TABLE DR1. ELECTRON MICROPROBE ANALYSES OF PLAGIOCLASE CRYSTALS WITHIN RHYODACITIC PUMICE SAMPLES

sample	D1	D1-1	D1-1	C1-1	C1-1	C1-2	C1-2	C1-2	C1-2	C1-2
zone	core	core	rim	core	rim	core	rim	rim	core	core
SiO_2	61.47	59.23	59.59	58.28	61.17	59.55	60.43	59.96	54.73	58.75
TiO_2	0.01	0.02	0.03	0.04	0.00	0.00	0.03	0.00	0.00	0.00
Al_2O_3	24.11	24.72	23.25	25.43	24.12	24.34	23.96	24.44	27.93	25.18
FeO	0.32	0.30	0.32	0.37	0.23	0.36	0.36	0.34	0.34	0.39
MnO	0.00	0.05	0.04	0.01	0.00	0.00	0.00	0.00	0.02	0.01
MgO	0.00	0.00	0.00	0.03	0.02	0.03	0.01	0.01	0.03	0.02
CaO	5.71	6.93	5.84	8.24	6.45	7.03	6.40	7.06	11.09	7.92
Na_2O	7.86	7.25	7.47	6.50	7.43	7.08	7.33	7.13	5.18	6.68
K_2O	0.78	0.69	0.93	0.48	0.70	0.64	0.71	0.65	0.29	0.57
Total	100.28	99.21	97.49	99.43	100.21	99.10	99.30	99.61	99.65	99.54

Key for sample: number after sample indicates crystal number; i.e. sample C1 has 2 different crystals (1 and 2).

TABLE DR2. ELECTRON MICROPROBE ANALYSES OF GLASS WITHIN RHYODACITIC SAMPLES

sample	D1	D1	I1	I1	I1	I1	I1	C1	C1	C1	C1
SiO_2	73.03	73.38	71.79	73.61	73.54	73.62	73.70	72.92	72.54	72.73	72.43
TiO_2	0.31	0.31	0.25	0.24	0.27	0.29	0.32	0.35	0.33	0.30	0.38
Al_2O_3	14.15	14.16	13.78	13.96	13.91	14.02	13.99	13.85	13.92	13.86	13.82
FeO	1.86	1.74	1.73	1.68	1.79	1.66	1.66	1.93	1.74	1.84	1.76
MnO	0.06	0.06	0.03	0.04	0.06	0.05	0.05	0.08	0.05	0.05	0.02
MgO	0.22	0.22	0.16	0.16	0.19	0.16	0.19	0.19	0.22	0.22	0.23
CaO	0.99	0.97	0.83	0.86	0.83	0.82	0.86	0.93	0.95	0.97	0.91
Na_2O	2.91	2.91	3.69	2.68	2.87	2.80	2.67	3.86	3.77	3.52	3.75
K_2O	4.46	4.39	4.68	4.58	4.68	4.73	4.64	4.52	4.56	4.53	4.54
Total	97.98	98.15	96.95	97.80	98.14	98.19	98.11	98.79	98.16	98.15	97.96

TABLE DR3. ELECTRON MICROPROBE ANALYSES OF PYROXENE CRYSTALS WITHIN RHYODACITIC PUMICE SAMPLES (C1)

Mineral zone	Opx	Opx	Opx	Opx core	Opx rim	Opx core	Opx rim	Cpx core	Cpx rim	Cpx core	Cpx rim	Cpx	Cpx
SiO_2	52.09	52.55	52.67	53.30	52.93	52.72	52.00	52.47	52.59	52.45	52.29	52.44	52.24
TiO_2	0.20	0.23	0.17	0.26	0.15	0.34	0.11	0.36	0.24	0.35	0.22	0.32	0.39
Al_2O_3	0.37	0.40	0.36	0.37	0.44	1.07	0.35	0.84	0.84	0.85	0.84	0.86	1.19
FeO	24.51	23.34	23.57	23.74	25.11	21.93	23.71	11.75	11.89	11.71	11.83	11.46	11.87
MnO	0.95	0.90	0.86	0.90	0.94	0.67	1.00	0.51	0.51	0.43	0.51	0.51	0.54
MgO	19.90	20.01	20.06	20.83	19.80	21.77	19.57	13.61	13.58	13.48	13.52	13.73	13.92
CaO	1.43	1.43	1.41	1.45	1.42	1.73	1.49	20.39	20.36	20.31	20.13	20.34	19.80
Na_2O	0.04	0.03	0.05	0.04	0.06	0.05	0.04	0.36	0.33	0.35	0.34	0.34	0.34
K_2O	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.00	0.00	0.00	0.01	0.01	0.00
Total	99.48	98.92	99.18	100.91	100.88	100.30	98.30	100.30	100.33	100.01	99.82	100.02	100.30

Key for minerals: Opx-orthopyroxene, Cpx: clinopyroxene (augite)

TABLE DR4. ELECTRON MICROPROBE ANALYSES OF Fe-Ti PHENOCRYSTS AND MICROPHENOCRYSTALS WITHIN THE RHYODACITIC SAMPLES

sample	C1	C1	C1	C1	C1	C1	C1	C1	C1
mineral	il	il	il	Mt core	Mt rim	Mt core	Mt rim	Mt core	Mt rim
SiO_2	0.52	0.00	0.00	0.01	0.00	0.00	0.00	0.04	0.05
TiO_2	48.31	48.43	48.56	16.52	16.52	16.07	16.23	16.27	15.95
Al_2O_3	0.17	0.15	0.18	1.43	1.53	1.59	1.64	1.68	1.66
FeO	44.06	45.10	45.28	74.11	74.22	71.93	72.43	71.42	70.66
MnO	0.69	0.70	0.69	0.46	0.56	0.58	0.55	0.55	0.57
MgO	2.44	2.51	2.37	1.29	1.21	1.34	1.55	1.54	1.53
CaO	0.03	0.02	0.01	0.01	0.03	0.71	0.02	0.00	0.00
Na_2O	0.00	0.01	0.00	0.02	0.00	0.04	0.02	0.00	0.01
K_2O	0.02	0.02	0.02	0.02	0.01	0.02	0.00	0.00	0.00
Total	96.26	96.97	97.14	93.96	94.17	92.33	92.50	91.56	90.50

Key for minerals: il-ilmenite; Mt-magnetite

TABLE DR5a. ELECTRON MICROPROBE ANALYSES OF PLAGIOCLASE CRYSTALS FOR THE ANDESITIC PUMICE SAMPLES (P2)

crystal	1	1	2	3	3	4	5	6	6	7	8	9	9	9	10
zone	core	rim	plag	core	rim	plag	plag	core	rim	plag	plag	in core	out core	out rim	plag
SiO_2	50.15	51.83	46.63	50.72	52.54	48.29	53.89	47.74	53.27	51.11	49.46	49.49	53.41	49.79	48.54
TiO_2	0.03	0.03	0.01	0.09	0.00	0.00	0.06	0.00	0.02	0.04	0.02	0.06	0.08	0.03	0.00
Al_2O_3	30.74	29.48	32.70	30.53	28.58	32.25	28.08	32.34	29.13	29.89	31.07	30.98	28.84	31.30	31.29
FeO	0.44	0.45	0.48	0.45	0.44	0.55	0.58	0.52	0.48	0.51	0.47	0.45	0.40	0.51	0.48
MnO	0.01	0.00	0.01	0.00	0.00	0.02	0.00	0.03	0.01	0.01	0.00	0.00	0.00	0.00	0.00
MgO	0.05	0.05	0.05	0.03	0.03	0.05	0.09	0.03	0.05	0.05	0.06	0.08	0.04	0.03	0.04
CaO	14.00	12.82	16.93	14.49	12.51	16.00	11.82	16.00	12.60	13.76	15.13	14.89	12.21	14.91	15.16
Na_2O	3.45	4.13	1.88	3.41	4.30	2.54	4.63	2.03	4.40	3.72	2.98	3.09	4.47	2.98	2.90
K_2O	0.12	0.18	0.05	0.13	0.18	0.09	0.29	0.07	0.21	0.14	0.11	0.11	0.20	0.10	0.09
Total	99.00	98.96	98.75	99.90	98.63	99.78	99.47	98.75	100.29	99.24	99.37	99.17	99.70	99.68	98.54

TABLE DR5b. ELECTRON MICROPROBE ANALYSES OF THE ZONED PLAGIOCLASE CRYSTALS SHOWN IN FIGURE 9

point	1	2	3	4	5	6	7	8	9	10
zone	outer pl	outer pl	inner pl	inner pl	inner pl	melt incl	inner pl	outer pl	outer pl	inner pl
	rim	core	rim	core	core	in pl	core	core	rim	rim
SiO_2	53.18	53.13	48.89	49.49	49.65	66.26	48.51	53.30	52.71	49.64
TiO_2	0.00	0.03	0.03	0.00	0.04	3.69	0.00	0.02	0.00	0.02
Al_2O_3	28.55	28.61	31.37	31.11	31.13	12.17	31.82	28.63	28.32	31.17
FeO	0.44	0.43	0.47	0.50	0.47	3.45	0.51	0.40	0.48	0.55
MnO	0.02	0.00	0.00	0.00	0.04	0.17	0.00	0.01	0.01	0.01
MgO	0.03	0.10	0.04	0.06	0.04	0.12	0.06	0.08	0.10	0.07
CaO	12.11	12.24	15.39	15.05	14.97	1.04	15.74	12.17	12.37	15.01
Na_2O	4.51	4.42	2.59	2.93	2.89	2.52	2.48	4.51	4.81	2.93
K_2O	0.21	0.21	0.10	0.12	0.09	6.66	0.07	0.24	0.22	0.11
Total	99.09	99.24	98.92	99.28	99.38	96.17	99.21	99.40	99.20	99.57

Point number are indicated in figure 9.

TABLE DR6. ELECTRON MICROPROBE ANALYSES OF MATRIX GLASS AND GLASS INCLUSIONS IN PHENOCRYSTS FOR ANDESITIC PUMICE SAMPLES

sample	glass	glass	glass	glass	glass	melt incl in opx	melt incl in opx	melt incl in ilm
SiO_2	67.12	66.09	66.50	67.42	67.51	67.64	67.42	67.70
TiO_2	0.86	0.82	0.75	0.75	0.85	0.93	0.96	1.15
Al_2O_3	15.85	15.69	15.79	16.24	15.79	17.31	17.32	16.63
FeO	4.46	4.05	4.20	4.13	4.26	3.87	4.29	5.03
MnO	0.11	0.08	0.07	0.09	0.11	0.08	0.04	0.14
MgO	1.14	1.00	1.09	1.00	1.15	0.84	1.08	1.41
CaO	3.02	2.76	2.87	3.36	3.18	2.55	2.41	4.15
Na_2O	3.97	3.08	4.31	4.79	4.52	4.92	5.05	4.90
K_2O	3.28	3.30	3.31	3.17	3.32	3.19	3.28	2.40
Total	99.84	96.87	99.02	101.01	100.82	101.45	102.03	103.66

TABLE DR7. ELECTRON MICROPROBE ANALYSES OF PYROXENE CRYSTALS FOR THE ANDESITIC PUMICE SAMPLES (P2)

Cristal #	1	1*	2	3	4	4	5	5	6	7	7*	8
Min/zone	opx core	opx rim	opx core	opx rim	opx rim	opx core	cpx core	cpx rim	cpx	cpx core	cpx rim	cpx
SiO_2	54.01	54.00	53.81	54.30	54.10	54.05	52.26	51.23	51.79	52.31	51.82	52.86
TiO_2	0.38	0.28	0.28	0.36	0.34	0.30	0.73	0.87	0.80	0.49	0.86	0.63
Al_2O_3	1.18	0.89	1.03	1.05	1.23	1.07	2.20	2.62	2.43	1.72	2.68	1.91
FeO	16.66	18.17	18.46	17.21	17.81	18.46	8.38	9.07	9.15	9.10	9.03	8.66
MnO	0.42	0.48	0.49	0.45	0.47	0.49	0.26	0.24	0.25	0.31	0.19	0.28
MgO	26.16	25.14	24.67	26.05	25.62	25.57	15.60	15.02	15.20	15.36	15.41	15.72
CaO	1.64	1.46	1.49	1.58	1.63	1.60	20.83	20.70	20.57	20.85	20.70	20.96
Na_2O	0.04	0.04	0.00	0.01	0.00	0.01	0.32	0.30	0.36	0.30	0.29	0.29
K_2O	0.02	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.02	0.00	0.01	0.01
Total	100.57	100.48	100.22	101.06	101.21	101.63	100.70	100.10	100.65	100.49	100.98	101.41

Key for minerals: opx-orthopyroxene; cpx-clinopyroxene.

TABLE DR10. ELECTRON MICROPROBE ANALYSES OF ILMENITE AND MAGNETITE CRYSTALS FOR THE ANDESITIC PUMICE SAMPLES (P2)

Crystal #	1	1	2	3	4	5	6	7	7	7	8	8	9	9
Mineral zone	ilm core	ilm rim	ilm	ilm centre	ilm	ilm	ilm	mt rim	mt core	mt rim	mt core	mt rim	mt rim	mt core
SiO_2	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.02	0.08	0.00	0.00	0.05	0.09	0.04
TiO_2	48.15	48.05	46.58	46.44	48.19	46.95	46.75	15.90	15.79	15.70	16.25	15.64	15.78	15.99
Al_2O_3	0.34	0.30	0.30	0.34	0.39	0.33	0.30	2.88	3.05	3.04	2.99	2.97	2.96	3.06
FeO	45.36	45.43	45.52	46.00	45.44	45.54	45.36	73.53	73.50	73.32	70.39	69.04	72.26	72.42
MnO	0.46	0.50	0.46	0.34	0.49	0.38	0.47	0.45	0.40	0.36	0.35	0.46	0.38	0.44
MgO	4.32	4.31	4.45	4.35	4.47	4.38	4.35	2.95	2.85	2.87	2.74	2.97	3.00	3.00
CaO	0.02	0.03	0.00	0.02	0.02	0.01	0.04	0.00	0.01	0.00	0.03	0.05	0.00	0.00
Na_2O	0.00	0.01	0.00	0.00	0.04	0.00	0.02	0.01	0.01	0.02	0.02	0.01	0.00	0.06
K_2O	0.00	0.02	0.01	0.01	0.00	0.01	0.03	0.03	0.00	0.00	0.02	0.04	0.04	0.00
Total	98.71	98.71	97.38	97.54	99.11	97.61	97.37	95.82	95.83	95.41	92.88	91.29	94.58	95.02