chem.	B-45	MgO			1.75	XRF	B-19
0. 16	Chem.	0-3	1180			1.66	XRF & Chem.	B-6'
			1 50	AAC	D 15			
0. 16	Chem.	B-56, B-221	1.50	AAS	B-15	1. 58	XRF(Dry basis)	
0. 16	Chem.	K-11'	1. 52	AAS	B-312	1. 56	XRF(fusion)	B-70
0.17	Chem.	K-11'	1.52	AAS	B-130	ļ		
0.18	Chem.	G-7	1.54	AAS	B-129	Mg		
0.160	FI-Photom.	B~261	1.55	AAS	B-328		-	
0. 14	ICP	B-122	1. 56	AAS	B-93	0.040	AAS(microwave)	R-433
0. 14		K-18'	1. 59		B-134	0. 8800		B-77
	ICP			AAS				
0. 14	ICP	B-482	1.6	AAS	B-216	0. 52	INAA	B-58
0. 15	ICP	B-192	1.6	AAS	B-279	1. 0687	SIMS	B-337
0.16	ICP	B-196	1.64	AAS	B-84			
0.16	I CP	B-18	1.68	AAS	B-109	Ca0		
0. 14	ICP & AAS	B-5'	1. 55	AAS	T-41'		-	
0. 16	ICP-MS	B-320	1.64	AAS	T-23'	5. 3	AAS	B-279
								B-93
0. 152	INAA	B-270	1.51	AAS & Photom.	C-4	5. 61	AAS	
0.171	INAA	B-447	1.62	AAS & Photom.	C-5'	5. 65	AAS	B-328
0. 152	INAA(epi)	B-18	1.46	Chem.	A-10'	5. 69	AAS	B-134
0. 15	Micro wave pla	sG-6'	1.46	Chem.	A-2'	5. 72	AAS	B-312
0.164	NAA	B-234, B-277	1.54	Chem.	G-7	5. 8	AAS	B-216
0.14	PAA	B-55	1.58	Chem.	B-39	5. 80	AAS	B-109
0. 15	Photom.	B-153	1.59	Chem.	K-11'	5. 87	AAS	T-23'
0. 16					B-56, B-221	5. 65	AAS	T-41'
	Photom.	B-14, B-91	1. 59	Chem.				
0. 18	Photom.	B-130	1.60	Chem.	K-11'	6. 22	AAS & Photom.	C-4
0.14	Various	P-5'	1.61	Chem.	0-11' A-10	5. 36	Chem.	G-7'
0.156	Various	S-23	1.62	Chem.	K-11'	5.64	Chem.	K-11'
0.15	XRF	B-247	1.65	Chem.	B-45	5. 68	Chem.	0-11' A-
0.15	XRF	B-44, B-73	1. 67	Chem.	0-3'	5. 69	Chem.	K-11'
0. 15	XRF	B-125	1. 54	Grav.	B-14, B-91	5. 69	Chem.	B-56, B-2
0. 15	XRF	B-18	1.54	Grav.	B-153	5. 72	Chem.	K-11'
								A-2'
0. 15	XRF	B-75	1. 63	Grav.	B-80, B-94	5. 85	Chem.	
0. 156	XRF	B-270	1. 41	ICP	B-482	5. 85	Chem.	A-10'
0. 16	XRF	0-3'	1.51	ICP	B-192	5. 89	Chem.	0-3'
0.16	XRF	B-19	1.53	ICP	B-122	5. 91	Chem.	B-45
0.16	XRF	B-90		I CP	B-196	6. 07	Chem.	B-39
0. 16	XRF	B-67	1. 65	ICP	K-18'	5. 66	Grav.	B-153
0. 16	XRF	B-31	1.61	ICP & AAS	B-5'	5. 75	Grav.	B-80, B-
						5. 50	ICP	B-482
0. 16	XRF	B-16	1.61	ICP-MS	B-320			
0. 16	XRF	B-43	1. 48	INAA	B-18	5. 70	ICP	B-196
0.16	XRF	Y-8'	1.74	INAA	B-270	5. 73	ICP	B-18
0.162	XRF	B-40	1. 37	Micro wave pla	sG-6'	5. 97	ICP	B-122
0. 17	XRF	S-26	1. 52	PAA	B-55	5. 59	ICP	B-192
0. 17	XRF	B-87	1. 47	Various	P-5'	5. 88	ICP	K-18'
						5. 58	ICP & AAS	B-5'
0.18	XRF	B-109	1. 55	Various	S-23			
0. 15	XRF	S-24'	1.54	Vol.	B-130	5. 70	ICP-MS	B-320
0. 15	XRF & Chem.	B-6'	1.54	Vol.	B-224	5. 40	INAA	B-447
	XRF(Dry basis)	B-129	1.46	XRF	T-13'	5. 69	INAA	B-270
0. 18	AIG (DI J DOG 10)							
0. 18 0. 16	XRF(fusion)	B-70	1. 46	XRF	B-36	5. 9	INAA(γ-ray)	B-18

Table A-1 Individual data for JA-1

*	Method	Code No.	%	Method	Code No.	*	Method	Code No.
5. 40	NAA	B-277	3. 98	Chem.	B-39	0.76	AAS	B-134
5. 69	PAA	B-55	4. 08	Chem.	A-10'	0. 80	AAS	B-328
5. 55	Various	P-5'	3. 91	Chem.	K-11'	0. 81	AAS	B-109
5. 67	Various	S-23	4. 08	FE	A-2'	0. 82	AAS	0-11' A-10
5. 60	Vol.	B-14, B-91	3. 71	FES	B-279	0. 82	AAS	B-93
5. 61	Vol.	B-224	3.84	FES	B-122	0.84	AAS	B-224
5. 63	Vol.	B-130		FI-AAS	B-262	0. 85	AAS	B-216
5. 45	XRF	B-109	3. 76	Fl. Photom.	B-80, B-94	0. 91	AAS	B-14, B-91
5. 51	XRF	B-67	3. 77	F1. Photom.	B-87	0. 80	AAS	T-41'
5. 56	XRF	S-24'	3. 80	F1. Photom.	B-130	0. 80	AAS	T-23'
5. 59	XRF	B-84	3. 87	Fl. Photom.	B-153	0. 69	AAS & Photom.	C-4
5. 62	XRF	B-15	3. 88	Fl. Photom.	B-56, B-221	0.71	AAS & Photom.	C-5'
5. 63	XRF	B-87	3. 69	ICP	B-482	0.65	Chem.	B-39
5. 64	XRF XRF	B-43 B-36	3. 72 3. 83	I CP I CP	B-192 B-196	0. 72	Chem.	B-45 K-11'
5. 65 5. 68	XRF	B-44, B-73	3. 63 4. 01	ICP	K-18'	0. 82 0. 82	Chem. Chem.	0-3'
5. 68	XRF	B-247	3. 80	ICP & AAS	B-5'	0. 82	Chem.	G-7
5. 68	XRF	B-134	3. 72	ICP-MS	B-320	0.83	Chem.	K-11'
5. 70	XRF	Y-8'	3. 18	INAA	B-447	0.85	Chem.	A-10'
5. 70	XRF	B-18	3. 92	INAA	B-270	0.84	FE	K-11'
5. 70	XRF	B-25	3. 98	INAA	B-18	0.85	FE	A-2'
5. 73	XRF	B-16	3. 73	Micro wave plas		0.770	FES	B-236
5. 74	XRF	B-31	3. 61	NAA	B-3	0. 83	FES	B-122
5. 74	XRF	B-75	4. 00	NAA	B-234, B-277	0. 92	FES	B-279
5. 76	XRF	B-19	3. 76	PAA	B-55	0.79	F1-AAS	B-262
5. 76	XRF	B-40	3. 90	Various	P-5'	0.76	Fl. Photom.	B-56, B-221
5. 77	XRF	T-13'	3. 90	Various	S-23	0.77	Fl. Photom.	B-153
5. 77	XRF	S-26'	3. 35	XRF	B-90	0. 77	Fl. Photom.	B-80, B-94
5. 80	XRF	B-90	3. 65	XRF	B-40	0. 83	Fl. Photom.	B-130
5. 82	XRF	B-270	3. 69	XRF	B-43	0. 58	ICP	B-192
5. 95	XRF	0-3'	3. 70	XRF	B-25	0.70	ICP	B-482
6.02	XRF	B-125		XRF	B-110, Y-8'	0. 72	ICP	B-18
5. 48	XRF & Chem.	B-6'	3. 76	XRF	B-75	0. 79	ICP	K-18'
5. 66	XRF(Dry basis)			XRF	B-31	0. 73	ICP & AAS	B-5'
5. 76	XRF(fusion)	B-70	3. 80	XRF	B-44, B-73	0. 85	ICP-MS	B-320
•			3. 82	XRF	B-270	0.754	INAA	B-447
Ca	_		3. 82	XRF	B-36	0. 75	INAA(γ-ray)	B-18
1 0000	110	D 77	3. 82	XRF	T-13'	0. 83	Micro wave pla	
1. 9600		B-77	3. 86	XRF	B-247	0.81	NAA	B-234, B-277
4. 55 4. 2	I NAA NAA	B-289, B-300 B-11	3. 86 3. 88	XRF XRF	B-19 B-67	0. 78 0. 83	Various Various	S-23 P-5'
4. 0251		B-337	3. 89	XRF	B-18	0. 65	XRF	B-109
3. 96	XRF	B-11	3. 95	XRF	S-26	0. 03	XRF	B-18
4. 350	XRF	B-111	4. 04	XRF	B-16	0.72	XRF	B-125
4.000	Alti	D 111	4. 07	XRF	0-3	0.74	XRF	B-43
Na20			4. 16	XRF	B-125	0.74	XRF	B-134
	~		4. 29	XRF	B-6'	0.75	XRF	B-36
3. 70		B-146	3. 82	XRF(Dry basis)		0.76	XRF	B-31
3. 54	AAS	B-312	3. 93	XRF(fusion)	B-70	0.76	XRF	B-40
3.74	AAS	B-134		•		0.77	XRF	B-270
3.84	AAS	B-93	Na			0.77	XRF	B-87
3. 85	AAS	B-216		-		0.77	XRF	B-75
3. 86	AAS	0-11' A-10	2. 84	AAS	B-84	0.78	XRF	B-44, B-73
3. 87	AAS	B-328	3. 0000		B-77	0.78	XRF	B-90
3. 89	AAS	B-15	2. 72	AAS(microwave)		0.79	XRF	S-26'
3. 89	AAS	B-224	2. 81	INAA	B-24	0.79	XRF	B-15
3. 94	AAS	S-23'	2. 90	INAA	B-289, B-300	0. 79	XRF	B-16
3. 94	AAS	B-14, B-91	2. 94	INAA	B-324	0.79	XRF	B-25
3. 97	AAS	B-109	2. 94	INAA	B-58	0.81	XRF	B-19
3. 87	AAS	T-41'	2. 84	NAA	B-287	0.81	XRF	T-13'
3. 97	AAS	T-23'	3. 20	NAA	B-11	0. 82	XRF	B-247
3. 75	Chem.	B-45 C-7	3. 0563	21W2	B-337	0.82	XRF XRF	Y-8' 0-3'
3. 80 3. 81	Chem. Chem.	G-7 K-11'	K20			0. 83 0. 91	XRF	0-3 B-67
3. 93	Chem.	K-11'	NZU	-		0. 77	XRF	S-24'
3. 94	Chem.	0-3'	0. 68	AAS	B-312	0.76	XRF & Chem.	B-6'
0.01			, 5.00			, 5		-· -

Table A-1 Individual data for JA-1

0.70 rcntg. B-41 0.16 XRF S-26' 0.65 Tit B-48 0.76 rcntg. B-237 0.160 XRF B-270 0.76 rcntg. B-273 0.17 XRF B-19 H20- 0.84 rcntg. B-109 0.170 XRF B-40 0.18 XRF B-109 0.24 Chem. T-41 0.18 XRF B-125 0.25 Chem. B-6' 0.19 XRF B-36 0.26 Chem. 0-11 0.6300 AAS B-77 0.20 XRF B-75 0.31 Chem. G-7 0.649 AAS B-84 0.16 XRF S-24' 0.32 Chem. P-5' 0.650 AAS(microwave) B-433 0.19 XRF & Chem. B-6' 0.38 Coul. B-27 0.6700 IDMS B-100, B-296, 0.16 XRF (Dry basis) B-129 0.37 Grav B-44 0.6890 IDMS B-48 0.17 XRF(fusion) B-70 0.19 Grav. B-93	, B-91 2 2 3 4 A-10 0 10 12 12 13 13 13 13 13 14 15 15 16 16 17 18 18 18 18 18 18 18 18 18 18 18 18 18
0.70 rcntg. B-41 0.16 XRF S-26' 0.65 Tit B-48 0.76 rcntg. B-237 0.160 XRF B-270 0.76 rcntg. B-273 0.17 XRF B-19 H20- 0.84 rcntg. B-109 0.170 XRF B-40 0.18 XRF B-109 0.24 Chem. T-41 0.18 XRF B-125 0.25 Chem. B-6' 0.19 XRF B-36 0.26 Chem. 0-11 0.6300 AAS B-77 0.20 XRF B-75 0.31 Chem. G-7 0.649 AAS B-84 0.16 XRF S-24' 0.32 Chem. P-5' 0.650 AAS(microwave) B-433 0.19 XRF & Chem. B-6' 0.38 Coul. B-27 0.6700 IDMS B-100, B-296, 0.16 XRF (Dry basis) B-129 0.37 Grav B-44 0.6890 IDMS B-48 0.17 XRF(fusion) B-70 0.19 Grav. B-95'	. A-10 .
0.76 r cntg. B-237 0.160 XRF B-270 H20- 0.76 r cntg. B-273 0.17 XRF B-19 H20- 0.84 r cntg. B-109 0.17 XRF B-40 K 0.18 XRF B-109 0.24 Chem. T-41 0.18 XRF B-125 0.25 Chem. B-6* 0.19 XRF B-36 0.26 Chem. 0-11 0.6300 AAS B-77 0.20 XRF B-75 0.31 Chem. G-7 0.649 AAS B-84 0.16 XRF S-24* 0.32 Chem. P-5* 0.6700 IDMS B-100, B-296, 0.16 XRF(Dry basis) B-129 0.37 Grav B-48 0.6890 IDMS B-48 0.17 XRF(fusion) B-70 0.19 Grav B-93	A-10 10 12 12 13 16 17 18 18 18 18 18 18 18 18 18
0.76 rcntg. B-273 0.17 XRF B-19 H20- 0.84 rcntg. B-109 0.170 XRF B-40 0.18 XRF B-109 0.24 Chem. T-41 K 0.18 XRF B-125 0.25 Chem. B-6' 0.19 XRF B-36 0.26 Chem. 0-11 0.6300 AAS B-77 0.20 XRF B-75 0.31 Chem. G-7 0.649 AAS B-84 0.16 XRF S-24' 0.32 Chem. P-5' 0.650 AAS(microwave) B-433 0.19 XRF & Chem. B-6' 0.38 Coul. B-27 0.6700 IDMS B-100, B-296, 0.16 XRF (Dry basis) B-129 0.37 Grav B-44 0.6890 IDMS B-48 0.17 XRF(fusion) B-70 0.19 Grav. B-95'	7 A-10 10 12 13 13 13 10 10 10 10 10 10 10 10 10 10
0.84 r cntg. B-109 0.170 XRF B-40 K 0.18 XRF B-109 0.24 Chem. T-41 0.18 XRF B-125 0.25 Chem. B-6* 0.6300 AAS B-77 0.20 XRF B-75 0.31 Chem. G-7 0.649 AAS B-84 0.16 XRF S-24* 0.32 Chem. P-5* 0.650 AAS(microwave) B-433 0.19 XRF & Chem. B-6* 0.38 Coul. B-27 0.6700 IDMS B-100, B-296, 0.16 XRF(Dry basis) B-129 0.37 Grav B-48 0.6890 IDMS B-48 0.17 XRF(fusion) B-70 0.19 Grav. B-93	7 A-10 10 12 13 13 13 10 10 10 10 10 10 10 10 10 10
K 0.18 XRF B-125 0.25 Chem. B-6' 0.6300 AAS B-77 0.20 XRF B-75 0.31 Chem. G-7 0.649 AAS B-84 0.16 XRF S-24' 0.32 Chem. P-5' 0.650 AAS(microwave) B-433 0.19 XRF & Chem. B-6' 0.38 Coul. B-25' 0.6700 IDMS B-100, B-296, 0.16 XRF(Dry basis) B-129 0.37 Grav B-48' 0.6890 IDMS B-48 0.17 XRF(fusion) B-70 0.19 Grav. B-93'	7 A-10 10 12 13 13 13 10 10 10 10 10 10 10 10 10 10
0.19 XRF B-36 0.26 Chem. 0-11	' A-10 ' A-10 ' A-10 ' A-10 ' A-10 ' A-10
0.6300 AAS B-77 0.20 XRF B-75 0.31 Chem. G-7 0.649 AAS B-84 0.16 XRF S-24' 0.32 Chem. P-5' 0.650 AAS(microwave) B-433 0.19 XRF & Chem. B-6' 0.38 Coul. B-27 0.6700 IDMS B-100, B-296, 0.16 XRF(Dry basis) B-129 0.37 Grav B-48 0.6890 IDMS B-48 0.17 XRF(fusion) B-70 0.19 Grav. B-95	0 12 3 5 6 7 2 8 7 8 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
0.649 AAS B-84 0.16 XRF S-24' 0.32 Chem. P-5' 0.650 AAS(microwave) B-433 0.19 XRF & Chem. B-6' 0.38 Coul. B-27 0.6700 IDMS B-100, B-296, 0.16 XRF(Dry basis) B-129 0.37 Grav B-48 0.17 XRF(fusion) B-70 0.19 Grav. B-95	70 82 8 6 2 8, B-221 63 80 0, B-94
0.650 AAS(microwave) B-433 0.19 XRF & Chem. B-6' 0.38 Coul. B-27 0.6700 IDMS B-100, B-296, 0.16 XRF(Dry basis) B-129 0.37 Grav B-48 0.17 XRF(fusion) B-70 0.19 Grav. B-95	32 3 5 2 3, B-221 33 30 0, B-94
0.6890 IDMS B-48 0.17 XRF(fusion) B-70 0.19 Grav. B-98	3 5 2 3, B-221 33 30 0, B-94
	2 2 3, B-221 33 30 0, B-94
0.66 NAA B-287 0.20 Grav. B-45	2 3, B-221 53 80 0, B-94
0.6486 SIMS B-337 P (ppm) 0.21 Grav. B-31	5, B-221 53 80 5, B-94 5
	30), B-94 3
0.60 XRF B-11 562 ICP B-77 0.28 Grav. B-15), B-94 S
630 OES B-208 0.31 Grav. B-15	5
P205 741 SIMS B-337 0.32 Grav. B-80 771 XRF B-25 0.32 Grav. B-16	5
0.16 AAS T-41' B-25 0.32 Grav. B-25 0.32 Grav. B-25 0.34 Grav. B-25 0.34 Grav. B-26 0.34 Grav. B-26 0.34 Grav. B-26 0.34 Grav. B-26 0.36 Grav.	
0. 17 AAS T-23' S03 0. 38 Grav. B-13	
0. 22 AAS & Photom. C-4 0. 39 KF B-1	1, B-91
0. 22 AAS & Photom. C-5' <0. 02 XRF B-36	
0.13 Chem. A-2' C02	
0. 15 Chem. B-56, B-221 L. O. I. 0. 15 Chem. 0-3' 0. 036 Chem. B-4!	;
0.16 Chem. A-10' 1.22 Chem. B-39 0.11 Chem. B-36	
0.16 Chem. 0-11' A-10 0.15 Grav. B-70 0.14 Chem. B-25	
0.16 Chem. K-11' 0.35 Grav. B-129 <0.07 Chem. G-7	
0.16 Chem. K-11' 0.36 Grav. B-87 <0.07 Conduct. B-1	10
0.16 Chem. K-11' 0.51 Grav. T-13' 0.18 Chem. B-45 0.51 Grav. B-36	
0.19 Chem. G-7 0.54 Grav. B-16	
0.19 Chem. B-39 0.56 Grav. S-24'	
0.17 FI-Photom. B-254 0.58 Grav. B-19	
0.14 ICP B-196 0.67 Grav. B-224	
0. 16 ICP B-192 0. 67 Grav. S-23 0. 17 ICP K-18' 0. 80 Grav. B-25	
0.17 ICI R 10 0.00 GTaV. B 20 0.15 ICP & AAS B-5' 1.09 Grav. G-6'	
0. 18 ICP-MS B-320 1. 12 Grav. B-134	
0.14 Micro wave plasG-6' 1.13 Grav. B-15	
0.15 Photm B-482 1.30 Grav. B-31	
0.14 Photom. B-279 0.15 Photom. B-224 T-H20	
0. 15 Photom. B-134 1 H20	
0. 16 Photom. B-15 1. 03 Coul. B-270	
0.164 Photom. B-84 0.27 Grav. B-224	
0. 165 Photom. B-216 1. 1 Grav. B-216	
0.170 Photom. B-93 1.04 INAA(PG) B-436 0.19 Photom. B-80, B-94	
0. 19 Photom. B-80, B-94 0. 19 Photom. B-130 H20+	
0. 22 Photom. B-153	
0.16 Various P-5' 0.41 Chem. P-5'	
0.167 Various S-23 0.69 Chem. B-6'	
0.13 Vol. B-14, B-91 0.80 Chem. 0-11'A-10 0.11 XRF B-90 0.80 Chem. T-41'	
0.11 XRF B-90 0.80 Chem. T-41' 0.13 XRF B-67 0.65 Coul. B-270	
0. 15 XRF B-31 0. 62 Grav. B-312	
0.15 XRF B-44, B-73 0.64 Grav. B-93	
0.15 XRF 0-3' 0.80 Grav. B-25	
0. 16 XRF Y-8' 0. 83 Grav. B-36	
0. 16 XRF B-247 0. 83 Grav. B-80, B-94 0. 16 XRF B-18 0. 91 Grav. B-45	
0. 16 XRF B-43 0. 91 Grav. B-153	

Table A-2 Individual data for JA-2

%	Method	Code No.	%	Method	Code No.	%	Method	Code No.
Si02	-		A1203			6. 48 6. 50	XRF XRF	B-270 B-63
56. 19 56. 33 56. 35 56. 50	AAS AAS AAS AAS	B-134 B-202 B-216 B-434	15. 27 15. 37 15. 4	AAS AAS AAS	Y-14' B-202 B-279	Fe203 2. 03	- Calc.	B-134
57. 06 54. 53 56. 18 55. 93	AAS Chem. Chem. Grav.	Y-14' B-181 B-258-7 B-224	15. 40 15. 50 15. 87 14. 90	AAS AAS Chem.	B-167 B-216 B-134 B-181	2. 04 2. 04 2. 05 2. 05	Calc. Calc. Calc. Calc.	B-134 B-136 B-216 B-142
56. 18 56. 20 56. 28 55. 8	Grav. & AAS Grav. & AAS INAA	F-3' B-167 B-139 B-447	15. 32 16. 20 15. 38 14. 8	Chem. Grav. & AAS ICP INAA	B-258-7 B-139 B-434 B-447	2. 06 2. 08 2. 13 2. 16	Calc. Calc. Calc. Calc.	B-167 B-139 B-258-7 B-59
55. 8 57. 22 56. 09 56. 16	NAA Photom. XRF XRF	B-277 B-279 B-134 B-201	15. 9 14. 8 15. 32 15. 45	INAA NAA Vol. Vol.	B-270 B-277 F-3' B-224	2. 24 2. 33 2. 51 2. 31	Calc. Calc. Calc. Chem.	B-202 B-63 B-270 F-3'
56. 18 56. 31 56. 35	XRF XRF XRF	B-247 B-62 B-142	14. 68 15. 14 15. 24	XRF XRF XRF	B-270 B-134 B-62	Fe0	-	
56. 42 56. 53 57. 02 57. 04	XRF XRF XRF XRF	B-136 B-63 B-270 B-59	15. 30 15. 32 15. 38 15. 41	XRF XRF XRF XRF	T-51' B-247 B-434 B-142	3. 60 3. 57 3. 9 3. 49	Chem. Photom. Photom. Vol.	B-258-7 B-270 B-216 B-279
57. 08 57. 16 57. 98 Si	XRF XRF XRF	B-61 B-434 T-51'	15. 61 15. 62 15. 68 15. 77 15. 98	XRF XRF XRF XRF XRF	B-63 B-136 B-201 B-59 B-61	3. 51 3. 60 3. 70 3. 71 3. 72	Vol. Vol. Vol. Vol. Vol.	B-224 F-3' B-136 B-134 B-202
26. 2711	SIMS	B-337	Al	_	5 01	3. 75 3. 80 3. 82	Vol. Vol. Vol.	B-63 B-59 B-167
TiO2	-	n 194	7. 9459	SIMS	B-337	3. 85 3. 61	Vol. Vol. ?	B-142 B-139
0. 64 0. 65 0. 67	AAS AAS AAS	B-134 B-216 B-167	6. 1	 AAS	B-279	Fe	-	
0. 673 0. 63 0. 67 0. 67	AAS Chem. Chem. Chem.	Y-14' B-181 B-258-7 F-3'	6. 14 6. 16 6. 17 6. 31	AAS AAS AAS	F-3' B-134 Y-14' B-167	4. 2 4. 2 4. 30 4. 30	INAA INAA INAA INAA	B-244 B-230 B-163 B-310
0. 67 0. 45 0. 66 0. 64	ICP INAA Photm(FI) Photom.	B-434 B-270 B-462 B-279	6. 31 6. 37 6. 10 6. 14	AAS AAS Chem. Chem.	B-328 B-202 B-181 B-258-7	4. 44 4. 53 4. 35 4. 5392	I NAA I NAA NAA	B-324 B-24 B-287 B-337
0. 66 0. 67 0. 68	Photom. Photom. Photom.	B-202 B-224 B-139	6. 26 6. 24 6. 30	ICP INAA INAA	B-434 B-270 B-447	MnO	_	
0. 65 0. 66 0. 66 0. 66	XRF XRF XRF XRF	B-134 B-136 B-64 B-62	6. 28 6. 07 6. 13 6. 18	NAA Photm(FI) Photom. Photom.	B-234, B-277 B-462 B-224 B-119	0. 09 0. 10 0. 107 0. 108	AAS AAS AAS AAS	B-139 B-224 Y-14' B-328
0. 67 0. 67 0. 67 0. 67	XRF XRF XRF	B-247 B-63 B-142 B-270	6. 5 6. 14 5. 53 6. 06	Photom. Vol. XRF XRF	B-216 B-119 T-51' B-62	0. 108 0. 11 0. 11 0. 11	AAS AAS AAS	B-167 B-216 B-134 B-279
0. 68 0. 68 0. 70 0. 70 0. 70	XRF XRF XRF XRF XRF	B-201 B-59 T-51' B-434 B-61	6. 10 6. 13 6. 14 6. 15 6. 15	XRF XRF XRF XRF XRF	B-434 B-64 B-247 B-134 B-136	0. 11 0. 115 0. 09 0. 11 0. 111	AAS AAS Chem. Chem. FI-Photom.	F-3' B-202 B-181 B-258-7 B-261
Ti	-	D 01	6. 33 6. 35 6. 37	XRF XRF XRF	B-142 B-201 B-61	0. 111 0. 112 0. 114	ICP INAA INAA	B-434 B-270 B-447
0. 4172	SIMS	B-337	6. 38	XRF	B-59	0. 114	NAA	B-234, B-277

Table A-2 Individual data for JA-2

%	Method	Code No.	%	Method	Code No.	*	Method	Code No.
	XRF	B-61	6. 54	Chem.	B-181			
0.10	XRF	B-64	6. 19	Grav. & AAS	B-139	K20		
0.10	XRF	B-62	6. 46	ICP	B-434		-	
	XRF	B-270	6. 36	INAA	B-270	1.69	AAS	B-202
	XRF	B-134	6. 38	Vol.	B-224	1. 76	AAS	B-134
	XRF	B-63	5. 88	XRF	B-64	1. 77	AAS	B-142
	XRF	B-136	5. 90	XRF	B-62	1. 78	AAS	Y-14'
	XRF	B-201	6. 15	XRF	B-201	1. 78	AAS	F-3'
	XRF	B-247	6. 16	XRF	B-136	1. 79	AAS	B-224
0.12	XRF	B-434	6. 18	XRF	B-134	1. 80	AAS	B-328
			6. 20	XRF	B-63	1. 80	AAS	B-167
Mn	-		6. 25	XRF	B-142	1. 9	AAS	B-216
			6. 37	XRF	B-61	1. 78	Chem.	B-258-7
0.0710		B-136	6. 39	XRF	B-59	1. 85	Chem.	B-181
0.0747		B-325	6. 48	XRF	B-270	1. 77	FES	B-236
0.0859	AAS	B-142	6. 48	XRF	B-247	1.98	FES	B-279
0.083	INAA	B-230	6. 51	XRF	B-434	1.79	FI-AAS	B-262
	INAA	B-244	6. 53	XRF	T-51'	1.82	F1. Photom.	B-139
	NAA	B-287				1.85	Fl. Photom.	B-434
0. 0895	SIMS	B-337	Ca			1. 87	INAA	B-447
0.0830	XRF(fusion)	B-59	- Ju	-		1. 88	INAA	B-270
	XRF(powder)	B-59	4. 5382	2MIS	B-337	1. 86	NAA	B-234, B-2
0.0024	ver (hoader)	טט ע	4. 0002	טוווט	וטט ע	1. 72	XRF	B-234, B-2 B-62
Mar)			Nego					
MgO	-		Na20	-		1.75	XRF	B-142
- 00						1. 76	XRF	B-134
7. 26	AAS	B-134	3. 03	AAS	Y-14'	1.78	XRF	B-59
7.4	AAS	B-279	3. 06	AAS	B-167	1.78	XRF	B-247
7.45	AAS	Y-14'	3. 06	AAS	B-328	1. 79	XRF	B-270
7.59	AAS	B-142	3. 08	AAS	F-3'	1.80	XRF	B-201
7.60	AAS	B-167	3. 12	AAS	B-142	1.82	XRF	B-64
7.60	AAS	B-328	3. 16	AAS	B-134	1.83	XRF	B-136
7.68	AAS	F-3'	3. 17	AAS	B-202	1. 83	XRF	B-63
7. 70	AAS	B-216	3. 17	AAS	B-224	1. 84	XRF	T-51'
7. 92	AAS	B-202	3. 25	AAS	B-216	1. 88	XRF	B-434
7. 68	Chem.	B-258-7	3. 23	Chem.	B-258-7	1. 88	XRF	B-61
					B-181	1. 83		B-273
7.40	Grav. & AAS	B-139	3. 45	Chem.			γ cntg.	
7. 78	ICP	B-434	2. 99	FES	B-279	1. 87	rentg.	B-237
8. 02	INAA	B-270	3. 09	FI-AAS	B-262			
7.70	Vol.	B-224	3. 02	Fl. Photom.	B-434	K	_	
7.02	XRF	B-64	3. 12	F1. Photom.	B-139			
7.14	XRF	B-136	3. 11	INAA	B-270	1. 4400		B-438
7. 25	XRF	B-201	3. 20	INAA	B-437	1. 22	INAA	B-163
7.46	XRF	B-61	3. 31	INAA	B-447	1. 22	INAA	B-310
7.48	XRF	B-63	3. 37	NAA	B-234, B-277	1.48	INAA	B-244
7.66	XRF	B-142	2. 90	XRF	B-61	1.48	INAA	B-230
7. 67	XRF	B-62	2. 90	XRF	B-434	1. 45	NAA	B-287
7. 68	XRF	B-247	2. 95	XRF	B-62	1. 2755		B-337
7. 69	XRF	T-51'	3. 00	XRF	B-63	1. 5.50		
7. 93	XRF	B-59	3.00	XRF	B-59	P205		
						1 400	-	
8. 24	XRF	B-270	3. 02	XRF	B-201	0.15	Chom	p_950 7
V			3. 03	XRF	B-270	0. 15	Chem.	B-258-7
Mg	_		3. 08	XRF	B-247	0. 16	Chem.	B-181
			3. 14	XRF	B-64		ICP	B-434
4. 6141	SIMS	B-337	3. 18	XRF	T-51'		Photom.	B-216
			3. 18	XRF	B-136	0.14	Photom.	B-224
Ca0	_		1			0.14	Photom.	B-142
	-		Na			0. 15	Photom.	F-3'
6. 0	AAS	B-279		_		0. 15	Photom.	B-167
6. 08	AAS	Y-14'	2. 28	INAA	B-310	0. 16	Photom.	B-202
6. 15	AAS	B-134	2. 28	INAA	B-163	0. 16	Photom.	B-279
6. 16	AAS	B-202	2. 23	INAA	B-244	0. 10	Photom.	B-139
							XRF	B-139 B-62
6. 29	AAS	B-167	2. 31	INAA	B-230	0. 11		
6. 29	AAS	B-328	2. 35	INAA	B-324	0. 13	XRF	B-63
6. 45	AAS	B-216	2. 37	INAA	B-24	0.14	XRF	B-434
	4.4.0	F-3'	2. 35	NAA	B-287	0. 14	XRF	B-61
6. 48 6. 48	AAS	B-258-7	2. 1251		B-337	0. 15	XRF	B-201

Major elements in 17 GSJ rock refevence samples (Terashima et al.)

Table A-2 Individual data for JA-2

%	Method	Code No.	%	Method	Code No.	%	Method	Code
0, 15	XRF	B-59						
0. 15 0. 15	XRF	B-247						
0. 152	XRF	B-270						
0. 102	Atti	<i>D</i> 210						
P	_(ppm)							
600	OES	B-208						
600		D-200 D-227						
545	SIMS	B-337						
777	XRF	B-136						
L. 0. I.	_							
0. 67	Grav.	B-59						
1. 03	Grav.	B-224						
1.04	Grav.	T-51'						
1. 22	Grav.	B-142						
1. 27	Grav.	B-61						
2. 03	Grav.	B-62						
2.00		Y-14'				Į.		
2. 27	Grav.	I-14 D 190						
2. 30	Grav.	B-136						
2. 48	Grav.	B-63						
2. 59	Grav.	B-134						
3. 95	Grav.	B-64						
T-H20	_							
1. 80	Coul.	B-270						
1.00		D-210	İ					
1.46	Grav.	B-224						
1. 85	Grav.	B-216						
H20+								
1.06	Chem.	F-3'						
1.06	Chem.	B-258-7	1					
0.87	Coul.	B-270						
0. 96		B-202						
0.90	Grav.	D-202 D-198						
0.97	Grav.	B-136					•	
1.02	Grav.	B-59						
1. 26	Grav.	B-167						
1.40	Grav.	B-139						
1. 46	Grav.	B-181						
H20-	_							
1. 41	Chem.	F-3'						
1.41	Chem.	B-258-7						
0.93	Coul.	B-270						
1. 12	Grav.	B-134						
1. 13	Grav.	B-139						
1. 19	Grav.	B-142				l		
1. 23	Grav.	B-167						
1. 30	Grav.	B-136						
1. 49	Grav.	B-202						
C02				•				
	-							
0.07	Vol.	B-59]]		
0. 07 0. 11	XRF	B-136						
S03								
	~ VDD	D 50						
<0.02	XRF	B-59						

Table A-3 Individual data for JA-3

%	Method	Code No.	%	Method	Code No.	%	Method	Code No.
Si02			15. 30	XRF	B-198	4. 84	Vol.	B-162
	-		15. 38	XRF	B-270	4. 84	Vol.	B-159, B-167
62. 15	AAS	B-216	15. 51	XRF	B-207	4. 87	Vol.	B-170
62. 26	AAS	B-418	15.54	XRF	B-138	4.90	Vol.	B-168
62. 19	Grav.	B-224	15. 57	XRF	B-247	5. 03	Vol.	B-207
62. 42	Grav.	B-162	15.62	XRF	B-189	4. 91	Vol. ?	B-139
62. 17	Grav. & AAS	B-139	15.74	XRF	B-201			
62. 26	Grav. & AAS	B-159, B-167	15.79	XRF	B-169	Fe		
61.58	I CP	B-476	15. 81	XRF	B-170		_	
63. 03	Photom.	B-279	15. 81	XRF	B-168	4.60	INAA	B-230, B-244
61.66	XRF	B-201	15. 89	XRF	B-219	4. 78	INAA	B-324
62. 03	XRF	B-189				4. 5392	SIMS	B-337
62. 05	XRF	B-138	A1	_				
62. 10	XRF	B-170				MnO	_	
62. 18	XRF	B-168	8. 0250	SIMS	B-337			
62. 26	XRF	B-247				0.09	AAS	B-139
62. 40	XRF	B-169	T-Fe203	_		0. 095	AAS	B-216
62. 44	XRF	B-207				0. 10	AAS	B-224
62. 46	XRF	B-270	6. 5	AAS	B-279	0. 106	AAS	B-418
62. 59	XRF	B-198	6. 55	AAS	B-139	0. 106	AAS	B-159, B-167
62. 89	XRF	B-219	6. 59	AAS	B-418	0. 106	AAS	B-328
0.			6. 59	AAS	B-328	0. 11	AAS	B-279
Si			6. 59	AAS	B-159, B-167	0.08	Chem.	B-205
00 1140	arva	D 007	6.06	Chem.	B-205	0. 107	FI-Photom.	B-261
29. 1143	21W2	B-337	6. 79	ICP	B-476	0. 12	ICP	B-476
m:00			6. 54	INAA	B-447	0. 100	INAA	B-270 B-447
Ti02	_		6. 75	INAA	B-270	0. 117 0. 123	INAA	
0.67	110	D 016	6.53	NAA	B-277 B-234	0. 123	NAA Photom.	B-234, B-277 B-162
0.67	AAS	B-216	6. 55	NAA Dhatm	B-467	0. 11	Vol.	B-102 B-198
0.68	AAS	B-159, B-167	6.66	Photm (EI)		0. 09	XRF	B-196 B-219
0. 78 0. 69	Chem. ICP	B-205 B-476	6. 51 6. 48	Photm(FI)	B-462 B-224	0. 10	XRF	B-168
0. 69		B-270	6. 75	Photom.	B-216	0. 10	XRF	B-189
0. 62	I NAA NAA	B-234, B-277	6. 27	Photom. XRF	B-216 B-270	0. 10	XRF	B-109 B-247
0. 69	Photm(FI)	B-462	6. 57	XRF	B-168	0. 106	XRF	B-247
0. 62	Photom.	B-402 B-279	6.58	XRF	B-219	0. 100	XRF	B-201
0. 68	Photom.	B-162	6. 59	XRF	B-247	0. 11	XRF	B-170
0. 69	Photom.	B-224	6.65	XRF	B-207	0.11	AILI.	D 110
0. 74	Photom.	B-139	6.66	XRF	B-169	Mn		
0. 58	XRF	B-138	6. 68	XRF	B-189	- FIAI	_	
0. 670	XRF	B-219	6. 69	XRF	B-201	0. 0847	AAS	B-207
0. 68	XRF	B-270	6. 86	XRF	B-170	0. 083		B-230, B-244
0. 68	XRF	B-247	7.00	XRF	B-138	0.0871		B-337
0. 68	XRF	B-169	1.00	75101	D 100	0. 0790		B-169
0. 68	XRF	B-170	Fe203					
0. 69	XRF	B-207		-		Mg0		
0.69	XRF	B-201	0.78	Calc.	B-270		_	
0.71	XRF	B-168	1.06	Calc.	B-207	3. 55	AAS	B-216
0.71	XRF	B-189	1.09	Calc.	B-139	3. 58	AAS	B-207
0.80	XRF	B-198	1. 10	Calc.	B-216	3. 65	AAS	B-159, B-167
			1. 13	Calc.	B-168	3. 65	AAS	B-328
Ti			1. 21	Calc.	B-159, B-167	3.8	AAS	B-279
			1. 43	Calc.	B-170	3.84	Chem.	B-205
0. 3866	SIMS	B-337	1. 44	Calc.	B-169	3. 82	Grav.	B-162
			1. 13	Photm	B-467	3.74	Grav. & AAS	B-139
A1203			1. 10	Photom.	B-162	3. 85	I CP	B-476
	_					3. 65	INAA	B-270
15.3	AAS	B-279	Fe0	_		3. 68	Vol.	B-224
15. 57	AAS	B-418		_		3. 65	XRF	B-247
15. 57	AAS	B-159, B-167	4. 98	Photm	B-467	3. 69	XRF	B-138
15. 60	AAS	B-216	4. 95	Photom.	B-270	3. 69	XRF	B-201
15. 05	Grav. & AAS	B-139	5. 05	Photom.	B-216	3. 70	XRF	B-219
15. 43	ICP	B-476	. 4.37	Vol.	B-198	3. 72	XRF	B-169
15. 4	INAA	B-270	4. 56	Vol.	B-279	3.74	XRF	B-270
15. 56	Vol.	B-224	4. 70	Vol.	B-169	3. 75	XRF	B-170
15. 68	Vol.	B-162	4. 84	Vol.	B-224	3. 75	XRF	B-168

Table A-3 Individual data for JA-3

%	Method	Code No.	%	Method	Code No.	%	Method	Code No.
3. 77	XRF	B-189				0. 19	Grav.	B-189
3. 91	XRF	B-198	K20	_		0. 52	Grav.	B-170
						0.59	Grav.	B-207
Mg	_		1. 42	AAS	B-207	-0. 01	Grav.	B-168
			1. 43	AAS	B-159, B-167			
2. 4203	SIMS	B-337	1. 43	AAS	B-224	T-H20		
			1. 43	AAS	B-328			
Ca0	_		1.50	AAS	B-216	0.34	Coul.	B-270
			1. 47	Chem.	B-205	0. 07	Grav.	B-224
5. 9	AAS	B-279	1.41	FES	B-236	0.3	Grav.	B-216
6. 28	AAS	B-328	1. 45	FES	B-162	****		
6. 28	AAS	B-159, B-167	1.52	FES	B-279	H20+	_	
6. 35	AAS	B-216	1. 39	FI-AAS	B-262	0.00	01	D 070
5. 99	Chem.	B-205	1.44	F1. Photom.	B-139	0. 26	Coul.	B-270
6. 53	Grav. & AAS	B-139	1. 45	ICP	B-476	0.05	Grav.	B-205
6. 25	ICP	B-476	1. 38	INAA	B-447	0. 12	Grav.	B-159, B-167
5. 95	INAA	B-447	1. 43	INAA	B-270	0. 20 0. 27	Grav.	B-198 B-169
6.34	INAA	B-270	1.18	NAA	B-234, B-277		Grav.	
5. 95	NAA	B-277	1. 36 1. 39	XRF	B-138	0. 29	Grav.	B-162
6. 17 6. 17	Vol.	B-162 B-224	1. 39	XRF XRF	B-170 B-168	H20-		
	Vol.	B-224 B-207	1. 39	XRF	B-201	n20-	_	
6. 18 6. 21	XRF XRF	B-201	1. 40	XRF	B-270	0. 08	Coul.	B-270
6. 26	XRF	B-168	1. 40	XRF	B-219	0.06	Grav.	B-162
6. 28	XRF	B-247	1. 41	XRF	B-219 B-207	0. 10	Grav.	B-168
6. 32	XRF	B-169	1. 41	XRF	B-169	0. 10	Grav.	B-205
6. 34	XRF	B-219	1. 41	XRF	B-189	0. 11	Grav.	B-139
6. 36	XRF	B-138	1. 42	XRF	B-247	0. 12	Grav.	B-159, B-167
6. 37	XRF	B-198	1. 43	XRF	B-198	0. 10	ui av.	D 100, D 107
6. 37	XRF	B-170	1. 37	γcntg.	B-273	CO2		
6. 37	XRF	B-189	1. 39	rentg.	B-237	002		
6. 38	XRF	B-270	1.00	7 Ones.	D 201	0.03	Vol.	B-169
0.00	76.101	D 210	K			<0.1	Vol.	B-168
Ca				-				
	-		1. 1440	IDMS	B-438	S03		
4. 3663	SIMS	B-337	1. 17	INAA	B-230, B-244			
		-	1.0967	SIMS	B-337	0.04	XRF	B-169
Na20						0. 05	XRF	B-168
	_		P205					
3. 17	AAS	B-159, B-167		_				
3. 17	AAS	B-328	0. 11	ICP	B-476			
3. 18	AAS	B-207	0.09	Photom.	B-279			
3. 20	AAS	B-216	0. 108	Photom.	B-224			
3. 31	AAS	B-224	0.11	Photom.	B-162			
3. 15	Chem.	B-205	0.11	Photom.	B-159, B-167			
3. 13	FES	B-279	0. 13	Photom.	B-216			
3. 14	FES	B-162	0. 18	Photom.	B-139			
3. 17	FI-AAS	B-262	0. 10	XRF	B-170			
3. 20	Fl. Photom.	B-139	0.11	XRF	B-201			
3. 27	I CP	B-476	0.11	XRF	B-219			
3. 14	INAA	B-270	0.11	XRF	B-198			
3. 21	INAA	B-437	0.11	XRF	B-247			
3. 04	XRF	B-170	0.12	XRF	B-169			
3. 07	XRF	B-198	0. 12	XRF	B-189			
3. 08	XRF	B-169	0. 120	XRF	B-270			
3. 15	XRF	B-270						
3. 17	XRF	B-247	P	_(ppm)				
3. 25	XRF	B-138						
3. 28	XRF	B-168	520	0ES	B-208			
3. 53	XRF	B-201	448	Photom.	B-207			
			532	SIMS	B-337			
Na	_		499	XRF	B-168			
	****	D 000 D 0::						
2. 32	INAA	B-230, B-244	L. 0. I.	_				
2. 47	INAA	B-324		0	D 004			
2. 3367	SIMS	B-337	0. 17	Grav.	B-224			

Table A-4 Individual data for JB-1

%	Method	Code No.	%	Method	Code No.	%	Method	Code No.
SiO	2		22. 8 24. 3959	PIXE	B-452 B-337	1. 35 1. 36	XRF XRF	B-155 B-44, B-73
51. 9	AAS	R-1	22	XRF	B-81	1.00	Atti	D 11, D 10
51. 9		A-9'	24. 07	XRF	B-106	Ti		
52. 2		B-92	21.01	Alei	D 100		-	
51. 7		0-5	TiO2			0.807	ED-XRF	B-399
51. 7		K-9	1102			0. 8350		B-400
51. 8		A-13	1.34		M-2	0. 8043		B-350
51.8		B-56, B-221	1. 40		T-36'	0. 8200		B-77
51. 9		0-6	1. 33		B-146	0. 80	PIXE	B-452
51. 9		I-7	1. 33	AAS	B-49	0.7403	SIMS	B-337
51. 9		V-1	1. 37	AAS	A-9'	0. 6530	XRF	B-81
52. (0-7	1. 16	Chem.	A-11	0.8979		B-111
52. (T-29	1. 23	Chem.	I-7			
52. (A-11	1. 26	Chem.	0-5	A1203		
52. 1		U-4	1. 31	Chem.	B'-2		-	
52. 1		0-2	1. 34	Chem.	B-56, B-221	14. 43		B-146
52. 2	27 Chem.	N-7	1. 34	Chem.	A-13	14. 10	AAS	S-24
52. 3	35 Chem.	S-14	1. 36	Chem.	0-6	14. 4	AAS	H-10
52. 6	66 Chem.	B'-2	1. 36	Chem.	0-2	14. 43	AAS	B-49
52. 2	2 EPMA	B-351	1. 38	Chem.	S-14	14. 52	AAS	₩-1
52. 4	48 EPMA	M-6	1. 38	Chem.	V-1	14.58	AAS	A-9'
53. (06 EPMA	B-380	1.40	Chem.	0-7	14. 59	AAS	B-92
51.8	80 ES	G-6	1.40	Chem.	K-9	14.60	AAS	M-8'
52. 3		B-348	1. 47	Chem.	T-29	14.7	AAS	R-1
52. 8	86 FI-Photom.	B-253	1. 47	Chem.	N-7	14. 05	Chem.	T-29
51.9		B-224	1. 15	Chem. Photom.	R-1	14. 37	Chem.	A-13
52. (B-153	1. 32	Chem. Photom.	H-5	14. 37	Chem.	B-56, B-221
52. 3		H-5	1. 32	Color.	S-23	14. 38	Chem.	0-6
52. 2		T-36'	1. 25	EPMA	B-380	14.44	Chem.	S-14
52. 2		B-49	1. 36	EPMA	M-6	14:47	Chem.	V-1
52. 2		S-23	1. 33	ES	G-6	14. 53	Chem.	0-7
52. 2		G-1	1. 22	ICP	B-192	14.53	Chem.	U-4
52. 6		M-2	1. 29	ICP	B-131	14. 54	Chem.	0-2
52.		B-122	1. 30	ICP	B-415, B-441	14. 56	Chem.	B'-2
52.		B-131	1. 31 1. 32	ICP	B-196	14.57	Chem.	K-9 A-11
52. 5 52. 5		B-120 B-48	1. 32	I CP I CP	B-120	14. 60 14. 60	Chem. Chem.	I-7
52. 8 52. 9		Б-46 В-453	1. 33	PAA	B-122 B-6-1, B-6-2	14. 00	Chem.	N-7
52.		B-143-1	1. 34	PAA	B-143-1	14. 73	Chem.	0-5
52. (T-27	1. 29	Photom.	B-153	14. 57	EDTA Vol.	S-23
52. 3		H-10	1. 33	Photom.	B-161	14. 57	EDTA Vol.	M-2
53.		B-161	1. 33	Photom.	M-8'	14. 34	EPMA	M-6
51. 6		B'-1	1. 34	Photom.	G-1	14. 51	EPMA	B-380
51.8		B-1,	1. 34	Photom.	B-92	14. 80	ES	G-6
52. 3		B-85	1. 35	Photom.	T-27	14.71	Grav.	B-153
52. 3		B-15	1. 35	Photom.	B-224	14. 50	Grav. & AAS	G-1
52.	42 XRF	B-13	1.4	Photom.	H-10	14. 17	ICP	B-192
52.	55 XRF	B-270	1. 33	TPD-prove	M-7'	14.50	ICP	B-415, B-441
52. (61 XRF	0-1'	1. 26	XRF	B-388	14. 56	ICP	B-122
52. (B-155	1. 27	XRF	B-1'	14. 63	ICP	B-196
52. (69 XRF	B-96	1. 29	XRF	B-382	14. 75	ICP	B-131
52. <i>'</i>		B-248	1. 29	XRF	B-270	14.8	ICP	B-120
52. ′		B-28	1.3	XRF	B-341-2	14. 40	INAA(CA)	B-453
52.		B-352	1. 30	XRF	B-28	14. 53	PAA	B-143-1
52. 9		B-44, B-73	1. 30	XRF	B'-1	14. 27	Photom.	T-27
52. 9		C-3'	1. 30	XRF	B-96	14.5	Photom.	B-95
53. (B-388	1. 30	XRF	B-248	14.6	Photom.	B-51
53. (₩-1	1. 31	XRF	S-24	14. 49	Vol.	B-224
53.		B-382	1.31	XRF	₩-1 P-95	14. 54 14. 80	Vol.	H-5 T-36'
53.	56 XRF	S-24	1.31	XRF	B-85	14. 80	Vol. Vol.	B-161
Si			1. 31 1. 315	XRF XRF	0-1' B-15	14. 94	XRF	B-161 B-270
			1. 313	XRF	C-3'	14. 05	XRF	B-382
24.	4 AAS	B-105	1. 32	XRF	B-352	14. 16	XRF	C-3'
22.		B-399	1. 35	XRF	B-13	14. 25	XRF	B-13
22.			1			,		

Table A-4 Individual data for JB-1

%	Method	Code No.	*	Method	Code No.	%	Method	Code No.
14. 38	XRF	B'-1	8. 81	Photom.	T-27	6. 04	Chem.	T-29
14. 49	XRF	B-85	8. 96	Photom.	B-78-1	6. 10	Chem.	K-9
14. 5 14. 54	XRF XRF	B-1' B-15	8. 97 9. 01	Photom. Photom.	B-224 B-123	6. 16 6. 18	Chem. Chem.	A-11 0-7
14. 60	XRF	B-28	8. 83	Vol.	T-36'	6. 21	Chem.	I-7
14. 60	XRF	B-248	8. 99	Vol.	B-153	6. 21	Chem.	B-56, B-221
14. 60	XRF	B-44, B-73	8. 70	XRF	B-270	6. 21	Chem.	A-13
14.61	XRF	B-96	8. 83	XRF	B-382	5. 42	Chem. Photom.	R-1
14.7	XRF	B-341-2	8.84	XRF	B-388	5. 98	Chem. Vol.	·B'-1
14. 77	XRF	0-1'	8. 87	XRF	B-1'	5. 98	Chem. Vol.	H-5
14. 81 14. 87	XRF XRF	B-352 B-155	8. 94 8. 94	XRF XRF	B-28 B-248	6. 00 6. 02	Chem. Vol.	G-1 P-149-1
14. 88	XRF	B-388	8. 95	XRF	0-1'	6. 02	PAA Photm.	B-143-1 S-23
11.00	A101	D 000	8. 98	XRF	B-13	5. 80	Photom.	B-270
A 1			9.01	XRF	B-15	6. 0	Photom.	A-9'
	-		9. 02	XRF	B-44, B-73	6. 0	Photom.	H-10
7. 8718		B-127	9. 03	XRF	B-155	6. 04	Photom.	B-123
9. 61	ED-XRF	B-399	9.05	XRF	B-85	6. 05	Photom.	T-27
7. 5400 7. 69	INAA	B-77 B-450	9. 09 9. 11	XRF XRF	C-3' B-352	5. 61 5. 95	Vol. Vol.	T-36' B-153
8. 3	NAA	B-98	9. 12	XRF	B-96	5. 96	Vol.	B-49
7. 8	PIXE	B-452	9. 38	XRF	₩-1	5. 97	Vol.	B-342
7. 8346		B-337				5. 99	Vol.	B-224
5. 66	XRF	B-106	Fe203	_		6. 01	Vol.	B-15
7. 5	XRF	B-81	0.00		0.11	6. 19	Vol.	B-88
T-Fe203			2. 28 2. 26	AAS	0-1' A-9'	Fe		
1-16203	-		2. 25	Calc.	B-270	re	-	
8. 78	AAS	B-65	2. 33	Calc.	B-15	6. 14	AAS	B-204
8. 83	AAS	K-6'	2. 40	Calc.	B-49	6. 6224		B-127
8. 92	AAS	B-161	2. 5	Calc.	H-10	5. 82	ED-XRF	B-399
8. 98	AAS	B-49	2. 50	Calc.	T-36'	6. 0600		B-400
9. 09	AAS	G-1	2. 20	Chem.	0-7	6. 2300		B-77
9. 10 8. 88	AAS Chem.	B-92 0-2	2. 20 2. 20	Chem. Chem.	A-11 U-4	6. 08 6. 15	INAA INAA	B-58 B-252, B-283
8. 91	Chem.	N-7	2. 21	Chem.	0-2	6. 16	INAA	B-8
8. 93	Chem.	V-1	2. 21	Chem.	K-9	6. 44	INAA	B-24
8. 93	Chem.	B'-2	2. 24	Chem.	I-7	6. 54	INAA	B-223
8. 97	Chem.	S-14	2. 25	Chem.	V-1	6. 08	NAA	B-4
8. 99	Chem.	K-9	2. 26	Chem.	A-13	6. 2700		B-126
9. 01	Chem.	0-6	2. 26	Chem.	B-56, B-221	6.3	NAA	B-98
9. 04 9. 07	Chem. Chem.	A-11 0-7	2. 31 2. 32	Chem. Chem.	B-143-1 N-7	6. 59 6. 34	NAA Photom.	B-10 B-51
9. 13	Chem.	I-7	2. 34	Chem.	B'-2	6. 7	PIXE	B-452
9. 16	Chem.	A-13	2. 36	Chem.	0-6	5. 5263		B-337
9. 18	Chem.	0-5	2. 40	Chem.	S-14	5. 66	XRF	B-106
9. 38	Chem.	T-29	2. 61	Chem.	0-5	6. 3	XRF	B-81
8. 91	Chem. Chem.	U-4	2. 67	Chem.	T-29	6. 405	XRF	B-111
9. 08 8. 89	Chem. Photom. Chem. Vol.	R-1 M-2	2. 24 2. 42	Chem. Vol. Chem. Vol.	B'-1 G-1	MnO		
8. 89	Chem. Vol.	B'-1	2. 47	Chem. Vol.	H-5	HIIO	-	
8. 90	EDTA Vol.	S-23	2. 09	Photom.	T-27	0.14		T-36'
9. 12	EDTA Vol.	H-5	2. 21	Photom.	S-23	0.16		B-146
8. 60	EPMA	B-380	2. 38	Vol.	B-153	0. 16		₩-1
9. 08	EPMA	M-6	п.			0. 12	AAS	G-1
8.90	ES ICP	G-6 B-192	Fe0	_		0.15	AAS	K-6'
8. 87 8. 91	ICP	B-192 B-120	6.06		M-8'	0. 15 0. 15	AAS AAS	B-65 B-224
8. 93	ICP	B-196	5. 91	Chem.	0-5	0. 15	AAS	B-78-1
8. 95	ICP	B-122	5. 91	Chem.	S-14	0. 15	AAS	B-161
9. 09	ICP	B-415, B-441	5. 93	Chem.	B'-2	0. 15	AAS	M-2
9. 12	ICP	B-131	5. 93	Chem.	N-7	0. 15	AAS	S-23
8. 98	INAA	B-360	5. 98	Chem.	0-6	0. 154	AAS	B-92
9. 16 9. 47	INAA INAA(CA)	B-393 B-453	6. 00 6. 01	Chem. Chem.	0-2 V-1	0. 155 0. 16	AAS AAS	B-49 R-1
9. 47 8. 62	PAA	B-6-1, B-6-2	6.01	Chem.	U-4	0. 16	AAS	и−1 М−8'
0.02		, D V D	"""			, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		

Table A-4 Individual data for JB-1

%	Method	Code No.	%	Method	Code No.	%	Method	Code No.
	AAS	B-15	0. 1030	XRF	B-81	7. 91	XRF	B-352
	AAS	B-388	0. 1167	XRF	B-111	7. 91	XRF	B-270
	AAS Chem.	A-9' B'-2	MgO			7.95	XRF	0-1'
	Chem.	V-1 -	пво	-		Mg		
0. 15	Chem.	U-4	7.68		B-146		-	
	Chem.	A-11	7. 32	AAS	B-388	4. 62	AAS	B-105
	Chem. Chem.	I-7 S-14	7. 48 7. 51	AAS AAS	₩-1 B-161	4. 7238 4. 67	AAS ED-XRF	B-127 B-399
	Chem.	T-29	7. 61	AAS	K-6'	4. 8600		B-77
0.16	Chem.	K-9	7. 62	AAS	B-15	4.67	INAA	B-450
	Chem.	0-6	7. 68	AAS	A-9'	3. 10	PIXE	B-452
	Chem.	0-5 0-2	7. 68 7. 69	AAS AAS	B-151 B-92	4. 2313 5. 01	SIMS XRF	B-337 B-106
	Chem.	N-7	7. 09 7. 72	AAS	B-78-1	ə. VI	ARF	D-100
	Chem.	0-7	7. 73	AAS	B-49	Ca0		
	Chem.	B-56, B-221	7.76	AAS	M-8'		_	
0. 17	Chem.	A-13	7.76	AAS	B-65	9. 17		H-5
0. 16 0. 13	Color. EPMA	H-5 B-380	7. 82 7. 84	AAS AAS	R-1 S-24	9. 23 9. 07	AAS	B-146 B-65
0. 15 0. 15	ES	G-6	7. 9	AAS	H-10	9.14	AAS	K-6'
	FI-Photom.	B-261	7. 23	Chem.	A-11	9. 16	AAS	B-78-1
0. 13	ICP	B-122	7.52	Chem.	T-29	9. 27	AAS	B-49
0. 15	ICP	B-192	7.63	Chem.	0-5	9. 29	AAS	B-161
0. 157 0. 16	I CP I CP	B-415, B-441 B-131	7.63 7.64	Chem. Chem.	I-7 S-14	9. 3 9. 31	AAS AAS	A-9' M-8'
0. 16	ICP	B-131 B-120	7.69	Chem.	0-2	9. 31	AAS	м-о Н-10
0. 16	ICP	B-196	7.69	Chem.	V-1	9. 05	Chem.	K-9
0. 15	INAA	B-393	7.70	Chem.	B-56, B-221	9.07	Chem.	I-7
0. 15	PAA	B-6-1, B-6-2	7.70	Chem.	A-13	9. 11	Chem.	A-13
0. 15	PAA	B-143-1 B-153	7. 72 7. 73	Chem.	B'-2 0-7	9. 11 9. 21	Chem. Chem.	B-56, B-221 U-4
0. 15 0. 167	Photom. Photom.	B-155 B-263	7.74	Chem. Chem.	K-9	9. 23	Chem.	A-11
0. 17	Photom.	T-27	7.77	Chem.	0-6	9. 24	Chem.	0-7
0. 12	XRF	B-1'	7.83	Chem.	U-44	9. 30	Chem.	N-7
0. 13	XRF	B-382	7.87	Chem.	N-7	9. 31	Chem.	S-14
0. 14 0. 149	XRF XRF	B-155 B-270	7.64 7.72	EDTA Vol. EDTA Vol.	H-5 S-23	9. 32 9. 34	Chem. Chem.	T-29 B'-2
0. 149	XRF	B-85	7. 87	EDTA VOI.	G-1	9. 35	Chem.	0-2
0. 15	XRF	C-3,	7. 99	EDTA Vol.	M-2	9. 38	Chem.	0-5
0. 15	XRF	B-44, B-73	7.67	EPMA	B-380	9. 41	Chem.	0-6
0. 15	XRF	B-28	7. 79	EPMA	M-6	9. 46	Chem.	V-1 S-23
0. 15 0. 15	XRF XRF	B'-1 0-1'	7. 60 7. 80	ES Grav.	G-6 B-153	9. 27 9. 33	EDTA Vol. EDTA Vol.	5-25 M-2
	XRF	B-13	7. 35	ICP	B-192	9. 34	EDTA Vol.	G-1
0. 16	XRF	B-96	7.70	ICP	B-196	9. 27	EPMA	M-6
0. 16	XRF	S-24	7. 78	ICP	B-415, B-441	9. 35	EPMA	B-380
Mn			7. 80 7. 91	ICP ICP	B-120 B-122	9. 10 9. 36	ES Grav.	G-6 B-153
FIII	-		7. 97	ICP	B-131	9. 10	ICP	B-196
0. 1150	AAS	B-204	7. 40	INAA (CA)	B-453	9. 19	ICP	B-192
0. 1225		B-127	7.74	PAA	B-143-1	9. 20	ICP	B-120
0. 1284		B-128	8. 07	PAA	B-6-1, B-6-2	9. 32	ICP	B-131 B-415, B-441
0. 1291	AAS ED-XRF	B-325 B-399	7. 71 7. 68	Photom. Vol.	T-27 T-36'	9. 36 9. 24	I CP Paa	B-143-1
0. 112		B-400	7. 77	Vol.	B-224	9. 37	PAA	B-6-1, B-6-2
0. 1161		B-77	7.40	XRF	B-96	9. 20	Photom.	T-27
0. 1226		B-350	7.61	XRF	B-85	9.04	Vol.	T-36'
	INAA	B-58	7.66	XRF	B-1'	9. 25 8. 93	Vol. XRF	B-224 S-24
0. 128 0. 1000		B-450 B-7	7. 72 7. 74	XRF XRF	B'-1 C-3'	8. 93 8. 96	XRF	3-24 ₩-1
0. 1000		B-4	7. 74	XRF	B-155	9. 12	XRF	B-382
0. 1190		B-1	7. 75	XRF	B-382	9. 24	XRF	B-1'
0. 13	NAA	B-98	7. 75	XRF	B-13	9. 24	XRF	B'-1
0. 1200		B-452	7. 75	XRF	B-28	9. 28 9. 28	XRF XRF	B-15 B-13
0. 1004	OINO	B-337	7. 85	XRF	B-44, B-73	į <i>3</i> . 40	AM	D 10

Table A-4 Individual data for JB-1

%	Method	Code No.	%	Method	Code No.	%	Method	Code No.
	XRF	0-1'	2. 49	ICP	B-192	1. 40	F1. Photom.	B'-1
	XRF	B-270		ICP	B-415, B-441	1. 41	F1. Photom.	M-2
	XRF	B-96	2. 65	ICP	B-196	1. 41	F1. Photom.	B-56, B-221
	XRF	B-44, B-73	2. 76	ICP	B-120	1. 41	F1. Photom.	A-13
9. 35	XRF	B-352	2. 78	ICP	B-131	1. 41	F1. Photom.	0-7
9. 38	XRF XRF	C-3' B-28	2. 80 2. 86	INAA	B-393	1. 42 1. 46	F1. Photom. F1. Photom.	B-78-1
9. 39 9. 47	XRF	B-155	2. 75	INAA Paa	B-360 B-6-1, B-6-2	1. 46	ICP	A-11 B-192
0. 41	Alti	D 100	2. 80	PAA	B-143-1	1. 36	ICP	B-131
Ca			2. 79	Photom.	T-27	1. 40	ICP	B-120
	_		2. 75	TPD-prove	M-7'	1. 49	ICP	B-196
6. 4357		B-127	2.65	XRF	B-28	1.49	ICP	B-415, B-441
6. 5500	AAS	B-77		XRF	B-96	1.48	MS	B-102
6. 72	AAS	B-105	2. 69	XRF	0-1'	1.44	PAA	B-143-1
6. 87	ED-XRF	B-399	2. 72	XRF	B-270	1.57	Photom.	T-27
6. 9600		B-400	2. 75	XRF	B-13	1. 47	TPD-prove	M-7'
5. 64 6. 25	NAA	B-4 B-452	2. 76 2. 79	XRF	C-3'	1. 35 1. 35	XRF XRF	B-382 C-3'
6. 3891	PIXE	B-337	2. 19	XRF XRF	B-44, B-73 B-155	1. 33	XRF	B-1'
4. 60	XRF	B-106	2. 00	Alti	Б 100	1. 42	XRF	B-28
6. 638	XRF	B-111	Na			1. 43	XRF	0-1
6. 64	XRF	B-81		-		1. 43	XRF	B-270
			2. 0870	AAS	B-77	1.43	XRF	B-15
Na20	_		2. 5562	AAS	B-127	1.44	XRF	B-13
			1.89	INAA	B-8	1. 45	XRF	B-96
2. 73		M-8'	2.06	INAA	B-252, B-283	1. 45	XRF	B-352
2. 45	110	B-146	2. 10	INAA	B-24	1. 46	XRF	B-155
2. 31 2. 71	AAS AAS	B-388 B-161	2. 22 2. 06	I NAA NAA	B-223 B-10	1. 47 1. 51	XRF XRF	B-85 B-44, B-73
2. 72	AAS	K-9	2. 08	NAA	B-4	1. 55	XRF	S-24
2. 75	AAS	B-49	2. 1	NAA	B-98	1.60	XRF	W-1
2.75	AAS	S-24	2. 40	PIXE	B-452	1.42	γcntg.	B-273
2.76	AAS	B-92	2. 0558	SIMS	B-337	1.46	γcntg.	B-240
2. 76	AAS	B-15						
2. 77	AAS	K-6'	K20	-		K	-	
2. 79	AAS	T-29	1 07	110	D 000	1 1050	110	D 77
2. 79 2. 79	AAS AAS	B-65 B-224	1. 37 1. 4	AAS AAS	B-388 A-9'	1. 1950 1. 2238		B-77 B-127
2. 19	AAS	A-9'	1. 40	AAS	B-92	1. 2236	ED-XRF	B-399
2. 81	AAS	R-1	1. 40	AAS	B-224		ED-XRF	B-400
2. 83	AAS	W-1	1. 43	AAS	K-9	1. 1950		B-48
2. 90	AAS	G-1	1.44	AAS	B-49	1. 3	INAA	B-252, B-283
3. 15	AAS	T-36'	1.45	AAS	M-8'	1.38	INAA	B-8
2. 68	Chem.	B'-2	1. 46	AAS	T-29	1.08	NAA	B-4
2. 71	Chem.	0-6	1. 46	AAS	B-65	1. 17	NAA	B-275
2. 72 2. 77	Chem. Chem.	0-2 S-14	1. 46 1. 47	AAS AAS	T-36' K- 6 '	1. 39 1. 1407	PIXE	B-452 B-337
2. 77	Chem.	V-1	1. 47	AAS	R-1	1. 1407	XRF	B-106
2. 83	Chem.	i-7	1. 56	AAS	B-161	1. 173	XRF	B-111
2. 87	Chem.	N-7	1. 20	CHem.	U-4	1. 2	XRF	B-81
2. 93	Chem.	U-4	1. 23	Chem.	N-7			
2. 83	EPMA	B-380	1. 34	Chem.	0-6	P205	_	
2. 83	ES	G-6	1. 37	Chem.	0-2			
2. 82	FES	B-122	1. 40	Chem.	S-14	0. 25	AAS	A-9'
2. 80 2. 76	FI-AAS F1. Photom.	B-262 B-153	1. 40 1. 41	Chem. Chem.	B'-2 I-7	0. 23 0. 23	Chem. Chem.	B-56, B-221 A-13
2. 76 2. 6	F1. Photom.	H-10	1. 41	Chem.	V-1	0. 23	Chem.	T-29
2. 74	F1. Photom.	0-7	1. 40	EPMA	B-380	0. 24	Chem.	U-4
2. 75	F1. Photom.	A-13	1. 38	ES	G-6	0. 25	Chem.	I-7
2. 75	F1. Photom.	B-56, B-221	1. 42	FES	B-236	0. 25	Chem.	N-7
2. 80	F1. Photom.	B-78-1	1. 45	FES	B-122	0. 25	Chem.	0-7
2. 81	F1. Photom.	0-5	1. 44	FI-AAS	B-262	0. 25	Chem.	B'-2
2. 84	F1. Photom.	B'-1	1. 41	Fl. Photom.	B-153	0. 26	Chem.	K-9
2. 85 2. 85	F1. Photom.	M-2 S-23	1. 31 1. 34	F1. Photom. F1. Photom.	S-23 0-5	0. 26 0. 26	Chem. Chem.	0-5 S-14
2. 85 2. 91	F1. Photom. F1. Photom.	5-25 A-11	1. 34	F1. Photom.	H-10	0. 20	Chem.	0-2
<i>a.</i> 01	1 1.1 HO COM.		1. 7	1 110 00111.		, J. L.		- -

Table A-4 Individual data for JB-1

%	Method	Code No.	%	Method	Code No.	%	Method	Code No.
0. 28	Chem.	V-1	0. 90	Chem.	S-14			
0. 29	Chem.	0-6	0. 93	Chem.	R-1			
0. 30	Chem.	A-11	0.94	Chem.	0-2			
0. 25	Chem. Photom.	H-5	0.97	Chem.	B-143-1			
0. 26	Chem. Photom.	M-2	0.98	Chem.	0-6 T 30			
0. 24 0. 26	Color. FI-Photom.	S-23 B-254	1. 04 1. 08	Chem. Chem.	T-29 A-11			
0. 23	ICP	B-196	1. 08	Chem.	T-27			
0. 235	ICP	B-415, B-441	1. 10	Chem.	S-23			
0. 24	ICP	B-131	1. 18	Chem.	A-13			
0. 26	ICP	B-192	1. 19	Chem.	0-7			
0. 26	PAA	B-143-1	1. 27	Chem.	I-7			
0. 2	Photom.	H-10	1.44	Chem.	K-9			
0. 224 0. 25	Photom.	B-15	0. 75 0. 93	Grav.	G-1 T-36'			
0. 25	Photom. Photom.	G-1 B-153	1. 09	Grav. Grav.	B-49			
0. 25	Photom.	B-78-1	1. 18	Grav.	B-56, B-221			
0. 25	Photom.	B-224	1. 33	Grav.	B-153			
0. 25	Photom.	B-161						
0. 26	Photom.	M-8'	H20-					
0. 26	Photom.	B-49	l					
0. 26	Photom.	T-27	0.94		M-8'			
0. 269 0. 22	Photom. Vol.	B-79 T-36'	0. 99 1. 1		М-2 Н-10			
0. 22	XRF	B-1'	0.84	Chem.	0-2			
0. 24	XRF	B-352	0. 85	Chem.	S-14			
0. 25	XRF	B-341-2	0. 89	Chem.	A-13			
0. 26	XRF	0-1'	0.89	Chem.	S-23			
0. 26	XRF	C-3'	0. 93	Chem.	I-7			
0. 26	XRF	B-28	0.94	Chem.	0-7			
0. 26	XRF	B-155	0.95	Chem.	0-6			
0. 26 0. 27	XRF XRF	B-96 B-44, B-73	0. 95 0. 97	Chem. Chem.	A-11 B-143-1			
0. 27	XRF	B-13	0. 98	Chem.	T-27			
0. 270	XRF	B-270	1.00	Chem.	K-9			
0. 28	XRF	B-382	1.10	Chem.	N-7			
0. 28	XRF	B-85	1.11	Chem.	T-29			
0. 29	XRF	B'-1	1. 16	Chem.	U-4			
0. 32	XRF	B-388	1. 16	Chem.	0-5 P-15			
P	(ppm)		0. 82 0. 83	Grav. Grav.	B-15 B-153			
1	_(bbiii)		0.84	Grav.	B-49			
1090	ICP	B-77	0.85	Grav.	G-1			
1109	SIMS	B-337	0.89	Grav.	B-56, B-221			
			1.00	Grav.	B-127			
L. 0. I.	_		000					
0. 44	Grav.	0-1'	C02	_				
0. 53	Grav.	B-28	0. 15		M-8'			
0.64	Grav.	B-224	0. 10		G-1			
1.00	Grav.	C-3'	0.14	Chem.	0-6			
1. 19	Grav.	B-131	0. 15	Chem.	N-7			
1. 36	Grav.	B-96	0. 17	Chem.	U-4			
1. 41 2. 02	Grav.	B-15	0. 20 0. 27	Chem.	B'-2 V-1			
2. 02	Grav.	B-1	0. 27	Chem. Vol.	B-104, B-295			
T-H20			0.11.	, , , , , ,	D 101, D 200			
1. 78	Chem.	V-1						
	JHOM.	• •						
H20+	_							
1. 2		H-10						
0. 65	Chem.	0-5						
0. 68	Chem.	N-7						
0.72	Chem.	U-4	1					

Table A-5 Individual data for JB-1A

%	Method	Code No.	%	Method	Code No.	%	Method	Code No.
SiO2			1. 29	XRF	B-16	9. 07	ICP	B-434
	-		1. 29	XRF	B-36	9. 0	INAA	B-118
52.00	AAS	B-434	1. 30	XRF	B-25	9.00	INAA	B-447
52. 15	AAS	B-216	1. 30	XRF	B-247	9. 10	INAA	B-478
	AAS	B-202	1. 31	XRF	B-19	9. 17	INAA	B-270
	AAS	B-134	1. 33	XRF	B-43	9. 37	INAA	B-142
53. 78	AAS	B-312	1. 37	XRF	B-434	8. 87	NAA	B-277
51.64	Chem.	B-52	1. 29	XRF(Dry basis)	B-129	8.94	Photm(FI)	B-462
51.945	Chem.	B-148	1. 28	XRF(fusion)	B-70	8. 83	Photom.	B-123
51.95	Chem.	B-89				9. 01	Photom.	B-224
53. 43	Chem.	B-39	l Ti			9.05	Photom.	B-119
	FI-Photom.	B-253	***	-		9. 15	Photom.	B-216
			0. 7990	CINC	B-337			
	Grav.	B-224	0. 1990	SIMS	D-991	9. 02	Vol.	B-119
52. 16	Grav.	B-49				8. 66	XRF	B-134
52. 22	Grav.	B-162	A1203	_		8. 95	XRF	B-31
52. 16	Grav. & AAS	B-167				9. 07	XRF	B-201
52. 24	Grav. & AAS	B-139	13. 79	AAS	B-202	9.07	XRF	B-15
	ICP	B-148	14. 25	AAS	B-312	9.09	XRF	B-270
55. 8	INAA	B-447	14. 35	AAS	B-216	9. 10	XRF	B-247
		B-279			B-167			
	Photom.		14. 51	AAS		9. 10	XRF	B-36
52.05	XRF	B-434	14. 51	AAS	B-49	9. 13	XRF	B-16
	XRF	B-15	14. 58	AAS	B-134	9. 15	XRF	B-25
	XRF	B-201	14.7	AAS	B-279	9. 18	XRF	B-19
	XRF	B-134	14.01	Chem.	B-39	9. 22	XRF	B-40
	XRF	B-247	14.72	Chem.	B-52	9. 23	XRF	B-43
	XRF	B-25	15. 095	Chem.	B-148	9. 24	XRF	B-434
	XRF	B-31	15. 10	Chem.	B-89	9.05	XRF(Dry basis)	
	XRF	B-40	14. 57	Grav. & AAS	B-139	9. 20	XRF(fusion)	B-70
52. 43	XRF	B-16	14. 730	ICP	B-148			
52. 55	XRF	B-270	15. 37	ICP	B-434	Fe203		
52.71	XRF	B-36	13. 2	INAA	B-447		-	
	XRF	B-43	14. 1	INAA	B-270	2. 12	Calc.	B-134
	XRF	B-19	14. 6	Photom.	B-51	2. 12	Calc.	B-31
55.50		D 100						
	XRF(Dry basis)		14. 34	Vol.	B-162	2. 35	Calc.	B-139
51.9	XRF(fusion)	B-70	14. 48	Vol.	B-224	2. 45	Calc.	B-216
			13. 89	XRF	B-434	2. 52	Calc.	B-167
Si			14.04	XRF	B-270	2. 52	Calc.	B-49
	_		14. 27	XRF	B-31	2. 54	Calc.	B-15
24. 3913	SIMS	B-337	14. 35	XRF	B-25	2. 61	Calc.	B-134
21.0010		2 001	14. 36	XRF	B-134	2. 615	Calc.	B-202
т: 09							Calc.	
TiO2	-		14. 41	XRF	B-15	2. 67		B-25
			14. 41	XRF	B-201	2.71	Calc.	B-36
	AAS	B-216	14. 46	XRF	B-16	2. 80	Calc.	B-270
1. 24	AAS	B-312	14. 51	XRF	B-247	2. 82	Calc.	B-312
1. 27	AAS	B-134	14. 55	XRF	B-40	2. 47	Chem.	B-89
1.30	AAS	B-167	14. 55	XRF	B-36	2, 490	Chem.	B-148.
1. 31	AAS	B-49	14. 58	XRF	B-19	2. 94	Chem.	B-39
	Chem.	B-148	14. 87	XRF	B-43	2. 62	Photom.	B-162
			14. 61	XRF(Dry basis)	D_100	2.02	1 110 COM.	D 104
1. 28	Chem.	B-89				n 0		
1. 29	Chem.	B-52	14. 51	XRF(fusion)	B-70	Fe0	_	
1.31	ICP	B-434						
1.314	ICP	B-148	Al			5. 44	AAS	B-312
1.14	INAA	B-270		-		5. 17	Chem.	B-39
1. 27	INAA	B-447	7. 6558	2M12	B-337	5, 278	Chem.	B-148
	Photm(FI)	B-462	1.0000	DINO	D 001	5. 78	Chem.	B-89
			т годо					
	Photom.	B-202	T-Fe203	-		5. 820	Chem.	B-148
	Photom.	B-279				5. 97	Chem.	B-52
1.27	Photom.	B-139	8. 865	AAS	B-202	5. 66	Photom.	B-270
1. 28	Photom.	B-162	8. 95	AAS	B-134	6. 05	Photom.	B-216
1. 29	Photom.	B-224	9. 0	AAS	B-279	6. 11	Photom.	B-123
1. 24	XRF	B-40	9. 01	AAS	B-49	5. 62	Vol.	B-202
	XRF	B-134	9. 10	AAS	B-328	5. 72	Vol.	B-279
	XRF	B-201	9. 10	AAS	B-167	5. 72	Vol.	B-162
1. 27	XRF	B-31	8. 80	Chem.	B-52	5. 75	Vol.	B-36
				O1	D 140	I = 0.4	17. 1	D OF
1. 28	XRF	B-15	8. 96	Chem.	B-148	5. 84	Vol.	B-25

Table A-5 Individual data for JB-1A

%	Method	Code No.	%	Method	Code No.	%	Method	Code No
5.88 V	/o1.	B-15	7. 75	AAS	B-328	9. 51	XRF	B-43
	Vol.	B-134		AAS	B-49		XRF(Dry basis)	B-129
	Vol.	B-49		AAS	B-134		XRF(fusion)	B-70
						0.02	Altir (1 us 1011)	טז ע
	Vol.	B-167		AAS	B-216			
	lol.	B-31		AAS	B-279	Ca		
5.82 V	Vol. ?	B-139	7. 905	AAS	B-202			
			7.67	Chem.	B-52	6.7608	SIMS	B-337
Fe				Chem.	B-39			
				Chem.	B-89	Na20		
6. 12	TNIAA	B-310			B-148	Nazo		
	INAA			Chem.		0.40	110	D 010
	INAA	B-37-2		Grav.	B-162		AAS	B-312
	INAA	B-24		Grav. & AAS	B-139		AAS	B-134
6. 35	INAA	B-324	7.728	ICP	B-148	2.74	AAS	B-328
6.5 h	NAA	B-287	7. 90	ICP	B-434	2.74	AAS	B-167
6. 29	Photom.	B-51	8. 07	INAA	B-270	2. 75	AAS	B-49
6. 2896		B-337	7. 73	Vol.	B-224	2.77	AAS	B-224
0. 2000	31110	, ooi		XRF	B-201	2. 82	AAS	B-202
Man ()								
MnO		1	7.75	XRF	B-247	2. 85	AAS	B-216
			7. 81	XRF	B-16	2. 87	AAS	B-15
	AAS	B-139	7. 82	XRF	B-36	2. 49	Chem.	B-52
0.13	AAS	B-312	7.82	XRF	B-31	2. 710	Chem.	B-148
	AAS	B-216	7.84	XRF	B-43	2.72	Chem.	B-89
	AAS	B-224	7. 88	XRF	B-25	2. 70	FES .	B-279
	AAS	B-167	7. 92	XRF	B-270	2. 76	FES	B-162
	AAS	B-328	7.97	XRF	B-19	2. 73	Fl. Photom.	B-139
	AAS	B-49	8. 00	XRF	B-40	2. 76	F1. Photom.	B-434
0. 15	AAS	B-134	7. 96	XRF(Dry basis)	B-129	2. 700	ICP	B-148
0. 15	AAS	B-202	7.84	XRF(fusion)	B-70	2. 67	INAA	B-478
	AAS	B-279		(,		2. 80	INAA	B-270
	AAS	B-15	Væ			2. 81	INAA	B-142
			Mg	-				B-447
	Chem.	B-52		0.110	n 00m	2. 93	INAA	
	Chem.	B-39	4. 6743	SIMS	B-337	2. 93	NAA	B-277
0. 16	Chem.	B-89				2. 38	XRF	B-25
0.160	Chem.	B-148	CaO			2. 46	XRF	B-43
	ICP	B-434		_		2. 47	XRF	B-434
	ICP	B-148	8. 9	AAS	B-279	2. 65	XRF	B-36
	INAA	B-270	9. 20	AAS	B-216	2. 68	XRF	B-270
						2. 70	XRF	B-40
	INAA	B-447	9. 23	AAS	B-167			
	NAA	B-277	9. 23	AAS	B-328	2.74	XRF	B-247
0. 15	Photom.	B-162	9. 25	AAS	B-49	2. 78	XRF	B-16
0.14	XRF	B-201	9. 32	AAS	B-312	2. 82	XRF	B-201
0.14	XRF	B-31	9. 39	AAS	B-134	2. 83	XRF	B-31
	XRF	B-270	9.445	AAS	B-202	2. 87	XRF	B-19
	XRF	B-134	9. 06	Chem.	B-52	2. 85	XRF(Dry basis)	
						I.	XRF(fusion)	B-70
	XRF	B-434	9. 30	Chem.	B-89	2. 76	ART (1 us 1011)	D 10
	XRF	B-247	9. 395	Chem.	B-148			
	XRF	B-16	9.56	Chem.	B-39	Na	-	
	XRF	B-43	9. 35	Grav. & AAS	B-139			
	XRF	B-19	9. 396	ICP	B-148	2. 03	INAA	B-324
	XRF	B-40	9. 43	ICP	B-434	2. 04	INAA	B-310
	XRF(Dry basis)		9. 37	INAA	B-270	2. 04	INAA	B-37-2
0. 15	XRF(fusion)	R-70	12	INAA	B-447		INAA	B-24
0. 10	viel (1 no 1011)	טו ע						B-287
		İ	9. 11	Vol.	B-162	2. 16		
Mn		l	9. 22	Vol.	B-224	1. 9554	21M2 ·	B-337
			9. 20	XRF	B-201			
0.1120	AAS	B-25	9.23	XRF	B-247	K20		
0. 112		B-287	9. 24	XRF	B-134		-	
0. 1111		B-337	9. 27	XRF	B-270	1.18	AAS	B-312
	XRF(fusion)	B-36	9. 28	XRF	B-15	1. 36	AAS	B-202
0.1129	XRF(powder)	B-36	9. 32	XRF	B-36	1. 38	AAS	B-134
			9. 33	XRF	B-25	1. 41	AAS	B-224
Mg0			9. 35	XRF	B-31	1. 45	AAS	B-49
		1	9. 36	XRF	B-16	1. 45	AAS	B-216
7.49	AAS	B-15		XRF	B-434	1. 46	AAS	B-167
			9. 40					
7. 73	AAS AAS	B-312 B-167	9. 50 9. 51	XRF	B-40 B-19	1. 46 1. 23	AAS	B-328
7.75				XRF			Chem.	B-39

Table A-5 Individual data for JB-1A

Ж	Method	Code No.	%	Method	Code No.	*	Method	Code No.
1. 235	Chem.	B-148	0. 26	XRF(fusion)	B-70	0.14	Chem.	B-25
1. 24	Chem.	B-89	_					
1. 40	FES	B-236	P	_(ppm)				
1. 44	FES	B-162	000	OPC	D 900			
1. 52 1. 41	FES F1. Photom.	B-279 B-434	920 1010	OES SIMS	B-208 B-337			
1. 41	Fl. Photom.	B-139	1362	XRF	B-25			
1. 419	ICP	B-148	1502	Aiti	D 20			
1. 41	INAA	B-270	S03					
1. 44	INAA	B-447	200					
1.55	NAA	B-277	<0.02	XRF	B-36			
1. 38	XRF	B-434						
1. 39	XRF	B-36	L. 0. I.					
1.40	XRF	B-25						
1.40	XRF	B-40	2. 16	Chem.	B-39			
1. 40	XRF	B-134	0. 30	Grav.	B-36			
1. 40	XRF	B-201	0.44	Grav.	B-129			
1. 40	XRF	B-15	0. 536	Grav.	B-148			
1. 40	XRF	B-43	0.58	Grav.	B-16			
1. 41 1. 41	XRF	B-31 B-270	0. 70 0. 72	Grav.	B-19 B-224			
1. 41	XRF XRF	B-270 B-16	1. 41	Grav. Grav.	B-70			
1. 41	XRF	B-19	1. 63	Grav.	B-25			
1. 46	XRF	B-247	1. 93	Grav.	B-134			
1. 44	XRF(Dry basis)		2. 17	Grav.	B-15			
1. 38	XRF(fusion)	B-70	2. 33	Grav.	B-31			
0.34	r cntg.	B-41						
1. 38	γ cntg.	B-273	T-H20					
1.39	γcntg.	B-237						
			1.615	Chem.	B-148			
K			1.52	Coul.	B-270			
	*****	T 100	0. 86	Grav.	B-224			
1. 2300		B-438	2. 05	Grav.	B-216			
1. 31	INAA	B-310	11001					
1 31	INAA	B-37-2	H20+	_				
1. 24 1. 0618	NAA	B-287 B-337	0. 93	Chem.	B-89			
1. 0010	JINO	р 001	0. 70	Coul.	B-270			
P205			0.66	Grav.	B-52			
1200	-		0. 83	Grav.	B-36			
0.24	Chem.	B-52	0. 86	Grav.	B-25			
0. 255	Chem.	B-148	0. 92	Grav.	B-139			
0. 26	Chem.	B-89	0. 92	Grav.	B-202			
0. 28	Chem.	B-39	1.06	Grav.	B-312			
0. 234	ICP	B-148	1.07	Grav.	B-162			
0. 25	ICP	B-434	1.10	Grav.	B-167			
0. 24	Photom.	B-134	1. 10	Grav.	B-49			
0. 24	Photom.	B-15	1100					
0. 25	Photom.	B-279	H20-					
0. 26 0. 26	Photom. Photom.	B-167 B-162	0. 79	Chem.	B-89			
0. 26	Photom.	B-102 B-49	0. 79	Coul.	B-270			
0. 28	Photom.	B-202	0. 82	Grav.	B-312			
0. 285	Photom.	B-224	0. 86	Grav.	B-49			
0. 285	Photom.	B-216	0.86	Grav.	B-167			
0. 24	XRF	B-434	0.86	Grav.	B-134			
0. 25	XRF	B-201	0. 93	Grav.	B-162			
0. 26	XRF	B-247	1.00	Grav.	B-139			
0. 26	XRF	B-36	1.01	Grav.	B-16			
0. 26	XRF	B-16	1. 02	Grav.	B-52			
0. 26	XRF	B-31	1.06	Grav.	B-25			
0. 260	XRF	B-40	1.08	Grav.	B-202			
0. 265	XRF	B-270						
0. 27	XRF	B-19	C02					
0. 30 0. 26	XRF XRF(Dry basis)	B-43	0. 11	Chem.	B-36			
				('hom	U_7C			

Table A-6 Individual data for JB-2

53. 24 Grav. & Photom. B-130	%	Method	Code No.	*	Method	Code No.	%	Method	Code No.
SS. 0	SiO2	-		24. 8776	SIMS	B-337			
58. 26									
53.34 AS B-134 1.11 AS B-146 1.16 XRF(fusion) B-70				Ti02	_				
58.54 AS									
Section Sect							1.16	XRF(fusion)	B-70
53.06 A.S. & Photom. C-5' 1.20 A.S. B-109 Chem. B-68, B-221 1.21 A.S. B-216 C.4' Chem. B-68, B-221 1.22 A.S. R-216 C.4' C.4' C.5. C.5. C.5. C.5. C.5. C.5. C.5. C.4' C.5.									
54.47 Chem B-482 1.21 AAS B-216 0.6180 CP B-77							Ti	_	
53.19 Chem. B-56, B-221 1.22 AAS T-23' 0.7484 SINS B-387 S3.20 Chem. K-11' 1.12 Chem. B-45 Chem. C-4' 0.9207 XFF B-111 S3.22 Chem. K-11' 1.12 Chem. C-4' Chem. C-4' Chem. C-4' Chem. C-4' Chem. C-4' Chem. C-7' Chem. C-7							0.0100	I an	D 77
53.20 Chem. O-11' A-10' 1.26 AAS & Photom. C-4'									
53.22 Chem. K-11' 1.12 Chem. B-45 Chem. G-7'									
53.24 Chem. G-7' 1.19 Chem. G-7! 1.20 Chem. G-7' 1.20 Chem. G-7' 1.21 Chem. G-7' 1.4.3 AAS B-103 S-29 Chem. B-45 1.26 Chem. A-2' 1.21 Chem. A-2' 1.4.58 AAS B-93 S-3.35 Chem. K-11' 1.26 Chem. A-2' 1.4.65 AAS B-123 S-24 Chem. B-39 1.27 Chem. B-66, B-221 H.4.65 AAS B-216 Chem. A-2' AAS B-216 Chem. B-39 B-216 Chem. B-102 AAS B-216 Chem. B-36 Chem. B-36 Chem. B-102 AAS B-216 Chem. B-36 Chem. B-36 Chem. B-102 AAS B-216 Chem. B-36 Chem. C-6' Chem. Chem. C-6' Chem. C-6' Chem. Chem. C-6' Chem. C-6							0.9207	XKF	R-111
53. 27 Chem. A-2							41000		
53.27 Chem. A-2' 1.21 Chem. A-2' 14.3 AAS B-109							A1203	-	
53.29 Chem. B-45 53.39 Chem. K-11' 1.26 Chem. W-11' 1.26 Chem. K-11' 1.26 Chem. K-11' 1.26 Chem. K-11' 1.26 Chem. K-11' 1.27 Chem. K-11' 1.28 Chem. K-11' 1.28 Chem. K-11' 1.28 Chem. K-11' 1.28 Chem. K-11' 1.28 Chem. K-11' 1.28 Chem. K-11' 1.28 Chem. K-11' 1.28 Chem. K-11' 1.28 Chem. K-11' 1.28 Chem. K-11' 1.28 Chem. K-11' 1.28 Chem. K-11' 1.28 Chem. K-11' 1.28 Chem. K-11' 1.28 Chem. K-11' 1.28 Chem. K-11' 1.28 Chem. K-11' 1.28 Chem. K-11' 1.27 Chem. K-11' 1.28 Chem. K-11' 1.28 Chem. K-11' 1.28 Chem. K-11' 1.28 Chem. K-11' 1.28 Chem. K-11' 1.28 Chem. K-11' 1.29 Chem. K-11' 1.29 Chem. K-11' 1.29 Chem. K-11' 1.20 B-18 1.27 Chem. K-11' 1.27 Chem. K-11' 1.28 Chem. K-11' 1.28 Chem. K-11' 1.28 Chem. K-11' 1.28 Chem. K-11' 1.28 Chem. K-11' 1.28 Chem. K-11' 1.28 Chem. K-11' 1.29 Chem. K-12' 1.29 Chem. K-12' 1.20 Chem. K-12' 1.20 Chem. K-12' 1.20 Chem. K-12' 1.20 Chem. K-12' 1.20 Chem. K-12' 1.20 Chem. K-12' 1.20 Chem. K-12' 1.20 Chem. K-12' 1.20 Chem. K-12' 1.20 Chem. K-12' 1.20 Chem. K-12' 1.20 Chem. K-12' 1.20 Chem. K-12' 1.20 Chem. K-12' 1.20 Chem. K-12' 1.20 Chem. K-12' 1.21 Chem. K-12' 1.22 Chem. K-12' 1.23 Chem. K-12' 1.24 Chem. K-11' 1.25 Chem. K-11' 1.25 Chem. K-11' 1.26 Chem. K-11' 1.27 Chem. K-12' 1.28 Chem. K-12' 1.29 Chem. K-12' 1.20 Chem. K-12' 1.20 Chem. K-12' 1.20 Chem. K-11' 1.20 Chem. K							14.9	AAC	P 100
53. 55 Chem. K-11'									
53. 41 Chem. K-11'									
53. 45 Chem. 0-3' 1.26 Chem. K-11' 14. 65 AAS T-41' 53. 76 Chem. B-39 1.27 Chem. B-56, B-221 14. 7 AAS B-270									
53. 76 Chem. B-39 1.27 Chem. B-56, B-221 14. 7									
53. 5 EPMA B-351 52. 95 Grav. B-14, B-91 1.08 ICP B-192 14. 55 AAS & Photom. C-5' 53. 13 Grav. B-24 1.10 ICP B-18 14. 52 AAS & Photom. C-4' 53. 16 Grav. B-153 1.12 ICP B-455 13. 13 Grav. B-455 1.14 ICP B-455 13. 25 Grav. B-71 13. 14 ICP B-455 13. 27 Grav. B-80, B-94 1. 17 ICP B-455 13. 27 Grav. B-80, B-94 1. 17 ICP & K-18' 14. 44 Chem. B-45 153. 27 Grav. B-71 153. 27 Grav. B-80, B-94 1. 17 ICP & AAS B-5' 14. 48 Chem. B-45 153. 27 Grav. B-80, B-94 1. 17 ICP & AAS B-5' 14. 48 Chem. B-45 153. 27 Grav. B-80, B-94 1. 17 ICP & AAS B-5' 14. 48 Chem. B-45 153. 27 Grav. B-80, B-94 1. 10 INAA B-477 14. 52 Chem. B-56, B-56, B-56, B-56, B-56, B-18 11. 10 INAA B-477 14. 52 Chem. B-56, B-56, B-56, B-56, B-18 11. 10 INAA B-270 14. 52 Chem. B-56, B-56, B-56, B-56, B-56, B-57, B-18 11. 10 INAA B-277 14. 67 Chem. C-11' 152. 21 INAA(γ-ray) B-18 1. 17 PAA B-55 14. 14. 67 Chem. C-11' 152. 22 INAA(γ-ray) B-18 1. 17 PAA B-55 14. 71 Chem. K-11' 152. 23 INAA(γ-ray) B-18 1. 17 PAA B-55 14. 71 Chem. K-11' 152. 23 INAA(γ-ray) B-18 1. 17 PAA B-55 14. 71 Chem. K-11' 152. 23 INAA (γ-ray) B-18 1. 17 PAA B-55 14. 71 Chem. K-11' 152. 23 INAA (γ-ray) B-18 1. 17 PAA B-55 14. 71 Chem. K-11' 152. 23 INAA (γ-ray) B-18 1. 17 PAA B-55 14. 71 Chem. K-11' 152. 24 INAA (γ-ray) B-18 1. 17 PAA B-55 14. 71 Chem. B-39 15. 35 Various P-5' 1. 16 Photom. B-279 15. 02 Chem. B-39 15. 35 Various P-5' 11. 16 Photom. B-130 14. 99 Grav. B-169 15. 02 Chem. B-39 15. 02 Chem. B-39 15. 02 Chem. B-39 15. 02 Chem. B-39 15. 02 INAA B-447 16. 16 Grav. B-18 16. 1. 17 PAA B-96 17 INAA B-97 18. 18 INAA B-97 18. 18 INAA B-97 18. 18 INAA B-97 19.									
52. 95 Grav. B-14, B-91									
53. 13 Grav. B-224									
53. 16 Grav. B-153 1. 12 ICP B-482 14. 38 Chem. A-2' 53. 25 Grav. B-455 1. 14 ICP B-455 14. 48 Chem. A-2' 53. 37 Grav. B-80, B-94 1. 17 ICP & AAS B-5' 14. 48 Chem. B-55 53. 24 Grav. B-93 1. 15 INAA B-270 14. 52 Chem. B-56, 53. 24 Grav. & Photom. B-130 1. 15 INAA B-247 14. 58 Chem. K-11' 52. 78 ICP & AAS B-5' 1. 28 Micro wave plasG-6' 1. 12 INAA(γ-ray) B-18 14. 67 Chem. K-11' 52. 28 Micro wave plasG-6' 1. 19 Photom. B-71 14. 67 Chem. K-11' 52. 33 Various P-5' 1. 13 Photom. B-71 14. 67 Chem. G-7' 53. 62 Photom. B-279 1. 13 Photom. B-71 14. 94 Chem. S-23' 53. 53 Various									
53. 22 Grav. B-455 1.14 ICP B-455 14.38 Chem. A-2' 53. 25 Grav. B-80, B-94 1.19 ICP K-18' 14.44 Chem. B-45 53. 52 Grav. B-80, B-94 1.10 INAA B-270 14.52 Chem. B-56 53. 24 Grav. B-93 1.10 INAA B-247 14.52 Chem. B-56 53. 17 ICP K-18' 1.12 INAA(γ-ray) B-18 14.64 Chem. K-11' 53. 17 ICP K-18' 1.28 Micro wave plasG-6' 14.67 Chem. K-11' 53. 11 IDMS B-48 1.25 NAA B-277 14.67 Chem. O-3' 52. 2 INAA(γ-ray) B-18 1.17 PAA B-55 14.71 Chem. K-11' 52. 23 INAA(γ-ray) B-18 1.27 Photom. B-279 15.02 Chem. G-7' 53. 36 Various P-5' 1.16 Photom. B-79 15.02 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>									
53. 25 Grav. B-71 1.19 ICP K-18' 14.44 Chem. B-45 53. 37 Grav. B-90 1.17 ICP & AAS B-5' 14.48 Chem. P-5' 53. 24 Grav. Photom. B-130 1.15 INAA B-447 14.58 Chem. K-11' 52. 78 ICP & AAS B-5' 1.28 Micro wave plasG-6' 14.67 Chem. K-11' 52. 78 ICP & AAS B-5' 1.28 Micro wave plasG-6' 14.67 Chem. K-11' 52. 78 IDMS B-48 1.25 NAA B-277 14.67 Chem. K-11' 52. 2 INAA(γ-ray) B-18 1.17 PAA B-55 14.71 Chem. K-11' 52. 2 INAA(γ-ray) B-18 1.17 PAA B-55 14.71 Chem. K-11' 52. 2 INAA(γ-ray) B-18 1.27 Photom. B-71 14.94 Chem. K-11' 52. 2 Photom. B-279 1.13 Photom. B-224 14.08									
53. 37 Grav. B-80, B-94 1.17 ICP & AAS B-5' 14. 48 Chem. P-5' 53. 52 Grav. B-93 1.10 INAA B-270 14. 52 Chem. B-56,									
53. 52 Grav. 8-93 1.10 INAA B-270 14.52 Chem. B-56, 53. 24 Grav. 8 Photom. B-18 1.15 INAA(r-ray) B-18 14.64 Chem. K-11' 53. 7 ICP & AAS B-5' 1.28 Micro wave plasG-6' 14.67 Chem. O-1' 53. 31 IDMS B-48 1.25 NAA B-277 14.67 Chem. M-11' 52. 2 INAA(r-ray) B-18 1.17 PAA B-55 14.71 Chem. K-11' 52. 83 Micro wave plasG-6' 1.19 Photom. B-71 14.94 Chem. G-7' 53. 62 Photom. B-279 1.13 Photom. B-71 14.94 Chem. S-23' 53. 62 Photom. B-279 1.13 Photom. B-224 14.08 Grav. B-153 52.90 XRF O-3' 1.20 Photom. B-123 14.65 Grav. B-14 53.02 XRF B-16 1.21 Photom. B-80									
53. 24 Grav. & Photom. B-130 1. 15 INAA B-447 14. 58 Chem. K-11' 53. 17 ICP K-18' 1. 12 INAA(γ-ray) B-18 14. 64 Chem. O-3' 52. 78 ICP & AAS B-5' 1. 28 Micro wave plasG-6' 14. 67 Chem. O-11' 53. 31 IDMS B-48 1. 25 NAA B-277 14. 67 Chem. M-11' 52. 23 INAA(γ-ray) B-18 1. 17 PAA B-55 14. 71 Chem. K-11' 52. 29 INAA(γ-ray) B-18 1. 17 PAA B-55 14. 71 Chem. K-11' 52. 29 INAA(γ-ray) B-18 1. 17 PAA B-55 14. 68 Chem. K-11' 52. 29 Photom. B-279 1. 13 Photom. B-279 15. 02 Chem. G-22' 53. 36 Various S-23' 1. 20 Photom. B-279 15. 02 Chem. S-23' 52. 93 XRF B-16 1. 21 Photom. B-130									B-56, B-221
53.17 ICP K-18' 1.12 INAA(γ-ray) B-18 14.64 Chem. O-3' 52.78 ICP & AAS B-5' 1.28 Micro wave plasG-6' 14.67 Chem. N-11' 52.2 INAA(γ-ray) B-18 1.17 PAA B-55 14.71 Chem. K-11' 52.2 INAA(γ-ray) B-18 1.17 PAA B-55 14.71 Chem. K-11' 53.62 Photom. B-279 1.13 Photom. B-71 14.94 Chem. G-7' 53.36 Various P-5' 1.16 Photom. B-279 15.02 Chem. B-39 53.53 Various S-23' 1.20 Photom. B-224 4.08 Grav. B-16. 52.93 XRF B-18 1.21 Photom. B-130 14.79 Grav. B-16. 53.02 XRF B-16 1.21 Photom. B-80. B-94 14.41 ICP B-482 53.10 XRF B-19 1.34 Photom. B-14, B-91 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>									
52.78 ICP & AAS B-5'									
53.31 IDMS B-48									0-11' A-10'
52. 2 INAA(γ-ray) B-18 1.17 PAA B-55 14.71 Chem. K-11' 52. 83 Micro wave plasG-6' 1.19 Photm(FI) B-462 14.74 Chem. G-7' 53. 62 Photom. B-279 1.13 Photom. B-279 15.02 Chem. B-39 53. 53 Various S-23' 1.20 Photom. B-224 14.08 Grav. B-163 52. 90 XRF O-3' 1.20 Photom. B-153 14.65 Grav. B-145 52. 93 XRF B-18 1.21 Photom. B-130 14.79 Grav. B-165 53. 02 XRF B-16 1.21 Photom. B-93 14.31 ICP B-482 53. 07 XRF B-19 1.34 Photom. B-80, B-94 14.41 ICP B-455 53. 11 XRF B-31 1.13 Various S-23' 15.20 ICP K-18' 53. 12 XRF B-94 1.44 H1 ICP B-455 <t< td=""><td>53. 31</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>K-11'</td></t<>	53. 31								K-11'
52. 83 Micro wave plasG-6' 1.19 Photm(FI) B-462 14.74 Chem. G-7' 53. 62 Photom. B-279 1.13 Photom. B-279 15.02 Chem. S-23' 53. 36 Various P-5' 1.16 Photom. B-224 14.08 Grav. B-153 52. 90 XRF O-3' 1.20 Photom. B-153 14.65 Grav. B-14, 52. 93 XRF B-18 1.21 Photom. B-130 14.79 Grav. B-14, 53. 02 XRF B-16 1.21 Photom. B-93 14.31 ICP B-482 53. 04 XRF B-44, B-73 1.27 Photom. B-94 14.41 ICP B-455 53. 07 XRF B-19 1.34 Photom. B-14, B-91 14.55 ICP B-482 53. 11 XRF B-31 1.13 Various S-23' 15.20 ICP & AS B-5' 53. 16 XRF B-87 1.08 XRF									
53. 62 Photom. B-279 1.13 Photom. B-71 14.94 Chem. S-23' 53. 36 Various P-5' 1.16 Photom. B-279 15.02 Chem. B-39 53. 53 Various S-23' 1.20 Photom. B-153 14.08 Grav. B-14. 52. 93 XRF B-18 1.21 Photom. B-130 14.79 Grav. B-80, 53. 02 XRF B-16 1.21 Photom. B-93 14.31 ICP B-482 53. 04 XRF B-14, B-73 1.27 Photom. B-80, B-94 14.41 ICP B-452 53. 07 XRF B-19 1.34 Photom. B-14, B-91 14.55 ICP B-192 53. 11 XRF B-31 1.13 Various S-23' 15.20 ICP K-18' 53. 14 XRF B-87 1.08 XRF B-109 14.22 INAA B-25 53. 16 XRF B-36 1.10 XRF B-90 15.0 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>14.74</td><td></td><td></td></td<>							14.74		
53. 53 Various S-23' 1. 20 Photom. B-224 14. 08 Grav. B-153 52. 90 XRF 0-3' 1. 20 Photom. B-153 14. 65 Grav. B-14, 52. 93 XRF B-18 1. 21 Photom. B-93 14. 31 ICP B-86, 53. 02 XRF B-44, B-73 1. 27 Photom. B-80, B-94 14. 41 ICP B-455 53. 07 XRF B-19 1. 34 Photom. B-80, B-94 14. 41 ICP B-455 53. 07 XRF B-19 1. 34 Photom. B-80, B-94 14. 41 ICP B-455 53. 10 XRF B-31 1. 13 Various S-23' 15. 20 ICP K-18' 53. 16 XRF B-87 1. 08 XRF B-109 14. 22 INAA B-22' 53. 16 XRF B-36 1. 10 XRF Y-8'	53.62							Chem.	S-23'
52. 90 XRF 0-3' 1. 20 Photom. B-153 14. 65 Grav. B-14, 52. 93 XRF B-18 1. 21 Photom. B-130 14. 79 Grav. B-80, 53. 02 XRF B-16 1. 21 Photom. B-93 14. 31 ICP B-482 53. 04 XRF B-44, B-73 1. 27 Photom. B-80, B-94 14. 41 ICP B-455 53. 07 XRF B-19 1. 34 Photom. B-80, B-94 14. 41 ICP B-452 53. 11 XRF B-31 1. 13 Various S-23' 15. 20 ICP K-18' 53. 14 XRF B-87 1. 08 XRF B-109 14. 22 INAA B-25' 53. 16 XRF B-36 1. 10 XRF Y-8' 14. 27 INAA B-247 53. 17 XRF B-36 1. 11 XRF B-80 15. 0 INAA B-47	53. 36	Various	P-5'	1. 16	Photom.	B-279	15. 02	Chem.	B-39
52. 93 XRF B-18 1. 21 Photom. B-130 14. 79 Grav. B-80, 53. 02 XRF B-16 1. 21 Photom. B-93 14. 31 ICP B-482 53. 04 XRF B-44, B-73 1. 27 Photom. B-80, B-94 14. 41 ICP B-452 53. 07 XRF B-19 1. 34 Photom. B-14, B-91 14. 55 ICP B-192 53. 11 XRF B-31 1. 13 Various S-23' 15. 20 ICP K-18' 53. 14 XRF B-87 1. 08 XRF B-109 14. 22 INAA B-270 53. 16 XRF B-86 1. 10 XRF Y-8' 14. 27 INAA B-270 53. 16 XRF B-36 1. 10 XRF Y-8' 14. 27 INAA B-18 53. 17 XRF B-134 1. 11 XRF B-90 15. 0 INAA B-26 <t< td=""><td>53. 53</td><td>Various</td><td>S-23'</td><td>1. 20</td><td>Photom.</td><td>B-224</td><td>14.08</td><td>Grav.</td><td>B-153</td></t<>	53. 53	Various	S-23'	1. 20	Photom.	B-224	14.08	Grav.	B-153
53. 02 XRF B-16 1. 21 Photom. B-93 14. 31 ICP B-482 53. 04 XRF B-44, B-73 1. 27 Photom. B-80, B-94 14. 41 ICP B-455 53. 07 XRF B-19 1. 34 Photom. B-14, B-91 14. 55 ICP B-192 53. 11 XRF B-31 1. 13 Various S-23* 15. 20 ICP K-18* 53. 14 XRF P-8* 1. 15 Various S-23* 15. 20 ICP K-18* 53. 16 XRF B-87 1. 08 XRF B-109 14. 22 INAA B-5* 53. 16 XRF B-36 1. 10 XRF B-90 15. 0 INAA B-18 53. 17 XRF B-134 1. 11 XRF B-90 15. 0 INAA B-47 53. 20 XRF B-247 1. 13 XRF B-43 14. 79 Micro wave plasG-6* 53. 21 <td>52. 90</td> <td>XRF</td> <td>0-3'</td> <td>1. 20</td> <td>Photom.</td> <td>B-153</td> <td>14.65</td> <td>Grav.</td> <td>B-14, B-91</td>	52. 90	XRF	0-3'	1. 20	Photom.	B-153	14.65	Grav.	B-14, B-91
53. 04 XRF B-44, B-73 1. 27 Photom. B-80, B-94 14. 41 ICP B-455 53. 07 XRF B-19 1. 34 Photom. B-14, B-91 14. 55 ICP B-192 53. 11 XRF B-31 1. 13 Various S-23' 15. 20 ICP K-18' 53. 14 XRF Y-8' 1. 15 Various P-5' 14. 59 ICP & AAS B-5' 53. 16 XRF B-87 1. 08 XRF B-109 14. 22 INAA B-270 53. 16 XRF B-36 1. 10 XRF B-90 15. 0 INAA B-18 53. 17 XRF B-134 1. 11 XRF B-90 15. 0 INAA B-447 53. 18 XRF B-25 1. 12 XRF B-43 14. 79 Micro wave plasG-6' 53. 20 XRF B-247 1. 13 XRF B-40 15. 0 NAA B-277 53. 21 </td <td>52.93</td> <td>XRF</td> <td>B-18</td> <td></td> <td>Photom.</td> <td>B-130</td> <td></td> <td>Grav.</td> <td>B-80, B-94</td>	52.93	XRF	B-18		Photom.	B-130		Grav.	B-80, B-94
53. 07 XRF B-19 1. 34 Photom. B-14, B-91 14. 55 ICP B-192 53. 11 XRF B-31 1. 13 Various S-23' 15. 20 ICP K-18' 53. 14 XRF Y-8' 1. 15 Various P-5' 14. 59 ICP & AAS B-5' 53. 16 XRF B-87 1. 08 XRF B-109 14. 22 INAA B-270 53. 16 XRF B-36 1. 10 XRF B-109 14. 22 INAA B-270 53. 17 XRF B-134 1. 11 XRF B-90 15. 0 INAA B-18 53. 17 XRF B-25 1. 12 XRF B-43 14. 79 Micro wave plasce' 53. 20 XRF B-247 1. 13 XRF B-40 15. 0 NAA B-57 53. 21 XRF S-26' 1. 16 XRF B-134 15. 3 NAA B-55 53. 25<	53. 02	XRF	B-16	1. 21	Photom.	B-93	14. 31	ICP	B-482
53. 11 XRF B-31 1. 13 Various S-23' 15. 20 ICP K-18' 53. 14 XRF Y-8' 1. 15 Various P-5' 14. 59 ICP & AAS B-5' 53. 16 XRF B-87 1. 08 XRF B-109 14. 22 INAA B-270 53. 16 XRF B-36 1. 10 XRF Y-8' 14. 27 INAA B-270 53. 17 XRF B-134 1. 11 XRF B-90 15. 0 INAA B-147 53. 18 XRF B-25 1. 12 XRF B-43 14. 79 Micro wave plasG-6' 53. 20 XRF B-247 1. 13 XRF B-40 15. 0 NAA B-277 53. 21 XRF S-26' 1. 16 XRF B-134 15. 3 NAA B-55 53. 23 XRF B-15 1. 16 XRF B-31 14. 6 Photom. B-55 53. 25 XRF B-84 1. 16 XRF B-87 14. 7 Photom. B-130 </td <td></td> <td></td> <td></td> <td></td> <td>Photom.</td> <td>B-80, B-94</td> <td></td> <td></td> <td>B-455</td>					Photom.	B-80, B-94			B-455
53. 14 XRF Y-8' 1. 15 Various P-5' 14. 59 ICP & AAS B-5' 53. 16 XRF B-87 1. 08 XRF B-109 14. 22 INAA B-270 53. 16 XRF B-36 1. 10 XRF Y-8' 14. 27 INAA B-18 53. 17 XRF B-134 1. 11 XRF B-90 15. 0 INAA B-18 53. 18 XRF B-25 1. 12 XRF B-43 14. 79 Micro wave plasG-6' 53. 20 XRF B-247 1. 13 XRF B-40 15. 0 NAA B-277 53. 21 XRF S-26' 1. 16 XRF B-134 15. 3 NAA B-55 53. 23 XRF B-15 1. 16 XRF B-31 14. 6 Photom. B-51 53. 25 XRF B-84 1. 16 XRF B-87 14. 7 Photom. B-95 53. 26 XRF B-67 1. 16 XRF B-270 14. 74 Photom. B-18					Photom.				B-192
53. 16 XRF B-87 1.08 XRF B-109 14.22 INAA B-270 53. 16 XRF B-36 1.10 XRF Y-8' 14.27 INAA B-18 53. 17 XRF B-134 1.11 XRF B-90 15.0 INAA B-447 53. 18 XRF B-25 1.12 XRF B-43 14.79 Micro wave plasG-6' 53. 20 XRF B-247 1.13 XRF B-40 15.0 NAA B-277 53. 21 XRF S-26' 1.16 XRF B-134 15.3 NAA B-277 53. 23 XRF B-15 1.16 XRF B-31 14.6 Photom. B-55 53. 25 XRF B-84 1.16 XRF B-31 14.7 Photom. B-95 53. 26 XRF B-67 1.16 XRF B-270 14.72 Vol. B-282 53. 67 XRF B-40 1.16 XRF B-270 14.72 Vol. B-270 53. 75 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>									
53. 16 XRF B-36 1. 10 XRF Y-8' 14. 27 INAA B-18 53. 17 XRF B-134 1. 11 XRF B-90 15. 0 INAA B-447 53. 18 XRF B-25 1. 12 XRF B-43 14. 79 Micro wave plasG-6' 53. 20 XRF B-247 1. 13 XRF B-40 15. 0 NAA B-27' 53. 21 XRF B-26' 1. 16 XRF B-134 15. 3 NAA B-55 53. 23 XRF B-15 1. 16 XRF B-31 14. 6 Photom. B-51 53. 25 XRF B-84 1. 16 XRF B-87 14. 7 Photom. B-95 53. 26 XRF B-67 1. 16 XRF S-24' 14. 74 Photom. B-130 53. 26 XRF B-40 1. 16 XRF B-270 14. 72 Vol. B-224 53. 67 XRF B-90 1. 17 XRF B-36 15. 11 Vol. B-71 <tr< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr<>									
53. 17 XRF B-134 1. 11 XRF B-90 15. 0 INAA B-447 53. 18 XRF B-25 1. 12 XRF B-43 14. 79 Micro wave plasG-6' 53. 20 XRF B-247 1. 13 XRF B-40 15. 0 NAA B-277 53. 21 XRF S-26' 1. 16 XRF B-134 15. 3 NAA B-277 53. 23 XRF B-15 1. 16 XRF B-31 14. 6 Photom. B-55 53. 25 XRF B-84 1. 16 XRF B-87 14. 7 Photom. B-95 53. 26 XRF B-67 1. 16 XRF S-24' 14. 74 Photom. B-130 53. 26 XRF B-40 1. 16 XRF B-270 14. 72 Vol. B-224 53. 67 XRF B-90 1. 17 XRF B-36 15. 11 Vol. B-71 53. 75 XRF B-43 1. 17 XRF B-67 13. 88 XRF T-13' <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>									
53. 18 XRF B-25 1. 12 XRF B-43 14. 79 Micro wave plasG-6' 53. 20 XRF B-247 1. 13 XRF B-40 15. 0 NAA B-277 53. 21 XRF S-26' 1. 16 XRF B-134 15. 3 NAA B-55 53. 23 XRF B-15 1. 16 XRF B-31 14. 6 Photom. B-51 53. 25 XRF B-84 1. 16 XRF B-87 14. 7 Photom. B-95 53. 26 XRF B-67 1. 16 XRF B-24' 14. 74 Photom. B-130 53. 26 XRF B-40 1. 16 XRF B-270 14. 72 Vol. B-224 53. 67 XRF B-90 1. 17 XRF B-36 15. 11 Vol. B-71 53. 75 XRF B-43 1. 17 XRF B-67 13. 88 XRF T-13' 53. 86 XRF T-13' 1. 17 XRF B-15 14. 01 XRF B-67									
53. 20 XRF B-247 1. 13 XRF B-40 15. 0 NAA B-277 53. 21 XRF S-26' 1. 16 XRF B-134 15. 3 NAA B-55 53. 23 XRF B-15 1. 16 XRF B-31 14. 6 Photom. B-51 53. 25 XRF B-84 1. 16 XRF B-87 14. 7 Photom. B-51 53. 26 XRF B-67 1. 16 XRF S-24' 14. 74 Photom. B-130 53. 26 XRF B-40 1. 16 XRF B-270 14. 72 Vol. B-224 53. 67 XRF B-90 1. 17 XRF B-36 15. 11 Vol. B-71 53. 75 XRF B-43 1. 17 XRF B-67 13. 88 XRF T-13' 53. 86 XRF T-13' 1. 17 XRF B-67 13. 88 XRF T-13' 53. 87 XRF B-125 1. 18 XRF B-19 14. 12 XRF B-109 53. 89 XRF B-270 1. 18 XRF B-18 14. 52 XRF B-44 53. 55 XRF <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>									
53. 21 XRF S-26' 1. 16 XRF B-134 15. 3 NAA B-55 53. 23 XRF B-15 1. 16 XRF B-31 14. 6 Photom. B-51 53. 25 XRF B-84 1. 16 XRF B-87 14. 7 Photom. B-95 53. 26 XRF B-67 1. 16 XRF S-24' 14. 74 Photom. B-130 53. 26 XRF B-40 1. 16 XRF B-270 14. 72 Vol. B-282 53. 67 XRF B-90 1. 17 XRF B-36 15. 11 Vol. B-71 53. 75 XRF B-43 1. 17 XRF B-67 13. 88 XRF T-13' 53. 86 XRF T-13' 1. 17 XRF B-15 14. 01 XRF B-67 53. 87 XRF B-125 1. 18 XRF B-19 14. 12 XRF B-109 53. 89 XRF B-270 1. 18 XRF B-18 14. 52 XRF B-49 53. 55 XRF S-24' 1. 18 XRF B-125 14. 52 XRF Y-8'									
53. 23 XRF B-15 1. 16 XRF B-31 14. 6 Photom. B-51 53. 25 XRF B-84 1. 16 XRF B-87 14. 7 Photom. B-95 53. 26 XRF B-67 1. 16 XRF S-24' 14. 74 Photom. B-130 53. 26 XRF B-40 1. 16 XRF B-270 14. 72 Vol. B-224 53. 67 XRF B-90 1. 17 XRF B-36 15. 11 Vol. B-71 53. 75 XRF B-43 1. 17 XRF B-67 13. 88 XRF T-13' 53. 86 XRF T-13' 1. 17 XRF B-15 14. 01 XRF B-67 53. 87 XRF B-125 1. 18 XRF B-19 14. 12 XRF B-109 53. 89 XRF B-270 1. 18 XRF B-18 14. 52 XRF B-44 53. 55 XRF S-24' 1. 18 XRF B-125 14. 52 XRF Y-8'									
53. 25 XRF B-84 1. 16 XRF B-87 14. 7 Photom. B-95 53. 26 XRF B-67 1. 16 XRF S-24' 14. 74 Photom. B-130 53. 26 XRF B-40 1. 16 XRF B-270 14. 72 Vol. B-224 53. 67 XRF B-90 1. 17 XRF B-36 15. 11 Vol. B-71 53. 75 XRF B-43 1. 17 XRF B-67 13. 88 XRF T-13' 53. 86 XRF T-13' 1. 17 XRF B-15 14. 01 XRF B-67 53. 87 XRF B-125 1. 18 XRF B-19 14. 12 XRF B-109 53. 89 XRF B-270 1. 18 XRF B-18 14. 52 XRF B-44, 53. 55 XRF S-24' 1. 18 XRF B-125 14. 52 XRF Y-8'									
53. 26 XRF B-67 1. 16 XRF S-24' 14. 74 Photom. B-130 53. 26 XRF B-40 1. 16 XRF B-270 14. 72 Vol. B-224 53. 67 XRF B-90 1. 17 XRF B-36 15. 11 Vol. B-71 53. 75 XRF B-43 1. 17 XRF B-67 13. 88 XRF T-13' 53. 86 XRF T-13' 1. 17 XRF B-15 14. 01 XRF B-67 53. 87 XRF B-125 1. 18 XRF B-19 14. 12 XRF B-109 53. 89 XRF B-270 1. 18 XRF B-18 14. 52 XRF B-44, 53. 55 XRF S-24' 1. 18 XRF B-125 14. 52 XRF Y-8'									
53. 26 XRF B-40 1. 16 XRF B-270 14. 72 Vol. B-224 53. 67 XRF B-90 1. 17 XRF B-36 15. 11 Vol. B-71 53. 75 XRF B-43 1. 17 XRF B-67 13. 88 XRF T-13' 53. 86 XRF T-13' 1. 17 XRF B-15 14. 01 XRF B-67 53. 87 XRF B-125 1. 18 XRF B-19 14. 12 XRF B-109 53. 89 XRF B-270 1. 18 XRF B-18 14. 52 XRF B-44 53. 55 XRF S-24' 1. 18 XRF B-125 14. 52 XRF Y-8'									
53. 67 XRF B-90 1. 17 XRF B-36 15. 11 Vol. B-71 53. 75 XRF B-43 1. 17 XRF B-67 13. 88 XRF T-13' 53. 86 XRF T-13' 1. 17 XRF B-15 14. 01 XRF B-67 53. 87 XRF B-125 1. 18 XRF B-19 14. 12 XRF B-109 53. 89 XRF B-270 1. 18 XRF B-18 14. 52 XRF B-44 53. 55 XRF S-24' 1. 18 XRF B-125 14. 52 XRF Y-8'									
53. 75 XRF B-43 1. 17 XRF B-67 13. 88 XRF T-13' 53. 86 XRF T-13' 1. 17 XRF B-15 14. 01 XRF B-67 53. 87 XRF B-125 1. 18 XRF B-19 14. 12 XRF B-109 53. 89 XRF B-270 1. 18 XRF B-18 14. 52 XRF B-44 53. 55 XRF S-24' 1. 18 XRF B-125 14. 52 XRF Y-8'									
53. 86 XRF T-13' 1. 17 XRF B-15 14. 01 XRF B-67 53. 87 XRF B-125 1. 18 XRF B-19 14. 12 XRF B-109 53. 89 XRF B-270 1. 18 XRF B-18 14. 52 XRF B-44, 53. 55 XRF S-24' 1. 18 XRF B-125 14. 52 XRF Y-8'									
53. 87 XRF B-125 1. 18 XRF B-19 14. 12 XRF B-109 53. 89 XRF B-270 1. 18 XRF B-18 14. 52 XRF B-44, 53. 55 XRF S-24' 1. 18 XRF B-125 14. 52 XRF Y-8'									
53. 89 XRF B-270 1. 18 XRF B-18 14. 52 XRF B-44, 53. 55 XRF S-24' 1. 18 XRF B-125 14. 52 XRF Y-8'									
53.55 XRF S-24' 1.18 XRF B-125 14.52 XRF Y-8'									
									B-44, B-73
D3 D4 XKK N ChOM R=6' 1 D2 YRK R=1K 1 M 57 YPC D=10									
	53. 04	XRF & Chem.		1. 18	XRF	B-16	14. 57	XRF	B-19
53.10 XRF(Dry basis) B-129 1.19 XRF B-44, B-73 14.62 XRF B-90									
52. 4 XRF(fusion) B-70 1. 19 XRF B-247 14. 63 XRF S-26'	5Z. 4	ARF(fusion)	R-10						
	c ·			1. 20					B-134
Si 1. 20 XRF B-84 14. 66 XRF B-40 1. 21 XRF 0-3' 14. 67 XRF B-25	- 31	_							

Table A-6 Individual data for JB-2

%	Method	Code No.	%	Method	Code No.	%	Method	Code No.
14. 67	XRF	B-247	13. 31	XRF	B-90	9. 93	Chem.	T-41'
	XRF	S-24'	13. 35	XRF	B-109	9. 93	Chem.	S-24'
	XRF	B-18	13.82	XRF	B-134	9. 96	Chem.	T-23'
	XRF	B-16	13. 97	XRF	B-31	9.97	Chem.	B-45
	XRF	B-15	13. 98	XRF	B-43	9.98	Chem.	K-11'
14.73	XRF	0-3'	14.02	XRF	B-270	10.03	Chem.	K-11'
14. 76	XRF	B-36	14. 10	XRF	B-125	10.08	Chem.	B-56, B-221
14. 80	XRF	B-87	14. 13	XRF	T-13'	10.09	Chem.	0-11' A-10'
	XRF	B-31	14. 19	XRF	0-3'	10. 25	Chem.	0-3'
	XRF	B-84	14. 24	XRF	B-87	10.55	Chem.	A-2'
	XRF	B-43	14. 25	XRF	B-18	10.55	Chem.	A-2'
	XRF	B-125	14. 25	XRF	B-19	10. 91	Chem.	G-7'
	XRF	B-270	14. 28	XRF	Y-8'	10.08	Photm	B-467
14. 54	XRF & Chem.	B-6'	14. 32	XRF	S-26'	10.02	Photom.	B-270
	XRF(Dry basis)	B-70	14. 34 14. 38	XRF XRF	B-247 B-15	10. 10 10. 37	Photom. Photom.	B-216 B-123
14. 09	XRF(fusion)	D-10	14. 30	XRF	B-25	9. 97	Vol	B-482
A 1			14. 40	XRF	S-24'	9. 31	Vol.	B-71
nı	-		14. 45	XRF	B-36	9. 65	Vol.	B-18
7. 7700	ICP	B-77	14. 48	XRF	B-16	9. 72	Vol.	B-134
8. 10	INAA	B-58	14. 56	XRF	B-67	9. 73	Vol.	B-80, B-94
6. 36	NAA	B-11	14. 72	XRF	B-44, B-73	9. 73	Vol.	B-36
8. 0145		B-337	14. 91	XRF	B-40	9. 75	Vol.	B-153
			14. 40	XRF & Chem.	B-6'	9. 75	Vol.	B-279
T-Fe203			14. 28	XRF(Dry basis)	B-129	9. 75	Vol.	B-14, B-91
	-		14. 19	XRF(fusion)	B-70	9. 78	Vol.	B-93
13. 13		B-146				9.82	Vol.	B-130
14.07	AAS	B-134	Fe203	_		9.84	Vol.	B-25
14. 1	AAS	B-279				9. 99	Vol.	B-224
14. 11	AAS	B-109	3. 18	AAS	T-23'	9. 99	Vol.	B-455
14. 25	AAS	T-23'	3. 28	AAS	B-134	10.08	Vol.	K-18'
14. 36	AAS	B-328	3. 32	AAS	T-41'	10. 18	Vol. Vol.	B-15 B-31
14. 36	AAS & Dhoton	T-41' C-4'	3. 42 3. 56	AAS AAS	B-93 B-80, B-94	10. 44 9. 51	XRF & Chem.	B-6'
13. 76	AAS & Photom. AAS & Photom.	C-4 C-5'	2. 90	Calc	B-482	9. 01	ART & CHEM.	D-0
13. 93 14. 12	Chem.	G-7'	2. 88	Calc.	B-270	Fe		
14. 12	Chem.	0-3'	3. 06	Calc.	B-15	re	-	
14. 34	Chem.	0-11' A-10'	3. 25	Calc.	B-216	9. 3100	ICP	B-77
14. 41	Chem.	K-11'	3. 48	Calc.	B-25 -	9. 52	INAA	B-289, B-300
14. 42	Chem.	K-11'	3. 64	Calc.	B-36	9. 73	INAA	B-37-2
14. 51	Chem.	K-11'	2. 99	Chem.	0-3'	9. 73	INAA	B-310
14.77	Chem.	A-2'	3. 05	Chem.	A-2'	9. 9	INAA	B-244
14.77	Chem.	A-2'	3.05	Chem.	A-2'	9. 9	INAA	B-230
14. 20	ICP	B-455	3. 13	Chem.	0~11' A-10'	9. 91	INAA	B-58
14.76	ICP	K-18'	3. 19	Chem.	B-56, B-221	9. 98	INAA	B-24
15. 02	ICP	B-192	3. 21	Chem.	G-7'	10. 3	INAA	B-324
14. 15	ICP & AAS	B-5'	3. 27	Chem.	K-11'	9. 5900		B-126
13. 85	INAA	B-142	3. 32	Chem.	K-11'	9.86	NAA	B-11
14. 02	INAA	B-270	3. 36	Chem.	B-45	11.6	NAA Dhatan	B-287
14. 44	INAA	B-18 B-110	3. 40	Chem.	K-11' B-39	10. 1 10. 1507	Photom.	B-51 B-337
14.5	INAA Micro wave pla	B-118	3. 59 3. 10	Chem. ICP	в-39 В-455	9.64		B-11
14. 26 12. 72	NAA	B-277	3. 10	ICP	K-18'	10. 55	XRF	B-84
13.6	NAA NAA	B-3	3. 42	Photm	B-467	11.86	XRF	B-111
14.5	PAA	B-55	3. 42	Vol.	B-14, B-91	11.00	A141	D 111
14.62	Photm	B-467	3. 64	Vol.	B-71	MnO		
13. 83	Photm(FI)	B-462	4.06	Vol.	B-153		-	
14. 12	Photom.	B-130	3. 03	XRF	B-134	0. 24		B-146
14. 22	Photom.	B-123	3. 38	XRF	S-24'	0. 20	AAS	B-224
14. 35	Photom.	B-224	3. 83	XRF & Chem.	B-6'	0. 20	AAS	B-71
14. 38	Photom.	B-119				0. 21	AAS	B-109
14. 45	Photom.	B-216	Fe0	_		0. 21	AAS	B-279
14. 14	Various	P-5'				0. 22	AAS	B-134
14. 27	Various	S-23'	9. 68	Chem.	B-39	0. 22	AAS	B-216
14. 36	Vol.	B-119	9. 72	Chem.	P-5'	0. 22	AAS	T-41'
14. 90	Vol.	B-153	9. 91	Chem.	K-11'	0. 22	AAS	B-328

Table A-6 Individual data for JB-2

*	Method	Code No.	%	Method	Code No.	%	Method	Code No.
0. 22	AAS	B-80, B-94	0. 17	INAA	B-230	4. 69	XRF	S-26'
0. 22	AAS	T-23'	0. 16	NAA	B-11	4. 69	XRF	B-19
0. 221	AAS	B-84	0. 175	NAA	B-287	4. 70	XRF	B-31
0. 222	AAS	B-93	0. 1508	SIMS	B-337	4. 72	XRF	B-25
0. 23	AAS	B-15	0. 15	XRF	B-11	4.77	XRF	B-43
0. 21	AAS & Photom.	C-4'	0. 1570		B-130	4. 78	XRF	B-40
0. 22	AAS & Photom.	C-5'	0. 1844		B-128	4. 78	XRF	Y-8'
0. 18	Chem.	A-2'	0. 2234	XRF	B-111	4. 95	XRF	0-3'
0. 18	Chem.	A-2'		XRF(fusion)	B-36	5. 15	XRF & Chem.	B-6'
0. 20	Chem.	0-11' A-10'	0. 1639	XRF(powder)	B-36	4. 72	XRF(Dry basis)	
0. 21	Chem.	B-56, B-221				4. 66	XRF(fusion)	B-70
0. 22	Chem.	B-45	MgO	_		.,		
0. 22	Chem.	P-5'	4 -1	110	D 15	Mg	_	
0. 22	Chem.	K-11'	4. 51	AAS	B-15	0 0000	LOD	D 77
0. 23	Chem.	G-7'	4. 53	AAS	B-93	2. 9200		B-77
0. 23	Chem.	K-11'	4. 58	AAS	B-130	4. 63	INAA	B-58
0. 23 0. 23	Chem. Chem.	B-39 K-11'	4. 63 4. 63	AAS AAS	T-23' B-328	2. 8615	31M3	B-337
0. 23		S-23'				CoO		
0. 23	Chem. Chem.	3-23 0-3'	4. 63 4. 63	AAS AAS	T-41' B-134	Ca0	-	
0. 23	FI-Photom.	B-261	4. 63	AAS	B-134 B-109	9. 40	AAS	B-71
0. 19	ICP	K-18'	4. 65	AAS	B-216	9. 63	AAS	B-109
0. 20	ICP	B-482	4. 67	AAS	B-71	9. 66	AAS	B-134
0. 21	ICP	B-192	4.7	AAS	B-279	9. 75	AAS	B-328
0. 22	ICP	B-455	4. 78	AAS	B-84	9. 75	AAS	T-41'
0. 23	ICP	B-18	4. 62	AAS & Photom.	C-5'	9. 80	AAS	T-23'
0. 20	ICP & AAS	B-5'	4. 64	AAS & Photom.	C-4'	9. 82	AAS	B-93
0. 207	INAA	B-270	4. 23	Chem.	A-2'	9. 90	AAS	B-216
0. 231	INAA	B-447	4. 23	Chem.	A-2'	10.0	AAS	B-279
0. 23	INAA(epi)	B-18	4. 41	Chem.	P-5'	10. 27	AAS & Photm.	C-4'
0. 22	Micro wave pla		4. 48	Chem.	K-11'	10. 70	AAS & Photm.	C-5'
0. 214	NAA	B-277	4. 56	Chem.	S-23'	8. 96	Chem.	B-39
0. 21	PAA	B-55	4. 58	Chem.	G-7'	9. 52	Chem.	P-5'
0. 22	Photom.	B-153	4. 63	Chem.	K-11'	9. 66	Chem.	G-7'
0. 23	Photom.	B-14, B-91	4.63	Chem.	B-45	9. 69	Chem.	S-23'
0. 24	Photom.	B-130	4. 65	Chem.	K-11'	9.74	Chem.	B-45
0. 20	XRF	B-125	4.66	Chem.	0-11' A-10'	9. 82	Chem.	K-11'
0. 20	XRF	B-247	4. 72	Chem.	B-56, B-221	9. 82	Chem.	K-11'
0. 21	XRF	B-44, B-73	4. 76	Chem.	0-3'	9. 85	Chem.	A-2'
0. 21	XRF	B-19	4. 84	Chem.	B-39	9. 85	Chem.	A-2'
0. 21	XRF	S-24'	4. 46	Grav.	B-80, B-94	9. 86	Chem.	K-11'
0. 211	XRF	B-270	4. 59	Grav.	B-14, B-91	9. 87	Chem.	B-56, B-221
0. 22	XRF	B-31	4.76	Grav.	B-153	9.89	Chem.	0-11' A-10'
0. 22	XRF	B-90	4. 33	ICP	B-482	9. 93	Chem.	0-3'
0. 22	XRF	B-16	4. 59	ICP	B-192	9. 84	Grav.	B-80, B-94
0. 22	XRF	B-134	4. 64	ICP	B-455	10.00	Grav.	B-153
0. 22	XRF	0-3'	4. 66	ICP	K-18'	9.63	ICP	B-482
0. 22	XRF	B-67	4. 88	ICP & AAS	B-5'	9.66	ICP	B-455
0. 22	XRF	Y-8'	4. 46	INAA	B-18	9. 69	ICP	B-192
0. 222	XRF	B-40	4. 75	INAA	B-270	9. 88	ICP	K-18'
0. 23	XRF	B-18	4. 40	Micro wave pla		10. 72	ICP * AAC	B-18
0. 23	XRF	B-109	4. 57		B-55	9.65	ICP & AAS	B-5'
0. 23	XRF	B-43	4. 54	Vol.	B-224	9. 42	INAA	B-270 B-447
0. 23	XRF	S-26'	4. 58	Vol.	B-130	10.1	INAA Micro wave pla	B-447
0. 25	XRF	B-87	4. 31	XRF	B-67	9. 75	•	Su~o В-277
0. 22	XRF & Chem.	B-6'	4. 41	XRF	B-90 T-12'	9. 93 9. 63	NAA Paa	B-277 B-55
0. 23 0. 22	XRF(Dry basis) XRF(fusion)	B-129 B-70	4. 41 4. 41	XRF XRF	T-13' B-44, B-73	9. 63	Vol.	B-130
0. 22	ART (TUSTOII)	B-10						B-14. B-91
v-			4. 59	XRF	B-18	9.66	Vol. Vol.	B-14, B-91 B-224
Mn	_		4. 60	XRF	B-16	9. 81		B-67
0 1500	244	D_995	4. 61	XRF	B-36	9.56	XRF XRF	Y-8'
0. 1560		B-325	4. 61	XRF	B-87	9. 60 9. 70	XRF	Y-8 S-24'
0. 1630		B-25	4. 66	XRF	B-247			S-24 B-44, B-73
0. 1607		B-77	4. 67	XRF	B-125	9.71	XRF XRF	B-44, B-73 B-87
0. 158		B-58	4. 67	XRF	B-270	9.72	XRF	B-43
0. 17	INAA	B-244	4. 69	XRF	S-24'	9.79	VILL	υ [−] 40

Table A-6 Individual data for JB-2

%	Method	Code No.	%	Method	Code No.	%	Method	Code No.
9. 79	XRF	B-15	1.85	ICP	B-482	0.41	Chem.	B-45
9.80	XRF	B-134	1. 93	ICP	B-192	0.42	Chem.	K-11'
9. 80	XRF	B-109	2. 16	ICP	K-18'	0.42	Chem.	0-3'
9. 81	XRF	B-18	2. 01	ICP & AAS	B-5'	0. 43		S-23'
9. 81	XRF	B-16	2. 02	INAA	B-270	0. 43	Chem.	K-11'
9.83	XRF	B-36	2.06	INAA	B-142	0.44		G-7' A-2'
9. 83 9. 88	XRF XRF	B-270 B-25	2. 20 2. 21	I NAA I NAA	B-18 B-447	0. 45 0. 45	Chem.	K-11'
9. 88	XRF	B-31		Micro wave pla		0.47	Chem.	A-2'
9. 89	XRF	B-19	1. 94	NAA	B-3	0.48	Chem.	P-5'
9. 89	XRF	B-247	2. 03	NAA	B-277	0. 41	FES	B-279
9.89	XRF	T-13'	2.03	PAA	B-55		FES	B-435
9. 90	XRF	B-84	1.63	XRF	B-90		FES	B-236
9. 94	XRF	S-26'	1.85	XRF	B-25	0. 42	FI-AAS	B-262
9. 98	XRF	B-125	1. 88	XRF	0-3'	0. 42	F1. Photom.	B-80, B-94
10. 03	XRF	0-3'	1. 89	XRF	B-44, B-73	0. 42	Fi. Photom.	B-153
10.08	XRF XRF	B-40 B-90	1. 96 1. 99	XRF	B-36 T-13'	0. 44 0. 44	Fl. Photom.	B-56, B-221 B-130
10. 08 10. 00	XRF & Chem.	B-6'	2. 00	XRF XRF	B-19	0. 44	F1. Photom. ICP	B-482
9. 79	XRF(Dry basis)		2. 02	XRF	B-270	0. 37	ICP	B-18
9. 82	XRF(fusion)	B-70	2. 03	XRF	B-247	0. 39	ICP	B-192
0. J	()	2	2. 04	XRF	B-110, Y-8'	0. 40	ICP	K-18'
Ca			2.06	XRF	S-24'	0.37	ICP & AAS	B-5'
	_		2.06	XRF	B-40	0.50	INAA	B-270
6. 0420		B-77	2. 08	XRF	B-18	0. 38	INAA(γ-ray)	B-18
6. 77	INAA	B-289, B-300	2. 13	XRF	S-26'	0. 38	Micro wave plas	
7. 1	NAA	B-11	2. 2	XRF	B-16	0. 36	XRF	B-134
7. 1809		B-337	2. 21	XRF	B-31	0.37	XRF	B-18
7. 39 8. 852	XRF XRF	B-11 B-111	2. 25 2. 20	XRF & Chem.	B-125 B-6'	0. 37 0. 38	XRF XRF	B-125 B-43
0.002	ART	D-111	2. 20	XRF(Dry basis)		0. 40	XRF	B-87
Na20			2. 10	XRF(fusion)	B-70	0.40	XRF	0-3'
	_			(1)		0. 40	XRF	B-270
2. 01		B-146	Na			0.40	XRF	B-36
1.82	AAS	B-224		-		0. 41	XRF	B-31
1.94	AAS	B-71	1. 35	AAS	B-84	0.41	XRF	B-25
2. 03	AAS	B-328	1. 5870		B-77	0. 41	XRF	S-24'
2. 03	AAS	T-41'	1. 45	INAA	B-24	0. 42	XRF	B-44, B-73
2. 03	AAS	B-93	1. 51 1. 52	INAA INAA	B-58	0. 42 0. 42	XRF XRF	B-16 B-40
2. 03 2. 03	AAS AAS	0-11' A-10' B-455	1. 52	INAA	B-289, B-300 B-37-2	0.42	XRF	B-67
2. 05	AAS	T-23'	1. 53	INAA	B-310	0.43	XRF	KT-13'
2. 05	AAS	B-134	1. 56	INAA	B-324	0. 43	XRF	B-90
2. 05	AAS	B-216	1.57	INAA	B-230	0. 43	XRF	B-247
2. 12	AAS	B-109	1.57	INAA	B-244	0. 43	XRF	B-15
2. 18	AAS	B-15	1.50	NAA	B-11	0. 44	XRF	B-19
2. 18	AAS	B-14, B-91	1. 550	NAA	B-287	0.44	XRF	S-26'
2. 13	AAS & Photom.	C-4'	1. 5345	SIMS	B-337	0. 47	XRF	Y-8'
1. 92	Chem.	G-7'	7/00			0. 47	XRF & Chem.	B-6'
2. 02	Chem.	B-45	K20	-		0. 42	XRF(Dry basis)	B-129 B-70
2. 04 2. 04	Chem. Chem.	S-23' K-11'	0. 35	AAS	B-224	0. 40 0. 40	XRF(fusion) γcntg.	B-70 B-41
2. 04	Chem.	K-11'	0. 39	AAS	B-134	0.40	γ cntg.	B-237
2. 07	Chem.	P-5'	0.40	AAS	B-216	0.44	γ entg.	B-273
2. 09	Chem.	0-3'	0. 42	AAS	B-93	0. 45	γ cntg.	B-109
2. 10	Chem.	A-2'	0. 42	AAS	B-328			
2. 11	Chem.	K-11'	0. 42	AAS	B-71	K	_	
2. 12	Chem.	A-2'	0. 42	AAS	T-23'			
2. 13	Chem.	B-39	0. 42	AAS	T-41'	0. 2980		B-77
1.98	FES	B-279	0. 43	AAS	B-109	0. 337		B-84
2. 02	FI-AAS	B-262	0. 43	AAS	0-11' A-10'	0. 3570		B-48
1. 92	Fl. Photom.	B-130	0. 43	AAS	B-455	0.368		B-230 B-244
1. 94 1. 99	F1. Photom. F1. Photom.	B-80, B-94 B-87	0. 45 0. 41	AAS & Photom.	B-14, B-91 C-5'	0. 368 0. 3506		B-244 B-100, B-296,
2. 05	F1. Photom.	B-153	0.41	AAS & Photom.	C-4'	0. 3300		B-287
2. 06	F1. Photom.	B-56, B-221	0. 32	Chem.	B-39	0. 3648		B-337
5. 00			J					

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Table A-6 Individual data for JB-2

0.3525 XRF B-111 S03 (0.07 Conduct. B P205 (0.02 XRF B-36) 0.10 AAS T-41' L.0.I. 0.11 AAS T-23' 0.09 Chem. K-11' 0.55 Chem. B-39 0.09 Chem. B-56, B-221 0.37 Grav. B-134 0.09 Chem. A-2' 0.45 Grav. B-16 0.09 Chem. K-117 0.50 Grav. T-13'	-36 -130
P205 <0.02 XRF B-36 0.10 AAS T-41' L.0.I. 0.11 AAS T-23' T-23' 0.09 Chem. K-11' 0.55 Chem. B-39 0.09 Chem. B-56, B-221 0.37 Grav. B-134 0.09 Chem. A-2' 0.45 Grav. B-16 0.09 Chem. K-117 0.50 Grav. T-13'	-130
0. 10 AAS T-41' L. 0. I. 0. 11 AAS T-23' 0. 09 Chem. K-11' 0.55 Chem. B-39 0. 09 Chem. B-56, B-221 0.37 Grav. B-134 0. 09 Chem. A-2' 0.45 Grav. B-16 0. 09 Chem. K-117 0.50 Grav. T-13'	
0.11 AAS T-23' 0.09 Chem. K-11' 0.55 Chem. B-39 0.09 Chem. B-56, B-221 0.37 Grav. B-134 0.09 Chem. A-2' 0.45 Grav. B-16 0.09 Chem. K-117 0.50 Grav. T-13'	
0.11 AAS T-23' 0.09 Chem. K-11' 0.55 Chem. B-39 0.09 Chem. B-56, B-221 0.37 Grav. B-134 0.09 Chem. A-2' 0.45 Grav. B-16 0.09 Chem. K-117 0.50 Grav. T-13'	
0.09 Chem. B-56, B-221 0.37 Grav. B-134 0.09 Chem. A-2' 0.45 Grav. B-16 0.09 Chem. K-117 0.50 Grav. T-13'	
0.09 Chem. A-2' 0.45 Grav. B-16 0.09 Chem. K-117 0.50 Grav. T-13'	
0.09 Chem. K-117 0.50 Grav. T-13'	
0.09 Chem. A-2' 0.70 Grav. B-15	
0.10 Chem. 0-11' A-10' 0.83 Grav. B-70	
0.10 Chem. K-11' 0.90 Grav. B-31 0.11 Chem. 0-3' -0.33 Grav. B-25	
0.11 Chem. 0-3' -0.33 Grav. B-25 0.11 Chem. B-45 -0.38 Grav. B-224	
0.12 Chem. G-7' -0.48 Grav. B-19	
0.10 FI-Photom. B-254 -0.56 Grav. B-36	
0.092 ICP B-192 -0.66 Grav. B-87	
0.096 ICP B-455 -0.68 Grav. B-129 0.15 ICP K-18'	
0.10 ICP & AAS B-5' T-H2O	
0.08 Micro wave plasG-6'	
0.09 Photm B-482 0.36 Coul. B-270	
0.07 Photom. B-216 0.07 Grav. B-224	
0.08 Photom. B-279 0.40 Grav. B-216 0.09 Photom. B-15 0.67 Grav. B-153	
0.094 Photom. B-134	
0.097 Photom. B-84 H20+	
0.10 Photom. B-224	
0.10 Photom. B-71 0.26 Chem. B-6'	
0.111 Photom. B-93 0.31 Chem. 0-11' A-10' 0.12 Photom. B-130 0.25 Coul. B-270	
0.17 Photom. B-80, B-94 0.18 Grav. B-93	
0.096 Various S-23' 0.22 Grav. B-71	
0.11 Various P-5' 0.25 Grav. B-25	
0.09 Vol. B-14, B-91 0.26 Grav. T-41' 0.07 XRF B-90 0.29 Grav. B-36	
0.08 XRF B-109 0.26 Grav.? B-18	
0.08 XRF B-44, B-73 0.20 KF B-14, B-91	
0.09 XRF B-67 0.31 Tit B-482	
0.09 XRF S-24'	
0. 09 XRF B-31 <u>H20-</u> 0. 10 XRF B-247	
0.10 XRF B-16 0.07 CHem. 0-11' A-10'	
0.10 XRF B-18 0.11 Chem. T-41'	
0.10 XRF S-26' 0.16 Chem. G-7'	
0.10 XRF B-87 0.18 Chem. S-23' 0.10 XRF Y-8' 0.11 Coul. B-270	
0.10 XRF Y-8' 0.11 Coul. B-270 0.106 XRF B-270 0.19 Grav B-482	
0. 11 XRF B-36 0. 10 Grav. B-16	
0.11 XRF 0-3' 0.12 Grav. B-80, B-94	
0.11 XRF B-125 0.12 Grav. B-25	
0.110 XRF B-40 0.12 Grav. B-71 0.12 XRF B-19 0.12 Grav. B-153	
0.12 ARF B-43 0.12 Grav. B-93	
0.10 XRF & Chem. B-6' 0.15 Grav. B-45	
0.10 XRF(Dry basis) B-129 0.16 Grav. B-130	
0.10 XRF(fusion) B-70 0.17 Grav. B-455	
0.12 KF B-14, B-91 0.13 XRF & Chem. B-6'	
366 ICP B-77 <u>CO2</u>	
480 OES B-208 410 SIMS B-337 0.03 Chem. B-45	
410 SIMS B-337 0.03 Chem. B-45 399 XRF B-25 0.09 Chem. B-25	

Table A-7 Individual data for JB-3

ж	Method	Code No.	%	Method	Code No.	%	Method	Code No.
Si02			1. 41	Photom.	B-162	17. 12	XRF	B-97
	-		1.46	Photom.	B-224	17. 15	XRF	B-16
50.65	AAS	B-216	1. 47	Photom.	B-130	17. 18	XRF	B-44, B-73
51.14	AAS	B-134	1. 47	Photom.	B-153	17. 20	XRF	B-25
51. 15	AAS	T-41'	1.51	Photom.	B-14, B-91	17. 29	XRF	B-40
51.00	Chem.	B-56, B-221	1. 32	XRF	B-74	17. 30	XRF	B-90
51.04	Chem.	0-11' A-10'	1. 36	XRF	B-90	17. 33	XRF	B-36
51.14	Chem.	B-45	1. 37	XRF	Y-8'	17. 35	XRF	B-134
51. 18	Chem.	G-7'	1. 38	XRF	B-40	17. 41	XRF	S-26'
50. 51	Grav.	B-14, B-91	1. 39	XRF	B-43	17. 41	XRF	B-15
50. 59	Grav.	B-94	1. 39	XRF	S-26'	17. 90	XRF	B-43
50.66	Grav.	B-153	1. 40	XRF	B-31	17. 43	XRF(Dry basis)	
50. 89	Grav.	B-224	1. 40	XRF	B-270	17. 34	XRF(fusion)	B-70
51.09	Grav.	B-162	1. 41	XRF	B-134			
51. 12	Grav.	B-74	1. 42	XRF	B-15	A1	_	
51. 18	Grav. & Photom.		1. 43	XRF	B-19			
50. 59	ICP	B-309	1. 43	XRF	B-16	8. 9900		B-77
51. 16	ICP	B-476	1. 43	XRF	B-36	9. 85	NAA	B-11
51.00	IDMS	B-48	1. 45	XRF	B-44, B-73	8. 7942	ŞIMS	B-337
50. 5	INAA	B-447	1. 45	XRF	B-247			
50. 5	NAA	B-277	1. 47	XRF	T-37'	T-Fe203	_	
50. 87	Photom.	B-86	1.50	XRF	B-25			D 050
50. 38	XRF	B-44, B-73	1.50	XRF	B-22	11.7	AAS	B-279
50. 52	XRF	B-31	1. 52	XRF	B-97	11. 72	AAS	B-86
50. 82	XRF	B-16	1. 57 1. 44	XRF	B-422	11.80	AAS	B-134
50.85	XRF	B-97	1. 44	XRF(Dry basis) XRF(fusion)		11. 99	AAS	B-328
50. 87 50. 97	XRF XRF	B-19 B-270	1.42	ART (TUSTOII)	B-70	11. 99 11. 75	AAS	T-41' G-7'
50. 91 50. 99	XRF	B-40	Ti			11. 75	Chem.	0-11' A-10'
	XRF	B-15	11	-		11. 81	I CP	B-309
51.00	XRF	B-15 B-247	0.7418	ICD	B-77	12. 10	ICP	B-476
51.04	XRF	B-134	0. 7729		B-337	12. 16	ICP	B-192
51.00	XRF	B-25	0.1120	SINO	D 001	12. 10	I CP-MS	B-320
51. 19	XRF	B-22	A1203			11.0	INAA	B-447
51. 23	XRF	Y-8'	AIZOO	-		11. 12	INAA	B-270
51. 25	XRF	B-36	16. 6	AAS	B-279	11. 9	INAA	B-118
51. 44	XRF	T-37'	16. 90	AAS	B-216	12. 15	INAA	B-142
51. 63	XRF	B-90	16. 99	AAS	B-134	11. 8	PAA	B-55
51.70	XRF	S-26'	17.03	AAS	T-41'	11. 45	Photm(FI)	B-462
	XRF(Dry basis)	B-129	17.65	AAS	B-74	11. 75	Photom.	B-130
50.7	XRF(fusion)	B-70	16.89	Chem.	0-11' A-10'	11. 83	Photom.	B-119
			16. 91	Chem.	B-56, B-221	11. 87	Photom.	B-123
Si			16. 97	Chem.	B-45	11.88	Photom.	B-224
	-		17. 34	Chem.	G-7'	11. 95	Photom.	B-216
23. 8675	SIMS	B-337	16. 95	Grav.	B-153	11.81	Vol.	B-119
			17. 34	Grav.	B-94	12. 35	Vol.	B-153
Ti02	_		17. 62	Grav.	B-14, B-91	11. 16	XRF	S-26'
			17. 02	ICP	B-476	11. 32	XRF	B-270
1. 42		B-146	17. 23	ICP	B-192	11.52	XRF	B-90
1. 40	AAS .	B-134	17. 39	ICP	B-309	11.67	XRF	B-134
1. 46	AAS	T-41'	16. 98	ICP-MS	B-320	11.69	XRF	B-31
1. 52	AAS	B-216	16. 6	INAA	B-270	11.84	XRF	B-19
1. 45	Chem.	0-11' A-10'	17. 1	NAA	B-55	11.86	XRF	B-43
1.46	Chem.	G-7'	18. 4	NAA	B-277	11. 88	XRF	B-247
1. 50	Chem.	B-56, B-221	17. 34	Photom.	B-130	11. 88	XRF	B-15
1. 52	Chem.	B-45	17. 8	Photom.	B-51	11. 97	XRF	Y-8'
1. 33	ICP	B-192	17. 87	Photom.	B-86	11. 98	XRF	B-16
1. 37	ICP	B-309	16. 91	Vol.	B-224	11.99	XRF	B-36
1. 49	ICP	B-476	17. 16	Vol.	B-162	12.00	XRF	B-40
1. 47	ICP-MS	B-320	16. 54	XRF	T-37'	12. 01	XRF	T-37'
1. 39	INAA	B-270	16. 82	XRF	B-22	12. 09	XRF	B-422
1. 45	PAA	B-55	16. 89	XRF	B-247	12. 10	XRF	B-44, B-73
1. 43	Photm(FI)	B-462	16. 96	XRF	B-19	12. 12	XRF	B-25
1. 36	Photom.	B-94	17. 01	XRF	B-270	11. 83	XRF(Dry basis)	
1. 38	Photom.	B-86	17. 04	XRF	B-31	11.76	XRF(fusion)	B-70
1. 39	Photom.	B-279	17. 10	XRF	Y-8'			

Table A-7 Individual data for JB-3

%	Method	Code No.	%	Method	Code No.	%	Method	Code No.
Fe203			0. 17	AAS	B-279	5. 07	Chem.	B-45
	-			AAS	B-74		Chem.	G-7'
2. 27	Calc.	B-31		AAS	B-224			0-11' A-10'
	Calc. Calc.	B-270 B-15		AAS	B-86 T-41'		Chem.	B-56, B-221
	Calc.	B-15 B-216	0. 18 0. 18	AAS AAS	B-15		Grav. Grav.	B-94 B-14, B-91
	Calc.	B-134		AAS	B-328		Grav.	B-153
3. 20	Calc.	B-134		AAS	B-134	5. 17	ICP	B-192
	Calc.	B-25	0. 16	Chem.	0-11' A-10'	5. 28	ICP	B-476
3. 26	Calc.	T-41'	0.18	Chem.	B-56, B-221	5. 30	ICP VC	B-309
3. 33 3. 67	Calc. Calc.	B-36 B-94	0. 18 0. 20	Chem.	B-45 G-7'	5. 12 5. 20	ICP-MS Inaa	B-320 B-270
3. 81	Calc.	B-22		FI-Photom.	B-261		PAA	B-55
2.94	Chem.	G-7'		ICP	B-476		Vol.	B-130
3. 10	Chem.	0-11' A-10'	0. 17	ICP	B-309	5. 24	Vol.	B-224
3. 14	Chem.	B-45		ICP	B-192		XRF	B-90
3. 38 3. 23	Chem. Photom.	B-56, B-221 B-162		ICP-MS INAA	B-320 B-447		XRF XRF	B-22
3. 23 3. 77	Vol.	B-153		INAA	B-447 B-270		XRF	B-44, B-73 T-37'
3. 82	Vol.	B-14, B-91		NAA	B-277	5. 13	XRF	B-36
			0. 18	PAA	B-55		XRF	B-31
Fe0	_		0.18	Photom.	B-153		XRF	B-16
7.04	01	D F0 D 001	0.18	Photom.	B-162	5. 20	XRF	Y-8'
7. 84 7. 86	Chem.	B-56, B-221 T-41'	0. 18 0. 20	Photom. Photom.	B-14, B-91 B-130		XRF XRF	B-25 B-247
7. 90	Chem.	0-11' A-10'		XRF	B-247		XRF	S-26'
7. 92	Chem.	B-45	0. 17	XRF	B-19	5. 24	XRF	B-270
7. 87	Photom.	B-270	0. 17	XRF	B-90	5. 27	XRF	B-19
8. 05	Photom.	B-216	0. 17	XRF	S-26'		XRF	B-40
8. 10	Photom.	B-123		XRF	B-270		XRF	B-43
7. 45 7. 46	Vol. Vol.	B-14, B-91 B-22		XRF XRF	B-134 B-44, B-73	5. 26 5. 23	XRF(Dry basis) XRF(fusion)	B-70
7. 51	Vol.	B-94	0. 18	XRF	B-31	0.20	ART (1us 10II)	D 10
7. 60	Vol.	B-279	0. 18	XRF	B-16	Mg		
7. 72	Vol.	B-153	0. 18	XRF	Y-8'		-	
7. 75	Vol.	B-134		XRF	B-40	3. 2600		B-77
7. 76	Vol.	B-162	0. 19	XRF	B-43	2. 9270	SIMS	B-337
7. 77 7. 79	Vol. Vol.	B-86 B-36	0. 20 0. 19	XRF XRF(Dry basis)	B-22 R-129	Ca0		
7. 86	Vol.	B-224	0. 18	XRF(fusion)	B-70	Cao	-	
7. 93	Vol.	B-130		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		9.57	AAS	B-86
8. 02	Vol.	B-25	Mn	-		9.64	AAS	B-162
8. 18	Vol.	B-15	0 1050	110	D 05	9.73	AAS	B-328
8. 48	Vol.	B-31	0. 1350 0. 1298	AAS	B-25 B-77	9. 73 9. 79	AAS AAS	T-41' B-134
Fе			0. 1236	INAA	B-230, B-244	9. 8	AAS	B-279
	=		0. 14	NAA	B-11	9. 85	AAS	B-74
8. 22	AAS	B-74	0. 1178	SIMS	B-337	10.00	AAS	B-216
7. 6100		B-77	0. 1208		B-130	9. 61	Chem.	G-7'
7. 97 7. 97	INAA INAA	B-163 B-310	0. 13 0. 195	XRF	B-11 B-97	9.84	Chem.	B-56, B-221 0-117 A-10'
8. 00	INAA	B-289, B-300		XRF(fusion)	B-36	9. 86 9. 88	Chem.	B-45
8. 2	INAA	B-230, B-244		XRF(powder)	B-36	9. 68	Grav.	B-94
8. 27	INAA	B-24		•		9. 95	Grav.	B-153
8. 40	INAA	B-324	Mg0	_		9. 77	ICP	B-192
8. 20	NAA Dhatan	B-11	4 00	110	D 00	9. 78	ICP	B-309
8. 34 7. 2598	Photom.	B-51 B-337	4. 98 5. 02	AAS AAS	B-86 B-15	9. 93 9. 88	ICP ICP-MS	B-476 B-320
7. 86	XRF	B-11	5. 02	AAS	B-74	9. 74	INAA	B-270
8. 80	XRF	B-97	5. 14	AAS	B-134	9. 63	PAA	B-55
			5. 21	AAS	B-328	9. 54	Vol.	B-14, B-91
MnO	_		5. 21	AAS	T-41'	9. 58	Vol.	B-130
0. 21		B-146	5. 25 5. 26	AAS AAS	B-216 B-162	9. 83 9. 57	Vol. XRF	B-224 Y-8'
0. 21	AAS	B-146 B-216	5. 4 5. 4	AAS	B-162 B-279	9. 57	XRF	S-26'
0. 16	AAS	B-94	5. 45	AAS	B-97	9. 71	XRF	B-270

Table A-7 Individual data for JB-3

%	Method	Code No.	%	Method	Code No.	%	Method	Code No.
9. 76 9. 77 9. 79 9. 79	XRF XRF XRF XRF	B-16 B-44, B-73 B-134 B-15	2. 73 2. 75 2. 75 2. 82	XRF XRF XRF XRF	B-36 B-40 B-270 B-247	0. 79 0. 80 0. 81 0. 82	XRF XRF XRF XRF	B-90 B-247 B-44, B-73 Y-8'
9. 82 9. 82 9. 85	XRF XRF XRF	B-36 B-31 B-19 T-37'	2. 85 2. 85 3. 0 2. 72	XRF XRF XRF XRF(Dry basis)		0. 77 0. 75 0. 79 0. 80	XRF(Dry basis) XRF(fusion) rentg. rentg.	B-70 B-41 B-237
9. 86 9. 87 9. 89	XRF XRF XRF	B-247 B-25 B-97	2.72 Na	XRF(fusion)	B-70	0. 81 K	rentg.	B-273
	XRF XRF XRF XRF (Dry basis)		1. 98 2. 7100 1. 95 1. 95	I NAA I NAA	B-97 B-77 B-163 B-310	0. 654 0. 6900 0. 6060 0. 7000	AAS IDMS IDMS	B-97 B-77 B-48 B-438
9. 71 Ca	XRF(fusion)	B-70	2. 01 2. 01 2. 08 2. 08	INAA INAA INAA	B-230, B-244 B-24 B-289, B-300	0. 66 0. 77 0. 6642 0. 63	INAA NAA SIMS XRF	B-230, B-244 B-11 B-337 B-11
4. 8700 7. 27 7. 0	AAS INAA NAA	B-77 B-289, B-300 B-11	2. 04 2. 1244	INAA NAA SIMS	B-324 B-11 B-337	P205	-	Đ-11
6. 9153 7. 26		B-337 B-11	K20 0. 763	- AAS	B-74	0. 22 0. 29 0. 30	Chem. Chem. Chem.	B-56, B-221 0-117 A-10' G-7'
<u>Na20</u> 2. 61	-	B-146	0. 703 0. 77 0. 79 0. 80	AAS AAS AAS	B-134 B-224 B-328	0. 36 0. 28 0. 29	Chem. FI-Photom. ICP	B-45 B-254 B-476
	AAS AAS AAS	B-134 B-74 B-328	0. 80 0. 80 0. 80 0. 80	AAS AAS AAS	T-41' B-216 0-11' A-10'	0. 30 0. 35 0. 29	ICP ICP ICP-MS	B-192 B-309 B-320
2. 75 2. 80 2. 80	AAS AAS AAS	T-41' B-224 B-216	0. 82 0. 79 0. 80	AAS Chem. Chem.	B-14, B-91 G-7' B-45	0. 27 0. 28 0. 28	Photom. Photom. Photom.	B-86 B-134 B-279
2. 83 2. 87 2. 69	AAS AAS Chem.	B-15 B-14, B-91 G-7'	0. 758 0. 774 0. 78	FES FES FES	B-435 B-236 B-279	0. 28 0. 28 0. 29	Photom. Photom. Photom.	T-41' B-224 B-15
2. 71 2. 82 2. 69	Chem. Chem. FES	B-45 0-11' A-10' B-162	0. 81 0. 77 0. 75	FES FI-AAS F1. Photom.	B-162 B-262 B-86	0. 29 0. 29 0. 30	Photom. Photom. Photom.	B-162 B-216 B-130
2. 57	FES FI-AAS Fl. Photom.	B-279 B-262 B-80	0. 76 0. 77 0. 77	F1. Photom. F1. Photom. F1. Photom.	B-56, B-221 B-153 B-80	0. 35 0. 25 0. 25	Photom. XRF XRF	B-153 B-90 B-43
	Fl. Photom. Fl. Photom. Fl. Photom.	B-86 B-94 B-130	0. 79 0. 80 0. 76	FI. Photom. FI. Photom. ICP	B-130 B-94 B-309	0. 28 0. 29 0. 29	XRF XRF XRF	B-22 B-247 B-16
2. 76 2. 78 2. 62	F1. Photom. F1. Photom. ICP ICP	B-56, B-221 B-153 B-192 B-309	0. 81 0. 83 0. 81 0. 673	ICP ICP ICP-MS INAA	B-476 B-192 B-320	0. 29 0. 29 0. 29 0. 29	XRF XRF XRF XRF	S-26' B-31 B-19
2. 76 2. 83 2. 84 2. 63	ICP ICP ICP-MS INAA	B-309 B-476 B-320 B-447	0. 673 0. 92 0. 711 0. 64	INAA INAA NAA XRF	B-447 B-270 B-277 S-26'	0. 290 0. 295 0. 30 0. 30	XRF XRF XRF	B-40 B-270 Y-8'
2. 63 2. 74 2. 83 2. 52	INAA INAA INAA NAA	B-270 B-142 B-277	0. 72 0. 73 0. 74	XRF XRF XRF	B-22 B-134 B-43	0. 30 0. 32 0. 361 0. 29	XRF XRF XRF(Dry basis)	B-44, B-73 B-36 B-74 B-120
2. 52 2. 75 2. 37 2. 50	PAA XRF XRF	B-277 B-55 B-90 B-25	0. 74 0. 74 0. 75 0. 76	XRF XRF XRF	B-43 B-25 B-36 B-40	0. 29 0. 30 P	XRF(fusion) (ppm)	B-70
2. 60 2. 63 2. 65	XRF XRF XRF	B-23 B-43 T-37' B-19	0. 76 0. 76 0. 77 0. 78	XRF XRF XRF	B-40 B-270 B-31 B-15	706 1050	ICP OES	B-77 B-208
2. 66 2. 67 2. 70	XRF XRF XRF	S-26' B-110, Y-8' B-44, B-73	0. 78 0. 79 0. 79	XRF XRF XRF	B-16 B-19 T-37'	1280 1379 1370	Photom. SIMS XRF	B-97 B-337 B-25

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Table A-7 Individual data for JB-3

<u></u> %	Method	Code No.	%	Method	Code No.	*	Method	Code 1
S03								
<0.02	XRF	B-36						
L. 0. I.	_							
0. 30 0. 42 0. 43 0. 51 0. 54 0. 70 -0. 36 -0. 39 -0. 40 -0. 48 -0. 54 -0. 67	Grav. Grav. Grav. Grav. Grav. Grav. Grav. Grav. Grav. Grav. Grav. Grav. Grav.	B-134 B-16 T-37' B-15 B-70 B-31 B-25 B-19 B-309 B-224 B-129 B-36						
T-H20	_							
0. 24 0. 11 0. 45 0. 48	Coul. Grav. Grav. Grav.	B-270 B-224 B-216 B-153						
H20+								
0. 14 0. 20 0. 18 0. 13 0. 16 0. 17 0. 17 0. 27 0. 16 0. 214	Grav. Chem. Coul. Grav. Grav. Grav. Grav. Grav. Krav. KF	T-41' 0-11' A-10' B-270 B-22 B-25 B-56, B-221 B-36 B-162 B-14, B-91 B-97						
Н20-	_							
0. 03 0. 11 0. 06 0. 04 0. 06 0. 06 0. 06 0. 07 0. 07 0. 09 0. 11 0. 06	Chem. Chem. Coul. Grav. Grav. Grav. Grav. Grav. Grav. Grav. Grav. Grav. Kr	0-11' A-10' G-7' B-270 B-45 B-16 T-41' B-74 B-162 B-86 B-153 B-56, B-221 B-25 B-130 B-14, B-91						
0. 016	Chem.	B-45						
0. 03 0. 04 <0. 07	Chem. Chem. Conduct.	B-36 B-25 B-130						

Table A-8 Individual data for JF-1

*	Method	Code No.	%	Method	Code No.	%	Method	Code No.
Si02	_		17. 4 17. 99	NAA Vol.	B-277 F-3'	0. 06 0. 06	I NAA I NAA	B-163 B-310
66. 20	AAS	B-434	18. 29	Vol.	B-224	0. 055	NAA	B-287
66. 76 66. 82	AAS AAS	B-134 Y-14'	17. 38 17. 83	XRF XRF	B-270 T-51'	MnO		
66. 85	AAS	B-216	17. 96	XRF	B-62	mio	_	
67. 11	AAS	B-202	17. 99	XRF	B-247	0.001		B-167
64. 35	Chem.	B-181	18.00	XRF	B-142	0.001		B-328
66. 64 66. 40	Chem. Grav.	B-258-7 B-224	18. 00 18. 02	XRF XRF	B-434 B-59	0. 001 0. 0011		B-224 Y-14'
66. 64	Grav.	F-3'	18. 20	XRF	B-136	0.0008		B-447
66.67	Grav. & AAS	B-139	18. 41	XRF	B-63	0.0012		B-270
66. 70 67. 8	Grav. & AAS	B-167 B-447	18. 44	XRF	B-201 B-61	0. 0008 0. 003		B-234, B-277
67.8	INAA NAA	B-277	18. 45 18. 51	XRF XRF	B-134	0.003	ARF	B-270
66.94	Photom.	B-279	18. 62	XRF	B-64	Mn	_(ppm)	
64. 69	XRF	B-62	m n 000			10	_	D 140
65. 58 66. 24	XRF XRF	B-434 B-201	T-Fe203	_		13 60	AAS AAS	B-142 B-136
66.64	XRF	B-247	0.07	AAS	B-134	22	XRF(fusion)	B-59
66.72	XRF	B-134	0.07	AAS	B-202	<5	XRF(powder)	B-59
66. 90	XRF	B-136	0.0776		Y-14'			
66. 91 67. 03	XRF XRF	B-142 B-59	0. 08 0. 08	AAS AAS	B-167 B-328	Mgo	_	
67. 11	XRF	B-61	0.09	AAS	B-279	0.004	AAS	B-224
67. 11	XRF	B-64	0.08	Chem	B-258-7	0.0055	2AAS	Y-14'
67. 12 67. 47	XRF XRF	B-63 T-51'	0. 085 0. 09	INAA INAA	B-447 B-270	0. 006 0. 006	AAS AAS	F-3' B-328
67.48	XRF	B-270	0.09	NAA NAA	B-234	0.006	AAS	B-328 B-167
		2 2.0	0. 075	Photom.	B-216	0.0075		B-216
Ti02			0.08	Photom.	B-224	0.008	AAS	B-279
0. 001	AAS	B-216	0. 06 0. 07	XRF XRF	B-63 B-136	0. 006 0. 006	Chem. XRF	B-258-7 B-247
0.001	AAS	B-134	0.07	XRF	T-51'	0.000	ARF	D-241
<0.01	AAS	Y-14'	0. 08	XRF	B-247	Ca0	_	
<0.01	AAS	B-167	0.08	XRF	B-134			n 000
0. 005 0. 005	Chem. Chem.	F-3' B-258-7	0. 085	XRF XRF	B-434 B-59	0. 86 0. 887	AAS AAS	B-202 Y-14'
0. 04	Chem.	B-181	0.00	Aiti	D 00	0.93	AAS	B-167
<0.8	INAA	B-270	Fe203	_		0. 93	AAS	B-328
0.005	Photom.	B-224	0.01	440	D 104	0.94	AAS	B-134
0. 01 0. 02	Photom. Photom.	B-202 B-279	0. 01 0. 08	AAS AAS	B-134 B-139	0. 95 0. 98	AAS AAS	B-216 B-224
0. 005	XRF	B-247	0.06	Calc.	B-63	1.03	AAS	B-279
0. 005	XRF	B-63	0. 07	Calc.	B-136	0. 93	Chem.	B-181
0. 007 0. 008	XRF XRF	B-270 B-136	0. 07 0. 075	Calc.	B-202 B-216	1. 05 1. 05	Chem.	F-3' B-258-7
0. 008	XRF	B-64	0.075	Calc. Calc.	B-167	1.03	Chem. Grav. & AAS	B-139
0. 01	XRF	B-62	0.08	Calc.	B-258-7	0.89	INAA	B-270
0. 01	XRF	B-59	0.09	Calc.	B-59	0.9	INAA	B-447
0. 02 <0. 02	XRF XRF	B-201 B-142	0. 08 0. 089	Chem. NAA	F-3' B-277	0. 887 0. 84	NAA XRF	B-277 B-61
\0. 0 <u>2</u>	Alti	D 145	0.00	XRF	B-134	0.86	XRF	B-270
A1203	_		0.01	XRF	B-201	0. 87	XRF	T-51'
15.00		V 141	п.			0.87	XRF	B-201
17. 96 18. 04	AAS AAS	Y-14' B-167	Fe0	_		0. 89 0. 89	XRF XRF	B-134 B-62
18. 15	AAS	B-216	0. 01	Photom.	B-216	0. 90	XRF	B-63
18. 18	AAS	B-202	<0.03	Photom.	B-270	0. 90	XRF	B-434
18. 2 18. 42	AAS AAS	B-279 B-134	0. 05 0. 06	Vol.	B-224	0. 92	XRF	B-64
17. 99	Chem.	B-154 B-258-7	0.00	Vol.	B-134	0. 92 0. 93	XRF XRF	B-136 B-142
18. 08	Grav. & AAS	B-139	Fe	_		0. 94	XRF	B-59
18. 28	ICP	B-434	0.05	TMAA	D 04	1.05	XRF	B-247
17. 4 17. 9	INAA INAA	B-447 B-270	0. 05 0. 052	INAA INAA	B-24 B-324	Na20		
11.0		D 2.0	0.004		D 001	11440	_	

Table A-8 Individual data for JF-1

%	Method	Code No.	%	Method	Code No.	%	Method	Code No.
3. 25 3. 27 3. 29	AAS AAS AAS	B-216 Y-14' B-142	10. 05 10. 12 9. 96 10. 18	XRF XRF rentg. rentg.	B-247 T-51' B-237 B-273	0. 03 0. 13 0. 14 0. 20	Grav. Grav. Grav. Grav.	B-134 B-167 B-136 B-202
3. 32 3. 32 3. 35 3. 35	AAS AAS AAS	B-202 B-134 B-167 B-328	K 8. 05	- Inaa	B-310	0. 21 C02	Grav. 	B-139
3. 54 3. 63 3. 54	AAS AAS Chem.	F-3' B-224 B-258-7	8. 4 8. 3	INAA NAA	B-163 B-287	0. 01 0. 01	Vol. XRF	B-59 B-136
3. 60 3. 28 3. 37	Chem. FES FI-AAS	B-181 B-279 B-262	P205 0. 009 0. 004	Chem.	B-258-7	<0. 02	XRF	B-59
3. 30 3. 38 3. 42 3. 72 3. 72	F1. Photom. INAA INAA INAA NAA	B-139 B-437 B-270 B-447 B-234, B-277	0. 008 0. 009 0. 01 0. 01	Photom. Photom. Photom. Photom. Photom.	B-202 B-224 F-3' B-167 B-216			
3. 07 3. 07 3. 08 3. 18 3. 19	XRF XRF XRF XRF XRF	B-61 B-136 B-63 B-59 B-270	0. 02 0. 006 0. 009 0. 017	Photom. XRF XRF XRF	B-279 B-63 B-247 B-270			
3. 28 3. 32 3. 52	XRF XRF XRF	B-64 T-51' B-201	P <100	_(ppm) OES	B-208			
3.54 Na	XRF _	B-247	97 L. O. I.	XRF —	B-136			
2. 41 2. 49 2. 49 2. 52 2. 19	INAA INAA INAA INAA NAA	B-324 B-310 B-163 B-24 B-287	0. 15 0. 24 0. 24 0. 27 0. 27 0. 27	Grav. Grav. Grav. Grav. Grav. Grav.	T-51' B-59 B-224 B-134 B-142 B-61			
9. 86 9. 87	 AAS AAS	B-202 B-142	0. 21 0. 31 0. 325 0. 37 0. 44	Grav. Grav. Grav. Grav.	B-62 Y-14' B-136 B-63			
10. 05 10. 06 10. 06	AAS AAS AAS	F-3' B-167 B-328	1. 63 T-H20	Grav.	B-64			
10. 07 10. 07 10. 10 10. 11 10. 05 10. 38	AAS AAS AAS Chem	Y-14' B-224 B-216 B-134 B-258-7	0. 33 0. 18 0. 25	Coul. Grav. Grav.	B-270 B-224 B-216			
9. 99 10. 12 10. 06 9. 89	Chem. FES FES FI-AAS F1. Photom.	B-181 B-236 B-279 B-262 B-139	0. 17 0. 17 0. 18	Chem Chem. Coul.	B-258-7 F-3' B-270			
10. 8 9. 80 9. 68 9. 71 9. 72	INAA NAA XRF XRF XRF	B-270 B-234, B-277 B-63 B-270 B-201	0. 19 0. 23 0. 24 0. 31 0. 33	Grav. Grav. Grav. Grav. Grav.	B-167 B-59 B-139 B-181 B-136			
9. 79 9. 79 9. 80	XRF XRF XRF	B-59 B-64 B-62	H20-		D_9E0 7			
9. 81 9. 85 9. 91 10. 03	XRF XRF XRF XRF	B-142 B-61 B-136 B-134	0. 14 0. 14 0. 15 0. 03	Chem. Chem. Coul. Grav.	B-258-7 F-3' B-270 B-181			

Table A-9 Individual data for JF-2

%	Method	Code No.	%	Method	Code No.	%	Method	Code No.
SiO2			0. 05	AAS	B-139	0. 007	AAS	B-162
	_		0.06	AAS	B-159, B-167	0.03	AAS	B-328
65. 35	AAS	B-216	0.06	AAS	B-328	<0.005	AAS	B-279
65. 51	Chem.	B-205	0.06	ICP	B-443	<0.02	Chem.	B-205
65. 12	Grav.	B-162	0.052	INAA	B-270	0.007	ICP	B-443
65. 22	Grav.	B-224	0.060	INAA	B-447	<0.3	INAA	B-270
64.91	Grav. & AAS	B-139	0.059	NAA	B-234, B-277	0.003	XRF	B-247
65. 20	Grav. & AAS	B-159, B-167	0.05	Photom.	B-224	0.01	XRF	B-198
65	INAA	B-447	0.079	Photom.	B-216	0.02	XRF	B-138
64. 95	Photom.	B-279	0.04	XRF	B-169	0.05	XRF	B-201
64.06	XRF	B-219	0.05	XRF	B-138	0.06	XRF	B-168
64.77	XRF	B-201	0.06	XRF	B-247	0.08	XRF	B-219
65. 14	XRF	B-169	0. 07	XRF	B-219	<0.05	XRF	B-270
65. 20	XRF	B-247	0. 08	XRF	B-189	<0.05	XRF	B-169
65. 24	XRF	B-168	0. 08	XRF	B-168	<0.10	XRF	B-189
65. 33	XRF	B-138						
65. 52	XRF	B-189	Fe203	_		Ca0	_	
65. 86	XRF	B-207						
65. 91	XRF	B-198	0. 05	AAS	B-139	0.06	AAS	B-162
66. 18	XRF	B-170	0.04	Calc.	B-169	0. 085	AAS	B-216
66. 20	XRF	B-270	0.06	Calc.	B-159, B-167	0.09	AAS	B-159, B-167
m:00			0.065	Calc.	B-216	0.09	AAS	B-328
Ti02	_		0.08	Calc.	B-168	0.10	AAS	B-279
0.001		D 010	0.11	Calc.	B-270	0.11	AAS	B-224
0.001	AAS	B-216	0.14	Calc.	B-207	0.12	Chem.	B-205
<0.01	AAS	B-159, B-167	0.05	Photom.	B-162	0. 12	ICP	B-443
<0. 05 0. 006	Chem. ICP	B-205	0. 04	XRF	B-198	0.004	XRF	B-170
<0.7	INAA	B-443 B-270	Fe0			0. 034 0. 07	XRF XRF	B-270 B-169
0.004	Photom.	B-162	reo	_		0.07	XRF	B-138
0. 02	Photom.	B-102 B-279	0. 01	Photom.	B-216	0.08	XRF	B-247
0. 007	Photom.	B-224	<0.03	Photom.	B-270	0. 10	XRF	B-219
0. 004	XRF	B-270	0.04	Vol.	B-198	0. 10	XRF	B-201
0.007	XRF	B-170	0.04	Vol.	B-224	0. 12	XRF	B-198
0. 01	XRF	B-247	<0.01	Vol.	B-162	0.12	AIII	<i>D</i> 100
0. 01	XRF	B-189	<0.01	Vol.	B-168	Na20		
0. 02	XRF	B-201	(0.01	101.	D 100	11420		
0. 05	XRF	B-168	Fe			2. 41	AAS	B-207
0. 10	XRF	B-198		_		2. 41	AAS	B-224
<0.01	XRF	B-169	0. 037	INAA	B-324	2. 45	AAS	B-216
<0.02	XRF	B-207	0.042	INAA	B-230	2. 46	AAS	B-328
			0.052		B-244	2. 46	AAS	B-159, B-167
A1203						2. 43	Chem.	B-205
	_		MnO			2. 45	FES	B-279
18. 30	AAS	B-216		_		2. 50	FES	B-162
18. 43	AAS	B-159, B-167	0.001	AAS	B-224	2. 43	FI-AAS	B-262
18. 5	AAS	B-279	0.001	AAS	B-328	2. 43	F1. Photom.	B-139
18. 57	Grav. & AAS	B-139	0.001		B-159, B-167	2. 367	I CP	B-443
18. 84	ICP	B-443	0.001	ICP	B-443	2. 35	INAA	B-270
18.6	INAA	B-270	0. 0009		B-447	2. 58	INAA	B-437
18. 41	Vol.	B-224	0.0014		B-270	2. 46	NAA	B-247
18. 50	Vol.	B-162	0.0009		B-234, B-277	2. 01	XRF	B-189
17. 73	XRF	B-270	0.002	Photom.	B-162	2. 22	XRF	B-170
18. 27	XRF	B-198	0.001	XRF	B-247	2. 24	XRF	B-169
18. 33	XRF	B-207	(0.001)	XRF	B-168	2. 33	XRF	B-198
18. 37	XRF	B-138				2. 33	XRF	B-168
18. 43	XRF	B-247	Mn	_(ppm)		2. 34	XRF	B-219
18.63	XRF	B-169			B 00F	2. 36	XRF	B-270
18. 63	XRF	B-219	18	AAS	B-207	2. 37	XRF	B-138
18. 73	XRF	B-168	5	XRF	B-169	2. 50	XRF	B-201
18. 79	XRF	B-201	,,,					
18. 81	XRF	B-170	Mg0			Na.	_	
18. 91	XRF	B-189	0.000	AAC	D 150 D 167	1 70	TWAA	D 000
T_E_2009			0. 003 0. 0055		B-159, B-167	1.78	INAA	B-230
T-Fe203			0.005		B-216	1.78	INAA	B-244
			0.006	MAS	B-224	1.86	INAA	B-324

Table A-9 Individual data for JF-2

%	Method	Code No.	%%	Method	Code No.	%	Method	Code No.
K20	_		0. 47 0. 48	Grav. Grav.	B-168 B-189			
13. 03 13. 10 13. 10 13. 13 13. 25	AAS AAS AAS AAS AAS	B-207 B-159, B-167 B-328 B-224 B-216	T-H20 0.37 0.18 0.3	Coul. Grav. Grav.	B-270 B-224 B-216			
13. 16 13. 01 13. 07 13. 20 13. 05 12. 99 12. 55 12. 8 12. 7	Chem. FES FES FES FI-AAS FI. Photom. ICP INAA NAA	B-205 B-279 B-236 B-162 B-262 B-139 B-443 B-447 B-234, B-277	H20+ 0. 20 0. 1 0. 21 0. 22 0. 29 0. 33	Coul. Grav. Grav. Grav. Grav.	B-270 B-168 B-198 B-159, B-167 B-169 B-205			
12. 05 12. 49 12. 57 12. 63 12. 89 12. 90 13. 00 13. 10 13. 25 13. 40 12. 94 13. 15	XRF XRF XRF XRF XRF XRF XRF XRF XRF XRF	B-198 B-170 B-201 B-189 B-219 B-169 B-168 B-247 B-138 B-207 B-237 B-237 B-273	0. 34 H20- 0. 17 0. 11 0. 16 0. 18 0. 20 0. 24	Coul. Grav. Grav. Grav. Grav. Grav. Grav. Grav.	B-162 B-270 B-205 B-168 B-162 B-139 B-159, B-167			
10. 4 10. 4	INAA INAA	B-230 B-244	0. 03 <0. 1 S03	Vol. Vol.	B-169 B-168			
P205 0. 25 0. 023 0. 0022 0. 0025 0. 01 0. 02 0. 03 <0. 01 0. 004 0. 015 0. 02 0. 02 0. 05 <0. 01 <0. 01 <0. 01 <0. 01 <0. 01 <0. 01 <0. 01 <0. 01 <0. 01 <0. 01 <0. 01 <0. 01 <0. 01 <0. 01 <0. 01 <0. 01	Chem. ICP Photom. Fhotom. Photom. Photom. Photom. Photom. XRF XRF XRF XRF XRF XRF XRF XRF XRF	B-205 B-443 B-162 B-224 B-216 B-279 B-139 B-159, B-167 B-170 B-270 B-270 B-189 B-219 B-198 B-247 B-247 B-201 B-169	0. 01 <0. 02	XRF XRF	B-168 B-169			
P <100 8 14 L. O. I.	(ppm) OES Photom. XRF	B-208 B-207 B-168						
0. 32 0. 37 0. 43 0. 44	Grav. Grav. Grav. Grav.	B-138 B-207 B-224 B-170						

Table A-10 Individual data for JG-1

. %	Method	Code No.	Ж	Method	Code No.	%	Method	Code No.
SiO2	_		31.66	XRF	B-106			
			32	XRF	B-81	Ti	_	
71.5	AAS	R-1	w.oo			0 1570	LCD	D 77
72. 17	AAS	B-92	Ti02	_		0. 1578		B-77
71.62	Chem.	T-29 H-10	0. 29		B-146	0. 1400 0. 1470	VDF	B-106 B-81
71. 9 71. 98	Chem. Chem.	K-9	0. 29	AAS	B-49	0. 1555		B-111
71. 99	Chem.	0-5	0. 20	Chem.	H-10	0. 1555	XRF	B-398
72. 01	Chem.	н-8	0. 21	Chem.	N-7	0. 10	AIU.	р 556
72. 06	Chem.	K-25	0. 21	Chem.	I-7	A1203		
72. 08	Chem.	V-1	0. 23	Chem.	H-9	N1200	-	
72. 11	Chem.	A-13	0. 23	Chem.	R-7	14. 33		B-146
72. 11	Chem.	B-56, B-221	0. 24	Chem.	C-3	14. 10	AAS	S-15
72. 15	Chem.	M-10	0. 24	Chem.	C-3'	14. 14	AAS	B-92
72. 19	Chem.	0-2	0. 24	Chem.	M-10	14. 15	AAS	B-49
72. 20	Chem.	Н-9	0. 25	Chem.	A-11	14. 20	AAS	S-24
72. 21	Chem.	0-6	0. 25	Chem.	M-12	14.6	AAS	R-1
72. 21	Chem.	A-11	0. 25	Chem.	0-6	13.94	Chem.	H-8
72.3	Chem.	A-9'	0. 25	Chem.	K-9	13.97	Chem.	B'-4
72.30	Chem.	I-7	0. 25	Chem.	V-1	14.0	Chem.	H-10
72.33	Chem.	S-14	0. 25	Chem.	M-7	14.06	Chem.	V-1
72.35	Chem.	M-7	0. 25	Chem.	B-56, B-221	14.06	Chem.	K-9
72.40	Chem.	R-7	0. 25	Chem.	0-7	14.07	Chem.	F-2
72.41	Chem.	0-7	0. 25	Chem.	A-13	14.07	Chem.	A-13
72.41	Chem.	N-7	0. 25	Chem.	K-25	14. 07	Chem.	B-56, B-2
72.42	Chem.	M-12	0. 26	Chem.	0-2	14. 16	Chem.	C-3
72. 43	Chem.	F-2	0. 26	Chem.	N-8	14. 21	Chem.	K-25
72.71	Chem.	C-3	0. 26	Chem.	F-2	14. 21	Chem.	0-7
72.87	Chem.	N-8	0. 27	Chem.	A-9'	14. 21	Chem.	0-2
72. 87	Chem.	B'-4	0. 28	Chem.	S-14	14. 23	Chem.	A-11
73. 36	Chem.	C-3'	0. 28	Chem.	B'-4	14. 23	Chem.	S-14
72. 17	EPMA	B-380	0. 28	Chem.	M-8'	14. 25	Chem.	A-9'
72. 40	EPMA	M-6	0. 29	Chem.	T-29	14. 29	Chem.	H-9
72. 40	ES	G-6	0. 31	Chem.	0-5	14. 30	Chem.	R-7
72. 2	FI-Photom.	B-348	0.31	Chem.	H-8	14. 35	Chem.	N-8
72. 33	FI-Photom.	B-253	0. 28	Color	M-13 S-23	14. 35 14. 36	Chem. Chem.	M-8' M-7
72. 03	Grav.	B-153 B-224	0. 28 0. 25	Color EPMA	3-23 B-380	14. 30	Chem.	m-7 T-29
72. 08 72. 25	Grav. Grav.	B-49	0. 28	EPMA	M-6	14. 42	Chem.	C-3'
72. 52	Grav. Grav.	S-23	0. 23	I CP	B-122	14. 44	Chem.	0-6
72. 01	ICP	B-122	0. 23	ICP	B-192	14. 48	Chem.	N-7
72. 01	ICP	G-8'	0. 24	ICP	G-8'	14. 45	Chem.	M-10
72. 6	ICP	B-120	0. 26	ICP	B-131	14. 64	Chem.	I-7
72.66	I CP	B-131	0. 28	ICP	B-120	14. 73	Chem.	0-5
72. 30	IDMS	B-48	0. 26	ICP-MS	B-320	14. 49	EPMA	M-6
73. 20	INAA(CA)	B-453	0. 27	PAA	B-6-1, B-6-2	14. 65	EPMA	B-380
72. 15	Photom.	M-13	0. 29	Photm.	M-2	13. 90	ES	G-6
72. 20	Photom.	G-1	0. 27	Photm(FI)	M-2 B-462	14. 60	Grav.	B-153
72. 70	Photom.	M-2	0. 26	Photom	B-224	13. 70	ICP	B-122
72. 74	Photom.	B-161	0. 26	Photom.	B-153	14. 02	ICP	B-192
70.90	XRF	S-15	0. 27	Photom.	B-92	14. 23	ICP	G-8'
71.78	XRF	B'-1	0. 27	Photom.	B-161	14. 23	ICP	B-131
72. 24	XRF	B-1,	0. 27	Photom.	G-1	14.6	ICP	B-120
72. 27	XRF	B-15	0. 25	XRF	0-1'	13. 80	ICP-MS	B-320
72. 29	XRF	0-1'	0. 26	XRF	B-96	15. 00	INAA(CA)	B-453
72.34	XRF	B-96	0. 26	XRF	B-1'	13.93	Oxine Grav.	M-12
72.35	XRF	B-125	0. 26	XRF	B-270	14.09	Photom.	M-13
72. 42	XRF	B-270	0. 26	XRF	B'-1	14. 2	Photom.	B-51
72. 45	XRF	B-28	0. 266	XRF	B-15	14. 2	Photom.	B-95
72.55	XRF	S-24	0. 27	XRF	B-44, B-73	14. 30	Photom.	G-1
72.76	XRF	B-85	0. 27	XRF	B-85	13. 84	Vol.	S-23
72.91	XRF	B-44, B-73	0. 28	XRF	S-24	14.08	Vol.	M-2
			0. 28	XRF	B-28	14. 26	Vol.	B-224
Si			0. 28	XRF	S-15	14. 44	Vol.	B-161
	AAS		0. 30	XRF	B-125	13. 84	XRF	B-270
33.6		B-105	0. 30	XRF	B-456	14.08	XRF	B-44, B-

Table A-10 Individual data for JG-1

%	Method	Code No.	*	Method	Code No.	%	Method	Code No.
14. 10	XRF	B'-1	2. 21	Photm(FI)	B-462	1.60	Chem.	S-14
14. 12	XRF	B-96	2. 12	Photom.	B-78-1	1.61	Chem.	M-8'
14. 14	XRF	B-85	2. 13	Photom.	B-224	1. 62	Chem.	0-2
14. 17	XRF	B-15	2. 21	Vol.	B-153	1. 62	Chem.	M-10
14. 19	XRF	B-1'	2. 22	Vol.	S-23	1. 63	Chem.	B'-4
14. 27	XRF	B-28	1. 86	XRF	B-270	1. 63	Chem.	N-7
14. 27	XRF	0-1'	2. 10	XRF	0-1'			H-9
14. 48	XRF	B-125	2. 10	XRF	B'-1	1.64 1.65	Chem. Chem.	n-9 A-9'
14.40	Alti	D 120	2. 12	XRF	B-1,			0-6
A 1			2. 13			1.65	Chem.	
nı	-			XRF	B-96	1. 68	Chem.	M-7
7. 9820	AAC	D 197	2. 14	XRF	B-44, B-73	1. 75	Chem.	K-9
		B-127	2. 15	XRF	B-15	1. 75	Chem.	R-7
7. 4700		B-77	2. 16	XRF	B-125	1. 79	Chem.	A-11
7. 50	INAA	B-450	2. 16	XRF	B-28	1. 81	Chem.	0-7
7. 7	XRF	B-81	2. 21	XRF	B-85	1. 81	Chem.	B-56, B-221
8. 35	XRF	B-106	2. 47	XRF	S-24	1. 83	Chem.	T-29
m n 000			2. 49	XRF	B-456	1.42	Chem. Photom.	R-1
T-Fe203	_		2. 56	XRF	S-15	1.63	Chem. Vol.	B'-1
						1. 67	Chem. Vol.	G-1
1.87		B-146	Fe203			1. 69	Phot.	B-123
2. 11	AAS	B'-4				1. 51	Photm.	M-13
2. 11	AAS	B-65	0.34	Calc.	B-15	1.60	Photom.	B-270
2. 11	AAS	K-6'	0. 36	Calc.	B-49	1.74	Photom.	S-23
2. 15	AAS	B-49	0.60	Calc.	R-1	1.60	Vol.	B-224
2. 18	AAS	R-1	0. 17	Chem.	M-12	1.61	Vol.	B-49
2. 20	AAS	B-92	0. 24	Chem.	0-6	1.62	Vol.	B-153
2. 21	AAS	B-161	0. 24	Chem.	M-7	1. 63	Vol.	B-15
2. 36	AAS	G-1	0. 3	Chem.	H-10	1. 69	Vol.	B-342
2. 05	Chem.	R-7	0.30	Chem.	B'-4	1.74	Vol.	B-88
2, 06	Chem.	0-5	0.31	Chem.	T-29	1.17	1011	D 00
2. 06	Chem.	I-7	0. 31	Chem.	N-7	Fe		
2. 07	Chem.	C-3	0. 34	Chem.	0-5	re		
2. 07	Chem.	M-13	0. 37	Chem.	A-13	1. 43	AAS	B-204
2. 07	Chem.	M-12	0. 37		B-56, B-221	1. 5283		B-127
2. 08	Chem.	0-6	0.37	Chem.		1. 5200		B-77
2. 00	Chem.		0. 38	Chem.	I-7 N-8	1. 3200		B-24
2. 11		M-7		Chem.			INAA	
	Chem.	H-8	0. 38	Chem.	A-9'	1. 47	INAA	B-8
2. 12	Chem.	N-7	0. 39	Chem.	S-14	1. 48	INAA	B-252, B-283
2. 13	Chem.	K-25	0. 39	Chem.	M-8'	1. 49	INAA	B-58
2. 13	Chem.	N-8	0. 40	Chem.	0-2	1. 52	INAA	B-223
2. 16	Chem.	F-2	0.40	Chem.	0-7	1. 45	INAA(epi)	B-184
2. 17	Chem.	S-14	0.40	Chem.	M-10	1. 46	NAA	B-4
2. 17	Chem.	V-1	0. 43	Chem.	A-11	1.53	NAA	B-10
2. 20	Chem.	0-2	0. 43	Chem.	H-8	1. 53	NAA	B-2
2. 20	Chem.	M-10	0. 44	Chem.	H-9	1.85	NAA	B-185
2. 24	Chem.	A-11	0. 46	Chem.	C-3	1. 48	Photom.	B-51
2. 26	Chem.	H-9	0. 49	Chem.	F-2	1.4	XRF	B-81
2. 32	Chem.	C-3'	0. 57	Chem.	K-9	1.64	XRF	B-398
2. 35	Chem.	T-29	0.50	Chem. Vol.	G-1	1.771	XRF	B-111
2. 38	Chem.	A-13	0. 39	Photm.	M-13			
2. 41	Chem.	0-7	0. 29	Photom.	S-23	MnO		
2. 51	Chem.	K-9	0.41	Vol.	B-153		-	
2. 20	Chem. Vol.	M-2	0. 31	XRF	B'-1	0.067		B-146
2.04	EPMA	B-380				0. 05	AAS	G-1
2. 34	EPMA	M-6	Fe0			0.06	AAS	B-78-1
1. 95	ES	G-6	100			0. 06	AAS	K-6'
1. 98	ICP	B-122	1. 17	Chem.	M-12	0.06	AAS	S-23
2. 09	ICP	B-192	1. 17	Chem.	M-12 A-13	0.06	AAS	S-15
2. 13	ICP	B-120	1. 16	Chem.	V-1	0.06	AAS	M-2
								m-2 B-224
2. 15	ICP	B-131	1. 45	Chem.	C-3	0.06	AAS	
2. 17	ICP NC	G-8'	1.50	Chem.	F-2	0.063	AAS	B-65
2. 15	ICP-MS	B-320	1.51	Chem.	1-7	0.064	AAS	B-49
2. 10	INAA	B-360	1.51	Chem.	H-8		AAS	B-92
2. 30	INAA(CA)	B-453	1. 55	Chem.	0-5	0. 07	AAS	R-1
2. 30	PAA	B-6-1, B-6-2	1.58	Chem.	N-8	0. 07	AAS	B-161
2. 15	Phot.	B-123	1.6	Chem.	H-10	0. 071	AAS	B-15
			I .					

Table A- 10 Individual data for JG-1

.%	Method	Code No.	*	Method	Code No.	%	Method	Code No.
0. 05	Chem.	A-11	0. 0489	XRF	B-111	0. 75	XRF	B-125
0. 05	Chem.	M-12	0. 0498		B-398	0.78	XRF	B-85
		0-5			B-106	0.78		B-248
0.05	Chem.		0. 0559	ARP	D-100		XRF	D~240
0.05	Chem.	A-9'	w 0			0.78	XRF	B-28
0.05	Chem.	N-8	MgO	_		0. 79	XRF	B'-1
0.05	Chem.	C-3						
0.06	Chem.	C-3'	0.60	AAS	S-15	Mg		
0.06	Chem.	B'-4	0.71	AAS	R-1		_	
0.06	Chem.	H-8	0.72	AAS	B-92	0. 4309	AAS	B-127
0.06	Chem.	T-29	0. 72	AAS	S-24	0. 45	AAS	B-105
0.06	Chem.	K-9	0.72	AAS	B-161	0. 4530		B-77
0.06	Chem.	V-1	0.73	AAS	B-78-1	0.33	INAA	B-450
0.06	Chem.	0-7	0. 73	AAS	B-224	0. 79	XRF	B-106
0.06	Chem.	S-14	0. 73	AAS	B-65			
0.06	Chem.	M-10	0.73	AAS	K-6'	Ca0		
0.06	Chem.	M-7	0.74	AAS	B-15		-	
0.06	Chem.	0-6	0.75	AAS	B-49	2. 15		S-24
							110	
0.06	Chem.	F-2	0.75	AAS	B-151	2. 12	AAS	K-6'
0.06	Chem.	0-2	0. 53	Chem.	V-1	2.14	AAS	B-92
0. 07	Chem.	K-25	0. 56	Chem.	N-7	2. 15	AAS	B-78-1
0.07	Chem.	N-7	0.62	Chem.	T-29	2. 16	AAS	B-49
0.07	Chem.	R-7	0.69	Chem.	0-5	2. 16	AAS	B-161
0. 07	Chem.	M-8'	0. 69	Chem.	0-7	2. 18	AAS	R-1
0.07	Chem.	H-9	0.70	Chem.	K-9	2. 18	AAS	B-65
0.07	Chem.	1-7	0. 73	Chem.	1-7	2. 00	Chem.	K-9
0.08	Chem.	B-56, B-221	0. 73	Chem.	K-25	2. 08	Chem.	0-5
0.08	Chem.	A-13	0.74	Chem.	B-56, B-221	2. 10	Chem.	F-2
0.09	Color	M-13	0.74	Chem.	A-13	2. 13	Chem.	C-3'
0. 05	EPMA	M-6	0. 75	Chem.	M-7	2. 13	Chem.	V-1
0.07	ES	G-6	0.75	Chem.	A-9'	2. 13	Chem.	A-11
0.061	FI-Photom.	B-261	0.75	Chem.	M-8'	2. 15	Chem.	A-9'
0. 05	ICP	B-122	0.76	Chem.	H-9	2. 15	Chem.	H-9
0.063	I CP	G-8'	0. 76	Chem.	0-2	2. 16	Chem.	H-8
0.065	ICP	B-192	0. 78	Chem.	S-14	2. 17	Chem.	K-25
0.066	ICP	B-120	0.79	Chem.	0-6	2. 17	Chem.	0-7
0. 07	ICP	B-131	0. 79	Chem.	F-2	2. 18	Chem.	M-8'
0.068	ICP-MS	B-320	0. 8	Chem.	H-10	2. 18	Chem.	M-7
0.080	INAA(epi)	B-114	0.80	Chem.	A-11	2. 18	Chem.	B-56, B-2
0.06	PAA	B-6-1, B-6-2	0. 82	Chem.	H-8	2. 18	Chem.	A-13
0.06	Photom.	B-153	0.84	Chem.	M-10	2. 19	Chem.	0-6
0.070	Photom.	B-263	1.01	Chem.	C-3'	2. 20	Chem.	0-2
0.03	XRF	B-1'	0.68	EDTA Vol.	R-7	2. 21	Chem.	M-10
0.06	XRF	B-44, B-73	0. 69	EDTA Vol.	C-3	2. 25	Chem.	S-14
0.06	XRF	0-1'	0.74	EDTA Vol.	M-2	2. 26	Chem.	T-29
0.06	XRF	B-28	0.80	EDTA Vol.	G-1	2. 27	Chem.	I-7
0.06	XRF	B-85	0.68	EPMA	B-380	2. 3	Chem.	H-10
0.065	XRF	B-270	0. 95	EPMA	M-6	2. 31	Chem.	N-7
0.067	XRF	B-125	0. 70	ES	G-6	2. 45	Chem.	N-8
0.07	XRF	B'-1	0.72	Grav.	B-153	2. 16	EDTA Vol.	G-1
0.07	XRF	B-96	0.75	Grav. & AAS	B'-4	2. 17	EDTA Vol.	R-7
0. 07	XRF	S-24	0.60	ICP	B-122	2. 46	EDTA Vol.	M-2
				ICP		2. 46	EDTA Vol.	
0.070	ART	B-456	0.69		B-131			C-3
.,			0.74	ICP	B-192	2. 18	EPMA	B-380
Mn	_		0.74	ICP	B-120	2. 26	EPMA	M-6
			0.76	ICP	G-8'	2. 20	ES	G-6
0.0490) AAS	B-204	0.72	ICP-MS	B-320	2. 16	Grav.	B-153
0. 050		B-127	0.67	INAA(CA)	B-453	2. 20	Grav. & AAS	B'-4
0. 050		B-325	0. 72	PAA	B-6-1, B-6-2	2. 16	ICP	B-192
0. 0500		B-128	0.94	Vo1	S-23	2. 16	ICP	B-122
0.050		B-77	0.70	Vol.	M-13	2. 20	ICP	B-120
0.0482	2 INAA	B-58	0.74	Voi.	M-12	2. 22	ICP	G-8'
	3 INAA	B-450	0.61	XRF	B-96	2. 25	ICP	B-131
0. 044		B-4	0.67	XRF	B-270	2. 19	ICP-MS	B-320
0. 044		B-7	0.73	XRF	B-44, B-73	2. 24	PAA	B-6-1, B-
		B-1 B-1	0. 73 0. 73					
	LNAA	K-1	11 73	XRF	B-1'	2. 10	Vol.	M-12
0.053		B-81	0.74	XRF	0-1'	2. 17	Vol.	S-23

Table A-10 Individual data for JG-1

%	Method	Code No.	%	Method	Code No.	*	Method	Code No.
2. 17 2. 42	Vol. Vol.	B-224 M-13	3. 14 3. 26	F1. Photom. F1. Photom.	C-3 S-23		Chem. EPMA	V-1 M-6
2. 09	XRF	B-44, B-73		F1. Photom.	R-7		EPMA	B-380
2. 16	XRF	B-15	3. 32	F1. Photom.	A-11	3. 95	ES	G-6
	XRF	0-1'		F1. Photom.	M-2	3. 90	FES	B-122 B-236
2. 16 2. 17	XRF XRF	B'-1 B-1'	3. 36 3. 37	F1. Photom. F1. Photom.	B'-1 B-78-1	3. 99 4. 01	FES FI-AAS	B-236 B-262
2. 17	XRF	B-28	3. 38	Fl. Photom.	N-8	4. 01	Fl. Photom.	B-153
2. 17	XRF	B-96	3. 43	F1. Photom.	B-56, B-221	3. 76	F1. Photom.	M-13
2. 17	XRF	B-270	3. 43	F1. Photom.	A-13	3. 88	F1. Photom.	A-11
2. 21	XRF	S-15	3. 44	F1. Photom.	0-7	3. 92	F1. Photom.	C-3
2. 24 2. 31	XRF	B-125 B-456	3. 46	FI. Photom.	0-5	3. 93	F1. Photom.	M-2 A-13
2. 31	XRF	D-400	3. 48 3. 24	F1. Photom. ICP	M-13 B-192	3. 94 3. 94	F1. Photom. F1. Photom.	B-56, B-221
Ca			3. 31	ICP	B-131	3. 94	F1. Photom.	S-23
	-		3. 48	ICP	G-8'	3. 96	F1. Photom.	B-78-1
1. 4300	AAS	B-77	3. 59	ICP	B-120		F1. Photom.	B'-1
1. 5355		B-127	3. 24	ICP-MS	B-320	3.96	Fl. Photom.	0-7
1.70	AAS	B-105	3. 39	INAA	B-360	3. 99	F1. Photom.	0-5
1. 45 1. 44	INAA(epi) NAA	B-184 B-4	3. 42 3. 24	PAA XRF	B-6-1, B-6-2 B-96	4. 05 4. 09	F1. Photom. F1. Photom.	N-8 R-7
1. 54	NAA	B-185	3. 28	XRF	0-1	4. 03	F1. Photom.	M-12
0.90	XRF	B-106	3. 32	XRF	B-270	3. 99	ICP	B-131
	XRF	B-111	3. 40	XRF	B-44, B-73	4. 02	ICP	G-8'
1.5	XRF	B-81	3. 45	XRF .	B-28	4. 05	ICP	B-120
1.54	XRF	B-398	3. 71	XRF	B-125	4. 08	ICP VC	B-192
Na20			. Na			4. 35 4. 03	ICP-MS MS	B-320 B-102
Nazo	-		, Na	-		3. 93	TPD-prove	M-7'
3. 23		B-146	2. 5052	AAS	B-127	3. 86	XRF	S-15
3. 23	AAS	B'-4	2. 5400	AAS	B-77	3. 90	XRF	S-24
3. 27	AAS	S-15	2. 37	INAA	B-8	3. 91	XRF	B-1'
3. 36	AAS	S-24	2. 46	INAA	B-252, B-283	3. 95	XRF XRF	B-125 B-44, B-73
3. 36 3. 37	AAS AAS	B-15 B-161	2. 47 2. 49	INAA NAA	B-24 B-4	3. 96 3. 98	XRF	0-1'
3. 37	AAS	B-49	2. 56	NAA	B-10	3. 98	XRF	B-96
3. 39	AAS	K-6'				3. 98	XRF	B-270
3. 39	AAS	B-224	K20	_		3. 99	XRF	B-15
3. 40	AAS	R-1	0.07	110	D 05	4. 00	XRF	B-28 B-85
3. 42 3. 42	AAS AAS	B-92 B-65	3. 87 3. 90	AAS AAS	B-65 K-9	4. 05 3. 96	XRF γcntg.	B-240
3. 43	AAS	T-29	3. 94	AAS	B-224	3. 98	γ cntg.	B-273
3. 43	AAS	K-9	3.948	AAS	B-72			
3. 48	AAS	G-1	3. 96	AAS	B'-4	K	_	
3. 2	Chem.	H-10	3. 96	AAS	B-92	0 4055	110	B-127
3. 33 3. 34	Chem. Chem.	H-9 F-2	3. 97 3. 98	AAS AAS	T-29 R-1	3. 4655 3. 5400		B-77
3. 35	Chem.	0-6	4. 00	AAS	G-1	3. 2800		B-48
3. 35	Chem.	S-14	4. 02	AAS	B-49	3. 09	INAA	B-8
3. 37	Chem.	C-3'	4. 02	AAS	K-6'	3. 1	INAA	B-252, B-283
3. 37	Chem.	M-8'	4. 15	AAS	B-161	3. 12	NAA	B-4 B-106
3. 37 3. 39	Chem. Chem.	0-2 M-10	3. 67 3. 86	Chem. Chem.	N-7 M-10	2. 66 3. 33	XRF XRF	B-398
3. 39	Chem.	M-7	3. 88	Chem.	0-6	3. 347	XRF	B-111
3.4	Chem.	A-9'	3. 91	Chem.	0-2	3. 9	XRF	B-81
3. 42	Chem.	I-7	3. 93	Chem.	S-14	nco=		
3. 44 3. 52	Chem.	H-8 N-7	3. 94 3. 95	Chem.	M-7 A-9'	P205	-	
3. 52 3. 56	Chem. Chem.	N-1 V-1	3. 95	Chem. Chem.	A-9 C-3'	0. 09		G-1
3. 20	EPMA	B-380	3. 96	Chem.	H-9	0.06	Chem.	C-3'
3.54	EPMA	M-6	3. 98	Chem.	K-25	0. 08	Chem.	B'-4
3. 45	ES	G-6	3. 99	Chem.	I-7	0. 08	Chem.	A-13
3. 37	FES	B-122	4. 0	Chem.	H-10	0.08	Chem.	B-56, B-221 M-7
3. 44 3. 34	FI-AAS Fl. Photom.	B-262 B-153	4. 00 4. 06	Chem. Chem.	M-8' F-2	0. 08 0. 08	Chem. Chem.	M-7 N-8
3. 45	Fl. Photom, .	M-12	4. 10	Chem.	H-8	0.08	Chem.	0-7
	,					•		

Table A-10 Individual data for JG-1

%	Method	Code No.	%	Method	Code No.	%	Method	Code No.
0.09 C	hem.	A-9'	0. 31	Chem.	R-1	0.08	Chem.	F-2
	hem.	K-25	0. 33	Chem.	M-10	0. 19	Chem.	V-1
	hem.	M-8'	0. 42	Chem.	S-23	0.0610		B-104, B-295
	hem.	T-29	0. 42	Chem.	C-3			2 101, 2 200
	hem.	N-7	0. 43	Chem.	M-7	0	(%)	
	hem.	S-14	0.44	Chem.	R-7		_ (,,,	
	hem.	K-9	0. 44	Chem.	B'-4	49. 40	NAA	H-6
	hem.	A-11	0. 45	Chem.	0-6	40. 40	IIII	11 0
	hem.	H-10	0. 45	Chem.	H-9			
	hem.	F-2	0.46	Chem.	N-7			
	hem.	V-1	0. 46	Chem.	N-8			
	hem.	R-7	0. 48	Chem.	0-2			
	hem.	0-5	0. 49	Chem.	I-7			
	hem.	0-2	0. 50	Chem.	S-14			
	hem.	M-10	0.54	Chem.	M-13			
	hem.	H-9	0.54	Chem.	0-5			
	hem.	0-6	0. 54	Chem.	H-10			
	hem.	I-7	0.61					
		M-12		Chem.	F-2			
	hem.		0. 62	Chem.	M-12			
	hem.	H-8	0. 67	Chem.	0-7			
	hem. Photom.	M-2	0. 67	Chem.	T-29			
	olor.	S-23	0.70	Chem.	A-11			
	I-Photom.	B-254	0. 73	Chem.	A-13			
	CP	B-192	0.73	Chem.	H-8			
	CP	B-131	0. 81	Chem.	K-9			
	CP-MS	B-320	0.47	Grav.	B-49			
	hotmom.	M-13	0. 58	Grav.	B-153			
	hotom.	B-161	0. 73	Grav.	B-56, B-221			
	hotom.	B-49						
	hotom.	B-15	H20-					
	hotom.	B-78-1	ŀ					
	hotom.	B-79	0.04		G-1			
0.115 P	hotom.	B-224	0.08		M-2			
0. 13 P	hotom.	B-153	0.03	Chem.	N-8			
0.06 X	RF	B-44, B-73	0.05	Chem.	C-3			
	RF	0-1'	0.05	Chem.	R-7			
	RF	B-270	0.06	Chem.	A-13			
	RF	B-85	0.06	Chem.	K-9			
	RF	B-96	0.06	Chem.	M-12			
	RF	B-28	0. 07	Chem.	0-6			
	RF	B-248	0. 07	Chem.	B'-4			
	RF	B-125	0. 07	Chem.	A-11			
	RF	B'-1	0. 08	Chem.	I-7			
	RF	B-1'	0.08	Chem.	0-2			
0. 10 A	161	D I	0.08	Chem.	H-9			
P (ppm)		0.08	Chem.	0-7			
	ppm)		0.00	Chem.	M-7			
388 I	CP	B-77	0.09		H-8			
500 1	01	וו ע	0.09	Chem.	S-23			
				Chem.				
			0. 1	Chem.	H-10			
L. 0. I.			0.11	Chem.	M-10			
		T 001	0.11	Chem.	S-14			
	rav.	B-224	0.04	Grav.	B-15			
	rav.	B-15	0.04	Grav.	B-153			
	rav.	B-96	0.06	Grav.	B-56, B-221			
	CP	B-131	0.08	Grav.	B-49			
0. 44 X	RF	B-28	0. 12	Grav.	B-127			
T-H20			C02	_				
0. 37 C	hem.	V-1	0.11		G-1			
				Chom				
0. 83 C	hem.	B'-1	0.06	Chem.	0-6			
11901			0.06	Chem.	M-7			
H20+			0.06	Chem.	M-10			
0. 67		0.1	0.07	Chem.	0-2			
0 67		G-1	0.08	Chem.	B'-4			

Table A-11 Individual data for JG-1A

%	Method	Code No.	%	Method	Code No.	Ж	Method	Code No
Si02			0. 25	XRF	B-15	2.00	Photom.	B-119
	-		0. 25	XRF	B-25	2.00	Photom.	B-224
71.53	AAS	B-134	0. 26	XRF	B-19	2. 24	Photom.	B-216
71.70	AAS	B-434	0. 26	XRF	B-201	2. 00	Vol.	B-119
72. 05	AAS	B-216	0. 26	XRF	B-16	1.94	XRF	B-201
72. 75	AAS	B-202	0. 27	XRF	B-43	1. 94	XRF	B-134
72. 78	AAS	B-312	0. 24	XRF(Dry basis)		1. 98	XRF	B-25
71. 52	Chem.	B-52	0. 24	XRF(fusion)	B-70	1.99	XRF	B-36
72. 59	Chem.	B-89				2. 00	XRF	B-270
72.605	Chem.	B-148	A1203	_		2.00	XRF	B-15
72.90	Chem.	B-39				2.01	XRF	B-31
71.30	FI-Photom.	B-253	13. 44	AAS	B-312	2.01	XRF	B-19
72.03	Grav.	B-190	13. 87	AAS	B-202	2.05	XRF	B-247
72.19	Grav.	B-49	14. 16	AAS	B-49	2. 09	XRF	B-40
72. 23	Grav.	B-224	14. 2	AAS	B-279	2. 10	XRF	B-43
71. 87		B-139		AAS	B-167	2. 10	XRF	B-434
	Grav. & AAS		14. 22					
72. 19	Grav. & AAS	B-167	14. 25	AAS	B-216	1.94	XRF(Dry basis)	
73. 150	ICP	B-148	14. 47	AAS	B-134	1.93	XRF(fusion)	B-70
71.7	INAA	B-447	14. 19	Chem.	B-52			
71.7	NAA	B-277	14. 26	Chem.	B-39	Fe203		
72.82	Photom.	B-279	15, 050	Chem.	B-148		_	
71.35	XRF	B-434	15. 07	Chem.	B-89	0.30	Calc	B-482
72. 12	XRF	B-134	14. 56	Grav. & AAS	B-139	0. 35	Calc.	B-216
72. 16	XRF	B-16	14. 11		B-482		Calc.	B-270
				ICP		0. 41		
72. 16	XRF	B-40	14. 15	ICP	B-434	0. 42	Calc.	B-31
72. 17	XRF	B-31	14. 202	ICP	B-148	0. 43	Calc.	B-134
72.19	XRF	B-247	14. 3	INAA	B-270	0. 43	Calc.	B-167
72.40	XRF	B-201	15. 5	INAA	B-447	0. 43	Calc.	B-49
72.40	XRF	B-25	15. 5	NAA	B-277	0. 45	Calc.	B-25
72. 47	XRF	B-270	14.5	Photom.	B-51	0. 47	Calc.	B-15
72. 48	XRF	B-36	14. 12	Vol.	B-190	0. 47	Calc.	B-134
72. 71	XRF	B-15	14. 22	Vol.	B-224	0. 58	Calc.	B-36
73. 11	XRF	B-19	13. 80	XRF	B-270	0.66	Calc.	B-139
73. 19	XRF	B-43	14.00	XRF	B-31	0.79	Calc.	B-202
72. 22	XRF(Dry basis)	B-129	14.05	XRF	B-43	0. 595	Chem.	B-148
72.8	XRF(fusion)	B-70	14. 10	XRF	B-25	0.63	Chem.	B-89
	(,		14. 11	XRF	B-434	0.73	Chem.	B-39
Ti02			14. 11	XRF	B-15			
1102	-		14. 13	XRF	B-16	Fe0		
0.04	110	D 194				reo	····	
0. 24	AAS	B-134	14. 19	XRF	B-40	1 10		D 010
0. 25	AAS	B-167	14. 22	XRF	B-247	1. 40		B-312
0. 25	AAS	B-49	14. 26	XRF	B-134	1. 01	Chem.	B-89
0. 257	AAS	B-216	14. 27	XRF	B-36	1.010	Chem.	B-148
0.32	AAS	B-312	14. 46	XRF	B-201	1. 20	Chem.	B-39
0.195	Chem.	B-148	14. 46	XRF	B-19	1. 47	Chem.	B-52
0. 20	Chem.	B-89	14. 12	XRF(Dry basis)		1. 129	ICP	B-148
0. 24	Chem.	B-52	14. 12	XRF(fusion)	B-70	1. 76	INAA	B-330
			14. 40	Aut (10310II)	טו ע			B-123
0. 29	Chem.	B-39	m n 000			1. 39	Photom.	
0. 193	ICP	B-148	T-Fe203			1. 43	Photom.	B-270
0. 23	ICP	B-482				1.70	Photom.	B-216
0. 25	ICP	B-434	1.98	AAS	B-134	1. 48	Vol	B-482
0. 27	ICP	B-472	2. 00	AAS	B-279	1. 19	Vol.	B-202
0. 21	INAA	B-270	2. 03	AAS	B-49	1. 27	Vol.	B-36
0. 24	Photm(FI)	B-462	2. 05	AAS	B-328	1. 36	Vol.	B-134
		B-402 B-279	2. 05		B-167	1. 38	Vol.	B-15
0.18	Photom.			AAS				
0. 25	Photom.	B-190	2. 11	AAS	B-202	1. 38	Vol.	B-25
0. 25	Photom.	B-224	1.72	Chem.	B-148	1. 38	Vol.	B-224
0. 27	Photom.	B-139	1.89	Chem.	B-52	1. 43	Vol.	B-31
0. 27	Photom.	B-202	2. 21	ICP	B-434	1.46	Vol.	B-167
0. 24	XRF	B-36	1. 87	INAA	B-447	1.46	Vol.	B-49
0. 24	XRF	B-134	1. 97	INAA	B-270	1. 24	Vol. ?	B-139
0. 24	XRF	B-40	1. 98	INAA	B-118	1.03		2 100
						P-		
0. 24	XRF	B-31	1.86	NAA	B-234, B-277	Fe		
0. 25	XRF	B-270	1. 92	Photm(FI)	B-462			
0 0=	XRF	B-434	1. 95	Photom.	B-190	1. 369	INAA	B-330
0. 25	VILL	B-247	1.00				INAA	B-24

Table A-11 Individual data for JG-1A

*	Method	Code No.	%	Method	Code No.	%	Method	Code No.
1. 38	INAA	B∹324	0. 50	Chem.	B-89	3. 40	AAS	B-216
1.44	INAA	B-37-2	0. 515	Chem.	B-148	3. 41	AAS	B-49
1. 44	INAA	B-310	0.63	Chem.	B-39	3. 41	AAS	B-202
1. 45	NAA	B-287	0. 67	Chem.	B-52	3. 41	AAS	B-167
1. 40	Photom.	B-51	0. 77	Grav. & AAS	B-139	3. 41	AAS	B-328
			0. 551	ICP	B-148	3. 44	AAS	B-224
MnO	_		0.64	ICP	B-482	3. 45	AAS	B-15
0.05		D 400	0. 72	ICP	B-434	3. 70	AAS	B-312
0. 05	AAS	B-139	0.69	Vol.	B-190	3. 15	Chem.	B-52
0. 05	AAS	B-312	0. 58	XRF	B-270	3. 47	Chem.	B-39
0.055	AAS	B-224	0.62	XRF	B-36	3. 49	Chem.	B-89
0. 057 0. 060	AAS AAS	B-134 B-167	0. 69 0. 69	XRF XRF	B-31	3. 490	Chem. FES	B-148
0.060	AAS	B-107 B-279	0. 70	XRF	B-247 B-434	3. 30 3. 40		B-279 B-434
0.060	AAS	B-190	0.73	XRF	B-201	3. 40	Fl. Photom. Fl. Photom.	B-139
0. 060	AAS	B-49	0.76	XRF	B-43	3. 29	ICP	B-482
0.060	AAS	B-328	0.77	XRF	B-16	3. 329	ICP	B-148
0. 063	AAS	B-216	0. 78	XRF	B-19	3. 32	INAA	B-447
0.068	AAS	B-202	0. 79	XRF	B-25	3. 46	INAA	B-270
0. 07	AAS	B-15	0. 82	XRF	B-40	3. 31	NAA	B-234, B-277
0.04	Chem.	B-89	0.74	XRF(Dry basis)		2.94	XRF	B-43
0.040	Chem.	B-148	0.69	XRF(fusion)	B-70	3. 14	XRF	B-434
0.06	Chem.	B-52				3. 25	XRF	B-36
0.06	Chem.	B-39	Ca0	_		3. 32	XRF	B-270
0.049	ICP	B-148				3. 33	XRF	B-25
0. 05	ICP	B-482	2. 08	AAS	B-190	3. 40	XRF	B-16
0.06	ICP	B-434	2. 12	AAS	B-49	3. 41	XRF	B-247
0. 04	INAA	B-330	2. 13	AAS	B-167	3. 42	XRF	B-31
0. 059	INAA	B-270	2. 13	AAS	B-328	3. 49	XRF	B-40
0.061	INAA	B-447	2. 14	AAS	B-312	3. 53	XRF	B-19
0. 060 0. 050	NAA XRF	B-234, B-277 B-40	2. 17 2. 175	AAS	B-134 B-202	3. 65 3. 46	XRF XRF(Dry basis)	B-201
0. 054	XRF	B-40 B-16	2. 175	AAS AAS	B-202 B-216	3. 46	XRF(fusion)	B-70
0. 054	XRF	B-134	2. 20	Chem.	B-52	3. 40	ARP (1USTOII)	D-10
0.06	XRF	B-43	2. 175	Chem.	B-148	Na		
0.06	XRF	B-434	2. 18	Chem.	B-89	, na	<u>-</u>	
0. 06	XRF	B-19	2. 19	Grav. & AAS	B-139	2. 54	INAA	B-24
0.06	XRF	B-201	1. 94	ICP	B-482	2. 55	INAA	B-37-2
0.06	XRF	B-31	2. 193	ICP	B-148	2. 55	INAA	B-310
0.06	XRF	B-247	2. 22	ICP	B-434	2. 67	INAA	B-324
0.060	XRF	B-270	2. 01	INAA	B-270	2. 53	NAA	B-287
0.06	XRF(Dry basis)	B-129	2. 34	INAA	B-447			
0.06	XRF(fusion)	B-70	1.9	NAA	B-279	K20	_	
			2. 13	Vol.	B-190			
Mn	_		2. 14	Vol.	B-224	3. 785	AAS	B-202
0.0400	244	D9E	2. 01	XRF	B-43	3.96	AAS	B-190
0. 0460 0. 0281		B-25 B-330	2. 08 2. 09	XRF	B-36 B-201	3. 98 4. 02	AAS	B-134
0. 0281		B-330 B-287	2. 09 2. 12	XRF XRF	B-201 B-15	4. 02	AAS	B-49 B-224
	XRF(fusion)	B-36	2. 12	XRF	B-134	4. 03	AAS AAS	B-224 B-167
	XRF(powder)	B-36	2. 12	XRF	B-134 B-19	4. 04	AAS	B-328
0. 0102	(poster)	- 00	2. 13	XRF	B-31	4. 05	AAS	B-312
Mg0			2. 13	XRF	B-247	4. 05	AAS	B-216
	-		2. 14	XRF	B-40	3. 86	Chem.	B-89
0.66	AAS	B-190	2. 14	XRF	B-270	3. 875	Chem.	B-148
0. 67	AAS	B-224	2. 15	XRF	B-25	4. 04	Chem.	B-39
0. 67	AAS	B-312	2. 18	XRF	B-18	3. 93	FES	B-435
0.67	AAS	B-15	2. 18	XRF	B-16	4. 03	FES	B-236
0.69	AAS	B-49	2. 20	XRF	B-434	4. 07	FES	B-279
0. 69	AAS	B-328	2. 13	XRF(Dry basis)		3. 98	Fl. Photom.	B-139
0. 69	AAS	B-167	2. 14	XRF(fusion)	B-70	4. 06	Fl. Photom.	B-434
0.70	AAS	B-216	y 22			3. 71	ICP	B-482
0.70	AAS	B-279	<u>Na20</u>	_		3. 952	ICP	B-148
0.72	AAS	B-129	0.05	110	D 100	3.60	INAA	B-447
0. 73 0. 76	AAS AAS	B-134 B-202	3. 35 3. 36	AAS AAS	B-190 B-134	3. 93	INAA	B-270 B-224 B-277
U. 10	nno	D~202	5. 50	AAS	B-134	3. 27	NAA	B-234, B-277

Table A-11 Individual data for JG-1A

%	Method	Code No.	%	Method	Code No.	%	Method	Code No.
3.88 X	RF	B-40	1. 05	Chem.	B-39			
	RF	B-201	0.07	Grav.	B-70			
	RF	B-270	0.444	Grav.	B-148			
	RF	B-31	0. 52	Grav.	B-36	ļ		
	RF	B-15	0.54	Grav.	B-224			
	RF	B-134	0.54	Grav.	B-129			
4.00 X	RF	B-19	0.63	Grav.	B-16			
4.00 X	RF	B-36	0.63	Grav.	B-190			
	RF	B-25	0.64	Grav.	B-19]		
	RF	B-43	0.71	Grav.	B-15			
	RF	B-247	0.73	Grav.	B-25			
	RF	B-16	0.79	Grav.	B-134			
	RF	B-434	0.90	Grav.	B-31			
	RF(Dry basis)	B-129						
4. 23 X	RF(fusion)	B-70	T-H20					
3.88	cntg.	B-41		_				
	cntg.	B-273	0.345	Chem.	B-148			
		B-237	0.65		B-270			
4.11 /	cntg.	D-791		Coul.				
			0.07	Grav	B-224			
K			0. 65	Grav.	B-216			
3. 39 I	NAA	B-37-2	H2O+					
	NAA	B-310	11201	_				
	AA	B-287	0. 30	Chem.	B-89			
			0.46	Coul.	B-270			
P205			0. 57	Grav.	B-36			
1200						1		
0.070.0		D 140	0.59	Grav.	B-52			
	hem.	B-148	0. 59	Grav.	B-167			
	hem.	B-39	0. 59	Grav.	B-49			
0.10 C	hem.	B-89	0. 65	Grav.	B-202			
0.100 C	hem.	B-148	0.71	Grav.	B-139			
	CP	B-434	0.75	Grav.	B-25			
		B-202	0.75		B-312			
	hotom.			Grav.				
	hotom.	B-224	0. 57	Tit	B-482			
	hotom.	B-134	1					
	hotom.	B-190	H20-	_		ĺ		
0.08 P	hotom.	B-139						
	hotom.	B-15	0.04	Chem.	B-89	1		
	hotom.	B-167	0. 19	Coul.	B-270	1		
	hotom.	B-49	0.14	Grav	B-482			
	hotom.	B-279	0. 08	Grav.	B-52			
0.097 P	hotom.	B-216	0.09	Grav.	B-167			
	RF	B-201	0. 09	Grav.	B-49			
0.07 X	RF	B-31	0.10	Grav.	B-312			
	RF	B-43	0.12	Grav.	B-190			
	RF	B-16	0. 13	Grav.	B-16			
	RF	B-247	0. 15	Grav.	B-25			
0.00 A								
	RF	B-270	0. 175	Grav.	B-202			
	RF	B-40	0.18	Grav.	B-139			
	RF	B-19						
0.10 X	RF	B-36	C02					
	RF	B-434		_				
	RF(Dry basis)		0.09	Chem.	B-36			
	RF(fusion)	B-70	0. 03	Chem.	B-25			
	ppm)							
	ES	B-208						
	RF	B-25						
S03								
<0.02 X	RF	B-36						
L. 0. I.								

Table A-12 Individual data for JG-2

%	Method	Code No.	*	Method	Code No.	%	Method	Code No.
SiO2			12. 36	AAS	B-202	1.04	XRF	B-270
			12. 41	AAS	B-418			
76.50	AAS	B-434	12. 44	AAS	B-134	Fe203	_	
76.95	AAS	B-418	12. 45	AAS	B-216	0.00	0.1	D 101
76.96	AAS	B-134	12. 52	AAS	Y-14'	0. 20	Calc.	B-134
77. 00 77. 1	AAS AAS	Y-14' B-216	12. 9 11. 45	AAS	B-279 B-181	0. 22 0. 23	Calc. Calc.	B-134 B-63
77. 35	AAS	B-210 B-202	12. 41	Chem. Chem.	B-258-7	0. 23	Calc.	B-136
74. 73	Chem.	B-181	12. 39	Grav. & AAS	B-141	0. 24	Calc.	B-270
76. 95	Chem.	B-258-7	12. 29	ICP	B-476	0. 35	Calc.	B-216
76. 84	Grav	B-224	12. 58	ICP	B-443	0.36	Calc.	B-258-7
76.88	Grav.	B-190	12. 95	ICP	B-434	0. 38	Calc.	B-167
76.95	Grav.	F-3'	12. 42	INAA	B-270	0.40	Calc.	B-59
76.78	Grav. & AAS	B-141	13. 1	INAA	B-447	0.42	Calc.	B-142
76.92	Grav. & AAS	B-167	13. 3	NAA	B-277	0.42	Calc.	B-202
76.34	ICP	B-476	12. 41	Vol.	F-3'	0.44	Calc.	B-141
77. 1	INAA	B-447	12. 45	Vol.	B-224	0. 36	Chem.	F-3'
77. 1	NAA	B-277	12. 53	Vol.	B-190			
77.51	Photom.	B-279	11. 91	XRF	B-62	Fe0	_	
75. 56	XRF	B-64	12. 27	XRF	T-51'	0.50	O1	D 050 5
75. 92 76. 72	XRF XRF	B-62 B-201	12. 29 12. 32	XRF	B-434	0. 52	Chem.	B-258-7
76. 72	XRF	B-434	12. 32	XRF XRF	B-270 B-63	0. 55 0. 67	Photom. Photom.	B-216 B-270
76. 92	XRF	B-270	12. 30	XRF	B-136	0. 52	Vol.	B-167
76. 95	XRF	B-247	12. 41	XRF	B-247	0. 52	Vol.	F-3'
77. 00	XRF	B-136	12. 44	XRF	B-134	0.54	Vol.	B-224
77. 05	XRF	B-142	12. 46	XRF	B-142	0.55	Vol.	B-142
77. 10	XRF	B-134	12. 49	XRF	B-64	0. 56	Vol.	B-202
77.13	XRF	B-59	12. 59	XRF	B-59	0. 56	Vol.	B-59
77.17	XRF	T-51'	12. 73	XRF	B-201	0.61	Vol.	B-136
77.77	XRF	B-63	12. 73	XRF	B-61	0.64	Vol.	B-63
						0.72	Vol.	B-134
Ti02			T-Fe203	_		0. 49	Vol.?	B-141
0.03	AAS	B-134	0. 92	AAS	F-3'	Fe		
0.04	AAS	B-167	0. 92	AAS	B-418			
0.0416	AAS	Y-14'	0.96	AAS	B-328	0.6557	5 I NAA	B-330
0.06	AAS	B-216	0. 96	AAS	B-167	0.67	INAA	B-324
0.02	Chem.	B-181	0. 977	AAS	Y-14'	0.70	INAA	B-230
0.04	Chem.	B-258-7	1.00	AAS	B-134	0. 71	INAA	B-244
0.04	Chem.	F-3'	1.01	AAS	B-279	0. 73	INAA	B-24
0.04	ICP	B-434	1.04	AAS	B-202	0. 74	NAA	B-287
0. 04 0. 043	ICP	B-476 B-443	0. 80 0. 92	Chem.	B-181 B-258-7	V-0		
0.045	ICP Photom.	B-445 B-279	0. 92	Chem. ICP	B-434	Mn0	_	
0.04	Photom.	B-190	0. 92	ICP	B-443	0. 0085	244	B-216
0.045	Photom.	B-224	1. 01	INAA	B-447	0.000	AAS	B-134
0. 05	Photom.	B-202	1. 07	INAA	B-270		AAS	B-224
0.06	Photom.	B-141	1.01	NAA	B-234, B-277	0. 015	AAS	B-190
0. 03	XRF	B-134	0. 91	Photom	B-224	0. 015	AAS	B-418
0.04	XRF	B-270	0. 95	Photom.	B-190	0.017	AAS	B-328
0.04	XRF	D 100	0.96	Photom.	B-119	0.017	244	B-167
		B-136						
0.04	XRF	B-63	0. 97	Photom.	B-216	0. 0179	AAS	Y-14'
0. 04 0. 04	XRF XRF	B-63 B-434	0. 97 0. 95	Photom. Vol.	B-216 B-119	0. 0179 0. 018	AAS AAS	Y-14' B-279
0. 04 0. 04 0. 04	XRF XRF XRF	B-63 B-434 B-247	0. 97 0. 95 0. 88	Photom. Vol. XRF	B-216 B-119 B-62	0. 0179 0. 018 0. 018	AAS AAS AAS	Y-14' B-279 B-202
0. 04 0. 04 0. 04 0. 05	XRF XRF XRF XRF	B-63 B-434 B-247 B-142	0. 97 0. 95 0. 88 0. 92	Photom. Vol. XRF XRF	B-216 B-119 B-62 B-136	0. 0179 0. 018 0. 018 0. 02	AAS AAS AAS AAS	Y-14' B-279 B-202 B-141
0. 04 0. 04 0. 04 0. 05 0. 05	XRF XRF XRF XRF XRF	B-63 B-434 B-247 B-142 B-201	0. 97 0. 95 0. 88 0. 92 0. 92	Photom. Vol. XRF XRF XRF	B-216 B-119 B-62 B-136 B-247	0. 0179 0. 018 0. 018 0. 02 0. 01	AAS AAS AAS Chem.	Y-14' B-279 B-202 B-141 B-181
0. 04 0. 04 0. 04 0. 05 0. 05 0. 05	XRF XRF XRF XRF XRF XRF	B-63 B-434 B-247 B-142 B-201 T-51'	0. 97 0. 95 0. 88 0. 92 0. 92 0. 94	Photom. Vol. XRF XRF XRF XRF	B-216 B-119 B-62 B-136 B-247 B-201	0. 0179 0. 018 0. 018 0. 02 0. 01 0. 015	AAS AAS AAS Chem. Chem.	Y-14' B-279 B-202 B-141 B-181 B-258-7
0. 04 0. 04 0. 04 0. 05 0. 05 0. 05 0. 05	XRF XRF XRF XRF XRF XRF XRF	B-63 B-434 B-247 B-142 B-201 T-51' B-59	0. 97 0. 95 0. 88 0. 92 0. 92 0. 94 0. 94	Photom. Vol. XRF XRF XRF XRF XRF	B-216 B-119 B-62 B-136 B-247 B-201 B-63	0. 0179 0. 018 0. 018 0. 02 0. 01 0. 015 0. 015	AAS AAS AAS Chem. Chem.	Y-14' B-279 B-202 B-141 B-181 B-258-7 F-3'
0. 04 0. 04 0. 04 0. 05 0. 05 0. 05 0. 05 0. 05	XRF XRF XRF XRF XRF XRF XRF XRF	B-63 B-434 B-247 B-142 B-201 T-51' B-59 B-64	0. 97 0. 95 0. 88 0. 92 0. 92 0. 94 0. 94 0. 95	Photom. Vol. XRF XRF XRF XRF XRF XRF	B-216 B-119 B-62 B-136 B-247 B-201 B-63 T-51'	0. 0179 0. 018 0. 018 0. 02 0. 01 0. 015 0. 015 0. 018	AAS AAS AAS Chem. Chem. Chem. FI-Photom.	Y-14' B-279 B-202 B-141 B-181 B-258-7 F-3' B-261
0. 04 0. 04 0. 04 0. 05 0. 05 0. 05 0. 05 0. 05 0. 05	XRF XRF XRF XRF XRF XRF XRF XRF	B-63 B-434 B-247 B-142 B-201 T-51' B-59 B-64 B-62	0. 97 0. 95 0. 88 0. 92 0. 92 0. 94 0. 94 0. 95 0. 99	Photom. Vol. XRF XRF XRF XRF XRF XRF XRF XRF XRF	B-216 B-119 B-62 B-136 B-247 B-201 B-63 T-51' B-64	0. 0179 0. 018 0. 018 0. 02 0. 01 0. 015 0. 015 0. 018	AAS AAS AAS Chem. Chem. Chem. ICP	Y-14' B-279 B-202 B-141 B-181 B-258-7 F-3' B-261 B-434
0. 04 0. 04 0. 04 0. 05 0. 05 0. 05 0. 05 0. 05	XRF XRF XRF XRF XRF XRF XRF XRF	B-63 B-434 B-247 B-142 B-201 T-51' B-59 B-64	0. 97 0. 95 0. 88 0. 92 0. 92 0. 94 0. 94 0. 95 0. 99 1. 01	Photom. Vol. XRF XRF XRF XRF XRF XRF XRF XRF XRF XRF	B-216 B-119 B-62 B-136 B-247 B-201 B-63 T-51' B-64 B-134	0. 0179 0. 018 0. 018 0. 02 0. 01 0. 015 0. 015 0. 018 0. 016	AAS AAS AAS Chem. Chem. FI-Photom. ICP	Y-14' B-279 B-202 B-141 B-181 B-258-7 F-3' B-261 B-434 B-443
0. 04 0. 04 0. 04 0. 05 0. 05 0. 05 0. 05 0. 05 0. 05 0. 05	XRF XRF XRF XRF XRF XRF XRF XRF	B-63 B-434 B-247 B-142 B-201 T-51' B-59 B-64 B-62	0. 97 0. 95 0. 88 0. 92 0. 92 0. 94 0. 94 0. 95 0. 99 1. 01	Photom. Vol. XRF XRF XRF XRF XRF XRF XRF XRF XRF XRF	B-216 B-119 B-62 B-136 B-247 B-201 B-63 T-51' B-64 B-134 B-61	0. 0179 0. 018 0. 018 0. 02 0. 01 0. 015 0. 015 0. 018 0. 016 0. 016	AAS AAS AAS Chem. Chem. Chem. I-Photom. ICP ICP	Y-14' B-279 B-202 B-141 B-181 B-258-7 F-3' B-261 B-434 B-443 B-476
0. 04 0. 04 0. 04 0. 05 0. 05 0. 05 0. 05 0. 05 0. 05	XRF XRF XRF XRF XRF XRF XRF XRF	B-63 B-434 B-247 B-142 B-201 T-51' B-59 B-64 B-62	0. 97 0. 95 0. 88 0. 92 0. 92 0. 94 0. 94 0. 95 0. 99 1. 01	Photom. Vol. XRF XRF XRF XRF XRF XRF XRF XRF XRF XRF	B-216 B-119 B-62 B-136 B-247 B-201 B-63 T-51' B-64 B-134	0. 0179 0. 018 0. 018 0. 02 0. 01 0. 015 0. 015 0. 018 0. 016	AAS AAS AAS Chem. Chem. FI-Photom. ICP	Y-14' B-279 B-202 B-141 B-181 B-258-7 F-3' B-261 B-434 B-443

Table A-12 Individual data for JG-2

Ж	Method	Code No.	*	Method	Code No.	*	Method	Code No.
0. 017	NAA	B-234, B-277	0. 66	XRF	B-270	4. 79	AAS	B-328
0.01	XRF	B-61	0.67	XRF	T-51'	4.79	AAS	B-167
0. 01	XRF	B-63	0. 68	XRF	B-136	4. 76	Chem.	B-258-7
0. 01	XRF	B-62	0.68	XRF	B-201	4. 98	Chem.	B-181
	XRF	B-136	0.69	XRF	B-59	4. 70	FES	B-279 B-236
	XRF XRF	B-434 B-247	0. 70 0. 70	XRF XRF	B-63 B-142	4. 73 4. 71	FES FI-AAS	B-262
0. 013	XRF	B-201	0.70	XRF	B-62	4. 62	F1. Photom.	B-434
0. 02	XRF	B-64	0.71	XRF	B-64	4. 74	F1. Photom.	B-141
0.020	XRF	B-270	0.78	XRF	B-434	4.64	ICP	B-476
			0. 80	XRF	B-247	4. 644	ICP	B-443
Mn	-		Na20			4. 43 4. 63	I NAA XRF	B-270 B-63
0. 0102	244	B-136	Nazu	_		4. 65	XRF	B-201
0.0102		B-142	3. 50	AAS	Y-14'	4. 66	XRF	B-64
0. 01255	5 I NAA	B-330	3. 52	AAS	B-134	4. 67	XRF	B-434
0.020	NAA	B-287	3. 53	AAS	B-190	4. 67	XRF	B-142
	XRF(fusion)	B-59	3. 54	AAS	B-328	4. 68	XRF	B-62
0. 0135	XRF(powder)	B-59	3. 54 3. 55	AAS	B-167 B-202	4. 70 4. 72	XRF	B-61 B-59
MgO			3. 55	-AAS AAS	F-3'	4. 72	XRF XRF	B-136
1180	-		3. 55	AAS	B-216	4. 74	XRF	B-134
0.03	AAS	B-142	3. 57	AAS	B-142	4. 76	XRF	B-247
0.03	AAS	B-190	3. 59	AAS	B-224	4.78	XRF	B-270
0. 0329		Y-14'	3. 55	Chem.	B-258-7	4. 79	XRF .	T-51'
0. 033	AAS	B-224	3. 80	Chem.	B-181	4.74	rentg.	B-237 B-273
0. 035 0. 035	AAS AAS	B-167 B-328	3. 49 3. 57	FES FI-AAS	B-279 B-262	4. 76	γ cntg.	D-213
0. 035	AAS	B-202	3. 52	Fl. Photom.	B-434	K		
0.04	AAS	B-279	3. 56	Fl. Photom.	B-141		_	
0.045	AAS	B-216	3. 42	ICP	B-476	3. 72	INAA	B-230
0. 06	AAS	B-134	3. 448	ICP	B-443	3. 72	INAA	B-244
0. 04 0. 05	Chem. Chem.	B-258-7 B-181	3. 50 3. 58	I NAA I NAA	B-270 B-437	3. 78	NAA	B-287
0. 03	Grav. & AAS	B-141	3. 77	INAA	B-447	P205		
0. 04	ICP	B-434	3. 53	NAA	B-234, B-277		_	
0.042	ICP	B-443	3. 34	XRF	B-59	0.002		B-258-7
0. 04	Photom.	F-3'	3. 36	XRF	B-62	0.002	Photom.	B-224
0.04	Vol.	B-190 T-51'	3. 37	XRF	B-136	0. 002 0. 003	Photom. Photom.	F-3' B-190
0. 01 0. 01	XRF XRF	B-136	3. 43 3. 43	XRF XRF	B-63 B-64	0.003	XRF	B-247
0.04	XRF	B-247	3. 48	XRF	B-61	0.002	Alvi	2 2
0.06	XRF	B-64	3. 55	XRF	B-247	P	_(ppm)	
			3. 58	XRF	T-51'			D 000
Ca0	_		3. 60	XRF	B-270	<100	0ES	B-208
0. 62	AAS	B-224	3. 70 3. 82	XRF XRF	B-201 B-434	79	XRF	B-136
0.65	AAS	B-190	0.02	Alti	D 404	L. O. I.		
0.655	AAS	Y-14'	Na	_				
0. 68	AAS	B-167				0. 32	Grav.	B-190
0. 68	AAS	B-328	2. 54	INAA	B-244	0.32	Grav.	T-51'
0. 68 0. 685	AAS	B-134 B-202	2. 54 2. 76	I NAA I NAA	B-230 B-24	0. 34 0. 35	Grav. Grav.	B-59 B-61
0. 70	AAS	B-216	2. 78	INAA	B-324	0.35	Grav.	B-142
0. 76	AAS	B-279	2. 59	NAA	B-287	0.40	Grav.	B-136
0.80	AAS	F-3'				0.40	Grav.	B-224
0.64	Chem.	B-181	K20_	_		0. 484	Grav.	Y-14'
0.80	Chem.	B-258-7	1 17	AAC	D_200	0. 54 0. 57	Grav.	B-134 B-63
0. 65 0. 67	Grav. & AAS ICP	B-141 B-476	4. 47 4. 64	AAS AAS	B-202 B-190	0.57	Grav. Grav.	B-62
0. 77	ICP	B-443	4. 67	AAS	Y-14'	3. 06	Grav.	B-64
0. 76	ICP	B-434	4. 71	AAS	B-142	3.00		
0. 61	INAA	B-270	4. 75	AAS	B-216	T-H20	_	
0. 73	Vol.	B-190	4. 75	AAS	B-134		2 1	D 000
0. 62	XRF	B-61	4. 76	AAS	F-3'	0.40	Coul.	B-270
0. 66	XRF	B-134	4. 77	AAS	B-224	0. 20	Grav.	B-224
			1					

Table A-12 Individual data for JG-2

.^0	Method	Code No.	%	Method	Code No.	*	Method	Code
0. 25	Grav.	B-216						
20+								
<u> 20+</u>	-							
0. 25	Chem.	B-258-7						
0.25	Chem.	F-3'				İ		
0. 27	Coul.	B-270	1					
0. 22	Grav.	B-167						
0. 37	Grav.	B-59						
0. 39	Grav.	B-181				İ		
0.40	Grav.	B-136	1					
0. 465	Grav.	B-202						
20-	_							
0. 13	Chem.	B-258-7						
0.10	Chem.	F-3'						
0. 13 0. 13	Coul.	B-270						
0. 03	Grav.	B-181						
0. 07	Grav.	B-134						
0. 07 0. 08	Grav.	B-190						
0. 11	Grav.	B-142						
0. 13	Grav.	B-136						
0. 14	Grav.	B-167						
0.18	Grav.	B-202						
0. 22	Grav.	B-141						
02	_							
0. 03	Vol.	B-59						
0.01	XRF	B-136						
03	_							
0. 02	XRF	B-59						
						1		

Table A-13 Individual data for JG-3

%	Method	Code No.	%	Method	Code No.	%	Method	Code No.
SiO2			15. 58	XRF	B-170	0. 068	AAS	B-224
5105	-			XRF	B-168	0. 07	AAS	B-216
66. 9	AAS	B-216		XRF	B-201		AAS	B-190
67. 10	AAS	B-418		XRF	B-189		AAS	B-279
68. 92	Chem.	B-205		XRF	B-219		AAS	B-328
67.08	Grav.	B-224				0.072	AAS	B-159, B-167
67.11	Grav.	B-190	T-Fe203				AAS	B-418
67. 19	Grav.	B-162				0.067	FI-Photom.	B-261
66. 36	Grav. & AAS	B-139	3. 57	AAS	B-139	0. 07	INAA	B-330
67.10	Grav. & AAS	B-159, B-167		AAS	B-279	0.071	INAA	B-270
67. 23	Photom.	B-279		AAS	B-328	0. 079	INAA	B-447
66.44	XRF	B-201		AAS	B-159, B-167	0. 079	NAA	B-234, B-277
67. 02	XRF	B-169		AAS	B-418	0. 08	Photom.	B-162
67.03	XRF	B-168		Chem.	B-205	0.07	Vol.	B-198
67. 10	XRF	B-247	3. 49	INAA	B-270	0.07	XRF	B-201
67. 21	XRF	B-189	3. 67	INAA	B-447	0.07	XRF	B-189
67. 23	XRF	B-170		NAA Dhote(EI)	B-234, B-277		XRF	B-219
67. 45 67. 57	XRF	B-138 B-270		Photm(FI)	B-462 B-190	0. 07 0. 07	XRF XRF	B-170 B-168
67. 70	XRF XRF	B-270 B-207		Photom.	B-224		XRF	B-100 B-270
67. 98	XRF	B-207 B-219		Photom. Photom.	B-216		XRF	B-247
68. 09	XRF	B-198		XRF	B-210 B-219	0.012	ART	D-241
00.00	AIL	D-190		XRF	B-169	Mn		
Ti02				XRF	B-168	PIII	-	
1102	_			XRF	B-201	0. 0525	AAS	B-325
0.48	AAS	B-159, B-167		XRF	B-247	0.0574		B-207
0. 50	AAS	B-216	3. 75	XRF	B-207	0.0510		B-330
0. 49	Chem.	B-205		XRF	B-189	0.063		B-230, B-244
0. 48	INAA	B-447		XRF	B-170	0.0556		B-169
0. 53	INAA	B-270		XRF	B-138			
0.48	Photm(FI)	B-462	3. 52	XRF	B-270	Mg0	_	
0.42	Photom.	B-279					_	
0.47	Photom.	B-162	Fe203	_		1.72	AAS	B-190
0. 49	Photom.	B-190				1. 73	AAS	B-207
0.49	Photom.	B-224	1.41	Calc.	B-270	1.79	AAS	B-159, B-167
0. 53	Photom.	B-139	1. 49	Calc.	B-168	1. 79	AAS	B-328
0. 41	XRF	B-138	1. 55	Calc.	B-216	1.8	AAS	B-279
0. 44	XRF	B-198	1. 55	Calc.	B-207	1. 95	AAS	B-216
0.464	XRF	B-219	1.61	Calc.	B-159, B-167	1.80	Chem.	B-205
0. 47 0. 47	XRF XRF	B-169 B-270	1. 73	Calc. Calc.	B-169 B-170	1. 91 1. 84	Grav. & AAS	B-162 B-139
0.47	XRF	B-270	2. 03 1. 56	Photom.	B-170 B-162	1. 7	INAA	B-139 B-270
0. 48	XRF	B-170	1.00	r no com.	D-102	1. 77	Vol.	B-224
0. 48	XRF	B-201	Fe0			1. 85	Vol.	B-190
0. 48	XRF	B-247	100	-		1. 68	XRF	B-170
0. 49	XRF	B-189	1. 34	Photom.	B-279	1. 74	XRF	B-198
0. 54	XRF	B-168	1. 90	Photom.	B-270	1.74	XRF	B-169
		2 200	2. 05	Photom.	B-216	1. 76	XRF	B-219
A1203			1. 62	Vol.	B-170	1.76	XRF	B-138
			1.72	Vol.	B-198	1. 78	XRF	B-270
15. 35	AAS	B-216	1. 76	Vol.	B-169	1.79	XRF	B-247
15. 52	AAS	B-418	1. 88	Vol.	B-162	1.80	XRF	B-201
15. 52	AAS	B-159, B-167	1. 91	Vol.	B-159, B-167	1.80	XRF	B-189
15. 6	AAS	B-279	1.95	Vol.	B-224	1.85	XRF	B-168
15. 56	Grav. & AAS	B-139	1.98	Vol.	B-207			
15	INAA	B-447	2.00	Vol.	B-168	Ca0	_	
15. 9	INAA	B-270						
15. 44	Vol.	B-162	Fe	_		3. 5	AAS	B-279
15. 49	Vol.	B-224				3. 55	AAS	B-190
15. 49	Vol.	B-190	2. 4845		B-330	3. 76	AAS	B-328
15. 10	XRF	B-270	2. 54	INAA	B-230, B-244	3. 76	AAS	B-159, B-167
15. 16	XRF	B-198	2. 54	INAA	B-324	3. 85	AAS	B-216
15. 36	XRF	B-207	N- 0			3.64	Chem.	B-205
15. 42	XRF	B-138	MnO	-		3.86	Grav. & AAS	B-139 B-270
15. 46	XRF	B-169	0.06	AAS	B-139	3. 66 3. 56	INAA Vol.	B-270 B-162
15. 52	XRF	B-247	J U. Ub	KAO	D_19A	J. 00	¥U1.	D-107

Table A-13 Individual data for JG-3

%	Method	Code No.	%	Method	Code No.	*	Method	Code No.
3. 67	Vol.	B-190	2.61	XRF	B-207	H20-		
3.77	Vol.	B-224	2.61	XRF	B-169			
3. 58	XRF	B-207	2. 61	XRF	B-189	0.18	Coul.	B-270
3. 63	XRF	B-201	2. 62	XRF	B-270	0. 09	Grav.	B-190
3. 64	XRF	B-138	2. 62	XRF	B-219	0. 11	Grav.	B-205
3. 65	XRF	B-198	2. 62	XRF	B-168	0. 12	Grav.	B-162
3. 69	XRF	B-219	2. 63	XRF	B-247	0. 12	Grav.	B-168
3. 70	XRF	B-169	2. 69	XRF	B-198	0. 16	Grav.	B-139
3. 71	XRF	B-170	2. 70	γ cntg.	B-273	0. 10	Grav.	B-159, B-167
3. 74	XRF	B-189	2. 71	rentg.	B-237	0. 33	Grav.	B-198
3.74	XRF	B-168	2. 11	/ Circg.	D 201	0.00	urav.	D 100
3. 76	XRF	B-247	K			C02		
3. 81	XRF	B-270	N	_		002		
			2. 2000	IDMS	B-438	0.04	Vol.	B-169
a20			2. 31	INAA	B-230, B-244	<0.1	Vol.	B-168
3. 90	AAS	B-190	P205			S03		
4.00	AAS	B-207		_	Ī		_	
4.03	AAS	B-159, B-167	0.11	Photom.	B-279	0.02	XRF	B-168
4.03	AAS	B-328	0.12	Photom.	B-159, B-167	0.04	XRF	B-169
4.05	AAS	B-216	0.12	Photom.	B-162			
4. 11	AAS	B-224	0. 125	Photom.	B-216			
3.61	Chem.	B-205	0.13	Photom.	B-190			
3.97	FES	B-162	0.148	Photom.	B-224			
4.04	FES	B-279	0. 10	XRF	B-170			
4. 03	FI-AAS	B-262	0.11	XRF	B-198			
4. 05	Fl. Photom.	B-139	0. 12	XRF	B-201			
4. 06	INAA	B-270	0. 12	XRF	B-247			
4. 11	INAA	B-437	0. 12	XRF	B-219			
4. 20	NAA	B-234, B-277	0. 13	XRF	B-189			
3. 64	XRF	B-219	0. 13	XRF	B-169			
3.66	XRF	B-189	0. 130		B-270			
3. 75	XRF	B-198	0. 100	71141	2 2.0			
3. 88	XRF	B-169	P	(ppm)				
3. 92	XRF	B-170		_(ppm)				
3. 92	XRF	B-168	540	0ES	B-208			
3. 99	XRF	B-270	509	Photom.	B-207			
4. 02	XRF	B-201	562	XRF	B-168			
4. 02	XRF	B-247	302	VIFI	р 100			
4. 04	XRF	B-138	L. O. I.					
	All I	D 100		_				
Na		4	0. 67 0. 58	Grav Grav.	B-224 B-138			
3. 09	INAA	B-230, B-244	0. 66	Grav.	B-190			
3. 21	INAA	B-324	0.70	Grav.	B-168			
700			0. 77	Grav.	B-189			
(20			0. 91 0. 96	Grav. Grav.	B-207 B-170			
2.61	AAS	B-224	0.00	urur.	<i>D</i> 1.0			
2. 63	AAS	B-159, B-167	T-H20					
2. 63	AAS	B-328						
2.64	AAS	B-190	0.87	Coul.	B-270			
2.65	AAS	B-216		Grav.	B-224			
2. 66	AAS	B-207		Grav.	B-216			
2.71	Chem.	B-205	0.00	urav.	D 210			
2. 62	FES .	B-236	H20+					
2. 64	FES	B-162	11201	-				
2. 75	FES .	B-102 B-279	0.69	Coul.	B-270			
2. 62		B-262	0. 69		B-168			
	FI-AAS			Grav.				
2. 67	Fl. Photom.	B-139	0.53	Grav.	B-198			
2.66	INAA	B-447	0.61	Grav.	B-169			
2. 68	INAA	B-270	0.67	Grav.	B-205			
2. 65	NAA	B-234, B-277	0.67	Grav.	B-159, B-167			
2. 57	XRF	B-138	0.80	Grav.	B-139			
2. 58	XRF	B-170	0. 87	Grav.	B-162			
2. 59	XRF	B-201			İ			

Table A-14 Individual data for JGB-1

%	Method	Code No.	*	Method	Code No.	%	Method	Code No.
SiO2			1.64	Photom.	B-130	17. 48	XRF	B-25
	-			Photom.	B-14, B-91	17. 48	XRF	S-26'
	AAS	B-134		XRF	B-43	17. 49	XRF	B-19
	AAS	T-41'		XRF	B-90	17. 56	XRF	B-40
		B-216		XRF	B-74	17. 60	XRF	B-16
	AAS	B-312		XRF	Y-8'	17.63	XRF	B-36
	Chem	B-482		XRF	S-26'	17.66	XRF	B-247
	Chem.	0-11' A-13'	1. 57	XRF	B-270	17.69	XRF	B-15
	Chem. Chem.	B-45		XRF	B-40	17. 81	XRF	B-44, B-73
43.65		B-56, B-221 G-7'	1. 58 1. 59	XRF XRF	B-31 B-134	18. 10 17. 85	XRF XRF(Dry basis)	B-43 R-120
	Chem. Grav.	B-14, B-91		XRF	B-154 B-15	17. 61	XRF(fusion)	B-70
	Grav.	B-80, B-94	1.61	XRF	B-16	17.01	ART (Tuston)	D 10
	Grav.	B-224	1. 62	XRF	B-36	A1		
	Grav.	B-153	1. 62	XRF	B-25	nı .	-	
	Grav.	B-71	1. 62	XRF	B-19	8. 8450	ICP	B-77
	Grav.	B-74	1.62	XRF	B-247	9. 2533		B-337
43.74	Grav. & Photom.	B-130	1.63	XRF	B-44, B-73			
43. 44	IDMS	B-48	1.66	XRF	T-37'	T-Fe203		
43. 40	Photom.	B-86	1.69	XRF	B-97		_	
4400	Photom.	B-279	1.73	XRF	B-22	14. 13		B-146
43. 38	XRF	B-16	1.63	XRF(Dry basis)		14.97	AAS	B-134
43. 43	XRF	B-15	1.60	XRF(fusion)	B-70	14.98	AAS	B-86
43. 44	XRF	B-247				15. 1	AAS	B-279
43. 44	XRF	B-270	Ti	_		15. 35	AAS	T-41'
43. 50	XRF	B-25	0 0047	LOD	D 77	15. 35	AAS	B-328
43. 55	XRF	B-90	0.8047		B-77	15. 09 15. 16	Chem.	G-7'
43.66	XRF	B-40 Y-8'	0.98	INAA (opi)	B-310 B-163	15. 16	Chem. ICP	0-11' A-13' B-192
43. 74 43. 75	XRF XRF	B-97	0. 98 0. 9917	INAA(epi)	B-337	14. 4	INAA	B-447
43. 77	XRF	B-36	0. 9917	SINS	D-991	14. 4	INAA	B-270
43. 78	XRF	B-134	A1203			15. 6	INAA	B-118
43. 78	XRF	B-22	AIZOO	-		13. 99	NAA	B-277
43. 90	XRF	B-44, B-73	17.68		B-146	15. 09	PAA	B-55
43. 98	XRF	B-31	17. 21	AAS	B-312	15. 12	Photm(FI)	B-462
44. 13	XRF	B-19	17. 25	AAS	B-134	15. 09	Photom.	B-130
44. 17	XRF	S-26'	17. 55	AAS	B-216	15. 16	Photom.	B-224
43.61	XRF(Dry basis)	B-129	17.61	AAS	T-41'	15. 17	Photom.	B-216
43.9	XRF(fusion)	B-70	18.0	AAS	B-279	15. 28	Photom.	B-119
			18.00	AAS	B-74	15. 44	Photom.	B-123
Si	_		17. 22	Chem.	B-45	15. 26	Vol.	B-119
			17. 40	Chem.	G-7'	15. 90	Vol.	B-153
20. 3136	SIMS	B-337	17. 45	Chem.	B-56, B-221	14.01	XRF	S-26'
m:00			17.66	Chem.	0-11' A-13'	14. 54	XRF	B-90
Ti02	-		16. 69 17. 95	Grav.	B-153	14. 65 14. 66	XRF XRF	B-43 B-134
1.51		B-146	18. 57	Grav. Grav.	B-14, B-91 B-80, B-94	14. 00	XRF	B-134 B-31
1. 57	AAS	B-134	17. 33	ICP	B-482	15. 00	XRF	B-270
1. 62	AAS	T-41'	17. 89	ICP	B-192	15. 04	XRF	T-37
1. 64	AAS	B-216	16. 4	INAA	B-447	15. 06	XRF	B-16
1. 65	AAS	B-312	17. 27	INAA	B-270	15. 07	XRF	Y-8'
1.62	Chem.	0-11' A-13'	16. 4	NAA	B-277	15. 16	XRF	B-247
1.67	Chem.	G-7'	17. 1	NAA	B-55	15. 19	XRF	B-40
1.68	Chem.	B-45	17. 40	Photom.	B-130	15. 23	XRF	B-44, B-73
1.70	Chem.	B-56, B-221	17.7	Photom.	B-51	15. 25	XRF	B-19
1. 53	ICP	B-482	18. 12	Photom.	B-86	15. 34	XRF	B-15
1. 53	ICP	B-192	17. 63	Vol.	B-224	15. 35	XRF	B-36
1. 45	INAA	B-270	17. 88	Vol.	B-71	15. 41	XRF	B-25
1. 63	PAA	B-55	16. 80	XRF	T-37'	15. 14	XRF(Dry basis)	
1.65	Photm(FI)	B-462	17. 03	XRF	B-22	15. 23	XRF(fusion)	B-70
1. 27	Photom.	B-80, B-94	17. 19	XRF	B-31	F-000		
1.53	Photom.	B-279	17. 22	XRF	Y-8'	Fe203	_	
1.56	Photom.	B-71	17. 24 17. 39	XRF	B-97	4. 56	Calc	B-482
1. 58 1. 60	Photom. Photom.	B-86 B-153	17. 43	XRF XRF	B-270 B-134	3. 66	Calc.	B-402 B-31
1. 62	Photom.	B-224	17. 43	XRF	B-134 B-90	4. 04	Calc.	B-15
1.02	. 110 tom.	דעט ע	1 11. 77	12.001	2 00	1.04	5310.	

Table A-14 Individual data for JGB-1

<u>%</u>	Method	Code No.	%	Method	Code No.	%	Method	Code No.
4. 32	Calc.	B-134	0. 18	AAS	B-279	8. 1	AAS	B-279
4.63	Calc.	B-134	0.18	AAS	B-312	7.78	Chem.	G-7'
4. 67	Calc.	B-312	0. 19	AAS	B-80, B-94	7. 82	Chem.	B-45
4. 72	Calc.	B-270	0. 19	AAS	B-134	7. 83	Chem.	0-11' A-13'
4. 72	Calc.	B-80, B-94	0. 19	AAS	B-86	7. 95	Chem.	B-56, B-221
4. 80 5. 00	Calc.	B-216 B-25	0. 19 0. 19	AAS AAS	B-328 B-71	7. 82 7. 95	Grav. Grav.	B-80, B-94 B-14, B-91
5. 18	Calc.	B-36	0. 19	AAS	T-41'	7. 95	Grav.	B-14, B-91 B-153
5. 67	Calc.	B-22	0. 19	AAS	B-74	7. 63	ICP	B-482
5.70	Calc.	T-41'	0. 20	AAS	B-15	7. 96	ICP	B-192
4. 40	Chem.	G-7'	0. 17	Chem.	0-11' A-13'	7. 25	INAA	B-270
4. 74	Chem.	B-45	0. 19	Chem.	B-56, B-221	7. 75	PAA	B-55
4. 89 4. 92	Chem. Chem.	0-11' A-13' B-56, B-221	0. 19 0. 23	Chem. Chem.	B-45 G-7'	7. 78 7. 81	Vol. Vol.	B-130 B-224
4. 73	Vol.	B-14, B-91	0. 23	FI-Photom.	B-261	7. 57	XRF	B-44, B-73
4. 93	Vol.	B-153	0. 18	ICP	B-482	7. 67	XRF	T-37'
5. 10	Vol.	B-71	0. 18	ICP	B-192	7.70	XRF	B-90
5. 10	Vol.	B-87	0. 155	INAA	B-447	7. 80	XRF	B-36
			0. 194	INAA	B-270	7. 83	XRF	B-247
Fe0	-		0. 197	NAA Daa	B-277	7.86	XRF	B-16
9. 16	Calc.	B-312	0. 19 0. 19	PAA Photom.	B-55 B-153	7. 87 7. 89	XRF XRF	S-26' B-40
9. 24	Chem.	0-11' A-13'	0. 10	Photom.	B-14. B-91	7. 90	XRF	B-22
9. 25	Chem.	T-41'	0. 23	Photom.	B-130	7. 90	XRF	B-25
9.51	Chem.	B-45	0. 17	XRF	S-26'	7.95	XRF	Y-8'
9. 54	Chem.	B-56, B-221	0. 17	XRF	B-247	7. 98	XRF	B-19
10.69	Chem.	G-7'	0. 179	XRF	B-270	7. 98	XRF	B-270
9. 25 9. 30	Photom. Photom.	B-270 B-216	0. 18 0. 19	XRF XRF	B-90 Y-8'	8. 07 8. 38	XRF XRF	B-31 B-43
9. 53	Vol	B-482	0. 19	XRF	B-16	8. 05	XRF(Dry basis)	
8.50	Vol.	B-279	0. 19	XRF	B-31	7.86	XRF(fusion)	B-70
8. 82	Vol.	B-71	0. 19	XRF	B-43			
8. 85	Vol.	B-22	0. 19	XRF	B-44, B-73	Mg	-	
8. 96 9. 15	Vol. Vol.	B-80, B-94 B-36	0. 19 0. 194	XRF XRF	B-19 B-40	4. 9600	ICP	B-77
9. 27	Vol.	B-224	0. 134	XRF	B-22	4. 6741		B-337
9. 32	Vol.	B-134	0. 21	XRF(Dry basis)				
9. 37	Vol.	B-25	0. 19	XRF(fusion)	B-70	Ca0	_	
9. 62	Vol.	B-130						D 00
9. 72	Vol.	B-14, B-91	Mn	_		11. 41	AAS	B-86 B-71
9. 84 9. 87	Vol. Vol.	B-86 B-153	0. 1430	244	B-25	11. 54 11. 66	AAS AAS	B-134
10. 01	Vol.	B-31	0. 1350		B-77	11.69	AAS	B-312
10. 17	Vol.	B-15	0. 2160	INAA	B-330	11.85	AAS	B-216
			0. 15	NAA	B-11	11.86	AAS	B-328
Fe	_		0. 162		B-287	11.86	AAS	T-41'
10.64	244	D_71	0.1400		B-337 B-130	12.0	AAS	B-279
10. 64 9. 4700	AAS LCP	B-74 B-77	0. 1381 0. 14	XRF	B-130 B-11	12. 00 11. 65	AAS Chem.	B-74 G-7'
10. 635	INAA	B-330	0. 14		B-11 B-97	11. 03	Chem.	B-56, B-221
10. 7	INAA	B-163		XRF(fusion)	B-36	11. 86	Chem.	B-45
10.7	INAA	B-310		XRF(powder)	B-36	11. 98	Chem.	0-11' A-13'
10.8	INAA	B-24	, , ,			12. 03	Grav.	B-80, B-94
11.0	INAA	B-324	Mg0	_		12. 04 11. 76	Grav.	B-153
10. 1 11. 2	NAA NAA	B-11 B-287	6. 95		B-146	11.76	ICP ICP	B-192 B-482
10.7	Photom.	B-51	7. 62	AAS	B-86	12. 1	INAA	B-447
11. 2612		B-337	7. 69	AAS	B-74	12. 10	INAA	B-270
10.04	XRF	B-11	7. 71	AAS	B-312	12. 10	NAA	B-277
11. 20	XRF	B-97	7. 72	AAS	B-15	11.8	PAA	B-55
W-0			7. 82	AAS	B-134	11.56	Vol.	B-130
Mn0	_		7. 82 7. 82	AAS AAS	T-41' B-328	11. 86 11. 92	Vol. Vol.	B-14, B-91 B-224
0. 21		B-146	7. 85	AAS	B-326 B-216	11. 52	XRF	Y-8'
0. 163	AAS	B-216	7. 90	AAS	B-71	11.70	XRF	S-26'
0. 18	AAS	B-224	8. 07	AAS	B-97	11. 72	XRF	B-270
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Table A-14 Individual data for JGB-1

ж	Method	Code No.	%	Method	Code No.	%	Method	Code No.
11.86	XRF	B-134	1. 32	XRF	B-40	0. 21	NAA	B-287
	XRF						NAA	B-11
		B-15		XRF(Dry basis)		0. 37		
	XRF	B-25	1. 27	XRF(fusion)	B-70	0. 2173		B-337
	XRF	B-16				0. 14	XRF	B-11
	XRF	B-36	Na.	_				
	XRF	B-44, B-73				P205	_	
11. 98	XRF	B-97	0.88	AAS	B-97		_	
11.98	XRF	B-247	0. 9800	AAS	B-77	0. 05	AAS	T-41'
	XRF	T-37'	0.89	INAA	B-24	0.04	Chem.	B-56, B-221
	XRF	B-19	0. 95	INAA	B-324	0. 05	Chem:	0-11' A-13'
	XRF	B-43	0.97	INAA	B-310	0.05	Chem.	B-45
	XRF	B-31		INAA	B-163	0.03	Chem.	G-7'
	XRF	B-22	0. 92	NAA	B-103 B-11	0.073	FI-Photom.	B-254
	XRF						ICP	
		B-40	0.95	NAA	B-287	0.047		B-192
	XRF	B-90	0. 9296	21W2	B-337	0.04	Photm	B-482
	XRF(Dry basis)					0. 03	Photom.	B-279
11. 96	XRF(fusion)	B-70	K20	_		0. 05	Photom.	B-15
		ì			'	0. 05	Photom.	B-224
Ca	_		0. 21	AAS	B-134	0. 05	Photom.	B-71
			0. 22	AAS	B-71	0.06	Photom.	B-86
6.7800	AAS	B-77	0. 228	AAS	B-74	0.066	Photom.	B-134
8. 1	NAA	B-11	. 0. 23	AAS	B-224	0.07	Photom.	B-216
9.0504		B-337	0. 24	AAS	B-328	0. 075	Photom.	B-130
	XRF	B-11	0. 24	AAS	T-41'	0.04	Vol.	B-14, B-91
0. 10	74.141	D 11	0. 25	AAS	B-216	0.03	XRF	B-90
Na20			0. 26	AAS	0-11' A-13'	0.05	XRF	Y-8'
Nazo	-				B-312			
1 17		D 140	0. 29	AAS		0.05	XRF	B-31
1. 17		B-146	0. 33	AAS	B-14, B-91	0.05	XRF	B-44, B-73
1. 02	AAS	B-312	0. 25	Chem.	G-7'	0. 05	XRF	B-247
1. 20	AAS	T-41'	0. 25	Chem.	B-45	0.053	XRF	B-74
1. 20	AAS	B-216		FES	B-236	0.06	XRF	B-16
1. 20	AAS	B-328	0. 24	FES	B-279	0.06	XRF	S-26'
1. 22	AAS	B-134	0. 23	FI-AAS	B-262	0.061	XRF	B-40
1. 22	AAS	B-74	0. 20	Fl. Photom.	B-86	0.062	XRF	B-270
1. 23	AAS	0-11' A-13'	0. 24	F1. Photom.	B-153	0.07	XRF	B-36
1. 23	AAS	B-71	0. 25	F1. Photom.	B-130	0. 09	XRF	B-22
1. 29	AAS	B-15		Fl. Photom.	B-56, B-221	0. 09	XRF	B-19
1. 31	AAS	B-224	0. 29	Fl. Photom.	B-80, B-94	0.06	XRF(Dry basis)	
1. 31	AAS	B-14, . B-91	0. 21	ICP	B-482	0.05	XRF(fusion)	B-70
1. 22	Chem.	G-7'	0. 19	XRF	B-134	0.00	AIGI (Tuston)	טו ע
1. 22						.	()	
	Chem.	B-45		XRF	B-43	P	_(ppm)	
1. 21	FES	B-279	0. 20	XRF	B-22	100	1.00	D 77
1. 24	FI-AAS	B-262	0. 21	XRF	B-36	120	ICP	B-77
1. 16	F1. Photom.	B-86	0. 22	XRF	B-31	200	0ES	B-208
1. 19	F1. Photom.	B-80, B-94	0. 22	XRF	B-270	230	Photom.	B-97
1. 22	F1. Photom.	B-130	0. 22	XRF	B-25	223	SIMS	B-337
1. 23	Fl. Photom.	B-56, B-221	0. 24	XRF	B-90	275	XRF	B-25
1. 24	Fl. Photom.	B-153	0. 24	XRF	B-16			
1.09	ICP	B-192	0. 24	XRF	B-44, B-73	S03		
1. 10	ICP	B-482	0. 24	XRF	T-37'			
0. 982	INAA	B-447	0. 25	XRF	B-40	0.46	XRF	B-36
1. 27	INAA	B-270	0. 26	XRF	B-247			
1. 30	NAA	B-277	0. 26	XRF	B-19	L. O. I.		
1. 29	PAA	B-55	0. 26	XRF	B-15	D. 0. 1.	_	
1. 00	XRF	B-22	0. 28	XRF	Y-8'	0. 43	Grav.	T-37'
								B-129
1.08	XRF	B-25	0. 24	XRF(Dry basis)		0.50	Grav.	
1.09	XRF	S-26'	0. 25	XRF(fusion)	B-70	0. 56	Grav.	B-16
1. 10	XRF	B-16	0. 24	γcntg.	B-237	0.61	Grav.	B-224
1. 11	XRF	B-110, Y-8'	0. 24	r cntg.	B-273	0. 62	Grav.	B-25
1. 14	XRF	B-19	0. 26	γcntg.	B-41	0.64	Grav.	B-19
1. 18	XRF	B-270				1.54	Grav.	B-134
1. 19	XRF	B-44, B-73	K	_		1.66	Grav.	B-15
1. 19	XRF	B-36		-		1.70	Grav.	B-31
1. 19	XRF	T-37'	0. 1280	AAS	B-77	-0. 21	Grav.	B-36
1. 23	XRF	B-247	0. 192		B-97	-0. 25	Grav.	B-70
1. 31	XRF	B-31	0. 2160		B-48			
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Table A-14 Individual data for JGB-1

%	Method	Code No.	%	Method	Code No.	*	Method	Code No.
T-H20	_							
1. 27	Coul.	B-270						
1. 35 1. 45	Grav. Grav.	B-216 B-153						
H20+								
1. 30	AAS	T-41'						
1. 23	Chem.	0-11' A-13'						
1.08	Coul.	B-270						
1. 09 1. 16	Grav. Grav.	B-71 B-56, B-221						
1. 21	Grav.	B-25						
1. 39	Grav.	B-153						
1. 47 1. 67	Grav. Grav.	B-80, B-94 B-45						
1. 11	KF	B-14, B-91						
1. 26	KF	B-97						
1. 36	Tit	B-482						
H20-	_							
0.09	AAS	T-41'						
0. 04	Chem.	0-11' A-13'						
0. 20 0. 19	Chem. Coul.	G-7' B-270						
0.14	Grav	B-482						
0.06	Grav.	B-153						
0. 07 0. 09	Grav. Grav.	B-45 B-22						
0. 10	Grav.	B-74						
0.10	Grav.	B-71						
0. 10	Grav.	B-86 B-16						
0. 12 0. 14	Grav. Grav.	B-10 B-25						
0. 20	Grav.	B-56, B-221						
0. 20	Grav.	B-130						
0. 26 0. 18	Grav. KF	B-80, B-94 B-14, B-91						
C02		<i>J</i> 1., <i>J</i> 0.						
0.06	Chem.	B-45						
0.066	Chem.	G-7'						
0.12	Chem.	B-36						
0. 12 0. 066	Chem. Conduct.	B-25 B-130						
0.000	conduct.	D 100						

Table A-15 Individual data for JP-1

%	Method	Code No.	Ж	Method	Code No.	%	Method	Code No.
SiO2	_		0. 58	ICP	B-434	3. 09	Chem.	B-39
	-		0.60	ICP	B-476			
42. 55	AAS	B-216	0. 63	INAA	B-270	Fe0		
42.80	AAS	B-434	0. 88	INAA	B-447			
43. 15	AAS	B-134	0. 28	XRF	B-15	6.01	Chem.	B-312
41.73	Chem.	B-52	0. 57	XRF	B-25	6.06	Chem.	B-52
42. 11	Grav.	B-224	0. 58	XRF	B-434	5. 85	Photom.	B-216
42.39	Grav. & AAS	B-167	0.60	XRF	B-43	5. 90	Photom.	B-270
42. 27	ICP	B-476	0. 62	XRF	B-270		Photom.	B-123
42.07	Photom.	B-279	0. 62	XRF	B-247	5. 28	Vol.	B-279
41.83	XRF	B-64	0. 63	XRF	B-31	5. 40	Vol.	B-36
41.93	XRF	B-134	0. 65	XRF	B-36	5. 73	Vol.	B-167
41.94	XRF	B-201	0.66	XRF	B-44, B-73	5. 76	Vol.	B-224
42.00	XRF	B-25	0.69	XRF	B-40	6. 02	Vol.	B-25
42.00	XRF	B-15	0.77	XRF	B-16	6. 09	Vol.	B-134
42. 03	XRF	B-31	0. 81	XRF	B-134	6. 36		B-31
42. 05	XRF	B-44, B-73	0. 83	XRF	B-201	6. 61	Vol.	B-15
42. 39	XRF	B-247	0.90	XRF	B-64	0.01	, , , ,	2 20
42. 53	XRF	B-16	0.99	XRF	B-19	Fe		
42. 53	XRF	B-40	0. 68	XRF(Dry basis)		10	-	
42. 66	XRF	B-36	0. 08	XRF(fusion)	B-70	5. 8	INAA	B-230
			0.71	ART (1 uS 1011)	D-10	5. 96		B-324
42. 80	XRF	B-270					INAA	B-244
43. 22	XRF	B-434	<u>A1</u>	_		6.0	INAA	
43.79	XRF	B-43		****	D 000	6.4	INAA	B-308
42. 13	XRF(Dry basis)		0.3	INAA	B-308	5. 69	NAA	B-287
42. 2	XRF(fusion)	B-70				5. 73	Photom.	B-51
			T-Fe203	_				
Ti02	_					MnO	_	
			8. 22	AAS	B-134			
0.01	AAS	B-216	8. 3	AAS	B-279	0. 108		B-216
0.02	AAS	B-134	8. 34	AAS	B-167	0.11	AAS	B-224
<0.01	AAS	B-167	8. 34	AAS	B-328	0. 116	AAS	B-167
0.02	Chem.	B-39	8. 17	Chem.	B-52	0.116	AAS	B-134
<0.05	Chem.	B-52	7. 78	INAA	B-270	0.116	AAS	B-328
<0.01	ICP	B-476	8. 35	INAA	B-447	0. 12	AAS	B-279
<1.2	INAA	B-270	8. 41	INAA	B-118	0.12	AAS	B-15
0.009	Photom.	B-224	8. 32	NAA	B-277	0.13	AAS	B-312
0.02	Photom.	B-279	8. 14	Photm(FI)	B-462	0.13	Chem.	B-52
0.003	XRF	B-27.0	8. 17	Photom.	B-123	0.13	Chem.	B-39
0. 01	XRF	B-15	8. 29	Photom.	B-224	0. 096	FI-Photom.	B-261
0.01	XRF	B-43	8. 35	Photom.	B-216	0. 12	ICP	B-476
0. 01	XRF	B-134	8. 20	XRF	B-434	0. 120	INAA	B-270
0.013	XRF	B-40	8. 29	XRF	B-134	0. 125	INAA	B-447
0. 013	XRF	B-201	8. 34	XRF	B-247	0. 122	NAA	B-277
0. 02	XRF	B-25	8. 40	XRF	B-15	0. 122	XRF	B-43
0. 02	XRF	B-25 B-19	8. 41	XRF	B-201	0.00	XRF	B-201
						0. 11	XRF	B-247
0.03	XRF	B-64	8. 50	XRF	B-36			B-40
0.03	XRF	B-16	8. 58	XRF	B-16	0. 122	XRF	B-40 B-270
<0.01	XRF	B-36	8. 67	XRF	B-270	0.126	XRF	B-270
<0.01	XRF	B-247	8. 83	XRF	B-19	0. 13	XRF	B-44, B-
<0.01	XRF	B-44, B-73	8. 89	XRF	B-64	0. 13	XRF	B-31
0.01	XRF(fusion)	B-70	8. 30	XRF(Dry basis)	B-129	0. 13	XRF	B-434
			8. 60	XRF(fusion)	B-70	0.13	XRF	B-19
Ti	_					0.13	XRF	B-64
			Fe203	_		0. 13	XRF	B-16
<0.0171	INAA	B-308				0. 12	XRF(Dry basis)	
			1.05	Calc.	B-15	0.13	XRF(fusion)	B-70
A1203			1. 46	Calc.	B-134			
	_		1. 53	Calc.	B-134	Mn		
0.60	AAS	B-216	1.54	Calc.	B-312			
0.61	AAS	B-279	1. 85	Caic.	B-216	0. 0810	AAS	B-25
0. 61	AAS	B-167	1. 03		B-167	0. 085		B-308
				Calc.		0.003	INAA	B-230
0.67	AAS	B-312	2. 09	Calc.	B-31			
0.73	AAS	B-134	2. 11	Calc. Calc.	B-270 B-36	0. 097 0. 095	INAA	B-244 B-287
0.50					K-36			
0. 53 0. 56	Chem. Chem.	B-52 B-39	2. 50 2. 57	Calc.	B-25		XRF(fusion)	B-36

Table A-15 Individual data for JP-1

%	Method	Code No.	%	Method	Code No.	%	Method	Code No.
	XRF(powder)	B-36	Na20	_		34. 4 40	NAA NAA	B-275 B-287
44. 06 44. 50 44. 6 44. 72 44. 86 43. 9 45. 15 44. 76 42. 96 43. 50 44. 35 44. 35 44. 38 44. 72 44. 74 44. 80 44. 81 44. 94 45. 04 45. 34	AAS AAS AAS AAS AAS AAS Chem. ICP Vol. XRF XRF XRF XRF XRF XRF XRF XRF XRF XRF	B-312 B-15 B-216 B-279 B-167 B-328 B-134 B-52 B-476 B-224 B-434 B-64 B-270 B-25 B-247 B-25 B-247 B-218 B-134 B-31 B-16 B-36 B-36 B-36 B-34, B-73	0. 02 0. 021 0. 021 0. 026 0. 06 0. 07 0. 01 <0. 1 0. 027 0. 02	AAS AAS AAS AAS AAS AAS Chem. Chem. INAA INAA INAA XRF XRF XRF XRF XRF XRF XRF XRF	B-216 B-15 B-167 B-328 B-224 B-312 B-134 B-39 B-52 B-279 B-476 B-270 B-447 B-277 B-40 B-247 B-64 B-44, B-73 B-31 B-201 B-270 B-25 B-43	0. 01 0. 01	Chem. Chem. ICP Photom. Photom. Photom. Photom. Photom. XRF XRF XRF XRF XRF XRF XRF XRF XRF XRF	B-39 B-52 B-476 B-224 B-15 B-134 B-216 B-279 B-167 B-40 B-19 B-16 B-270 B-36 B-44, B-73 B-201 B-19 B-70
45. 12	XRF(Dry basis) XRF(fusion)		<0.08 <0.10	XRF XRF XRF(Dry basis) XRF(fusion)	B-16 B-36	<100 12 S03	OES XRF	B-208 B-25
27. 0 Ca0	INAA	B-308	Na <0.038	- Inaa	B-308	<0.02	- XRF	B-36
0. 55 0. 56 0. 56 0. 58 0. 61 0. 56 0. 51 0. 56 0. 40 0. 42 0. 46 0. 53 0. 54 0. 54 0. 54	AAS AAS AAS AAS AAS Chem. ICP INAA XRF XRF XRF XRF XRF XRF XRF XRF XRF XRF	B-224 B-134 B-216 B-167 B-328 B-312 B-379 B-52 B-476 B-270 B-43 B-36 B-270 B-134 B-44, B-73 B-434 B-25 B-15 B-247 B-19 B-201 B-16 B-64	K20 0.003 0.003 0.003 0.003 0.007 0.015 0.02 0.01 0.004 0.003 0.006 0.009 0.01 0.02 0.02 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.01 0.01 0.01 0.01 0.01 0.01	AAS AAS Chem. FES ICP INAA XRF XRF XRF	B-167 B-328 B-224 B-216 B-312 B-39 B-52 B-279 B-476 B-270 B-247 B-43 B-270 B-43 B-16 B-16 B-15 B-15 B-16 B-25 B-19 B-15 B-44, B-73 B-201	L. O. I. 2. 01 2. 19 2. 29 2. 38 2. 52 2. 60 2. 83 3. 34 3. 60 4. 44 T-H20 2. 77 0. 46 2. 90 H20+	Grav. Grav. Grav. Grav. Grav. Grav. Grav. Grav. Grav. Grav. Grav. Grav. Grav. Grav. Grav. Grav. Crav.	B-36 B-129 B-16 B-19 B-224 B-70 B-25 B-134 B-15 B-39 B-31 B-64 B-270 B-224 B-216
0. 63 0. 55 0. 58	XRF XRF(Dry basis) XRF(fusion)	B-31 B-129 B-70	<0. 01 0. 01 0. 044 K	XRF XRF(fusion) γcntg. _(ppm)	B-36 B-70 B-41	2. 34 2. 37 2. 40 2. 68	Grav. Grav. Grav. Grav.	B-312 B-52 B-25 B-167
0. 38	INAA	B-308	<30	INAA	B-308	Н20-	-	

Table A-15 Individual data for JP-1

%	Method	Code No.	%	Method	Code No.	%	Method	Code No.
0. 44 0. 34 0. 37 0. 40 0. 48 0. 53 0. 54	Coul. Grav. Grav. Grav. Grav. Grav.	B-270 B-52 B-134 B-167 B-16 B-25 B-312						
C02								
0. 28 0. 38 0. 24	Chem. Chem. com-IR-abs.	B-25 B-36 B-312						

Table A-16 Individual data for JR-1

ж	Method	Code No.	%	Method	Code No.	%	Method	Code No.
SiO2		:	0. 13	Photom.	B-80, B-94	12. 89	XRF	B-134
	•		0. 13	Photom.	B-93	12.89	XRF	B-36
74.82	AAS	B-134	0.14	Photom.	B-14, B-91	13.00	XRF	B-84
75. 3	AAS	B-216	0.10	XRF	B-134	13.07	XRF	B-40
76. 18	AAS	B-312	0. 10	XRF	B-44, B-73	13. 10	XRF	B-90
75.09	Chem	B-482	0.10	XRF	B-247	13. 13	XRF	B-19
75. 17	Chem.	B-56, B-221	0.10	XRF	B-31	12. 87	XRF(Dry basis)	
75. 46	Chem.	B-45	0.10	XRF	B-87	12. 72	XRF(fusion)	B-70
75. 50	Chem.	B-39		XRF	B-270			
76. 28	FI-Photom.	B-253	0.11	XRF	B-18	<u> </u>	_	
74. 57		B-80, B-94	0.11	XRF	B-36			
74. 83	Grav.	B-14, B-91	0. 11	XRF	B-90	6. 36	ICP	B-77
74. 94		B-153	0. 11	XRF	B-15	6. 8041	SIMS	B-337
75. 17	Grav.	B-224	0. 11	XRF	B-25	m D.000		
75. 39	Grav.	B-71	0. 12	XRF	B-43	T-Fe203	-	
75. 80	Grav. & Photom.	B-93	0. 12 0. 12	XRF	B-19 B-16	0.00		D 140
75. 41 75. 41	IDMS	B-48	0. 12	XRF XRF	B-16 B-67	0. 89 0. 89	AAS	B-146 B-328
73. 41 74. 4	INAA	B-447	0. 13	XRF	B-40	0. 89		B-134
74. 4 76. 1	INAA(γ-ray)	B-18	0. 14	XRF(Dry basis)		0. 92	AAS AAS	B-134 B-279
74. 4	NAA (/ - Lay)	B-277	0. 10	XRF(fusion)	B-70	0. 86	ICP	B-192
75. 66		B-279	0.00	ART (TUSTOR)	D-10	0.88	ICP	B-311
74. 61	XRF	B-40	Ti			0. 33	ICP-MS	B-320
75. 05	XRF	B-134	11	-		0. 79	INAA	B-270
75. 12		B-31	0.0547	ICP	B-77	0. 847	INAA	B-447
75. 20	XRF	B-84	0.0779		B-337	0.88	INAA	B-18
75. 24	XRF	B-16	0. 0668		B-130	0. 91	INAA	B-118
75. 41	XRF	B-247	0. 0000	Aiti	D 100	0.816	NAA	B-277
		B-25	A1203			1. 09	PAA	B-55
75. 49		B-15		-		0. 87	Photom.	B-123
75. 53	XRF	B-36	13. 62		B-146	0.94	Photom.	B-130
75. 54	XRF	B-87	11. 96	AAS	B-312	0. 94	Photom.	B-224
75. 60	XRF	B-90	12. 47	AAS	B-93	0. 96	Photom.	B-216
75. 65	XRF	B-18	12. 85	AAS	B-216	0. 95	Vol.	B-153
75. 81	XRF	B-270	12. 92	AAS	B-134	0.71	XRF	B-84
75. 86	XRF	B-67	13. 1	AAS	B-279	0.80	XRF	B-25
76. 50	XRF	B-19	12. 08	Chem.	B-39	0.81	XRF	B-40
76. 78	XRF	B-43	12.77	Chem.	B-45	0. 86	XRF	B-90
76.84	XRF	B-44, B-73	12. 95	Chem.	B-56, B-221	0.86	XRF	B-87
75. 37	XRF(Dry basis)	B-129	12. 91	Grav.	B-153	0. 86	XRF	B-270
75. 7	XRF(fusion)	B-70	13. 05	Grav.	B-14, B-91	0. 87	XRF	B-19
			13. 43	Grav.	B-80, B-94	0.88	XRF	B-134
Si	_		12.68	ICP	B-482	0.88	XRF	B-31
			12. 76	ICP	B-192	0. 89	XRF	B-36
35. 2635	SIMS	B-337	12. 90	ICP	B-311	0. 91	XRF	B-44, B-73
			11. 26	ICP-MS	B-320	0. 92	XRF	B-15
Ti02	-		12.74	INAA	B-18	0. 93	XRF	B-43
			12. 9	INAA	B-270	0.94	XRF	B-18
0. 12		B-146	13. 1	INAA	B-447	0.96	XRF	B-247
0. 09	AAS	B-134	13. 4	NAA	B-55	1.00	XRF	B-16
0. 12	AAS	B-312	13.8	NAA	B-277	1.01	XRF	B-67
0. 13	AAS	B-216	13. 4	Photom.	B-51	0.83	XRF(Dry basis)	
0. 11	Chem.	B-45	12. 86	Vol.	B-224	0.84	XRF(fusion)	B-70
0.11	Chem.	B-56, B-221	12. 87	Vol.	B-130 B-71	P-000		
0. 10	ICP	B-192	12. 87 12. 38	Vol.		Fe203	_	
0. 10 0. 11	I CP I CP	B-482 B-18	12. 38	XRF XRF	B-67 B-270	0. 36	Calc	B-482
0.11	ICP	B-16 B-311	12. 63	XRF	B-270 B-25	0. 30	Calc Calc.	B-482 B-134
0. 112	ICP-MS	B-311 B-320	12. 70	XRF	B-43	0. 20	Caic.	B-134 B-134
0. 10	INAA(γ-ray)	B-320 B-18	12. 70	XRF	B-45 B-15	0. 24	Caic.	B-134 B-25
0. 10	PAA PAA	B-55	12. 74	XRF	B-44, B-73	0. 20	Calc.	B-23 B-270
0. 11	Photom.	B-279	12. 75	XRF	B-18	0.34	Calc.	B-216
0. 10	Photom.	B-71	12. 78	XRF	B-16	0.36	Calc.	B-80, B-94
0. 10	Photom.	B-224	12. 78	XRF	B-31	0.46	Calc.	B-15
0. 11	Photom.	B-153	12. 84	XRF	B-87	0.46	Calc.	B-36
0. 11	Photom.	B-130	12. 89	XRF	B-247	0. 47	Calc.	B-93
			-					

Table A-16 Individual data for JR-1

0. 23 Chem. B-56, B-221 0. 08 ICP-MS B-320 0. 12 XRF 0. 28 Chem. B-45 0. 094 INAA B-270 0. 13 XRF 0. 31 Vol. B-14, B-91 0. 115 INAA B-447 0. 19 XRF 0. 42 Vol. B-71 0. 097 INAA(epi) B-18 0. 08 XRF(U	B-18 B-87
0.28 Chem. B-45 0.094 INAA B-270 0.13 XRF 0.31 Vol. B-14, B-91 0.115 INAA B-447 0.19 XRF	
0.31 Vol. B-14, B-91 0.115 INAA B-447 0.19 XRF	
	B-16
	Ory basis) B-129
	fusion) B-70
0. 088 PAA B-55	201011, 200
FeO 0.10 Photom. B-153 Mg	
0.10 Photom. B-14, B-91	
0.26 Chem. B-39 0.11 Photom. B-130 0.0697 ICP	B-77
0.55 Chem. B-45 0.094 XRF B-16 0.0558 SIMS	B-337
0.61 Chem. B-56, B-221 0.10 XRF B-90	D 007
0. 45 Photom. B-216 0. 10 XRF B-44, B-73 <u>CaO</u>	
0. 47 Photom. B-270 0. 10 XRF B-247	
0.50 Photom. B-123 0.10 XRF B-43 0.63 AAS	B-224
0. 46 Vol B-482 0. 10 XRF B-19 0. 66 AAS	B-130
0. 39 Vol. B-36 0. 10 XRF B-18 0. 66 AAS	B-93
0. 40 Vol. B-18 0. 10 XRF B-87 0. 66 AAS	B-312
0. 41 Vol. B-71 0. 10 XRF B-31 0. 67 AAS	B-71
0. 41 Vol. B-15 0. 100 XRF B-270 0. 69 AAS	B-328
0. 43 Vol. B-153 0. 101 XRF B-40 0. 7 AAS	B-216
0. 44 Vol. B-93 0. 11 XRF B-67 0. 71 AAS	B-134
0. 47 Vol. B-224 0. 11 XRF(Dry basis) B-129 0. 72 AAS	B-279
0. 49 Vol. B-25 0.10 XRF(fusion) B-70 0.61 Chem.	
0.52 Vol. B-80, B-94 0.65 Chem.	
0. 56 Vol. B-312 Mn 0. 72 Chem.	
0. 59 Vol. B-130 0. 60 Grav.	
0. 61 Vol. B-134 0. 0750 AAS B-25 0. 85 Grav.	
0. 66 Vol. B-31 0. 0844 AAS B-128 0. 62 ICP	B-482
0. 69 Vol. B-14, B-91 0. 0711 ICP B-77 0. 69 ICP	B-192
0.083 NAA B-287 0.73 ICP	B-311
Fe 0.10 NAA B-11 0.61 ICP-1	MS B-320
0.0755 SIMS B-337 0.59 INAA	B-18
0.584 ICP B-77 0.0801 XRF B-130 0.69 PAA	B-55
0.61 INAA B-24 0.10 XRF B-11 0.75 Vol.	B-14, B-91
0.62 INAA B-324 0.0741 XRF(fusion) B-36 0.52 XRF	B-43
0.64 INAA B-37-1 0.0823 XRF(powder) B-36 0.62 XRF	B-36
0.64 INAA B-310 0.62 XRF	B-67
0.63 NAA B-11 Mg0 0.63 XRF	B-247
0.68 NAA B-287 0.63 XRF	B-90
0.63 Photom. B-51 0.07 AAS B-216 0.67 XRF	B-16
0.7772 SIMS B-337 0.11 AAS B-93 0.68 XRF	B-19
0. 46 XRF B-11 0. 11 AAS B-328 0. 68 XRF	B-270
0.50 XRF B-84 0.12 AAS B-134 0.68 XRF	B-44, B-73
0. 12 AAS B-312 0. 69 XRF	B-87
MnO 0. 12 AAS B-129 0. 69 XRF	B-40
0. 12 AAS B-15 0. 69 XRF	B-134
0. 11 B-146 0. 12 AAS B-224 0. 69 XRF	B-15
0. 07 AAS B-312 0. 12 AAS B-71 0. 71 XRF	B-25
0. 095 AAS B-279 0. 120 AAS B-84 0. 71 XRF	B-18
0. 096 AAS B-84 0. 14 AAS B-130 0. 73 XRF	B-31
0. 097 AAS B-134 0. 14 AAS B-279 0. 80 XRF	B-84
	Dry basis) B-129 fusion) B-70
	fusion) B-70
0.10 AAS B-80, B-94 0.11 Grav. B-14, B-91	
0.10 AAS B-328 0.12 Grav. B-153 <u>Ca</u> 0.10 AAS B-15 0.19 Grav. B-80, B-94	
	B-77
The state of the s	B-11
	D 11
0.10 Chem. B-39 0.11 ICP-MS B-320 0.10 Chem. B-45 0.16 PAA B-55 Na20	
	B-146
0. 09	B-71
0. 100 ICP B-18 0. 09 XRF B-247 3. 92 AAS	B-93
0.100 ICP B-311 0.11 XRF B-44, B-73 3.95 AAS	B-134
0.100 101	

Table A-16 Individual data for JR-1

%	Method	Code No.	%	Method	Code No.	*	Method	Code No.
3. 99 A	AS	B-15	4. 46	FES	B-236	0. 01	XRF	B-18
	AS	B-328		FI-AAS	B-262	0. 01	XRF	B-31
	AS	B-14, B-91		Fl. Photom.	B-153	0. 01	XRF	B-44, B-73
	AS	B-216		F1. Photom.	B-130	0. 02	XRF	B-87
	AS	B-224		F1. Photom.	B-80, B-94	0. 02	XRF	B-16
	AS	B-312	4. 45	F1. Photom.	B-56, B-221	0. 02	XRF	B-247
	hem.	B-39	4. 28	I CP	B-18	0.021	XRF	B-40
	chem.	B-45	4. 42	ICP	B-192	0. 021	XRF	B-270
	ES	B-43 B-279	4. 42	ICP	B-192 B-482		XRF	B-270 B-19
						0.03		
	I-AAS	B-262	4.7	ICP MC	B-311	0.04	XRF	B-67
	'l. Photom.	B-153	4. 04	ICP-MS	B-320	0.04	XRF	B-36
	'l. Photom.	B-130	4. 32	INAA	B-270	0.02	XRF(Dry basis)	
	'1. Photom.	B-80, B-94	4. 40	INAA(γ-ray)	B-18	0.01	XRF(fusion)	B-70
	1. Photom.	B-87	4. 28	NAA	B-277	_		
	'1. Photom.	B-56, B-221	4. 30	XRF	B-90	P	_(ppm)	
	CP	B-192	4. 33	XRF	B-44, B-73			
	CP	B-482	4. 34	XRF	B-67	82	ICP	B-77
	CP	B-311	4. 37	XRF	B-40	<100	0ES	B-208
3.59 I	CP-MS	B-320	4. 38	XRF	B-31	175	SIMS	B-337
4. 03 I	NAA	B-270	4. 40	XRF	B-25	53	XRF	B-25
4. 19 I	NAA	B-18	4. 41	XRF	B-134			
	NAA	B-447	4. 41	XRF	B-15	S03		
	IAA	B-277	4. 42	XRF	B-87		_	
	AA	B-55	4. 43	XRF	B-36	<0.02	XRF	B-36
	RF	B-43	4. 43	XRF	B-270			2 00
	RF	B-90	4. 44	XRF	B-247	L. O. I.		
	RF	B-36	4. 47	XRF	B-19	B. U. 1.	_	
	RF	B-16	4. 51	XRF	B-16	1.84	Chem.	B-39
	RF	B-270	4. 52	XRF	B-43	0. 22	Grav.	B-19
	RF	B-25	4. 54	XRF	B-18	1. 09	Grav.	B-87
	RF	B-31	4.51	XRF(Dry basis)		1. 12	Grav.	B-129
	(RF	B-67	4. 69	XRF(fusion)	B-70	1. 22	Grav.	B-16
	(RF	B-247	4. 14	γcntg.	B-41	1. 30	Grav.	B-31
	(RF	B-44, B-73	4. 44	γcntg.	B-237	1. 35	Grav.	B-15
4. 13 X	(RF	B-18	4. 52	γcntg.	B-273	1.40	Grav.	B-25
	(RF	B-110				1.44	Grav.	B-224
4. 20 X	(RF	B-40	K			1.44	Grav.	B-70
4. 45 X	(RF	B-19		_		1.50	Grav.	B-134
4.00 X	(RF(Dry basis)	B-129	3. 67	AAS	B-84	1.58	Grav.	B-36
	(RF(fusion)	B-70	4. 3300		B-77			
			3. 6900		B-48	T-H20		
Na			3. 99	INAA	B-37-1			
na .			3. 99	INAA	B-310	1. 26	Coul.	B-270
2.87 A	AAS	B-84	3. 45	NAA	B-11	0. 19	Grav.	B-224
3. 1370 A		B-77	4. 2	NAA	B-287	0. 13	Grav.	B-153
	I NAA	B-24	4. 2		B-337	1. 2	Grav.	B-133 B-216
							INAA (PG)	B-436
	[NAA	B-37-1	3. 54	XRF	B-11	1. 28	THAM (EU)	D 400
	NAA	B-310	DOOE			поот		
	NAA	B-324	P205	-		H20+	_	
	IAA	B-11	0.010	Ch	D 45		Caul	D 070
	NAA	B-287	0.019	01	B-45	1. 19	Coul.	B-270
3. 8133 S	SIMS	B-337	0.04	Chem.	B-39	0. 84	Grav.	B-93
			0. 02	Chem.	B-56, B-221	1.04	Grav.	B-71
K20			0.02	FES	B-279	1.12	Grav.	B-45
			0.012	ICP	B-192	1.17	Grav.	B-153
4.32 A	AAS	B-71	0.01	Photm	B-482	1. 22	Grav.	B-80, B-9
4.36 A	AAS	B-14, B-91	0.015	Photom.	B-84	1. 25	Grav.	B-56, B-22
	AAS	B-312		Photom.	B-134	1. 26	Grav.	B-25
	AAS	B-216	0. 02	Photom.	B-71	1. 45	Grav.	B-312
	AAS	B-224	0. 02	Photom.	B-279	1. 05	Grav. ?	B-18
	AAS	B-93	0.02	Photom.	B-224	1.04	KF	B-14, B-9
	AAS	B-134	0.02	Photom.	B-15	1. 32	Tit	B-482
				Photom.	B-80, B-94	1. 32	116	מטד ע
4. 47 A	110	U_270						
4. 47 A 4. 52 A	AAS	B-328	0.02			1100		
4. 47 A 4. 52 A 4. 28 C	Chem.	B-45	0.025	Photom.	B-93	H20-	_	
4. 47 A 4. 52 A 4. 28 C 4. 37 C			0.025			H20- 0. 07	- Coul.	B-270

Table A-16 Individual data for JR-1

<u>"</u> %	Method	Code No.	%	Method	Code No.	%	Method	Code No.
0. 36 0. 14 0. 14 0. 17 0. 18 0. 19 0. 23 0. 24 0. 24 0. 25 0. 27 0. 10	Grav Grav. Grav. Grav. Grav. Grav. Grav. Grav. Grav. Grav. KF	B-482 B-56, B-221 B-16 B-45 B-71 B-153 B-130 B-80, B-94 B-312 B-93 B-134 B-14, B-91						
C02	_							
0. 001 0. 04 0. 06 <0. 07	Chem. Chem. Chem. Conduct.	B-45 B-25 B-36 B-130						

Table A-17 Individual data for JR-2

%	Method	Code No.	<u> </u>	Method	Code No.	%	Method	Code No.
SiO2						0.84	Photom.	B-216
	•		Ti			0. 85	Vol.	B-153
75.39	AAS	B-134		-		0.60	XRF	B-270
75. 45	AAS	B-216	0. 0307	ICP	B-77	0. 70	XRF	B-25
75. 40	Chem.	B-56, B-221	0. 0431		B-337	0. 70	XRF	B-40
76. 26	Chem.	B-45	0.0425		B-130	0.74	XRF	B-19
75. 22	Grav.	B-153	0.0423	AIL!	D 100	0.74	XRF	B-36
		B-80, B-94	A 1 2 0 2			0.74		B-30 B-31
75. 40	Grav.		A1203	-			XRF	
75. 40	Grav.	B-14, B-91				0. 75	XRF	B-90
75. 54	Grav.	B-224	13. 39		B-146	0. 75	XRF	B-134
76.37	Grav.	B-74	12. 10	AAS	B-74	0. 78	XRF	B-44, B-7
75.86	Grav. & Photom.	B-130	12.75	AAS	B-216	0.79	XRF	B-15
75. 25	ICP	B-476	13.0	AAS	B-279	0.80	XRF	B-43
75.65	IDMS	B-48	13.02	AAS	B-134	0.86	XRF	B-247
75.40	Photom.	B-86	12.72	Chem.	B-45	0.87	XRF	B-16
75. 49	Photom.	B-279	13. 13	Chem.	B-56, B-221	0. 73	XRF(Dry basis)	
74. 94	XRF	B-40	12. 96	Grav.	B-80, B-94	0. 84	XRF(fusion)	B-70
75. 29	XRF	B-134	13. 07	Grav.	B-153	0.04	Aiti (Tuston)	D 10
						B-000		
75. 46	XRF	B-16	13. 12	Grav.	B-14, B-91	Fe203	-	
75. 60	XRF	B-22	12. 62	ICP	B-192	0.10	0.1	D 050
75. 65	XRF	B-247	12. 77	ICP	B-476	0. 12	Calc.	B-270
75. 71	XRF	B-90	12. 87	INAA	B-270	0.13	Calc.	B-134
75.80	XRF	B-36	12. 1	NAA	B-55	0.14	Calc.	B-134
75.88	XRF	B-25	12. 29	Photom.	B-86	0. 19	Calc.	B-31
76.05	XRF	B-15	13. 3	Photom.	B-51	0. 22	Calc.	B-25
76.06	XRF	B-270	12.74	Vol.	B-130	0. 23	Calc.	B-22
76. 07	XRF	B-97	12. 81	Vol.	B-224	0.34	Calc.	B-36
76. 20	XRF	B-31	12. 38	XRF	B-31	0.39	Calc.	B-80, B-
76. 40	XRF	B-19	12. 41	XRF	B-90	0. 33	Calc.	B-15
75. 85	XRF(Dry basis)		12. 42	XRF	B-270	0. 45	Calc.	B-216
75. 9	XRF(fusion)	B-70	12. 49	XRF	B-22	0. 18	Chem.	B-56, B-2
			12.50	XRF	B-97	0. 22	Chem.	B-45
Si			12. 59	XRF	B-15	0. 35	Vol.	B-14, B-
	_		12.60	XRF	B-25	0.46	Vol.	B-153
35. 3758	SIMS	B-337	12. 63	XRF	B-44, B-73			
			12.63	XRF	B-43	Fe0		
Ti02			12. 63	XRF	B-16		-	
1102	-		12. 71	XRF	B-36	0. 42	Chem.	B-45
0.00	AAC	D 194	12. 71		B-134			
0.06	AAS	B-134		XRF		0. 59	Chem.	B-56, B-2
0.07	Chem.	B-56, B-221	12. 82	XRF	B-247	0. 35	Photom.	B-216
0.08	Chem.	B-45	12. 99	XRF	B-40	0. 43	Photom.	B-123
0.058	ICP	B-192	13. 00	XRF	B-19	0. 43	Photom.	B-270
0.07	ICP	B-476	12. 72	XRF(Dry basis)	B-129	0. 32	Vol.	B-80, B-
0.060	PAA	B-55	12.78	XRF(fusion)	B-70	0.34	Vol.	B-15
0.05	Photom.	B-279				0. 35	Vol.	B-153
0.05	Photom.	B-14, B-91	A1			0. 36	Vol.	B-36
0.06	Photom.	B-224		-		0.41	Vol.	B-86
0. 07	Photom.	B-86	6. 1900	ICP	B-77	0. 43	Vol.	B-25
0. 07	Photom.	B-130	6. 7213		B-337	0.43	Vol.	B-224
			0. 1213	3143	р ээт			
0.08	Photom.	B-153	m n 000			0.47	Vol.	B-130
0.05	XRF	B-31	T-Fe203	_		0.50	Vol.	B-31
0.05	XRF	B-22				0. 52	Vol.	B-22
0.058	XRF	B-270	0.74	AAS	B-134	0. 55	Vol.	B-134
0.06	XRF	B-74	0.75	AAS	B-328	0.64	Vol.	B-14, B-
0.06	XRF	B-36	0. 75	AAS	B-86	I		
0.06	XRF	B-90	0.81	AAS	B-279	Fe		
0.06	XRF	B-15	0.73	ICP	B-192		-	
0.06	XRF	B-44, B-73	0. 80	ICP	B-476	0.50	AAS	B-74
0.06	XRF	B-134	0.734	INAA	B-447	0. 4910		B-77
0.07	XRF	B-25	0. 79	INAA	B-118	0. 52	INAA	B-324
0.07	XRF	B-43	0. 81	INAA	B-270	0. 54	INAA	B-24
0.08	XRF	B-19	0. 73	NAA	B-277	0.54	INAA	B-310
0.08	XRF	B-16	0. 88	PAA	B-55	0.54	INAA	B-37-1
0.09	XRF	B-247	0. 75	Photom.	B-123	0. 60	INAA	B-244
0.06	XRF(Dry basis)		0. 81	Photom.	B-130	0. 61	INAA	B-230

Table A-17 Individual data for JR-2

<u>%</u>	Method	Códe No.	*	Method	Code No.	%	Method	Code No.
0. 53	Photom.	B-51	0.03	Chem.	B-45	3. 97	AAS	B-15
0. 5927		B-337	0.04	Chem.	B-56, B-221	3. 98	AAS	B-134
0. 39	XRF	B-11		Grav.	B-153	4. 02	AAS	B-328
0. 51	XRF	B-97		Grav.	B-14, B-91	4. 07	AAS	B-224
MnO				I CP PAA	B-192 B-55	4. 10 4. 15	AAS AAS	B-216 B-14, B-91
HIIO	-			XRF	B-31	3. 93	Chem.	B-45
0. 10	AAS	B-74	0. 02	XRF	B-90	3. 95	FES	B-279
0. 10	AAS	B-224		XRF	B-44, B-73	4. 05	FI-AAS	B-262
	AAS	B-216		XRF	B-40	3. 83	F1. Photom.	B-80, B-94
0. 108 0. 11	AAS AAS	B-134 B-279		XRF XRF	B-247 B-25	3. 83 3. 96	F1. Photom. F1. Photom.	B-86 B-153
0. 11	AAS	B-328		XRF(Dry basis)		4. 02	Fl. Photom.	B-56, B-221
0. 12	AAS	B-15		XRF(fusion)	B-70	4. 10	F1. Photom.	B-130
0.12	AAS	B-86				3. 88	ICP	B-192
0. 12	AAS	B-80, B-94	Mg	_		3. 97	ICP	B-476
0. 11 0. 11	Chem.	B-56, B-221	2. 1300	I CD	B-77	3. 88 4. 10	I NAA I NAA	B-447 B-270
0. 11	Chem. FI-Photom.	B-45 B-261	0. 0282		B-337	4. 10	NAA	B-277
0.11	ICP	B-476	0. 0202	OTHO	<i>B</i> 001	3. 90	PAA	B-55
0.11	ICP	B-192	Ca0	_		3. 39	XRF	B-43
0. 109	INAA	B-270				3. 64	XRF	B-22
0. 110	INAA	B-447	0. 45	AAS	B-216	3. 65 3. 91	XRF XRF	B-90 B-16
0. 117 0. 097	NAA PAA	B-277 B-55	0. 49 0. 51	AAS AAS	B-74 B-86	3. 92	XRF	B-36
0.11	Photom.	B-14, B-91	0. 51	AAS	B-224	3. 98	XRF	B-25
0. 11	Photom.	B-153	0. 51	AAS	B-328	3. 98	XRF	B-270
0. 12	Photom.	B-130	0.53	AAS	B-134	4. 01	XRF	B-40
0. 11	XRF	B-16	0. 56	AAS	B-279	4. 03	XRF	B-247
0. 11 0. 11	XRF XRF	B-90	0. 45 0. 60	Chem.	B-56, B-221 B-45	4. 10 4. 18	XRF XRF	B-31 B-110
0. 11	XRF	B-19 B-247	0. 60	Chem. Grav.	B-153	4. 16	XRF	B-44, B-73
0. 111	XRF	B-40	0. 43	ICP	B-476	4. 41	XRF	B-19
0. 112	XRF	B-270	0. 53	ICP	B-192	4. 05	XRF(Dry basis)	
0. 12	XRF	B-43	0. 41	INAA	B-270	4. 14	XRF(fusion)	B-70
0. 12	XRF	B-44, B-73	0.54	PAA	B-55 B-130	No		
0. 13 0. 11	XRF(Dry basis) XRF(fusion)	B-70	0. 49 0. 51	Vol. Vol.	B-130 B-14, B-91	Na	-	
0.11	AMI (Tubion)	b 10	0. 32	XRF	B-43	2. 91	AAS	B-97
Mn	_		0. 43	XRF	B-36	3. 6300		B-77
			0. 45	XRF	B-247	3. 02	INAA	B-37-1
0.0830		B-25	0. 46	XRF	B-90	3. 02 3. 05	INAA INAA	B-310 B-24
0. 0788 0. 096	INAA	B-77 B-244	0. 48 0. 49	XRF XRF	B-270 B-134	3. 03	INAA	B-230
0. 096	INAA	B-230	0.49	XRF	B-16	3. 08	INAA	B-244
0. 15	NAA	B-11	0. 49	XRF	B-44, B-73	3. 08	INAA	B-324
0. 0851		B-337	0.50	XRF	B-15	3. 08	NAA	B-11
0. 0930 0. 115		B-130 B-97	0. 50 0. 51	XRF XRF	B-19 B-25	3. 7861	21W2	B-337
0. 113	XRF	B-11	0. 51	XRF	B-40	K20		
	XRF(fusion)	B-36	0. 55	XRF	B-31		-	
0.0921	XRF(powder)	B-36	0.60	XRF	B-22	4. 42	AAS	B-134
				XRF	B-97	4. 44	AAS	B-14, B-91
Mg0	-		0. 50 0. 54	XRF(Dry basis) XRF(fusion)	B-129 B-70	4. 45 4. 51	AAS AAS	B-216 B-74
0. 03	AAS	B-129	0.54	ART (TUSTOIL)	D-10	4. 51	AAS	B-328
0. 04	AAS	B-224	Ca			4. 59	AAS	B-224
0.04	AAS	B-15				4. 56	Chem.	B-45
0. 04	AAs	B-328	0. 0180		B-77	4. 48	FES	B-279
0.04	AAS	B-279	0. 3538		B-337 R-11	4. 51 4. 36	FES FI-AAS	B-236 B-262
0. 04 0. 04	AAS AAS	B-74 B-86	0. 77	XRF	B-11	4. 36	F1-AAS F1. Photom.	B-80, B-94
0.044	AAS	B-97	Na20			4. 42	F1. Photom.	B-86
0.045	AAS	B-134		_		4. 44	F1. Photom.	B-130
0. 055	AAS	B-216	3. 84	446	B-146	4. 47	Fl. Photom.	B-153
0. 06	AAS	B-130	3. 95	AAS	B-74	4. 52	Fl. Photom.	B-56, B-221

Table A-17 Individual data for JR-2

%	Method	Code No.	%	Method	Code No.	%	Method	Code No.
4. 22 4. 38 4. 30 4. 48	ICP ICP INAA INAA	B-192 B-476 B-447 B-270	\$03 <0.02	– XRF	B-36			
4. 74 4. 35 4. 38 4. 38 4. 41 4. 44 4. 45 4. 45 4. 46 4. 48 4. 48 4. 54	NAA XRF XRF XRF XRF XRF XRF XRF XRF XRF XRF	B-277 B-90 B-40 B-270 B-44, B-73 B-22 B-31 B-25 B-15 B-134 B-247 B-36 B-16	L. O. I. 1. 10 1. 17 1. 32 1. 46 1. 58 1. 60 1. 60 1. 61 1. 75 1. 42	Grav. Grav. Grav. Grav. Grav. Grav. Grav. Grav. Grav. Grav. Grav. XRF	B-36 B-70 B-129 B-16 B-15 B-31 B-224 B-25 B-134 B-19			
4. 54 4. 56 4. 55 4. 73 4. 08 4. 41 4. 54	XRF XRF(Dry basis) XRF(fusion) rentg. rentg. rentg.	B-19 B-43 B-129 B-70 B-41 B-237 B-273	1. 50 1. 35 1. 58 H20+	Coul. Grav. Grav.	B-270 B-216 B-153			
3. 67 4. 4300 3. 7000 3. 7200 3. 77 3. 77 3. 84 3. 84 3. 50 4. 0741 3. 98	AAS ICP IDMS IDMS INAA INAA INAA INAA	B-97 B-77 B-438 B-48 B-230 B-244 B-310 B-37-1 B-11 B-337 B-11	1. 38 0. 98 1. 02 1. 07 1. 09 1. 20 1. 30 1. 32 1. 38 1. 15 1. 21	Coul. Grav. Grav. Grav. Grav. Grav. Grav. Grav. KF	B-270 B-56, B-221 B-45 B-22 B-36 B-80, B-94 B-25 B-153 B-86 B-14, B-91 B-97			
P205 0. 01 0. 02 0. 005 0. 02 0. 006 0. 01 0. 015 0. 02 0. 01 0. 003 0. 01 0. 001 0. 014 0. 016 0. 01 0. 01 0. 016 0. 01 0. 01	Chem. Chem. FI-Photom. ICP ICP Photom. Photom. Photom. Photom. Vol.	B-45 B-56, B-221 B-254 B-192 B-476 B-224 B-15 B-216 B-80, B-94 B-14, B-91 B-74 B-247 B-16 B-270 B-40	0. 12 0. 14 0. 16 0. 18 0. 22 0. 23 0. 24 0. 26 0. 31 0. 32 0. 19 CO2	Coul. Grav. Grav. Grav. Grav. Grav. Grav. Grav. Grav. KF Chem. Chem. Conduct.	B-270 B-16 B-45 B-86 B-134 B-74 B-130 B-153 B-22 B-25 B-14, B-91 B-25 B-36 B-45 B-130			
52 <100 63 2. 2	_(ppm) ICP OES SIMS XRF	B-77 B-208 B-337 B-25						

Code	Analyst	Year	Title	Journal	Vol	Page
A-2'	T. Abe	1978	Personal communication, Geological Survey of Japan.			
A-9'	B. Ayranci	1977	The major-, minor-, and trace-element analysis of silicate rocks and minerals from a single sample solution.	Schweiz. Mineral. Petrogr. Mitt.	57	299-312
A-10'	A. Ando, T. Ohmori and S. Terashima	1983	New GSJ silicate rock reference samples and their chemical compositions.	1983 Annual Meet. Japan Geoch. Soc.		168-169
A-11	T. Abe	1970	Personal communication, Geological Survey of Japan.	-		
A-13	Y. Ueda, K. Aoki, H. Onuki, and Y. Kato	1969	Analtical data on the geochemical standards JB-1 basalt and JG-1 granodiorite	J. Japan Assoc. Min. Pet. Econ. Geol.	61	35-39
B'-1	P.H. Beasley	1972	Personal communication, The Australian National University, Canberra, Australia			
B'-2	Y. I. Belyaev and O. P. Sobornov	1981	Uranium, thorium and potassium in reference samples	Geost. Newsletter	5	109-111
B'-4	J. L. Bouvier	1968	Personal communication, Geological Surveu of Canada			
B-1	Y. Tanizaki	1976	Personal communication, Tokyo Metoro. Isot. Res. Center			
B-1'	G. M. Best, G. R. Neilsen and W. H. Brimhall	1976	Personal communication, Brigham Young Univ., Provo, Utah, U.S.A.			
B-2	S. Gohda and H. Yamazaki	1982	Heavy metal pollution in Osaka bay sediment (in Japanese with English abstract)	Rep. Atom. Ener. Res. Inst., Kinki Univ.	19	29-36
B-3 B-4	H.Wakita T.Kawashima		Personal communication, Tokyo University Personal communication, Coverment Industrial Research Institute Nagoya			
B-5'	I. Gal	1983	Personal communication, Geological Survey of Israel.			
B-6-1	T.Yoshida, H.Fujimaki and K.Aoki	1981	Analysis of igneous rocks by instrumental photon-activation	Sci. Rep. Tohoku Univ. Ser. III	15	101-119
B-6-2		1982	Nondestructive multielement photon-activation analysis of rocks		15	224-238
B-6'	G. Bologne	1983	Peersonal communication, University of Liege, Belgium.			
B-7	Y. Saito	1979	Personal communication, Nihon Inspection Ltd., Tokyo Res. Center			
B-8	H. Hamaguchi, N. Nonaka, H. Fukushima and H. Higuchi	1979	Application of instrumental neutron activation analysis for environmental samples	Rep. Ministry of Educ.	1	122-124
B-10	Y. Sakakibara	1977	Personal communication, Tokyo Gakugei University			
B-11	N. Aota, T. Nikko, K. Okada, K. Sakamoto and H. Nohke	1983	Activation analysis of standard rock samples (Abst., in Japanese)	1983 Annual Meet. Japan Geoch. Soc.		170-171
B-13	H.Kobayashi, T.Watanabe and S.Iizumi	1981	A full-automatic analysis of silicate rocks by X-ray fluorescence method(in Japanese)	Mem. Fac. Sci., Shimane Univ.	15	115-124
B-14	T. Tiba	1984	Major constituents in the six new geochemical standards	Bull. Natn. Sci. Mus., Tokyo, Ser. C	10	47-48
B-15	Z. Solyom	1985	Personal communication, University of Lund, Sweden			
B-16	S. Naidoo		Personal communication, The Transvaal Coal Owners Association, Richmond, South Africa			
B-18	N. W. Bower, E. S. Gladney, R. C. Hagan, P. E. Trujillo and R. G. Warren	1985	Elemental concentrations in Japanese silicate rock standards JA-1, JR-1 and JB-2 $$	Geost. Newsletter	9	199-203
B-19	J. Etoubleau	1985	Personal communication, IFREMER, Centre de Brest, France			
B-22	I. Roelandts	1983	Personal communication, Universite de Liege, Liege, Belgium			
B-24	S. Ninomiya	1985	Personal communication, Tokyo Gakugei University			
B-25	H. A. Olszowy	1985	Personal communication, Govern. Chem. Lab., Brisbane, Australia			
B-28	J. Gill	1985	Personal communication, Earth Sciences Board, University of California			
B-31	S. A. Mertzman	1985	Personal communication, Franklin & Marshall College, Pennsylvania			
B-36	R.Kanaris-Sotiriou	1984	Personal communication, Sheffield Univ., England			

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B-37-1	T. Chunhan	1985 Personal communication, Chengdu College of Geology, China			
B-37-2	T. Chunhan	1985 Personal communication, Chengdu College of Geology, China			
B-39	V. Balaram	1985 Personal communication, National Geophysica Research Institute, India	I		
B-40	J. C. H. Huang	1985 Personal communication, University of Winds Canada	or,		
B-41 B-43	K.L.Tan and K.Komura G.Thompson	1985 Personal communication, Kanazawa University 1985 Personal communication, Woods Hole Oceanographic Institution, U.S.A.			
B-44	S. Nakada, T. Yanagi, S. Maeda, D. Fang and	1985 X-ray fluorescence analysis of major elementin silicate rocks	ts Sci. Repts., Dept. Geol., Kyushu Univ	14 103	3-115
B-45	M. Yamaguchi B. Moldan	(in Japanese with English abstract) 1984 Personal communication, Geological Survey Prague, Czechoslovakia			
B-48	H. Kurasawa	1984 Strontium isotopic consequence of the volcanic rocks from Fuji, Hakone and Izu areas(in Japanese with English abstract)	Bull. Geol. Surv. Japan	35 637	7-659
B-49	T. Yamashige, M. Yamamoto, S. Terashima, Y. Shigetomi, A. Ando and Y. Yamamoto	1985 Determination of major and minor elements i GSJ reference rock samples (JB-1a and JG-1a (in Japanese with English abstract)		34 104	4-107
B-51 B-52	T. Ohmori C. Riandey	1982 Personal communication, Toho University 1984 Personal communication, ORSTOM, services Sci. Cent., Bondy, France			
B-55 B-56	T.Kato T.Yoshida and K.Aoki	1984 Personal communication, Tohoku University 1985 Photon-activation analysis of GSJ standard rocks	Res. Rep. Lab. Nuc. Sci. Tohoku Univ.	18 336	6-350
B-58	H. Nakahara, K. Masago, Y. Nakamura, K. Horiuchi and Y. Murakami	1980 Neutron activation analysis of Japanese standard rocks	J. Radioanal. Chem.	59 245	5-248
B-59	R. Kanaris-Sotiriou	1985 Personal communication, Sheffield Univ., England			
B-61	J. Etoubleau	1985 Personal communication, IFREMER, Centre de Brest, France			
B-62	D.Nielsen and C.J.Van Niekerk	1985 Personal communication, Gold Fields Laboratories, Johannesburg, South Africa			
B-63	S. A. Mertzman	1985 Personal communication, Franklin & Marshall College, Pennsylvania			
B-64	J. Kalf	1985 Personal communication, Netherlands Inst. Se Research, Netherlands	a		
B-65	K.Inoue, Y.Ikeda and A.Minami	1985 Determination of Sodium, Potassium, Magnesium, Calcium, Manganese and Iron in the silicate rocks by Atomic Absorption	Comm. Pub. Prof. Yoshida, H.	358	5-363
B-67	T. Takenaka	Spectrophotometry(in Japanese) 1985 Personal communication, Cent. Res. Lab. Idemitsukosan Ltd.			
B-70	I. W. Croudace	1984 Personal communication, University of Southampton, England			
B-71	T.Nakajima	1983 Personal communication, Geological Survey of Japan	f		
B-72	S. Uchiumi and K. Shibata	1980 Errors in K-Ar age determination (in Japanese with English abstract)	Bull. Geol. Surv. Japan	31 26'	7-273
B-73 B-74	S. Nakada V. Sjoberg	1984 Personal communication, Kyushu University 1984 Personal communication, Rautaruukki oy, Research Centre, Raahe, Finlande	•		
B-75	R. Matsumoto and T. Urabe	1980 An automatic analysis of major elements in silicate rocks with X-ray fluorescence spectrometer using fused disc samples	J. Japan Assoc. Mi Pet. Econ. Geol.	n. 75 271	2-278
B-77	S. Hirata	1984 Personal communication, Government Industri Research Institute, Chugoku	al		
B-78-1 B-79	A. Inazumi R. Kuroda and I. Ida	1982 Personal communication, Kagawa University 1983 Spectrophotometric determination of Phosphorus in silicates following fusion wi	Fresenius Z. Anal. th Chem.	31 53	-54
B-80 B-81	Y.Ohba Y.Shirayanagi	a mixture of Lithium carbonate/Boric acid 1983 Personal communication, Yamagata University 1983 Determination of multi elements in sediment by X-ray fluorescence			3-110

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B-84	G. Jecko	1983	Personal communication, IRSID,	Sci.		
B-85 B-86	O.Ujike M.Pinta		Maizieres-les-Metz, France Personal communication, Univ. Tronto, Canada Personal communication, ORSTOM, services			
B-87	M. Ogasawara and J. Stanley	1982	Sci. Cent., Bondy, France Personal communication, The University of			
B-88	O. Ujike	1975	Adelaide, Australia Personal communication, Geological Survey of			
B-89	K. Ohta	1984	Japan Personal communication, Tokyo Coal and			
B-90 B-91	R. Matsumoto T. Tiba		Mineral Institute Personal communication, Tokyo University Personal communication, National Science Museum, Tokyo			
B-92 B-93	S.Yamazaki B.Sulasmoro	1978 1983				
B-94 B-95	Y. Ohba T. Ohmori		Personal communication, Yamagata University Spectrophotometric determination of a small amount of aluminum with stilbazo and zephiramine in alkaline solution; Determination of aluminum in standard rocks	Bunseki Kagaku	32	483-487
B-96	R. J. Parker	1982	and cement(in Japanese with English abstract) Single pass major element X-ray fluorescence analysis of silicate rock samples using a Philips 1212 spectrometer	X-ray Spectrometry	11	100-108
B-97	G. Jecko	1983	Personal communication, IRSID, Maizieres-les-Metz, France			
B-98	S. Tanaka, S. Shibata, P. Y. Chen, C. H. Ke and S. J. Yeh	1977	Depth profiles of chemical elements in pelagic clay sediments	Geoch. J.	11	171-176
B-100	S. Nohda	1982	Personal communication, Kyoto Sangyo University			
B-102	K. Nagao and T. Itatani	1983	Personal communication, Okayama University of Science			
B-104 B-105	A.Ueda M.Tuchiya		Personal communication, Okayama University Personal communication, Res. Center Jujo Paper Co. Ltd.			
B-106	J. Yamamoto	1975	Personal communicatin, Kochi Pref. Res. Center Env. Prot.			
B-109	S. Terashima, H. Gotoh, T. Tanaka and H. Kanaya	1975	Personal communication, Geological Survey of Japan			
B-110	A. Yoshioka	1983	Personal communication, Cent. Res. Institute, Mitsubishi Metal Co.			
B-111	T. Takamatsu	1978	Multi-element analyses of rock and sediment samples by non-dispersive X-ray fluorescence (in Japanese with English abstract)	Bunseki Kagaku	27	193-198
B-114	H. Takagi and H. Sugiyama	1978	Personal communication, Kanagawa Prefectural Public Health Laboratory			
B-118	P. J. Potts and N. W. Rogers	1986	Instrumental neutron activation analysis of nine new reference materials from the Geological Survey of Japan	Geost. Newsletter	10	121-125
B-119	T.Okai and T.Fujinuki	1986	Determination of total iron in silicate and aluminous silicate by EDTA-H202 spectrophotometric method	Bull. Geol. Surv. Japan	37	67-75
B-120	H. Uchida, T. Uchida and C. Iida	1979	(in Japanese with English abstract) Determination of major and minor elements in silicates by inductively coupled plasma emission spectrometry	Anal. Chim. Acta	10	87-92
B-122	T. Uchida, C. Iida, K. Yamasaki, S. Kanaoka, Y. Ohmori and T. Masuda	1984	Simple and rapid determination of major elements in miligram amounts of silicate by multi-channel inductively coupled plasma emission spectrometry	Bunseki Kagaku	33	242-247
B-123	T.Uchida, M.Mitsumatsu, I.Kojima and C.Iida	1986	(in Japanese with English abstract) Rapid spectrophotometric determination of iron (I, II) in silicates with 1,10-phenanthroline	Bunseki Kagaku	35	42-46

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B-125	R. Sugisaki, T. Shimomura and K. Ando	1977	(in Japanese with English abstract) An automatic X-ray fluorescence method for the analysis of silicate rocks (in Japanese with English abstract)	J. Geol. Soc. Japan	83	725-733
B-126	H. Takagi	1979	Personal communication, Kanagawa Prefectural Public Health Laboratory			
B-127 B-128	Y. Honma S. Yokota		Personal communication, Yamagata University Personal communication, Geological Survey of Japan			
B-129 B-130	J.Stanley Gotte		Personal communication, University of Adelaide Private communication, DDR Zentrales			
B-131	A. H. Debnam	1984	Geologisches Institut, Berlin Personal communication, Technical Service Laboratories, Canada			
B-134 B-136	B. Zanettin H. A. Olszowy		Personal communication, Univ. Padova, Italia Personal communication, Govern. Chem. Lab.,			
B-138	S. Tanemura	1986	Brisbane, Australia Personal communication, Kyoritsu Bunseki Center, Japan			
B-139 B-141 B-142	Y.Ohba Y.Ohba Z.Solyom	1986	Personal communication, Yamagata University Personal communication, Yamagata University Personal communication, University of Lund, Sweden			
B-143-1	M. W. Lee, K. Ishikawa and	1982	Elemental abundances in some basaltic rocks from the Japan arc and adjacent area	Res. Rep. Lab. Nuc. Sci. Tohoku Univ.	15	239-248
B-146	N. Kaneko Y. Minai, M. Ebihara, K. Sakamoto, N. Aota, R. Matsumoto, J. Ishibashi K. Togashi, A. Ando and K. Tominaga		Analysis of standard rock samples by neutron activation, x-ray fluorescence and Mossbauer Methods(Abst., in Japanese)	29 Symp. Radioch.		
B-148	S. Terashima	1984	Personal communication, Geological Survey of Japan			
B-151	R. Kuroda, T. Nara and K. Oguma	1986	Determination of magnesium in silicates by flow-injection-atomic absorption spectrometry (Abst., in Japanese)	47th Symp. Japan Soc. for Anal. Chem		29-30
B-153	H. Nishido, Y. Ye, T. Sakamoto and A. Doi	1985	Analytical data on the GSJ geochemical reference samples of JA-1, JB-1, JB-2, JB-3, JG-1, JGb-1, JR-1 and JR-2	Bull. Hiruzen Res. Institute, Okayama Univ. Sci.	11	15-21
B-155	M. Nakagawa and M. Komatsu	1983	Analysis of rocks by automated X-ray fluorescence spectrometer	Rep. 1982 Kakenhi(A No.542023 Niigata Univ.)	4-10
B-159	A. Ando and S. Terashima	1986	GSJ rock RMs "igneous rock series" and their chemical compositions(Abst.)	1986 Annual Meet. Japan Geoch. Soc.		243
B-161	R. Kuroda, N. Suzuki and K. Oguma	1986	New scheme for complete silicate analysis based on ion-exchange chromatography	Fresenius Z. Anal. Chem.	32	43-46
B-162	S. Suzuki		Personal communication, Japan Chem. Anal. Center			
B-163	T. Chunhan		Personal communication, Chengdu College of Geology, China			
B-167	S. Terashima and A. Ando		Elemental concentrations in nine new Japanese rock reference samples	Geost. Newsletter	11	75-77
B-168	H. A. Olszowy, R. Sumner, R. Francis, J. Hegarty and S. Mckeown		Personal communication, Govern. Chem. Lab., Brisbane, Australia			
B-169	R. Kanaris-Sotiriou	1986	Personal communication, Sheffield Univ., England			
B-170	S. A. Mertzman	1986	Personal communication, Franklin & Marshall College, Pennsylvania			
B-181	C. Riandey	1986	Personal communication, ORSTOM, services Sci. Cent., Bondy, France			
B-184	A. Alian and B. Sansoni	1980	Comparison of different methods for activation analysis of geological and pedological samples: Reactor and epithermal neutron activation, relative and	KFA Julich GmbH	19	1-46
B-185	A. Alian, R. G. Djingova, B. Kroner and B. Sansoni	1983	monostandard method The monostandard method in thermal neutron activation analysis	KFA Julich GmbH	19	1-24

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B-190	N. Hirate and Y. Yokote	1987	Personal communication, Toshiba Compo Res. Inst.			
B-192	N. Imai	1986	Multielement determination of rocks by inductively coupled plasma emission spectrometry	Bull. Geol. Surv. Japan	37	515-523
B-196	K. Kikkawa	1986	(in Japanese with English abstract) Personal communication, Geological Survey of Japan			
B-198	I. Roelandts and G. Bologne	1987	Personal communication, Universite de Liege, Liege, Belgium			
B-201	A. Yoshioka	1987	Personal communication, Cent. Res. Institute, Mitsubishi Metal Co.			
B-202	H. U. Kasper	1987	Personal communication, Universitat zu Koln, Germany			
B-204	K. Suga and K. Kurosawa	1987	Geochemical map of heavy metal elements in soils from the northern Hokkaido (in Japanese with English abstract)	J. Geol. Surv. Hokkaido	17	1-30
B-205	C. Riandey	1987	Personal communication, ORSTOM, services Sci. Cent., Bondy, France			
B-207	Z. Solyom	1987	Personal communication, University of Lund, Sweden			
B-208	B. F. Myasoedov	1987	Personal communication, Vernadsky Inst. Geoch. Anal. Chem., USSR			
B-216	B. Ayranci	1987	Personal communication, ETH Inst. Krist. Krist. Petr., Zurich, Switzerland			
B-219	D. Nielsen, C. J. Van Niekerk, M. B. Forsyth, P. R. Janisch, A. H. Munro and C. J. Ross	1987	Personal communication, Gold Fields Laboratories, Johannesburg, South Africa			
B-221	T. Yoshida, K. Masumoto and K. Aoki	1986	Photon-activation analysis of standard rocks using an automatic γ -ray counting system with a micro-robot	J. Japan. Assoc. Min. Petr. Econ. Geol.	81	406-422
B-223	S. Ito, K. Shibata, T. Tanaka, K. Uto, S. Tamanyu, H. Kamioka, A. Ando, S. Terashima, N. Imai, Y. Kanai, T. Okai, T. Sakamoto and K. Sato	1987	Geochemical map project for evaluating the distribution of heavy metals in natural background level (in Japanese with English abstract)	1986 Annual Rep. on Environ. Res. National Inst. Japan	l	1-19
B-224 B-230	E.M.Macalalad F.Wakabayashi and M.Shima		Personal communication, BMG, Philippines Personal communication, National Sci. Museum, Tokyo			
B-234	Y. Miyamoto, N. Aota, S. Kosanda, T. Fukasawa Y. Ozaki, A. Kunugise, Y. Hamajima and K. Sakamoto		Neutron activation analysis of geochemical reference rocks(Abst.)	31 Symp. Radioch.		70-71
B-236	A. Matsumoto		Personal communication, Geological Survey of Japan			
B-237 B-240 B-244	K.Komura K.Komura F.Wakabayashi	1987	Personal communication, Kanazawa Univ. LLRL Personal communication, Kanazawa Univ. LLRL Determination of major and trace elements in nine Japanese geochemical standard rock samples by instrumental neutron activation	Bull. Natn. Sci. Mus., Tokyo, Ser. E	10	14-19
B-247 B-248	D. Hogari A. L. Stork, D. K. Smith and J. B. Gill		analysis XRF analysis of rock samples(in Japanese) Evaluation of geochemical reference standards by X-ray fluorescense analysis	JEOL Application Not Geost. Newsletter		3-18 107-113
B-252	T. Tanaka, H. Kamioka and K. Yamanaka	1987	A fully automated γ -ray counting and data data processing system for INAA and analysis of rock reference samples (in Japanese with English abstract)	Bull. Geol. Surv. Japan	39	537-557
B-253	T. Uchida, K. Yamamoto, I. Kojima and C. Iida	1987	Determination of silica in standard rocks by FIA method(Abst., in Japanese)	36th Annual Meeting Japan Soc. Anal.		950
B-254	N.Mita and Y.Kato	1987	Determination of phosphorous in geologic materials by flow injection method(Abst.,in Japanese)	Chem. 36th Annual Meeting Japan Soc. Anal. Chem.		953

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	A. Ando		composition(Abst., in Japanese)			
B-261	K.Oguma, K.Nishiyama and R.Kuroda	1987	Spectrophotometric flow injection analysis of silicates for manganese	Analytical Sciences	3	251-255
B-262	T. Nara, K. Oguma and R. Kuroda	1987	Determination of sodium and potassium in silicates by FIA/AAS(in Japanese with English abstract)	Bunseki Kagaku	36	851-855
B-263	R. Kuroda, Y. Matsuzawa and K. Oguma	1987	Spectrophotometric microanalysis of silicate rocks for manganese after fusion with	Fresenius Z. Anal. Chem.	32	156-157
B-270	K. W. Sims, E. S. Gladney, C. Lundstrom and N. W. Bower		a lithium carbonate-boric acid mixture Elemental concentrations in Japanese silicate rock standards: A comparison with	Geost. Newsletter	12	379-389
B-273	K. Komura, K. L. Tan and K. Ueno	1988	the literature Uranium, thorium and potassium contents in eighteen geochemical reference samples issued	Geost. Newsletter	12	371-374
B-275	M. Ebihara	1985	from the Geological Survey of Japan Determination of ppm level contents of potassium in silicate materials by means of nertron activation analysis(in Japanese with	Bunseki Kagaku	34	761-765
B-277	Y. Miyamoto	1988	English abstract) Personal communication, Kanazawa University			
B-279	V. P. Afonin		Personal communication, USSR Academy of Sciences Siberian Branch			
B-283	S. Itoh, K. Shibata, T. Tanaka, K. Uto, S. Tamanyu, H. Kamioka, A. Ando, S. Terashima, N. Imai, Y. Kanai, T. Okai,	1988	Geochemical map project for evaluating the distribution of heavy metals in natural background level (in Japanese with English abstract)	1987 Annual Rep. on Environ. Res. National Inst. Japan		1-29
D 907	T. Sakamoto and K. Sato	1000	Neutron estimation analysis of Japanese	Bull. Natn. Sci.	1.1	0.10
B-287	F. Wakabayashi	1900	Neutron activation analysis of Japanese standard rock samples II	Mus., Tokyo Ser. E	11	9-16
B-289	T. Fujitani	1988	Activation analysis of trace elements in some standard rocks	Rev. Marine Tech. College	3	45-58
B-295	A.Ueda and H.Sakai	1983	Simultaneous determinations of the concentration and isotope ratio of sulfate-and sulfide-sulfur and carbonate-carbon in geological samples	Geoch. J.	17	185-196
B-296	S. Nohda and	1981	Nd and Sr isotopic study of volcanic rocks	Earth Planet. Sci.	52	264-276
B-300	G. J. Wasserburg T. Fujitani	1988	from Japan Activation analysis of trace elements in	Let. Rev. Marine Tech.	31	45-58
B-308	S. Hirai and S. Suzuki	1989	some standard rocks Personal communication, Musashi Institute of	College		
B-309	K. Govindaraju	1988	Technology Personal communication, Centre Nat. Res. Sci.,			
B-310	T. Chunhan		France Personal communication, Chengdu College of			
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B-311	K. Kikkawa	1989	Personal communication, Geological Survey of Japan			
B-312	H. Takeda	1989	Personal communication, Ministry Ener. Mines., Caracas, Venezuela			
B-320	N. Imai	1990	Multielement analysis of rocks with the use of geological certified reference material by	Analytical sciences	6	389-395
B-324	H.Kamioka and T.Tanaka	1989	inductively coupled plasma mass spectrometry The problems in the analyses of geological materials by INAA -An examination of the analytical results of GSJ rock reference	J. Geol. Soc. Japan	95	835-850
B-325	J. S. Kane	1989	samples- Analysis of geochemical reference materials using simultaneous multi-element atomic	Geost. Newsletter	13	205-215
B-328	S.Terashima, T.Okai, A.Ando and S.Itoh	1990	absorption spectrometry Homogeneity tests for twenty-four GSJ rock reference samples (in Japanese with English abstract)	Bull. Geol. Surv. Japan	41	129-138
B-330 B-337	A. Ishiwatari H. Yurimoto, A. Yamashita, N. Nishida and S. Sueno		Personal communication, Kanazawa University Quantitative SIMS of rock reference samples	Geoch. J.	23	215-236

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B-341-2	J. N. Ludden, R. Daigneault, F. Robert and R. P. Taylor	1984	Trace element mobility in alteration zones associated with archean au lode deposits	Econ. Geol.	79	1131-1141
B-342	S. S. Goldich	1984	Determination of ferrous iron in silicate rocks	Chem. Geol.	42	343-347
B-348	R. Kuroda, I. Ida and H. Kimura	1985	Spectrophotometric determination of silicon in silicates by flow-injection analysis	Talanta	32	353-357
B-350	V. K. Din	1984	The preparation of iron-free solutions from geological materials for the determination of boron (and other elements) by inductively-coupled plasma emission spectrometry	Anal. Chim. Acta	15	387-391
B-351	A. Ueda and H. Sakai	1984	Sulfur isotope study of Quaternary volcanic rocks from the Japanese islands arc	Geoch. Cosmo. Acta	48	1837-1848
B-352	R. A. Coish, R. Hickey and F. A. Frey	1982	Rare earth elements geochemistry of the Betts Cove ophiolite, Newfoundland: complexities in ophiolite formation	Geoch. Cosmo. Acta	46	2117-2134
B-357	S. Nohda and G. J. Wasserburg	1981	Nd and Sr isotopic study of volcanic rocks from Japan	Earth Planet. Sci. Let.	52	264-276
B-360	_	1984	Trace element analysis by neutron activation with a low flux reactor (slowpoke-II): Results for international reference rocks	Geost. Newsletter	8	17-23
B-380	T. Mori and K. Kanehira	1984	X-ray energy spectrometry for electron-probe analysis	J. Geol. Soc. Japan	90	271-285
B-382	B. Robins and M. A. Takla	1979	Geology and geochemistry of a metamorphosed picrite-ankaramite dyke suite from the Seiland province, northern Norway	Norsk Geologisk Tidsskrift	59	67-95
B-388	M. A. Olade and A. A. Elueze	1979	Petrochemistry of the Ilesha amphibolites and Precambrian crustal evolution in the Pan-African domain of SW Nigeria	Precambrian Research	8	303-318
B-393	H. Nagasawa, K. Yamakoshi and T. Shimamura	1979	Trace element concentrations in silicate spherules from oceanic sediments	Geoch. Cosmo. Acta	43	267-272
B-398	P. V. Espen, L. Van Dack, F. Adams and R. V. Grieken	1979	Effective sample weight from scatter peaks in energy-dispersive X-ray fluorescence	Anal. Chem.	51	961-967
B-399	P. Verbeke and F. Adams	1979	Multi-element analysis of geological samples by energy-dispersive X-ray fluorescence	Anal. Chim. Acta	10	85-95
B-400	R.V.Grieken, L.Van Dack, C.C.Dantas and H.Da Silveira Dantas	1979	Soil analysis by thin-film energy-dispersive X-ray fluorescence	Anal. Chim. Acta	10	93-101
B-415	K. Kikkawa, N. Imai, K. Okumura and K. Mizuno	1989	Identification of tephra layers by chemical analyses of volcanic glass using inductively coupled plasma emission spectrometry (ICP) (in Japanese with English abstract)	Bull. Geol. Surv. Japan	40	1-18
B-418	R. E. Santelli, M. Gallego and M. Valcarcel	1989	Atomic absorption determination of copper in silicate rocks by continuous precipitation preconcentration	Anal. Chem.	61	1427-1430
B-422	C. T. Yap and K. V. R. Gunawardena	1989	TXRF spectrometric analysis of major elements in mineral sands	Applied Spectroscopy	43	702-704
B-433	T. Suzuki and M. Sensui	1991	Application of the microwave acid digestion method to the decomposition of rock samples	Anal. Chim. Acta	24	43-48
B-434	N. K. Saini	1991	Personal communication, Wadia Institute of Himalayan Geology, Dehra, India			
B-435	N. Ueno	1991	Potassium concentrations in GSJ rock reference samples -JB-2, JB-3 and JG-1a	J. Toyo Univ., General Education	(3	1-10
B-436	D. M. Shaw and P. L. C. Smith	1991	Concentrations of B, Sm, Gd, and H in 24 reference materials	Geost. Newsletter	15	59-66
B-437	P. J. Potts and N. W. Rogers	1991	Determination of trace elements in selected geological reference materials by	Geost. Newsletter	15	111-116
B-438	S. P. Verma	1991	instrumental neutron activation analysis Determination of thirteen rare-earth elements by high-performance liquid chromatography in thirty and of K, Rb, Cs, Sr and Ba by isotope dilution mass spectrometry in eighteen	Geost. Newsletter	15	129-134
B-441	K. Kikkawa	1991	international geochemical reference samples Major and minor elements composition of volcanic glasses -Comparison of tephra using ICP analysis-(in Japanese)	Chikyu	13	161-168
B-443 B-447	V. Sixta Y. Oura, N. Aota, S. Kosanda, Y. Miyamoto,		Evaluation of ICP spectrometric measurements Activation analysis of GSJ rock standard samples -Sedimentary rock series-	Atomic Spectroscopy 1991 Annual Meet. Japan Geoch. Soc.	12	11-15 201

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B-452	I.Brissaud, A.de Chateau-Thierry, J.P.Frontier and	1986	PIXE and PIGE technioues applications to volcanic rocks	Chem., Articles	10	131-141
B-453	G.Lagarde P.Ila and D.S.Murty	1989	Elemental analysis of geological samples by cyclic activation using a 14 MeV neutron generator and applying flux corrections	J. Radio. Nuc. Chem., Articles	13	27-37
B-455 B-456	M. Tanaka L. M. Muia and R. Van Grieken		Personal communication, Toray research center Use of theoretical accurate binary influence coefficients with tertian's equation in X-ray fluorescence analysis of silicate rocks	X-ray Spectrometry	19	141-144
B-462	S. Kozuka, K. Saito, K. Ogawa and R. Kuroda	1990	on borax glass beads Simultaneous Determination of Trace Amounts of Iron(III) and Titanium(IV) by Flow Injection With Spectrophotometric Detection	Analyst	11	431-434
B-467	S. Endo and S. Abe	1991	Kinetic spectrophotometry of iron(II) and iron(III), (abstract)	40th Annual Meeting Japan, Soc. Anal, Chem		532
B-472	H. Hirano, M. Kamitani, Y. Kanazawa and S. Sudo	1992	Personal Communication, Geol. Survey of Japan (Anal. Chemex)			
B-476	G. R. Boaventura	1992	Personal Communicatoin, Universidade de Brasilla			
B-478	M. Musashino and Y. Miyake	1992	Personal Communication, Kyoto Kyoiku University			
B-482	Y. Kinryu	1992	Personal Communication, Dowa Engineering Co., Ltd. (Anal. Iijima Bunseki Center)			
C-3	Onoda Cement Co.	1967	Personal communication, Central Research Lab., Tokyo.			
C-3'	D. H. Cornell	1976	Personal communication, The University of Stellenbosch, South Africa.			
C-4'	S. Chagrapan	1983	Personal Communication, ESCAP/RMRDC, Bandung, Indonesia.			
C-5' F-2	S. C. Chareonkul D. C. G. Friese		Taken from C-4' Personal communication, Zentrales			
F-3'	T. Fujinuki	1985	Geologisches Institut, Berlin, DDR. Personal communication, Geological Survey of Japan.			
G-1	J. Gagnon	1975	Personal communication, Service Analyse et			
G-6	K.Govindaraju	1969	Contro, Complexe Scientifique, Canada. Personal communication, C.R.P.G., Nancy, France.			
G-6'	K. Govindaraju	1983	Personal communication, C.R.P.G., Nancy, France.			
G-8'	N. I. Gulko	1985	Personal communication, Institute of Lithosphere, Moscow, USSR.			
H-5	T. Hayata	1974	Chemical analysis of geochemical standard sample JB-1	Nagasaki-ken Chigak kaishi	u21	19-21
H-6	K. Huysmans		Personal communication, Ruks Univ. Belgie.			
H-7 H-8	K. Huysmans H. Haramura		Personal communication, Ruks Univ. Belgie. Personal communication, Geological Institute,			
H-9	Y. Hikichi	1968	Univ. of Tokyo Personal communication, Nagoya Institute of			
H-10	T. Hugi	1975	Technology, Japan. Personal communication, Univ. Bern, Switzerland.			
I-7	K. Ishibashi	1970	Personal communication, Faculty of Science, Kyushu Univ., Japan.			
K-6'	S. Kanisawa		Personal communication, Tohoku Univ. Japan.			
K-9 K-11'	Y.Kato Y.Kato, H.Onuki and		Taken from A-13. Major element analyses on the geochemical	J. Japan Assoc. Min.	73	281-282
K-18'	K. Aoki S. Koga		standards JA-1 and JB-2 The determination of major and minor elements on the two geochemical standard samples, JA-1 and JB-2, by inductively	Pet. Econ. Geol. J. Japan Assoc. Min. Pet. Econ. Geo	75	266-271

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M-2	G. Maruyama and M. Suda	1974	U.S.A. Personal communication, Mitsubishi Mining			
M-6 M-7	T. Mori E. L. Munson		Cement Research Lab., Saitama, Japan. Personal communication, Kanazawa Univ. Japan. Personal communication, U.S. Geological			
M-7'	T. Mori and D. H. Green	1976	Survey, Denver, Colorado, U.S.A. Subsolidus equilibria between pyroxenes in the CaO-MgO-SiO2 system at high pressures and	Am. Mineralogist	61	616-625
M-8'	G. K. Muecke	1979	temperatures. Personal communication, Dalhousie Univ., Nova Scotia, Canada.			
M-10	K. Maeda	1970	Personal communication, Geological Survey of Japan.			
M-12	Nittetsu Mining Co.	1967	Personal communication, Mitaka Laboratory, Japan.			
M-13	M. Murakami	1970	Personal communication, Faculty of Liberal Arts, Yamaguchi Univ., Japan.			
N-7	K. Nakao	1970	Personal communication, Tokyo Kyoiku Univ. Japan.			
N-8	Nihon Cement	1968	Personal communication, Research Laboratory, Tokyo, Japan.			
0-1'	M. Ogasawara	1979	Personal communication, university of Adelaide, Australia			
0-2	K.Ohta	1972	Personal communication, Tokyo Coal and Mineral Laboratory, Japan.			
0-3'	T. Ohomori	1976	X-ray fluorescence analysis of major elements in rocks and minerals. Part 2. Quantitative	Bull. Geol. Surv. Japan	27	425-442
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0-6	T. Ohmori	1970	Hokkaido Univ., Japan. Personal communication, Geological Survey of			
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P-5'	M. Pinta	1983	Japan. Personal communication, Office de la Recherche Scientifique et Technique			
R-1	B. A. O. Randall	1972	Outre-Mer, France. Personal communication, The Univ. of Newcastle upon Tyne, England.			
R-7 S-14	Asahi Glass Co. H.Shirahata		Personal communication, Research Laboratory. Personal communication, Muroran Institute of Technology, Muroran, Japan.			
S-15	K.F. Steele	1971	Personal communication, University of Arkansas, U.S.A.			
S-23	R. Sugisaki and T. Tanaka	1971	Collective analysis of silicate rocks in the mass and analyses of standard rocks.—With special reference to carbonate bearing silicate rocks—	J. Geol. Soc. Japan	77	453-463
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S-24	J. G. Sullivan	1970	Personal communication, ESCAP/RMRDC, Bandung, Indonesia.			
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S-26' T-13'	J. Sato S. Tanemura		Personal commnication, Meiji Univ. Tokyo. Personal communication, Kyoritsu Analytical Center, Nagoya, Japan.			
T-27	H. Takamura	1969	Analytical data on the geochemical standard JB-1 basalt.	J. Japan Assoc. Min. Pet. Econ. Geol.	62	219-221
T-29	T. Tiba	1970) JB-1 and JG-1-Geological Survey of Japan silicate rock standards	J. Geol. Soc. Japan	76	441-447
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T-51'	S. Tanemura	1985 Personal communication, Kyoritsu Analytica Center, Nagoya, Japan.	1	
U-4	T. Uchida	1970 Personal communication, Tokyo Kyoiku Univ. Japan.		
V-1	M. Vernet	1969 Personal communication, C. R. P. G., Nancy, France.		
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