
Apollo 14 Very High Potassium Basalt Petrogenesis: Influence of Magma Chamber and Impact Processes

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CSD data for 14304,245

Size inter	Data Set 1	Data Set 2	Mid Inter	ln(pop den)	ln(min PD)	ln(max PD)
0.631	3		0.722	1.99	1.13	2.45
0.398	3		0.456	2.8	1.75	3.3
0.251	9		0.288	4.88	4.45	5.18
0.158	25		0.181	6.81	6.57	7.01
0.1	19		0.1145	7.27	6.92	7.53
0.0631	10		0.0722	7.2	6.34	7.66
0.0398	0					

Cry num	Vol %
2.44	22.97
3.45	8.152
17.4	10.37
76.1	11.35
75.7	2.839
44.6	0.42

CSD data for 14304,187

Size inter	Data Set 1	Data Set 2	Mid Inter	ln(pop den)	ln(min PD)	ln(max PD)
1	4		1.135	-0.63	-1.33	-0.23
0.631	16		0.716	1.65	1.36	1.88
0.398	33		0.452	3.27	3.07	3.44
0.251	20		0.285	3.53	3.2	3.77
0.158	13		0.18	3.75	3.16	4.12
0.1	4		0.1135	3.46	1.65	4.07
0.0631	0					

Cry num	Vol %
0.278	6.827
1.72	10.63
5.48	8.497
4.46	1.739
3.52	0.345
1.66	0.04

CSD data for 14304,189

Size inter	Data Set 1	Data Set 2	Mid Inter	ln(pop den)	ln(min PD)	ln(max PD)
1	1		1.105	-1.85	-infinity	-1.15
0.631	4		0.697	0.44	-0.27	0.85
0.398	22		0.44	3.07	2.83	3.27
0.251	41		0.278	4.58	4.4	4.73
0.158	27		0.175	4.95	4.69	5.16
0.1	2		0.1105	Over		
0.0631	2		0.0697	Over		
0.0398	0					

Cry num	Vol %
0.0804	1.592
0.5	2.486
4.37	5.462
12.5	3.925
11.4	0.901

CSD data for 14304,203

Size inter	Data Set 1	Data Set 2	Mid Inter	ln(pop den)	ln(min PD)	ln(max PD)
0.631	4		1.011	-0.59	-1.28	-0.18
0.398	37		0.638	2.55	2.37	2.7
0.251	129		0.403	4.71	4.62	4.8
0.158	165		0.254	5.85	5.76	5.93
0.1	52		0.1603	5.31	5.09	5.49
0.0631	7		0.1011	3.73	1.58	4.36
0.0398	0					

Cry num	Vol %
0.258	1.27
3.76	4.654
20.6	6.399
40.5	3.16
14.9	0.292
1.93	0.009

CSD data for 14304,299

Size inter	Data Set 1	Data Set 2	Mid Inter	ln(pop den)	ln(min PD)	ln(max PD)
0.1	3		0.8014	3.58	2.72	4.04
0.0631	21		0.5056	6.45	6.2	6.65
0.0398	34		0.319	7.85	7.66	8.01
0.0251	12		0.2013	7.68	7.32	7.95
0.0158	1		0.127	5.87	-infinity	6.73
0.01	0					

Cry num	Vol %
13.3	37.14
147	103.3
376	66.21
201	8.891
20.8	0.231

CSD data for 14305,388

Size inter	Data Set 1	Data Set 2	Mid Inter	ln(pop den)	ln(min PD)	ln(max PD)	Cry num	Vol %
1.58	1		2.54	-3.24	-infinity	-2.54	0.046	3.591
1	1		1.603	-2.36	-infinity	-1.64	0.0697	1.366
0.631	15		1.011	1.31	1.01	1.54	1.73	8.496
0.398	44		0.638	3.3	3.13	3.44	7.93	9.808
0.251	62		0.403	4.54	4.39	4.66	17.3	5.377
0.158	40		0.254	4.92	4.71	5.08	16	1.245
0.1	10		0.1603	4.13	3.44	4.54	4.61	0.09
0.0631	0							

PLAGIOCLASE

SAMPLE	core 1	rim 1	core 2	rim 2	core 3	SAMPLE
SiO2	44.44	44.81	44.60	44.19	44.58	SiO2
TiO2	0.02	0.00	0.00	0.00	0.02	TiO2
Al2O3	36.44	35.97	36.50	36.62	36.39	Al2O3
Cr2O3	0.00	0.00	0.00	0.00	0.00	Cr2O3
FeO	0.23	0.30	0.17	0.22	0.22	FeO
MnO	0.00	0.03	0.01	0.01	0.01	MnO
MgO	0.05	0.06	0.06	0.05	0.06	MgO
CaO	19.13	18.85	19.20	19.43	19.12	CaO
Na2O	0.64	0.77	0.66	0.57	0.68	Na2O
K2O	0.08	0.11	0.06	0.08	0.06	K2O
BaO	0.00	0.00	0.00	0.00	0.00	BaO
TOTAL	101.03	100.93	101.27	101.18	101.17	TOTAL

PLAGIOCLASE

OLIVINE			PYROXENE			PYROXENE	
SAMPLE	1	core 1	b 12	2	3	SAMPLE	
SiO2	37.26	37.57	34.61	53.02	52.03	SiO2	
TiO2	0.00	0.03	0.02	0.66	0.73	TiO2	
Al2O3	0.00	0.00	0.01	1.84	1.04	Al2O3	
Cr2O3	0.05	0.09	0.03	0.59	0.31	Cr2O3	
FeO	28.29	28.14	40.33	16.51	20.83	FeO	
MnO	0.26	0.28	0.41	0.29	0.31	MnO	
MgO	33.74	33.88	23.49	24.69	21.32	MgO	
CaO	0.20	0.17	0.18	2.28	2.51	CaO	
Na2O	0.00	0.00	0.00	0.00	0.00	Na2O	
K2O	0.00	0.00	0.00	0.00	0.00	K2O	
BaO	0.00	0.00	0.00	0.00	0.00	BaO	
TOTAL	99.82	100.19	99.20	99.90	99.07	TOTAL	

PLAGIOCLASE						
rim 3	core 4	rim 4	core 5	rim 5	SAMPLE	core 6
44.50	44.56	44.85	45.00	44.65	SiO2	44.68
0.00	0.07	0.03	0.05	0.11	TiO2	0.03
36.60	36.21	36.07	35.75	36.17	Al2O3	36.30
0.00	0.00	0.00	0.00	0.00	Cr2O3	0.00
0.23	0.23	0.40	0.27	0.33	FeO	0.16
0.01	0.00	0.02	0.02	0.01	MnO	0.03
0.04	0.05	0.05	0.03	0.04	MgO	0.06
19.22	19.22	18.59	18.53	19.22	CaO	19.26
0.61	0.72	0.84	0.93	0.77	Na2O	0.75
0.07	0.10	0.13	0.11	0.08	K2O	0.09
0.00	0.00	0.00	0.00	0.00	BaO	0.00
101.28	101.16	101.00	100.71	101.42	TOTAL	101.40

PYROXENE						
4	5	6	7	8	SAMPLE	8
50.86	52.06	51.65	51.67	50.86	SiO2	51.82
0.74	0.88	0.80	0.84	1.36	TiO2	0.74
2.39	1.24	1.10	1.22	2.23	Al2O3	1.07
0.44	0.35	0.32	0.33	0.59	Cr2O3	0.30
21.35	19.76	21.56	19.66	12.39	FeO	21.73
0.34	0.35	0.40	0.38	0.24	MnO	0.37
20.29	19.45	17.40	18.94	15.14	MgO	18.42
2.10	5.84	6.74	6.65	16.96	CaO	5.22
0.04	0.02	0.03	0.03	0.08	Na2O	0.03
0.01	0.00	0.00	0.00	0.01	K2O	0.00
0.00	0.00	0.00	0.00	0.00	BaO	0.00
98.58	99.94	100.03	99.93	99.87	TOTAL	99.72

PLAGIOCLASE						
rim 6	core 7	rim 7	core 8	SAMPLE	rim 8	core 9
44.32	44.69	44.37	45.05	SiO2	44.45	45.25
0.00	0.04	0.00	0.03	TiO2	0.00	0.07
36.36	36.51	36.39	35.55	Al2O3	36.24	35.87
0.00	0.01	0.00	0.00	Cr2O3	0.00	0.00
0.20	0.27	0.31	0.27	FeO	0.27	0.24
0.01	0.02	0.00	0.03	MnO	0.02	0.02
0.03	0.03	0.04	0.09	MgO	0.05	0.04
19.53	19.18	19.33	18.68	CaO	19.09	18.59
0.68	0.68	0.60	0.97	Na2O	0.66	0.94
0.08	0.08	0.08	0.14	K2O	0.10	0.10
0.00	0.00	0.00	0.00	BaO	0.00	0.00
101.21	101.51	101.13	100.82	TOTAL	100.88	101.13

PYROXENE						
9	10	2	3	SAMPLE	4	5
51.50	52.17	53.02	52.03	SiO2	50.86	52.06
0.73	0.70	0.66	0.73	TiO2	0.74	0.88
1.01	1.03	1.84	1.04	Al2O3	2.39	1.24
0.26	0.27	0.59	0.31	Cr2O3	0.44	0.35
21.75	21.26	16.51	20.83	FeO	21.35	19.76
0.40	0.32	0.29	0.31	MnO	0.34	0.35
18.00	19.20	24.69	21.32	MgO	20.29	19.45
5.95	4.78	2.28	2.51	CaO	2.10	5.84
0.03	0.01	0.00	0.00	Na2O	0.04	0.02
0.00	0.00	0.00	0.00	K2O	0.01	0.00
0.00	0.00	0.00	0.00	BaO	0.00	0.00
99.96	99.73	99.90	99.07	TOTAL	98.58	99.94

PLAGIOCLASE						
rim 9	core 10	rim10	SAMPLE	core 11	rim11	core 12
44.77	44.71	44.35	SiO2	46.05	44.35	44.57
0.04	0.03	0.05	TiO2	0.08	0.06	0.01
36.02	36.12	36.40	Al2O3	35.03	36.52	36.37
0.00	0.03	0.01	Cr2O3	0.00	0.00	0.01
0.31	0.32	0.33	FeO	0.28	0.23	0.23
0.00	0.00	0.01	MnO	0.00	0.02	0.02
0.05	0.04	0.03	MgO	0.10	0.03	0.04
18.50	18.92	19.27	CaO	18.14	19.65	19.12
0.79	0.77	0.63	Na2O	1.31	0.60	0.74
0.11	0.12	0.08	K2O	0.14	0.08	0.09
0.00	0.00	0.00	BaO	0.00	0.00	0.00
100.61	101.06	101.18	TOTAL	101.13	101.54	101.21

6	7	8
51.65	51.67	50.86
0.80	0.84	1.36
1.10	1.22	2.23
0.32	0.33	0.59
21.56	19.66	12.39
0.40	0.38	0.24
17.40	18.94	15.14
6.74	6.65	16.96
0.03	0.03	0.08
0.00	0.00	0.01
0.00	0.00	0.00
100.03	99.93	99.87

PLAGIOCLASE						
rim 12	core 13	rim13	SAMPLE	core 14	rim14	core 15
44.69	44.85	44.99	SiO2	45.13	44.54	44.63
0.02	0.04	0.04	TiO2	0.00	0.01	0.00
36.60	36.15	35.86	Al2O3	35.87	36.37	36.42
0.01	0.00	0.00	Cr2O3	0.00	0.00	0.02
0.46	0.30	0.44	FeO	0.20	0.20	0.20
0.02	0.01	0.00	MnO	0.02	0.03	0.01
0.04	0.04	0.05	MgO	0.05	0.04	0.05
19.18	19.11	19.03	CaO	18.97	19.59	19.53
0.66	0.79	0.86	Na2O	0.93	0.66	0.68
0.08	0.11	0.13	K2O	0.11	0.09	0.07
0.00	0.00	0.00	BaO	0.00	0.00	0.00
101.77	101.41	101.43	TOTAL	101.29	101.54	101.63

EPMA data for 14303,245

PLAGIOCLASE						
rim15	core 16	SAMPLE	core 14	rim14	core 15	rim15
44.62	44.59	SiO2	45.13	44.54	44.63	44.62
0.02	0.04	TiO2	0.00	0.01	0.00	0.02
36.66	36.51	Al2O3	35.87	36.37	36.42	36.66
0.00	0.01	Cr2O3	0.00	0.00	0.02	0.00
0.31	0.13	FeO	0.20	0.20	0.20	0.31
0.02	0.01	MnO	0.02	0.03	0.01	0.02
0.04	0.03	MgO	0.05	0.04	0.05	0.04
19.49	19.83	CaO	18.97	19.59	19.53	19.49
0.63	0.64	Na2O	0.93	0.66	0.68	0.63
0.07	0.07	K2O	0.11	0.09	0.07	0.07
0.00	0.00	BaO	0.00	0.00	0.00	0.00
101.87	101.88	TOTAL	101.29	101.54	101.63	101.87

core 16	rim16	core 17	rim A 17	core B 17	b 1	b 2
44.59	44.44	43.98	44.83	44.58	44.32	44.89
0.04	0.04	0.00	0.00	0.05	0.00	0.07
36.51	36.66	36.70	36.44	36.38	36.16	36.38
0.01	0.00	0.00	0.00	0.01	0.01	0.00
0.13	0.17	0.15	0.27	0.39	0.18	0.23
0.01	0.01	0.01	0.00	0.00	0.02	0.00
0.03	0.04	0.05	0.05	0.06	0.04	0.06
19.83	19.41	19.51	19.48	19.40	19.68	19.00
0.64	0.59	0.53	0.66	0.65	0.66	0.76
0.07	0.06	0.02	0.09	0.07	0.08	0.10
0.00	0.00	0.00	0.00	0.00	0.00	0.00
101.88	101.41	100.97	101.82	101.63	101.15	101.50

b 3	b 4	b 5	b 6	b 7
44.75	44.35	44.64	44.05	44.53
0.00	0.01	0.00	0.04	0.03
36.14	36.41	36.65	36.35	36.38
0.00	0.00	0.00	0.00	0.00
0.51	0.58	0.22	0.14	0.21
0.01	0.02	0.00	0.00	0.01
0.05	0.04	0.03	0.03	0.04
19.24	19.39	18.85	18.91	18.83
0.76	0.61	0.69	0.55	0.66
0.10	0.07	0.08	0.07	0.06
0.00	0.00	0.00	0.00	0.00
101.58	101.50	101.16	100.15	100.74

EPMA data for 14303,328

PLAGIOCLOSE

SAMPLE	12	11	9	19	19 2	40
SiO2	44.20	43.56	44.01	43.66	58.53	60.52
TiO2	0.00	0.00	0.00	0.00	0.00	0.00
Al2O3	34.99	34.88	35.08	35.22	21.48	19.97
Cr2O3	0.00	0.00	0.00	0.00	0.00	0.00
FeO	0.00	0.00	0.00	0.00	0.00	0.00
MnO	0.00	0.00	0.00	0.00	0.00	0.00
MgO	0.00	0.00	0.00	0.00	0.00	0.00
CaO	19.16	19.04	19.23	18.98	2.80	0.74
Na2O	0.62	0.51	0.49	0.65	0.90	0.71
K2O	0.09	0.06	0.11	0.08	11.90	13.85
BaO	0.02	0.05	0.02	0.00	2.94	3.64
TOTAL	99.08	98.09	98.94	98.58	98.55	99.43

K-FELDSPAR

PYROXENE

SAMPLE	5	7	8	6	21
SiO2	50.91	50.74	51.87	52.08	50.75
TiO2	0.75	1.17	0.75	0.69	0.90
Al2O3	1.29	2.23	1.73	1.76	1.32
Cr2O3	0.59	0.82	0.71	0.80	0.44
FeO	20.68	14.06	17.92	17.46	22.02
MnO	0.31	0.23	0.37	0.31	0.39
MgO	17.89	15.03	19.04	20.15	16.80
CaO	6.24	14.60	7.45	6.04	5.92
Na2O	0.00	0.04	0.00	0.00	0.00
K2O	0.01	0.00	0.00	0.00	0.00
BaO	0.00	0.00	0.00	0.00	0.00
TOTAL	98.67	99.00	99.86	99.29	98.56

41	42
47.53	58.82
0.00	0.00
32.10	20.43
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
16.68	0.76
0.93	1.07
0.75	12.47
0.04	5.44
98.04	98.98

EPMA data for 14304,169

PLAGIOCLASE

SAMPLE	2_9	2_10	2_11	3_2	3_3	3_7
SiO2	44.75	43.64	44.84	45.29	44.48	44.27
TiO2	0.00	0.00	0.00	0.00	0.00	0.00
Al2O3	35.10	35.96	34.84	34.79	35.22	35.72
Cr2O3	0.00	0.00	0.00	0.00	0.00	0.00
FeO	0.00	0.00	0.00	0.00	0.00	0.00
MnO	0.00	0.00	0.00	0.00	0.00	0.00
MgO	0.00	0.00	0.00	0.00	0.00	0.00
CaO	18.09	18.94	17.99	18.01	18.31	18.98
Na2O	0.93	0.54	1.01	1.09	0.86	0.58
K2O	0.15	0.05	0.11	0.10	0.07	0.06
BaO	0.08	0.03	0.10	0.00	0.03	0.08
TOTAL	99.10	99.17	98.89	99.28	98.97	99.69

OLIVINE

PYROXENE

SAMPLE	2_5	2_8	2_7	1_1a	1_2a	1_3a
SiO2	17.60	24.61	23.85	52.84	52.82	52.98
TiO2	0.03	0.33	0.48	0.81	0.70	0.70
Al2O3	0.01	0.69	0.53	0.91	0.82	0.71
Cr2O3	0.06	0.45	0.17	0.34	0.30	0.28
FeO	25.34	14.53	13.47	19.05	20.24	20.52
MnO	0.23	0.30	0.21	0.31	0.35	0.34
MgO	18.97	13.04	7.08	21.22	22.27	22.40
CaO	0.14	2.86	12.49	4.36	2.13	1.95
Na2O	0.02	0.01	0.08	0.02	0.01	0.01
K2O	0.00	0.00	0.00	0.00	0.00	0.00
BaO	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	102.42	99.88	100.00	99.89	99.63	99.89

K-FELDSPAR

3_8	1_4	1_8	1_11	1_12	1_9	1_13
45.11	62.67	59.54	58.93	60.96	60.43	60.74
0.00	0.00	0.00	0.00	0.00	0.00	0.00
34.93	19.47	20.02	19.71	19.60	19.99	20.07
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
18.31	0.32	0.71	0.48	0.49	0.62	0.67
0.79	0.70	0.83	0.62	0.71	0.71	0.85
0.10	14.23	12.86	13.40	14.01	12.89	12.75
0.07	3.10	5.39	4.90	3.20	5.14	5.35
99.31	100.48	99.35	98.04	98.98	99.78	100.43

3_3	3_4	1_1	1_2	1_3	1_4	1_5
51.86	51.68	51.48	50.70	52.58	52.18	51.61
1.29	1.38	0.85	0.82	0.83	0.92	0.96
1.49	1.63	0.85	0.85	0.90	0.96	0.88
0.48	0.47	0.31	0.26	0.28	0.40	0.36
11.65	11.44	21.96	22.92	19.28	18.20	19.09
0.23	0.21	0.32	0.33	0.25	0.23	0.30
15.28	14.94	19.27	18.72	20.62	21.22	20.23
18.11	18.18	4.54	4.31	4.92	5.02	4.93
0.13	0.09	0.00	0.01	0.02	0.01	0.00
0.00	0.00	0.00	0.01	0.01	0.00	0.01
0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.52	100.04	99.61	98.93	99.68	99.15	98.41

2_15	3_10	3_5	3_21	3_6	3_4	3_1
60.44	60.32	59.55	62.32	62.12	60.53	62.38
0.00	0.00	0.00	0.00	0.00	0.00	0.00
19.82	22.26	20.61	19.59	19.41	19.51	19.68
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42	7.26	1.67	0.61	0.53	0.70	0.74
0.67	0.94	0.69	0.67	0.64	0.76	0.60
13.98	7.37	13.27	14.43	14.56	13.62	14.34
3.82	0.18	2.80	1.93	2.11	3.42	2.39
99.15	98.33	98.59	99.54	99.35	98.55	100.13

1_6	3_16	3_15	3_14	3_13	2_8	2_7
52.19	51.87	51.96	52.15	49.30	51.94	50.86
0.87	0.85	0.86	1.39	1.25	1.19	1.50
0.90	0.86	0.78	1.45	4.99	1.26	1.64
0.34	0.35	0.28	0.47	0.42	0.37	0.51
19.80	20.27	22.47	11.55	11.18	11.60	11.55
0.27	0.25	0.35	0.21	0.22	0.21	0.21
20.25	20.72	19.23	15.24	14.13	15.01	15.18
4.84	4.74	4.13	17.89	17.18	18.24	17.79
0.01	0.00	0.01	0.09	0.10	0.09	0.10
0.01	0.00	0.00	0.00	0.02	0.01	0.01
0.00	0.00	0.00	0.00	0.00	0.00	0.00
99.46	99.91	100.12	100.46	98.78	99.92	99.34

2_6	2_5	2_4	2_1
51.44	51.03	51.64	51.61
1.69	1.60	0.88	1.67
1.76	1.74	0.78	1.79
0.52	0.53	0.31	0.53
11.20	10.96	20.64	11.53
0.20	0.14	0.34	0.23
15.06	15.02	19.98	14.88
18.05	18.02	4.85	18.23
0.10	0.09	0.00	0.09
0.00	0.00	0.01	0.01
0.00	0.00	0.00	0.00
100.02	99.17	99.44	100.57

EPMA data for 14304,177

PLAGIOCLASE

SAMPLE	a 1	a 2	a 4	a 3	a 5	a 6
SiO2	44.42	44.57	47.23	44.84	47.56	71.98
TiO2	0.01	0.01	0.08	0.00	0.04	1.02
Al2O3	36.32	36.33	34.51	36.53	33.42	15.52
Cr2O3	0.01	0.00	0.06	0.00	0.02	0.02
FeO	0.10	0.14	0.08	0.10	0.19	0.87
MnO	0.00	0.01	0.01	0.00	0.02	0.03
MgO	0.03	0.03	0.02	0.01	0.06	0.15
CaO	19.53	19.42	17.05	19.04	16.81	0.96
Na2O	0.65	0.55	1.63	0.59	1.77	0.79
K2O	0.07	0.11	0.29	0.09	0.33	10.09
BaO	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	101.15	101.18	100.98	101.22	100.74	101.75

APATITE

SAMPLE	a 50	a 52	a 53	b 23
SiO2	0.28	0.26	0.29	0.27
TiO2	0.01	0.01	0.03	0.02
Al2O3	0.48	0.00	0.00	0.09
Cr2O3	0.00	0.03	0.00	0.02
FeO	0.45	0.44	0.58	0.41
MnO	0.04	0.04	0.05	0.06
MgO	0.33	0.39	0.34	0.29
CaO	56.01	55.14	55.30	56.35
Na2O	0.04	0.06	0.02	0.02
K2O	0.02	0.00	0.01	0.01
P2O5	41.71	42.33	41.89	42.00
TOTAL	99.40	98.73	98.66	99.55

PYROXENE

SAMPLE
SiO2
TiO2
Al2O3
Cr2O3
FeO
MnO
MgO
CaO
Na2O
K2O
BaO
TOTAL

a 7	a 8	a 9	a 10	a 11	a 12	a 13
47.45	47.47	47.67	48.16	47.63	48.60	48.54
0.05	0.09	0.17	0.06	0.07	0.08	0.04
35.04	34.71	34.30	33.85	34.66	33.71	33.76
0.00	0.00	0.00	0.01	0.00	0.00	0.03
0.06	0.06	0.11	0.04	0.08	0.08	0.14
0.02	0.00	0.01	0.01	0.00	0.00	0.00
0.01	0.02	0.01	0.01	0.00	0.01	0.02
17.35	17.03	16.90	16.88	17.07	16.39	16.07
1.64	1.73	1.90	2.05	1.89	2.18	2.23
0.24	0.24	0.17	0.17	0.10	0.23	0.20
0.00	0.00	0.00	0.00	0.00	0.00	0.00
101.88	101.39	101.29	101.26	101.54	101.29	101.05

a 36	a 37	a 38	a 39	a 40	a 41	a 42
55.38	53.27	56.42	53.40	52.89	53.14	53.10
0.57	0.79	0.28	0.52	0.28	0.48	0.65
0.72	0.73	0.68	0.88	0.88	1.08	0.95
0.22	0.98	0.32	0.35	0.35	0.37	0.41
14.52	18.81	11.60	20.29	22.30	21.30	21.58
0.27	0.27	0.19	0.31	0.36	0.35	0.36
27.44	24.01	30.50	22.32	22.14	21.72	21.82
1.50	1.64	0.58	2.46	1.08	2.38	2.11
0.00	0.01	0.02	0.03	0.00	0.01	0.01
0.00	0.01	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.65	100.52	100.59	100.56	100.29	100.83	100.99

a 14	b 1	b 2	b 3	b 4	b 5	b 6
53.12	50.13	47.84	47.20	47.03	46.89	47.17
0.14	0.08	0.00	0.03	0.05	0.07	0.01
29.73	32.38	34.36	34.60	34.51	34.74	34.39
0.00	0.02	0.00	0.00	0.00	0.00	0.00
0.14	0.05	0.05	0.03	0.08	0.12	0.07
0.01	0.00	0.00	0.01	0.02	0.00	0.02
0.07	0.02	0.00	0.00	0.01	0.02	0.00
12.46	14.78	16.65	16.95	17.20	16.96	17.08
3.67	2.58	1.96	1.75	1.66	1.65	1.80
1.00	0.58	0.15	0.08	0.12	0.16	0.09
0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.37	100.67	101.04	100.68	100.72	100.63	100.65

a 43	a 44	a 45	a 46	a 47	a 48	a 49
53.49	53.27	53.27	53.28	53.01	53.02	52.80
0.41	0.42	0.44	0.51	0.43	0.41	0.81
1.00	0.94	1.04	0.89	0.87	0.85	0.96
0.38	0.38	0.42	0.38	0.38	0.36	0.37
21.14	21.34	21.65	21.48	21.09	21.26	21.81
0.37	0.30	0.34	0.33	0.33	0.35	0.37
21.75	21.67	21.73	21.82	21.67	21.78	21.54
2.18	2.33	1.95	1.99	2.24	2.39	1.92
0.00	0.01	0.01	0.01	0.00	0.01	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.74	100.69	100.87	100.72	100.04	100.43	100.57

K-FELDSPAR

b 7	SAMPLE	a 17	a 19	a 20	a 21	a 24
47.30	SiO2	61.53	71.02	77.92	65.96	62.49
0.07	TiO2	0.49	0.72	1.26	0.45	0.71
34.39	Al2O3	20.62	15.40	10.78	18.23	19.72
0.00	Cr2O3	0.01	0.00	0.00	0.00	0.00
0.12	FeO	0.01	0.65	1.58	0.19	0.05
0.00	MnO	0.02	0.03	0.01	0.03	0.03
0.02	MgO	0.00	0.09	0.10	0.00	0.00
17.01	CaO	1.89	0.69	0.84	0.30	0.50
1.71	Na2O	0.87	0.42	0.57	0.42	0.72
0.20	K2O	13.35	12.20	6.40	14.96	14.66
0.00	BaO	0.00	0.00	0.00	0.00	0.00
100.83	TOTAL	98.8223	101.45	100.433	100.605	98.9169

b 24	b 25	b 26	b 27	b 28
54.16	53.34	53.32	53.19	53.54
0.53	0.34	0.61	0.55	0.26
0.43	0.64	1.07	0.57	0.73
0.20	0.30	0.41	0.26	0.27
20.24	22.13	7.80	10.12	21.88
0.34	0.30	0.13	0.17	0.37
21.03	21.90	14.63	14.95	21.85
5.00	1.14	22.94	21.94	1.83
0.01	0.01	0.14	0.10	0.00
0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00
101.96	100.10	101.08	102.64	100.75

a 25	a 29	a 31	a 33	a 34	b 8	b 9
69.72	69.97	70.75	66.26	74.04	76.18	73.29
1.00	1.03	1.36	0.71	1.21	1.16	1.01
15.83	14.60	14.65	18.03	15.38	12.68	14.34
0.00	0.03	0.00	0.00	0.00	0.02	0.02
0.58	1.41	0.94	0.38	0.80	1.24	0.81
0.00	0.01	0.01	0.02	0.02	0.01	0.01
0.09	1.61	0.09	0.04	0.05	0.08	0.07
0.47	3.04	0.79	0.33	1.01	0.63	0.75
0.43	0.53	0.57	0.53	0.82	0.74	0.52
12.13	9.99	10.82	14.46	7.69	7.93	10.47
0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.516	102.387	100.39	100.9	101.246	100.887	101.569

b 10	b 11	b 12	b 13	b 14	b 15	b 16
72.41	59.39	69.86	73.42	65.11	74.48	69.73
1.50	1.04	2.89	0.87	0.47	1.15	0.97
13.11	5.17	12.53	12.90	19.00	13.72	12.94
0.00	0.11	0.00	0.00	0.02	0.00	0.00
1.82	11.76	5.30	2.17	0.11	0.96	2.21
0.01	0.15	0.02	0.03	0.00	0.02	0.06
0.10	9.40	0.20	0.06	0.00	0.02	0.87
0.68	14.99	1.39	0.66	0.28	0.42	3.16
0.40	0.33	0.50	0.33	0.51	0.41	0.54
10.31	1.97	8.91	10.31	15.41	10.29	9.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.722	104.491	104.346	102.179	101.034	101.683	99.9966

b 17	b 18	b 19
60.48	74.00	75.32
0.46	1.30	1.04
21.49	13.35	13.72
0.00	0.00	0.00
0.05	1.40	1.06
0.00	0.02	0.01
0.00	0.04	0.00
2.90	0.36	0.52
1.06	0.40	0.58
12.17	10.23	8.97
0.00	0.00	0.00
98.6264	101.725	101.697

PLAGIOCLASE

EPMA data for 14304,187

PLAGIOCLASE

SAMPLE	18	19	20	21	22	23
SiO2	45.16	43.65	44.11	44.42	45.45	44.35
TiO2	0.00	0.00	0.00	0.00	0.00	0.00
Al2O3	34.56	35.45	35.27	35.11	34.65	34.73
Cr2O3	0.00	0.00	0.00	0.00	0.00	0.00
FeO	0.00	0.00	0.00	0.00	0.00	0.00
MnO	0.00	0.00	0.00	0.00	0.00	0.00
MgO	0.00	0.00	0.00	0.00	0.00	0.00
CaO	18.42	18.71	18.79	18.73	18.28	18.68
Na2O	0.95	0.62	0.67	0.70	0.95	0.71
K2O	0.04	0.09	0.07	0.02	0.05	0.01
BaO	0.03	0.02	0.00	0.00	0.00	0.01
TOTAL	99.15	98.55	98.90	98.99	99.37	98.50

OLIVINE

SAMPLE	9	10	11	12	13	14
SiO2	32.59	32.98	34.53	36.43	0.04	33.10
TiO2	0.00	0.00	0.00	0.00	0.00	0.00
Al2O3	0.00	0.00	0.00	0.00	0.00	0.00
Cr2O3	0.02	0.03	0.07	0.14	23.24	0.05
FeO	50.74	49.20	42.71	29.46	42.52	49.22
MnO	0.65	0.59	0.46	0.26	0.55	0.53
MgO	14.76	16.12	22.29	32.84	3.26	16.58
CaO	0.33	0.27	0.30	0.25	0.02	0.29
Na2O	0.00	0.00	0.00	0.00	0.00	0.00
K2O	0.00	0.00	0.00	0.00	0.00	0.00
BaO	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	99.09	99.20	100.40	99.38	69.65	99.75

K-FELDSPAR

24	25	27	28	29	30	31
44.39	45.60	44.49	67.93	44.83	74.53	73.13
0.00	0.00	0.00	0.00	0.00	0.00	0.00
35.13	34.75	34.94	15.27	34.70	13.11	13.67
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
18.75	18.38	18.76	0.78	18.26	1.19	0.31
0.64	0.90	0.68	0.86	0.93	1.23	1.00
0.06	0.07	0.08	11.88	0.15	8.12	10.51
0.00	0.03	0.00	0.04	0.02	0.01	0.03
98.97	99.74	98.93	96.76	98.88	98.19	98.65

PYROXENE

15	16	17	SAMPLE	1	2	3
51.78	32.45	32.11	SiO2	51.44	52.43	52.60
0.00	0.00	0.00	TiO2	0.67	0.63	0.55
0.00	0.00	0.00	Al2O3	1.52	1.36	1.33
0.71	0.03	0.04	Cr2O3	0.73	0.67	0.68
18.53	51.24	51.47	FeO	18.91	19.48	18.42
0.34	0.61	0.61	MnO	0.32	0.28	0.33
19.21	14.65	14.09	MgO	19.71	20.60	21.54
6.58	0.37	0.35	CaO	6.39	4.89	4.20
0.00	0.00	0.00	Na2O	0.02	0.00	0.00
0.00	0.00	0.00	K2O	0.00	0.00	0.00
0.00	0.00	0.00	BaO	0.00	0.00	0.00
97.15	99.35	98.71	TOTAL	99.71	100.35	99.68

32	33
62.62	63.50
0.00	0.00
18.98	19.38
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.28	0.64
0.66	1.00
15.63	14.95
0.65	0.40
98.82	99.86

4	5	6	7	8
48.52	49.46	49.65	54.03	52.27
1.40	1.15	1.52	0.33	0.55
1.45	1.51	1.58	0.77	1.80
0.40	0.56	0.42	0.53	0.81
22.32	20.65	14.83	17.03	17.06
0.35	0.28	0.26	0.32	0.36
11.02	12.73	11.52	24.37	23.01
13.35	12.45	19.46	3.25	3.71
0.06	0.05	0.11	0.00	0.00
0.00	0.00	0.01	0.00	0.00
0.00	0.00	0.00	0.00	0.00
98.86	98.83	99.35	100.64	99.57

EPMA data for 14304,189**PLAGIOCLASE**

SAMPLE	60	61	62	63	64	31
SiO2	44.57	45.39	44.28	45.50	44.93	45.08
TiO2	0.00	0.00	0.00	0.00	0.00	0.00
Al2O3	34.51	34.62	34.62	34.47	34.62	34.79
Cr2O3	0.00	0.00	0.00	0.00	0.00	0.00
FeO	0.00	0.00	0.00	0.00	0.00	0.00
MnO	0.00	0.00	0.00	0.00	0.00	0.00
MgO	0.00	0.00	0.00	0.00	0.00	0.00
CaO	18.60	18.54	18.26	18.61	18.03	18.54
Na2O	0.84	0.85	0.99	0.81	0.99	0.83
K2O	0.10	0.10	0.18	0.14	0.13	0.08
BaO	0.02	0.00	0.00	0.01	0.00	0.05
TOTAL	98.65	99.50	98.33	99.54	98.70	99.37

PYROXENE

SAMPLE	20	21	22	23	24	25
SiO2	51.66	53.10	49.08	52.48	52.18	51.83
TiO2	0.47	0.54	1.38	0.47	0.54	0.48
Al2O3	3.14	1.73	1.56	1.78	1.35	1.44
Cr2O3	0.74	0.85	0.46	0.93	0.74	0.74
FeO	16.51	16.76	21.01	16.25	17.99	18.12
MnO	0.28	0.25	0.34	0.26	0.27	0.33
MgO	23.09	23.41	11.51	23.73	22.84	22.65
CaO	3.61	3.78	14.06	3.69	3.95	3.60
Na2O	0.00	0.00	0.05	0.00	0.01	0.01
K2O	0.02	0.00	0.00	0.00	0.00	0.00
BaO	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	99.54	100.42	99.50	99.59	99.85	99.19

32	33	34	67	37	38	39
45.17	43.87	44.53	53.95	60.48	61.68	64.81
0.00	0.00	0.00	0.00	0.00	0.00	0.00
34.65	35.09	34.42	28.17	19.96	19.93	17.22
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
18.29	18.84	18.57	12.48	1.16	0.78	0.28
0.96	0.69	0.84	2.08	0.83	0.71	0.51
0.10	0.11	0.02	2.46	14.11	14.34	14.85
0.00	0.01	0.04	0.05	2.18	2.54	0.55
99.18	98.61	98.42	99.19	98.71	99.98	98.22

26	27	28	29	30	R 1	R 2
50.13	52.68	52.31	52.57	49.76	36.48	35.90
0.78	0.46	0.48	0.50	1.12	0.04	0.05
1.10	1.45	1.32	1.55	1.46	0.02	0.02
0.50	0.75	0.72	0.80	0.57	0.11	0.09
22.64	17.25	17.85	17.16	22.59	33.34	36.41
0.39	0.23	0.29	0.27	0.42	0.35	0.37
15.85	23.66	22.64	22.96	12.98	29.34	26.72
7.45	3.60	3.77	3.88	10.77	0.21	0.26
0.01	0.00	0.00	0.00	0.04	0.00	0.00
0.00	0.01	0.00	0.00	0.01	0.01	0.01
0.00	0.00	0.00	0.00	0.00	0.00	0.00
98.85	100.10	99.39	99.70	99.71	99.94	99.83

40

61.35

0.00

19.85

0.00

0.00

0.00

0.00

0.85

0.74

14.22

2.48

99.49

R 3

R 4

R 5

R 6

R 7

R 8

50.73

51.50

52.62

52.61

51.72

52.21

0.94

0.58

0.53

0.48

0.67

0.56

1.61

1.85

1.89

1.19

1.40

1.63

0.56

0.82

0.92

0.60

0.56

0.74

20.86

17.44

16.70

19.40

20.40

18.35

0.35

0.31

0.30

0.34

0.34

0.32

15.85

21.19

21.92

21.24

18.78

20.65

9.13

5.51

4.51

3.78

5.94

5.05

0.03

0.01

0.00

0.02

0.02

0.01

0.00

0.00

0.01

0.00

0.02

0.01

0.00

0.00

0.00

0.00

0.00

0.00

100.09

99.23

99.44

99.65

99.84

99.52

EPMA data for 14304,203**PLAGIOCLASE**

SAMPLE	40	41	42	51	53	54
SiO2	45.56	44.25	43.47	44.86	44.35	44.34
TiO2	0.00	0.00	0.00	0.00	0.00	0.00
Al2O3	34.95	35.05	35.03	34.87	35.27	34.77
Cr2O3	0.00	0.00	0.00	0.00	0.00	0.00
FeO	0.00	0.00	0.00	0.00	0.00	0.00
MnO	0.00	0.00	0.00	0.00	0.00	0.00
MgO	0.00	0.00	0.00	0.00	0.00	0.00
CaO	18.91	18.76	18.96	18.61	18.85	18.27
Na2O	0.72	0.70	0.72	0.79	0.72	0.80
K2O	0.10	0.12	0.11	0.09	0.10	0.06
BaO	0.02	0.00	0.00	0.05	0.05	0.01
TOTAL	100.25	98.88	98.29	99.26	99.34	98.26

OLIVINE

SAMPLE	12	13	14	15	16	17
SiO2	36.75	36.85	36.21	35.11	36.05	33.41
TiO2	0.00	0.00	0.00	0.00	0.00	0.00
Al2O3	0.00	0.00	0.00	0.00	0.00	0.00
Cr2O3	0.10	0.10	0.07	0.06	0.06	0.04
FeO	28.92	29.03	32.67	38.34	35.18	43.62
MnO	0.30	0.31	0.36	0.44	0.41	0.51
MgO	33.19	34.36	29.90	25.64	28.43	20.90
CaO	0.19	0.14	0.14	0.21	0.25	0.19
Na2O	0.00	0.00	0.00	0.00	0.00	0.00
K2O	0.00	0.00	0.00	0.00	0.00	0.00
BaO	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	99.44	100.79	99.35	99.80	100.41	98.69

K-FELDSPAR

55	43	45	48	49	50	53
43.16	57.55	59.30	61.83	61.72	62.75	59.69
0.00	0.00	0.00	0.00	0.00	0.00	0.00
35.34	24.13	23.34	20.48	19.56	19.18	22.01
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
18.86	6.75	5.52	1.79	0.81	0.55	3.53
0.64	1.05	1.26	0.77	0.84	0.71	0.89
0.06	9.91	10.30	14.09	14.67	15.21	12.52
0.00	0.42	0.21	0.84	1.42	0.80	0.86
98.06	99.80	99.93	99.80	99.02	99.18	99.50

18	19	20	21	22	23	24
35.90	34.13	33.78	33.71	33.98	33.48	35.83
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23	0.09	0.02	0.07	0.05	0.05	0.06
34.15	43.53	45.96	46.48	44.20	45.24	34.80
0.38	0.52	0.57	0.55	0.54	0.58	0.40
28.52	21.40	19.09	19.02	20.13	19.89	29.29
0.39	0.21	0.17	0.24	0.18	0.19	0.22
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
99.55	99.90	99.60	100.07	99.08	99.43	100.60

PYROXENE						
26	27	28	1	2	3	4
34.76	35.88	33.17	50.57	50.13	50.21	49.50
0.00	0.00	0.00	1.26	1.03	1.19	1.28
0.00	0.00	0.00	1.75	1.22	1.30	1.54
0.14	0.09	0.05	0.46	0.33	0.35	0.38
41.22	32.43	47.16	14.79	21.08	16.05	16.78
0.47	0.36	0.63	0.34	0.34	0.36	0.41
23.66	30.58	18.91	13.13	11.33	12.81	12.64
0.18	0.17	0.20	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.08	0.05	0.08	0.08
0.00	0.00	0.00	0.00	0.00	0.03	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.45	99.51	100.15	99.21	99.66	98.94	99.36

5	6	7	8	9	10	11
50.36	46.03	49.93	49.41	49.90	50.59	49.64
1.12	0.04	1.25	1.43	1.09	1.04	1.35
4.09	33.52	1.61	2.99	3.86	1.42	1.72
1.44	0.01	0.37	0.78	1.31	0.37	0.48
15.42	0.34	15.33	18.27	16.21	17.16	15.38
0.26	0.01	0.29	0.34	0.23	0.38	0.38
19.56	0.08	13.01	14.72	19.71	13.28	12.57
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	1.36	0.12	0.07	0.00	0.09	0.10
0.00	0.19	0.01	0.00	0.00	0.00	0.03
0.00	0.00	0.00	0.00	0.00	0.00	0.00
99.54	99.34	99.07	99.14	99.27	100.10	99.05

EPMA data for 14304,221, thin section 221

PLAGIOCLASE

SAMPLE	16	1	2	4	5	6
SiO2	44.24	44.13	44.82	43.81	44.34	43.93
TiO2	0.00	0.02	0.04	0.00	0.00	0.07
Al2O3	36.02	36.41	35.91	34.82	36.12	36.53
Cr2O3	0.00	0.00	0.01	0.01	0.00	0.00
FeO	0.19	0.20	0.25	1.53	0.17	0.10
MnO	0.01	0.02	0.01	0.01	0.01	0.00
MgO	0.03	0.08	0.09	0.45	0.10	0.02
CaO	19.29	19.62	19.11	19.09	19.45	19.61
Na2O	0.43	0.48	0.71	0.62	0.55	0.47
K2O	0.00	0.00	0.00	0.00	0.00	0.00
BaO	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	100.67	101.03	101.01	100.40	100.78	100.86

OLIVINE

SAMPLE	7	10	11	13	23	31
SiO2	36.96	36.62	36.79	37.39	36.81	36.37
TiO2	0.09	0.00	0.06	0.03	0.05	0.01
Al2O3	0.03	0.00	0.00	0.02	0.00	0.00
Cr2O3	0.14	0.11	0.12	0.12	0.06	0.09
FeO	30.79	31.83	31.90	28.93	32.39	34.08
MnO	0.30	0.29	0.28	0.28	0.31	0.34
MgO	31.30	30.52	30.56	32.38	30.63	28.99
CaO	0.19	0.17	0.18	0.16	0.16	0.25
Na2O	0.00	0.00	0.00	0.00	0.00	0.00
K2O	0.00	0.00	0.00	0.00	0.00	0.00
BaO	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	99.81	99.55	99.90	99.34	100.43	100.15

22	28	7
44.38	44.34	44.58
0.00	0.03	0.00
35.95	35.91	35.80
0.00	0.00	0.01
0.21	0.20	0.28
0.01	0.03	0.03
0.08	0.07	0.22
18.93	19.59	19.54
0.62	0.67	0.57
0.00	0.00	0.00
0.00	0.00	0.00
100.29	100.93	101.09

PYROXENE

32	9	14	15	16	17	21
36.03	51.80	52.74	52.24	50.43	51.38	48.93
0.00	1.29	0.64	0.72	0.97	1.02	0.62
0.00	2.13	1.83	1.73	1.26	1.36	0.75
0.08	0.63	0.79	0.73	0.31	0.32	0.21
34.19	14.82	16.49	16.72	23.56	14.71	28.45
0.37	0.27	0.32	0.31	0.41	0.31	0.44
28.78	17.13	22.15	20.84	14.95	13.69	12.41
0.23	11.53	4.84	6.16	7.53	17.62	6.09
0.00	0.09	0.00	0.01	0.03	0.11	0.02
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
99.81	99.72	99.84	99.45	99.47	100.56	97.93

18	20	29	25	26
49.92	50.22	49.89	53.59	54.45
1.22	1.10	1.56	0.63	1.39
1.43	1.35	1.95	1.67	4.26
0.32	0.27	0.38	0.74	0.43
21.86	23.76	17.25	17.42	11.12
0.35	0.45	0.32	0.37	0.20
11.31	13.41	12.23	21.46	13.47
13.76	9.33	16.79	5.05	12.84
0.05	0.04	0.04	0.02	0.26
0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00
100.25	99.96	100.42	100.96	99.76

EPMA data for 14304,221 thin section 299**PLAGIOCLASE**

SAMPLE	2_1	2_2	2_3	2_4	2_5	2_6
SiO2	45.08	45.27	44.66	44.75	44.54	44.59
TiO2	0.00	0.00	0.01	0.02	0.02	0.02
Al2O3	35.85	35.62	35.76	35.83	36.36	35.34
Cr2O3	0.00	0.00	0.00	0.02	0.02	0.03
FeO	0.32	0.41	0.38	0.27	0.22	2.12
MnO	0.03	0.02	0.02	0.01	0.03	0.00
MgO	0.11	0.13	0.21	0.18	0.08	0.56
CaO	19.08	19.13	19.34	19.92	19.46	18.70
Na2O	0.70	0.80	0.63	0.63	0.60	0.62
K2O	0.07	0.16	0.05	0.02	0.08	0.06
BaO	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	101.27	101.55	101.06	101.68	101.42	102.08

OLIVINE

SAMPLE	1_8	1_9	1_14	2_11	2_13	2_14
SiO2	33.63	32.93	35.28	36.79	37.23	37.13
TiO2	0.00	0.00	0.00	0.00	0.00	0.00
Al2O3	0.00	0.00	0.00	0.01	0.00	0.01
Cr2O3	0.09	0.08	0.13	0.08	0.09	0.06
FeO	42.13	42.44	33.65	32.92	31.15	32.27
MnO	0.50	0.47	0.27	0.31	0.30	0.34
MgO	21.97	21.89	29.88	29.89	31.80	31.03
CaO	0.29	0.29	0.23	0.20	0.20	0.17
Na2O	0.00	0.00	0.00	0.00	0.00	0.00
K2O	0.00	0.00	0.00	0.00	0.00	0.00
BaO	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	98.62	98.09	99.44	100.29	100.87	101.04

2_7	2_8	2_9	2_10	1_12	1_13	1_14
45.33	44.52	75.67	48.22	45.50	44.79	44.70
0.05	0.00	1.11	0.07	0.05	0.02	0.03
35.93	36.06	13.41	33.35	35.71	36.48	36.18
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.33	0.08	0.55	0.45	0.30	0.20	0.19
0.00	0.01	0.03	0.01	0.02	0.02	0.03
0.06	0.03	0.07	0.23	0.11	0.05	0.06
18.78	18.71	0.35	16.87	18.81	18.65	19.19
0.87	0.72	0.43	1.81	0.72	0.62	0.66
0.13	0.08	9.42	0.37	0.31	0.07	0.11
0.00	0.00	0.00	0.00	0.00	0.00	0.00
101.61	100.23	101.19	101.39	101.54	100.94	101.17

2_32	2_15	2_16	2_17	2_18	2_19	2_21
36.44	36.65	30.28	35.11	36.57	37.63	36.11
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.01	0.02	1.38	0.02	0.48	0.02	0.03
0.08	0.10	0.06	0.05	0.06	0.15	0.07
34.86	33.57	30.91	41.91	29.98	28.93	37.88
0.40	0.34	0.32	0.48	0.29	0.29	0.38
28.57	29.46	25.04	23.11	31.13	33.44	26.46
0.20	0.23	0.23	0.17	0.18	0.15	0.25
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.66	100.46	88.42	101.17	98.78	100.61	101.21

2_20	2_22	1_6	1_7	1_8	1_9	1_10
38.36	37.61	36.85	36.99	36.60	34.94	36.57
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.07	0.01	0.01	0.00	0.00	0.01	0.01
0.17	0.09	0.06	0.09	0.06	0.04	0.08
26.16	30.31	33.22	32.85	33.25	42.60	34.68
0.28	0.35	0.34	0.30	0.33	0.49	0.36
35.92	32.44	29.73	30.39	29.77	22.21	28.78
0.14	0.13	0.10	0.15	0.10	0.25	0.11
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
101.17	100.96	100.40	100.85	100.17	100.61	100.61

PYROXENE

1_11	2	3	4	1 1	1 2	1 3
34.60	51.41	51.98	50.83	52.66	49.86	37.16
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.01	1.47	1.52	1.58	1.44	2.01	1.25
0.07	0.63	0.78	0.59	0.68	0.65	0.11
44.26	19.53	17.02	19.85	18.00	16.50	30.58
0.50	0.35	0.29	0.37	0.35	0.30	0.30
20.86	19.66	22.56	18.00	22.31	15.56	30.06
0.19	5.54	4.29	7.30	4.02	12.27	0.16
0.00	0.00	0.00	0.00	0.00	0.02	0.00
0.00	0.00	0.00	0.00	0.01	0.01	0.01
0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.53	99.32	98.98	99.41	100.01	98.46	99.68

1 4	1 5	1 5B	1 6	1 7	2_23	2_24
49.10	36.04	52.46	51.60	52.26	51.80	54.23
0.00	0.00	0.00	0.00	0.00	0.97	0.13
1.93	0.03	0.79	2.32	1.84	2.10	0.19
0.43	0.09	0.52	0.36	0.81	0.83	0.17
17.77	31.56	17.84	19.80	16.78	15.28	21.31
0.27	0.28	0.36	0.32	0.35	0.29	0.31
13.38	31.04	22.89	17.22	19.35	16.53	22.18
13.73	0.21	3.44	5.81	8.38	12.90	2.00
0.02	0.00	0.00	0.12	0.00	0.06	0.01
0.01	0.00	0.00	0.39	0.01	0.00	0.01
0.00	0.00	0.00	0.00	0.00	0.00	0.00
98.24	99.40	98.65	98.99	100.58	100.78	100.55

2_25	2_26	2_27	2_28	2_29	2_30	2_32
53.39	50.35	52.26	53.62	51.60	51.24	53.45
0.59	1.54	0.83	0.50	0.76	0.98	0.58
1.57	2.32	1.57	1.76	1.66	1.53	1.59
0.68	0.64	0.67	0.83	0.45	0.42	0.71
17.01	16.93	18.79	16.60	21.41	21.43	17.56
0.37	0.35	0.36	0.35	0.33	0.37	0.31
22.30	12.99	18.80	23.49	16.30	16.28	22.26
4.52	16.14	7.46	3.63	8.12	7.64	4.35
0.02	0.09	0.04	0.00	0.03	0.03	0.02
0.01	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.46	101.35	100.79	100.78	100.66	99.93	100.83

EPMA data for 14304,324**PLAGIOCLASE**

SAMPLE	1	2	3	4	5	6
SiO2	45.24	45.33	45.16	44.97	45.73	44.86
TiO2	0.01	0.02	0.04	0.01	0.09	0.00
Al2O3	35.44	35.43	35.29	35.90	35.27	35.96
Cr2O3	0.00	0.01	0.00	0.00	0.03	0.00
FeO	0.35	0.59	0.70	0.28	0.48	0.32
MnO	0.00	0.01	0.03	0.01	0.01	0.01
MgO	0.18	0.16	0.56	0.11	0.13	0.13
CaO	19.27	18.30	19.06	19.29	18.92	19.30
Na2O	0.78	0.81	0.70	0.73	0.97	0.65
K2O	0.04	0.09	0.04	0.09	0.15	0.08
BaO	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	101.32	100.78	101.58	101.39	101.78	101.34

OLIVINE

SAMPLE	8	9	10	11	12	13
SiO2	37.09	36.69	34.66	34.16	35.71	35.77
TiO2	0.03	0.05	0.08	0.09	0.10	0.04
Al2O3	0.00	0.00	0.01	0.01	0.01	0.01
Cr2O3	0.09	0.08	0.04	0.05	0.05	0.14
FeO	32.26	33.91	43.45	43.33	38.09	37.25
MnO	0.36	0.33	0.54	0.49	0.42	0.42
MgO	30.85	29.21	21.17	21.08	25.68	26.16
CaO	0.22	0.21	0.19	0.21	0.22	0.26
Na2O	0.00	0.00	0.00	0.02	0.00	0.00
K2O	0.00	0.00	0.00	0.00	0.00	0.00
BaO	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	100.93	100.55	100.22	99.53	100.51	100.05

K-FELDSPAR

7	40	42	43
45.00	47.29	48.54	56.76
0.01	0.00	0.00	0.00
35.89	30.90	31.57	25.44
0.00	0.00	0.00	0.00
0.29	0.00	0.00	0.00
0.02	0.00	0.00	0.00
0.20	0.00	0.00	0.00
19.38	15.77	15.02	8.49
0.71	1.21	1.84	1.37
0.02	0.94	1.50	6.53
0.00	0.18	0.12	0.76
101.54	96.29	98.58	99.35

PYROXENE

14	15	16	17	18	19	20
35.28	36.72	52.94	50.69	52.84	53.19	50.71
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	1.63	1.89	1.45	1.61	1.24
0.05	0.12	0.66	0.55	0.72	0.75	0.35
40.35	33.44	18.02	19.85	18.58	16.93	23.97
0.47	0.36	0.36	0.38	0.32	0.36	0.41
23.69	29.35	22.09	15.56	21.09	23.11	15.84
0.21	0.14	3.55	10.00	4.73	3.58	6.48
0.00	0.01	0.01	0.04	0.02	0.01	0.03
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.09	100.15	99.83	100.23	100.24	100.05	100.16

21	22	23
53.37	50.15	53.31
0.00	0.00	0.00
1.65	1.64	1.74
0.82	0.30	0.85
16.90	18.54	16.72
0.32	0.35	0.34
22.72	11.28	23.23
3.92	16.14	3.83
0.01	0.08	0.00
0.00	0.00	0.00
0.00	0.00	0.00
100.09	99.84	100.44

EPMA data for 14304,221, thin section 326

PLAGIOCLASE

SAMPLE	5	10
SiO2	44.50	44.17
TiO2	0.00	0.02
Al2O3	35.85	36.36
Cr2O3	0.02	0.00
FeO	0.32	0.07
MnO	0.00	0.01
MgO	0.19	0.01
CaO	19.35	19.69
Na2O	0.60	0.56
K2O	0.01	0.09
BaO	0.00	0.00
TOTAL	100.84	100.99

OLIVINE

SAMPLE	3	4	8	11	12	13
SiO2	36.60	36.71	36.59	36.67	36.64	36.47
TiO2	0.03	0.08	0.13	0.03	0.14	0.00
Al2O3	0.00	0.00	0.00	0.00	0.02	0.00
Cr2O3	0.10	0.06	0.09	0.08	0.10	0.07
FeO	33.00	32.95	32.64	32.56	32.64	32.90
MnO	0.27	0.32	0.32	0.32	0.31	0.32
MgO	30.22	30.17	30.18	30.30	30.40	30.35
CaO	0.17	0.19	0.23	0.21	0.20	0.19
Na2O	0.00	0.00	0.00	0.00	0.00	0.00
K2O	0.00	0.00	0.00	0.00	0.00	0.00
BaO	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	100.44	100.55	100.22	100.23	100.51	100.35

PYROXENE

1	2	6	7	9	10
51.99	52.39	50.27	53.82	52.60	52.68
0.73	0.56	1.34	0.56	0.31	0.43
1.91	1.69	1.48	0.72	0.75	0.54
0.81	0.82	0.35	0.27	0.45	0.28
17.35	18.86	22.51	9.35	21.92	24.00
0.37	0.37	0.42	0.19	0.32	0.37
19.48	20.56	13.63	17.10	19.98	20.67
7.50	5.20	10.01	19.50	3.50	0.83
0.02	0.00	0.04	0.09	0.02	0.00
0.00	0.00	0.00	0.01	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00
100.16	100.48	100.06	101.61	99.85	99.80

EPMA data for 14305,380

PLAGIOCLASE

SAMPLE	2	7	6	9	19
SiO2	44.16	44.55	46.29	48.20	62.13
TiO2	0.00	0.00	0.00	0.00	0.00
Al2O3	35.23	34.22	33.15	32.60	19.45
Cr2O3	0.00	0.00	0.00	0.00	0.00
FeO	0.00	0.00	0.00	0.00	0.00
MnO	0.00	0.00	0.00	0.00	0.00
MgO	0.00	0.00	0.00	0.00	0.00
CaO	19.18	18.46	17.82	16.66	0.60
Na2O	0.47	0.83	1.11	1.78	0.69
K2O	0.05	0.31	0.18	0.35	14.12
BaO	0.03	0.04	0.02	0.02	2.85
TOTAL	99.11	98.40	98.57	99.61	99.82

OLIVINE

SAMPLE	1	2	51B	53	14
SiO2	35.77	35.85	31.78	32.25	49.94
TiO2	0.00	0.00	0.00	0.00	1.22
Al2O3	0.00	0.00	0.00	0.00	2.61
Cr2O3	0.07	0.08	0.04	0.05	0.91
FeO	32.98	33.22	53.36	50.84	16.89
MnO	0.28	0.25	0.67	0.62	0.34
MgO	29.63	29.80	13.68	14.88	14.22
CaO	0.23	0.21	0.25	0.26	12.88
Na2O	0.00	0.00	0.00	0.00	0.00
K2O	0.00	0.00	0.00	0.00	0.00
BaO	0.00	0.00	0.00	0.00	0.00
TOTAL	98.96	99.43	99.78	98.90	99.01

PYROXENE

K-FELDSPAR

18	17	14	15	20	20
60.64	61.61	59.84	61.91	62.96	62.96
0.00	0.00	0.00	0.00	0.00	0.00
19.52	19.18	19.63	19.09	18.83	18.83
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00
0.59	0.44	0.56	0.37	0.37	0.37
0.72	0.71	0.89	0.73	0.64	0.64
14.24	14.51	13.29	14.61	15.44	15.44
2.80	2.11	4.34	1.87	0.47	0.47
98.50	98.57	98.55	98.57	98.70	98.70

13	12	11
50.30	51.15	51.04
1.03	0.79	0.71
2.40	2.37	1.84
0.91	1.01	0.70
17.32	17.30	20.67
0.35	0.29	0.28
14.54	19.77	16.21
12.29	6.46	7.98
0.01	0.00	0.00
0.00	0.00	0.01
0.00	0.00	0.00
99.16	99.13	99.42

54	56
60.80	63.33
0.00	0.00
19.98	19.41
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
0.68	0.42
0.63	0.62
14.07	14.54
3.39	2.09
99.55	100.40

EPMA data for 14305,383

PLAGIOCLASE

SAMPLE	18	19	20	21	22	23
SiO2	44.73	46.31	45.12	44.64	44.44	43.59
TiO2	0.00	0.09	0.05	0.00	0.04	0.03
Al2O3	36.03	32.68	35.67	35.94	36.12	32.14
Cr2O3	0.01	0.00	0.00	0.00	0.02	0.02
FeO	0.23	0.30	0.25	0.34	0.43	5.49
MnO	0.00	0.01	0.01	0.01	0.01	0.07
MgO	0.07	0.06	0.05	0.09	0.11	1.39
CaO	19.24	16.74	18.50	18.91	19.24	17.02
Na2O	0.64	0.87	0.94	0.70	0.55	0.73
K2O	0.00	0.00	0.00	0.00	0.00	0.00
BaO	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	101.02	99.09	100.73	100.73	101.07	101.93

OLIVINE

SAMPLE	22	23	24	25	26	6
SiO2	36.48	36.51	39.75	37.61	37.01	51.44
TiO2	0.00	0.00	0.00	0.00	0.00	1.23
Al2O3	0.00	0.00	0.00	0.00	0.00	1.66
Cr2O3	0.07	0.06	0.07	0.09	0.11	0.68
FeO	28.11	25.33	15.31	24.09	26.97	17.12
MnO	0.24	0.21	0.13	0.23	0.26	0.32
MgO	33.53	35.78	44.33	37.20	35.24	17.30
CaO	0.18	0.14	0.14	0.15	0.16	10.44
Na2O	0.00	0.00	0.00	0.00	0.00	0.03
K2O	0.00	0.00	0.00	0.00	0.00	0.00
BaO	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	98.63	98.04	99.74	99.37	99.74	100.24

PYROXENE

24	25	26	27	28	29	30
45.05	45.66	44.47	44.99	45.13	45.81	44.34
0.02	0.01	0.00	0.01	0.00	0.04	0.03
35.29	34.98	35.39	35.35	35.44	34.95	35.90
0.00	0.01	0.00	0.01	0.01	0.00	0.01
0.86	0.28	0.34	0.34	0.15	0.31	0.30
0.03	0.00	0.00	0.02	0.00	0.03	0.02
0.11	0.11	0.12	0.18	0.07	0.12	0.06
18.87	18.50	19.21	19.42	18.97	18.59	19.60
0.86	1.18	0.74	0.89	1.00	1.15	0.66
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
101.40	100.89	100.38	101.34	100.89	101.18	100.99

7	9	11	12	13	14	15
52.38	52.35	49.73	52.37	49.71	52.14	52.72
0.91	0.87	1.93	0.80	1.19	0.90	0.71
1.74	1.63	2.23	1.56	1.46	1.71	1.25
0.77	0.63	0.48	0.67	0.37	0.68	0.59
17.14	18.07	14.27	18.16	20.68	18.45	17.99
0.38	0.36	0.30	0.31	0.33	0.36	0.35
20.41	21.06	12.69	21.38	13.53	19.57	19.90
6.40	4.82	18.25	4.59	11.09	6.49	6.62
0.02	0.01	0.10	0.01	0.04	0.02	0.03
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.16	99.82	99.98	99.87	98.44	100.32	100.18

K-FELDSPAR

30	33 1
46.36	61.76
0.00	0.00
32.72	19.00
0.00	0.00
0.00	0.00
0.00	0.00
0.00	0.00
17.15	0.46
1.58	0.61
0.27	14.73
0.04	1.58
98.12	98.13

16	17
52.10	52.74
0.79	0.71
1.71	1.76
0.58	0.74
17.79	16.97
0.38	0.36
19.90	21.58
6.36	5.19
0.02	0.02
0.00	0.00
0.00	0.00
99.64	100.09

EPMA data for 14305,388**PLAGIOCLASE**

SAMPLE	10	11	12	13	15	16
SiO2	45.25	44.58	44.86	43.71	45.63	44.60
TiO2	0.00	0.00	0.00	0.00	0.00	0.00
Al2O3	35.03	35.03	34.27	35.09	33.50	34.47
Cr2O3	0.00	0.00	0.00	0.00	0.00	0.00
FeO	0.00	0.00	0.00	0.00	0.00	0.00
MnO	0.00	0.00	0.00	0.00	0.00	0.00
MgO	0.00	0.00	0.00	0.00	0.00	0.00
CaO	18.69	19.29	18.26	19.13	18.26	19.08
Na2O	0.86	0.59	0.95	0.65	1.07	0.66
K2O	0.05	0.07	0.16	0.09	0.18	0.01
BaO	0.02	0.06	0.04	0.02	0.00	0.00
TOTAL	99.90	99.61	98.54	98.69	98.64	98.83

OLIVINE

SAMPLE	9	8	5	7	4	3
SiO2	35.66	35.26	32.38	32.70	36.48	35.91
TiO2	0.00	0.00	0.00	0.00	0.00	0.00
Al2O3	0.00	0.00	0.00	0.00	0.00	0.00
Cr2O3	0.09	0.08	0.05	0.03	0.07	0.06
FeO	30.39	33.51	50.46	48.89	28.60	31.24
MnO	0.24	0.37	0.66	0.62	0.30	0.38
MgO	31.49	28.96	15.22	16.18	32.84	31.69
CaO	0.14	0.24	0.29	0.27	0.16	0.20
Na2O	0.00	0.00	0.00	0.00	0.00	0.00
K2O	0.00	0.00	0.00	0.00	0.00	0.00
BaO	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	98.02	98.44	99.07	98.70	98.48	99.50

K-FELDSPAR

17	18	29	28	27	33
44.87	45.26	45.17	63.81	60.09	60.40
0.00	0.00	0.00	0.00	0.00	0.00
34.07	34.60	33.36	18.98	19.72	19.89
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00
18.62	19.06	18.34	0.36	0.69	0.72
0.84	0.66	1.01	0.68	0.92	0.82
0.05	0.01	0.19	15.76	13.24	13.95
0.02	0.01	0.02	0.15	3.94	2.73
98.45	99.62	98.08	99.74	98.61	98.52

PYROXENE

1	2	10	24	31	21	20
32.61	35.90	32.42	51.67	51.43	51.49	51.48
0.00	0.00	0.00	0.61	0.65	0.65	0.73
0.00	0.00	0.00	1.94	2.25	2.02	2.14
0.05	0.09	0.04	0.85	0.97	0.88	0.92
49.44	33.16	49.60	18.08	17.19	18.10	18.38
0.65	0.39	0.62	0.35	0.31	0.39	0.37
15.76	29.64	16.18	20.04	20.78	19.73	18.69
0.25	0.21	0.30	5.70	5.42	6.48	7.48
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
98.75	99.43	99.15	99.27	99.00	99.77	100.20

19	23
49.89	51.10
1.40	0.65
1.71	2.44
0.34	1.03
16.01	17.95
0.39	0.30
10.97	20.16
18.11	5.20
0.07	0.00
0.00	0.00
0.00	0.00
98.90	98.82

EPMA data for 14305,393**PLAGIOCLASE**

SAMPLE	27	28	29	30	31	36
SiO2	45.17	45.20	44.69	44.78	45.03	44.89
TiO2	0.00	0.00	0.00	0.00	0.00	0.00
Al2O3	35.31	35.33	35.25	34.84	35.02	34.87
Cr2O3	0.00	0.00	0.00	0.00	0.00	0.00
FeO	0.00	0.00	0.00	0.00	0.00	0.00
MnO	0.00	0.00	0.00	0.00	0.00	0.00
MgO	0.00	0.00	0.00	0.00	0.00	0.00
CaO	18.22	18.60	18.53	18.50	18.33	18.41
Na2O	0.80	0.67	0.69	0.75	0.72	0.73
K2O	0.14	0.09	0.08	0.05	0.12	0.07
BaO	0.02	0.00	0.00	0.00	0.01	0.01
TOTAL	99.65	99.90	99.23	98.92	99.22	98.98

OLIVINE

SAMPLE	12	13	14	15	16	17
SiO2	32.22	31.77	31.87	31.75	31.67	32.33
TiO2	0.00	0.00	0.00	0.00	0.00	0.00
Al2O3	0.00	0.00	0.00	0.00	0.00	0.00
Cr2O3	0.00	0.00	0.00	0.00	0.00	0.00
FeO	48.03	50.66	51.02	50.49	49.40	47.28
MnO	0.55	0.64	0.57	0.64	0.54	0.50
MgO	16.95	15.18	15.30	15.11	16.49	17.79
CaO	0.26	0.28	0.30	0.21	0.28	0.23
Na2O	0.00	0.00	0.00	0.00	0.00	0.00
K2O	0.00	0.00	0.00	0.00	0.00	0.00
BaO	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	98.10	98.56	99.11	98.26	98.40	98.19

K-FELDSPAR

37	41	45	32	33	34	38
44.34	44.10	45.78	59.47	61.77	61.23	63.80
0.00	0.00	0.00	0.00	0.00	0.00	0.00
34.94	35.01	33.64	20.16	19.59	19.53	19.26
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
18.69	18.80	17.17	0.76	0.46	0.76	0.50
0.62	0.62	0.69	0.89	0.91	1.03	0.71
0.03	0.03	1.27	12.71	13.74	13.70	14.64
0.00	0.00	0.00	4.65	2.94	2.02	1.79
98.62	98.56	98.54	98.63	99.42	98.26	100.70

PYROXENE

18	19	24	1	5	3	4
31.88	32.22	31.99	51.31	48.32	52.84	52.20
0.00	0.00	0.00	0.65	1.35	0.60	0.50
0.00	0.00	0.00	1.77	3.26	1.87	1.53
0.00	0.00	0.00	0.77	0.33	0.89	0.78
49.74	50.20	50.40	18.50	15.01	18.11	17.63
0.54	0.59	0.68	0.32	0.23	0.30	0.40
15.64	14.93	15.13	19.71	10.73	21.07	21.40
0.24	0.30	0.30	5.49	18.67	5.15	4.91
0.00	0.00	0.00	0.00	0.10	0.00	0.00
0.00	0.00	0.00	0.00	0.01	0.01	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
98.11	98.27	98.54	98.55	98.03	100.82	99.36

39	40	42	44
63.70	65.10	59.93	61.03
0.00	0.00	0.00	0.00
18.70	18.38	19.60	18.75
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00
0.29	0.34	0.39	0.71
0.54	0.60	0.65	0.70
15.33	14.91	13.76	14.44
0.20	0.20	3.99	0.59
98.77	99.53	98.32	96.22

6	7	8	9	10	11	12
50.53	49.70	51.93	51.29	36.91	51.46	51.42
0.72	1.25	0.56	0.57	0.07	0.64	0.77
1.59	1.34	1.83	1.72	0.02	1.87	1.61
0.71	0.34	0.86	0.85	0.09	0.83	0.70
19.08	18.83	17.59	17.25	33.22	18.72	19.98
0.27	0.34	0.29	0.35	0.40	0.40	0.36
17.49	9.51	20.83	20.11	29.44	19.95	17.32
8.35	18.18	4.86	5.87	0.21	5.76	7.66
0.00	0.07	0.00	0.00	0.00	0.00	0.00
0.01	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00
98.79	99.57	98.76	98.00	100.39	99.67	99.84

Element	2452	2453	2454	2455	2457	2458
(ppm)Ca43	137227.58	136655.11	134743.28	132441.23	16262.73	16262.73
Sc45	0.74	0.00	0.72	2.88	47.16	62.34
Ti47	307.61	246.57	378.20	642.16	3781.08	7028.60
Cr53	<5.66	7.69	7.74	13.55	1661.96	4977.58
Mn55	42.07	61.09	38.14	96.65	2008.87	2001.30
Co59	1.57	1.66	2.77	2.30	32.31	30.44
Ni60	<4.25	4.04	7.02	<3.41	23.19	34.39
Ga69	6.94	6.09	10.95	5.72	0.00	1.09
Rb85	0.36	0.27	0.28	0.24	0.00	0.12
Sr86	245.64	226.59	251.31	228.92	<2.42	2.68
Sr88	234.16	228.63	266.10	227.96	1.55	0.45
Y89	0.90	0.97	2.90	5.79	22.19	26.72
Zr90	3.03	2.13	7.36	9.99	12.91	43.88
Nb93	0.27	0.08	0.60	0.33	0.06	7.35
Cs133	<0.065	0.00	0.00	0.00	0.00	<0.036
Ba137	67.36	45.77	179.38	51.42	0.79	0.59
Ba138	69.65	46.82	185.69	51.73	0.52	0.71
La139	1.86	1.34	4.18	2.00	0.14	0.41
Ce140	4.55	2.82	7.80	4.83	0.56	1.00
Pr141	0.37	0.36	1.05	0.60	0.05	0.22
Nd146	2.35	1.68	4.33	3.57	1.15	1.44
Sm147	0.54	0.27	0.65	0.92	0.91	0.93
Eu153	1.21	1.42	2.30	1.36	0.05	0.05
Tb159	0.00	0.00	0.10	0.17	0.41	0.38
Gd160	0.00	0.00	1.02	0.74	1.69	2.06
Dy163	0.38	0.16	0.77	1.05	3.18	4.59
Ho165	0.04	0.04	0.12	0.17	0.84	1.02
Er166	0.00	0.00	0.26	0.47	2.95	3.53
Tm169	<0.034	0.00	0.08	0.04	0.46	0.59
Yb172	0.17	0.13	0.29	0.54	3.44	4.92
Lu175	0.00	0.00	0.00	0.10	0.53	0.80
Hf180	0.07	0.04	0.16	0.31	0.41	1.28
Ta181	<0.028	0.00	0.05	<0.029	<0.0178	0.24
Pb208	0.20	0.28	0.39	<0.095	<0.044	0.07
Th232	0.12	0.02	0.23	0.11	0.01	0.10
U238	<0.0160	0.01	0.04	0.02	<0.0102	0.02

2459	24510	24511	24512	24513	24516	24517
1415.39	17943.71	15020.94	140044.94	135575.91	139470.31	139195.16
6.75	15.17	12.58	1.43	7.02	0.87	0.67
332.80	1238.51	938.90	572.84	4553.21	330.09	324.27
316.82	479.28	390.39	28.11	64.24	0.00	0.00
974.72	648.31	548.84	71.44	170.24	41.01	37.19
31.31	5.31	5.42	2.50	2.57	2.31	0.85
108.87	7.74	6.17	4.75	6.19	4.93	0.00
<0.23	1.95	1.67	8.12	10.45	5.86	6.55
0.00	0.43	0.11	0.62	1.89	0.17	0.00
1.31	24.42	14.60	247.75	241.31	289.64	251.14
0.74	23.01	14.68	254.66	250.83	289.61	245.71
1.76	23.39	16.23	3.18	46.24	1.34	1.35
1.53	37.17	23.95	15.28	74.02	1.11	0.30
0.05	0.65	0.21	0.80	7.35	0.00	0.00
0.00	0.02	<0.0084	<0.063	0.07	0.00	0.00
0.69	34.33	23.90	79.25	99.91	77.27	54.11
0.99	35.24	24.67	84.71	101.27	76.43	55.42
0.07	1.00	0.70	2.16	11.79	1.81	1.37
0.09	2.70	2.26	5.34	30.43	3.86	3.24
0.02	0.45	0.36	0.67	4.51	0.43	0.41
0.13	2.51	2.09	2.75	22.06	2.41	1.63
0.06	1.11	0.83	0.84	6.75	0.32	0.41
0.02	0.25	0.17	1.61	1.65	2.65	1.61
0.00	0.44	0.37	0.06	1.41	0.00	0.00
0.00	2.08	1.61	0.74	7.19	0.44	0.23
0.32	4.06	2.48	0.76	9.44	0.28	0.20
0.06	0.89	0.57	0.22	2.02	0.04	0.06
0.18	2.85	1.81	0.35	5.36	0.00	0.10
0.06	0.53	0.33	0.03	0.63	0.00	0.00
0.48	3.45	2.21	0.35	4.39	0.19	0.15
0.06	0.48	0.31	0.05	0.53	0.00	0.00
0.05	1.07	0.78	0.28	1.33	0.04	0.05
<0.0070	0.01	0.01	0.04	0.33	0.00	0.00
0.04	0.15	0.16	0.21	0.47	0.09	0.11
0.01	0.14	0.08	0.29	1.33	0.04	0.02
0.01	0.03	0.03	0.05	0.28	0.02	0.01

24521	24520
139616.11	139616.11
1.32	0.72
1133.54	375.47
98.52	0.00
64.77	42.27
2.25	0.00
14.75	0.00
7.89	5.44
0.62	0.00
244.70	235.36
245.92	239.33
6.51	0.73
43.74	1.11
2.97	0.04
<0.058	0.00
110.06	51.56
108.62	48.95
3.97	1.06
9.02	2.63
1.17	0.40
4.35	1.09
1.30	0.00
1.51	1.54
0.17	0.00
1.31	0.46
1.44	0.00
0.24	0.06
0.81	0.11
0.09	0.00
0.74	0.00
0.07	0.00
1.02	0.03
0.09	0.00
0.60	0.10
1.10	0.01
0.22	0.02