

Sample	H87-201	81009	H92-68	U94-R112	DML-5	J81-214
Age, Ma	36.8	36.8	27.3-27.0	27.3-27.0		
Long W	104 40*	103 45	103 59.5	104 02	103 52	104 54
Lat N	30 32.5*	30 31	29 24.8	29 25	30 32	31 26
SiO2	67.47	68.02	69.06	70.31	67.75	68.64
TiO2	0.54	0.06	0.33	0.28	0.10	0.34
Al2O3	12.61	14.56	15.46	14.71	15.50	15.42
Fe2O3	1.88	4.83			0.54	1.16
FeO	3.65	0.10			2.73	1.78
FeO*			3.35	3.18		
MnO	0.22	0.08	0.09	0.14	0.12	0.06
MgO	0.23	0.11		0.56	0.20	0.24
CaO	1.50	0.22	0.49	0.95	0.56	1.35
Na2O	4.62	4.78	5.73	5.99	5.26	5.14
K2O	5.02	5.68	5.45	5.59	5.22	5.14
P2O5		0.07	0.06	0.11	0.10	0.08
H2O+	1.99	0.47				0.07
H2O-		0.35				
CO2	0.11					0.25
Total	99.84	99.33	99.55	101.82	98.08	99.67
SiO2'	69.03	69.05	69.06	69.06	69.08	69.09
(Na2O+K2O)'	9.86	10.62	11.18	11.37	10.69	10.35
Sc			4			
V						3
Cr						
Ni			12			3
Cu			5			4
Zn		93	166			87
Ga			32			
Rb			173	173		258
Sr			13	8		220
Y	84		82	79		70
Zr			987	807		560
Nb			171.2	139		70
Cs						
Ba			28			400
La	77		181			
Ce	173		363			
Pr	23					
Nd	75					
Sm	16					
Eu	2.4					
Gd	16					
Tb	2.5					
Dy	15					
Ho	3					
Er	10.1					
Tm	1.3					
Yb	9.3					
Lu	1.4					

Hf						
Ta						
Pb			19			
Th			25			32
U						
Li						
F						2000
Rb/Sr			13.3	21.6		1.17
Cen/Ybn	5.03					
Eu*	0.45					
Zr/Hf						
Ba/Rb			0.16			1.55
Rb/Th			6.92			8.06
$^{87}\text{Sr}/^{86}\text{Sr}_i$						0.7063
$^{143}\text{Nd}/^{144}\text{Nd}$						
$^{206}\text{Pb}/^{204}\text{Pb}$						
$^{207}\text{Pb}/^{204}\text{Pb}$						
$^{208}\text{Pb}/^{204}\text{Pb}$						

Sample	J85-76	R-41	H88-68	H87-197	H87-199	DML-4
Age, Ma	36.8	38.4-36.9	36.8	36.8	36.8	35.9
Long W	104 45*		103 40.6	104 45*	104 45*	103 49
Lat N	30 30*		30 39.2	30 30*	30 30*	30 32
SiO2	69.12	66.85	69.15	68.03	68.45	68.44
TiO2	0.56	0.62	0.72	0.52	0.52	0.32
Al2O3	12.86	14.11	14.64	13.03	13.05	14.59
Fe2O3	4.50	4.09	2.69	5.79	5.26	0.72
FeO	1.46	0.29	2.36	0.13	0.68	3.60
FeO*						
MnO	0.22	0.06	0.26	0.08	0.16	0.11
MgO	0.28	0.11	0.16	0.31	0.24	
CaO	0.56	1.25	1.22	0.56	0.57	0.61
Na2O	4.34	3.92	4.94	4.59	4.46	4.57
K2O	5.58	5.20	5.50	5.27	5.43	5.72
P2O5	0.06	0.20	0.08			0.14
H2O+	0.56	1.96	0.42	0.69	0.56	
H2O-		0.76				
CO2		0.03				
Total	100.20	99.45	99.90	99.06	99.48	98.82
SiO2'	69.12	69.13	69.15	69.16	69.20	69.26
(Na2O+K2O)'	9.96	9.43	10.44	10.02	10.00	10.41
Sc						
V						
Cr						
Ni						
Cu						
Zn						
Ga			23			
Rb			102			
Sr			1			
Y	80		58	82	79	
Zr			522			
Nb			40*			
Cs						
Ba			19			
La	72			75	87	
Ce	171			157	173	
Pr	20					
Nd	71			69	87	
Sm	15					
Eu	2.4			2.4	2.6	
Gd	14			15	16	
Tb						
Dy	15			14	16	
Ho						
Er	8.7			9.4	8.9	
Tm						
Yb	8.9			8.6	8.9	
Lu	1.3			1.3	1.2	

Hf						
Ta						
Pb						
Th						
U						
Li						
F	1000					
Rb/Sr			102*			
Cen/Ybn	5.19			4.93	5.25	
Eu*	0.5					
Zr/Hf						
Ba/Rb			0.19			
Rb/Th						
87Sr/86Sr,l						
143Nd/144Nd						
206Pb/204Pb						
207Pb/204Pb						
208Pb/204Pb						

Sample	Tr-73	MN-38	PP-8	H87-203	DML-2	87110
Age, Ma	27.3-27.0	36.3	36.3	36.8	36.8	36.8
Long W	103 59.9	103 50.4		104 45*	103 45	103 47
Lat N	29 28	30 18.7		30 30*	30 31	30 42.6
SiO2	69.28	69.29	69.24	67.09	68.40	69.30
TiO2	0.41	0.29	0.32	0.54	0.72	0.54
Al2O3	16.33	13.85	15.10	12.66	13.21	14.80
Fe2O3		4.43		2.15	0.94	
FeO				3.20	3.88	
FeO*	1.29		3.44			3.06
MnO	0.02	0.16	0.05	0.20	0.23	0.07
MgO	0.10	0.14	0.17	0.26	0.18	0.03
CaO	1.58	0.70	0.61	1.59	1.33	0.34
Na2O	5.21	5.41	5.64	4.29	4.34	5.65
K2O	5.68	5.68	5.24	4.80	5.33	6.04
P2O5	0.11	0.04	0.07		0.11	0.14
H2O+				2.64		
H2O-						
CO2				0.15		
Total	100.01	100	99.88	99.57	98.67	99.97
SiO2'	69.27	69.29	69.32	69.32	69.32	69.33
(Na2O+K2O)'	10.89	11.09	10.89	9.39	9.80	11.69
Sc	5.42	8.85				
V	33.2	31				
Cr	2.67					
Ni	22.7					
Cu						
Zn	76	123				
Ga						
Rb	140	146	191			105
Sr	99	50	99			12
Y	84	101	88	84		55
Zr	678	1040	1302			525
Nb	122	101	200			51*
Cs	0.91					
Ba	302		28			
La	129	115		75		
Ce	213	203		168		
Pr				21		
Nd	93	113	137.3	73		55.2
Sm	14.1	18.3	23.2	16		11.4
Eu	0.74	1.26		2.4		
Gd				16		
Tb	3.02	2.95		2.6		
Dy				15		
Ho				2.9		
Er				10.2		
Tm				1.3		
Yb	6.92	11.1		9.4		
Lu	0.9	1.59		1.4		

Hf	20.4	24.9			
Ta	2.1	5			
Pb			20.9		14.5
Th	17.7	19.8	29.8		10.6
U	3.72		6.87		1.78
Li					
F					
Rb/Sr	1.41	2.92	1.93		8.75
Cen/Ybn	8.32	4.94		4.83	
Eu*	0.14	0.2		0.45	
Zr/Hf	33.2	41.8			
Ba/Rb	2.16		0.15		
Rb/Th	7.91	7.37	6.41		9.91
87Sr/86Sr,l					
143Nd/144Nd			0.512546		0.512539
206Pb/204Pb			17.812		18.051
207Pb/204Pb			15.483		15.494
208Pb/204Pb			37.796		37.946

Sample	TH7	PP92	MH82	DM141	PP189	H91-210
Age, Ma		36.3		36.8	36.3	27.04
Long W	105 23.1		103 05	103 59.6	103 44	104 01.8
Lat N	31 16.4		29 17	30 50.9	33 19	29 29.2
SiO2	69.34	68.50	69.39	68.05	68.77	69.39
TiO2	0.30	0.34	0.20	0.51	0.24	0.36
Al2O3	15.28	14.60	12.27	11.95	15.33	15.30
Fe2O3	3.26	2.40	1.44	1.25	1.74	
FeO		1.04	5.92	5.16	0.93	
FeO*						3.30
MnO	0.11	0.08	0.15	0.14	0.24	0.04
MgO	0.28	0.16	0.12	0.94	0.11	0.01
CaO	1.27	0.70	1.12	0.97	0.34	0.55
Na2O	4.92	5.67	4.48	4.11	6.51	5.31
K2O	5.23	5.21	4.83	4.91	4.79	5.71
P2O5	0.12	0.06	0.12	0.09	0.07	0.04
H2O+		0.83			0.24	
H2O-		0.13			0.02	
CO2		0.06			0.02	
Total	100	99.78	100.04	98.08	99.40	99.51
SiO2'	69.34	69.36	69.36	69.38	69.38	69.39
(Na2O+K2O)'	10.15	11.02	9.31	9.20	11.40	11.02
Sc			3.39	0.49		10
V						5
Cr			2.3	1.74		
Ni						9
Cu						4
Zn		99	246	222	93	146
Ga						31
Rb	199	177	284	95.9	178	168
Sr	156	7	28	58.5		20
Y	87	277	110		76	72
Zr	550	1363	761	937	1003	905
Nb	55*	271	125	50.6	228	134.1
Cs			2.48	1.43		
Ba			352	90		88
La				92.7		110
Ce				171		254
Pr						
Nd				83.3		
Sm				17.03		
Eu				0.49		
Gd						
Tb				4.66		
Dy						
Ho						
Er						
Tm						
Yb				13.55		
Lu				1.78		

Hf			28.1	27.51		
Ta			10.23	11.48		
Pb						16
Th	25		25.59	16.91		22
U			8.19	4.88		
Li						
F						
Rb/Sr	1.28	25.3	10.1	1.64		8.4
Cen/Ybn				3.41		
Eu*				0.07		
Zr/Hf			27.1	34.1		
Ba/Rb			1.24	0.94		0.52
Rb/Th	7.96		11.1	5.67		7.64
87Sr/86Sr,l						
143Nd/144Nd						
206Pb/204Pb						
207Pb/204Pb						
208Pb/204Pb						

Sample	NCB6	J85-72	J81-223	DM108	TPC414	H87-204
Age, Ma	36.8	36.8		36.8	33.3	36.8
Long W	103 35	104 45*	104 50	103 44.9	103 17	104 45*
Lat N	30 16	30 30*	31 28	30 46.9	29 15	30 30*
SiO2	65.77	69.52	67.77	68.33	68.85	68.61
TiO2	0.44	0.54	0.11	0.43	0.30	0.53
Al2O3	14.03	12.58	14.73	14.13	14.50	13.03
Fe2O3	6.40	4.30	3.17	0.90	4.54	4.32
FeO		1.68	0.21	3.72	0.07	1.40
FeO*						
MnO	0.21	0.16	0.11	0.10	0.06	0.17
MgO	0.47	0.29	0.08	0.20	0.04	0.40
CaO	0.77	1.16	0.87	0.62	0.22	1.15
Na2O	4.16	4.56	5.71	4.21	4.95	3.89
K2O	5.82	5.23	4.06	5.50	5.32	6.81
P2O5	0.16	0.06		0.06	0.06	
H2O+		0.48	0.58		0.24	0.61
H2O-					0.26	
CO2		0.22	0.10		0.01	0.32
Total	98.23	100.79	97.50	98.20	99.42	99.43
SiO2'	69.41	69.46	69.51	69.58	69.61	69.65
(Na2O+K2O)'	10.53	9.78	10.02	9.89	10.38	10.86
Sc	13.09			15.6		
V						
Cr	1.66					
Ni			4		6	
Cu			18			
Zn	122		360		123	
Ga						
Rb	97		520	106	209	
Sr			61	38	4	
Y	56.9	76	160	75	59	71
Zr	540		380	482	1017	
Nb	33.47		47	33*	89*	
Cs	1.22			0.87		
Ba	1180		11	118		
La	53.55	71		61		68
Ce	120	156		139		152
Pr		19				
Nd	73.08	70		53.6		66
Sm	12.17	14		11.29		
Eu	3.86	2.2		1.27		2.2
Gd		15				15
Tb	2.03			1.6		
Dy		14				14
Ho						
Er		9.1				8.9
Tm						
Yb	6.25	7.7		6.42		7.9
Lu	0.84	1.2		0.86		1.2

Hf	11.05			15.78		
Ta	2.07			2.87		
Pb						
Th	7.95		55	8.67		
U				1.5		
Li						
F		700	5600			
Rb/Sr			8.52	2.79	52.3	
Cen/Ybn	5.19	5.48		5.85		5.2
Eu*	0.93*	0.46		0.34		
Zr/Hf	48.9			30.5		
Ba/Rb	12.2		0.02	1.11		
Rb/Th	12.2		9.45	12.2		
⁸⁷ Sr/ ⁸⁶ Sr _l						
¹⁴³ Nd/ ¹⁴⁴ Nd						
²⁰⁶ Pb/ ²⁰⁴ Pb						
²⁰⁷ Pb/ ²⁰⁴ Pb						
²⁰⁸ Pb/ ²⁰⁴ Pb						

Sample	DM155	DM115	QM247	H91-181	R-157	Tr-63
Age, Ma	35.3	36.5		33.3	38.4-36.9	27.3-27.0
Long W	104 05.7	103 56.9	105 30	103 53.6		104 01.9
Lat N	30 40.2	30 49.7	31 10	29 28.1		29 28.8
SiO2	68.63	69.38	69.68	69.68	67.92	69.70
TiO2	0.61	0.38	0.25	0.40	0.49	0.37
Al2O3	14.63	14.53	15.70	15.36	13.52	15.73
Fe2O3	0.61	0.72	0.66		3.63	
FeO	2.50	2.96	0.68		0.12	
FeO*				2.50		3.01
MnO	0.10	0.07	0.07	0.17	0.06	0.05
MgO	0.25	0.28	0.13	0.21	0.39	0.17
CaO	0.51	0.44	0.88	1.15	1.70	0.98
Na2O	4.83	5.43	4.92	6.03	3.94	4.47
K2O	5.78	5.36	6.99	4.36	5.56	5.46
P2O5	0.08	0.05	0.04	0.14	0.15	0.07
H2O+					1.18	
H2O-					0.71	
CO2					0.55	
Total	98.53	99.58	100	98.47	99.92	100.01
SiO2'	69.65	69.67	69.68	69.68	69.68	69.69
(Na2O+K2O)'	10.77	10.84	11.87	10.39	9.75	9.93
Sc	3.65	5.21	1.24	5		5.87
V				10		20.1
Cr	2.95	2.04	6.2			3.47
Ni			2	7		18
Cu			7	6		
Zn	119	144	38	74		111
Ga				15		
Rb	184	190	207	54		145
Sr		44.5	54	170		95
Y		187	80	40		82
Zr	983	1050	181*	651		751
Nb		81.5	61	64		126
Cs	1.48	2	2.59			1.02
Ba	296	84	151	2134		295
La	121	148	53.9	68		162
Ce	247	252	132	147		276
Pr						
Nd	94.6	118	68.2			110
Sm	16.57	20.49	10.5			16
Eu	1.44	1.31	0.69			
Gd						
Tb	3.64	3.33	1.82			3.28
Dy						
Ho			2.6			
Er						
Tm						
Yb	10.79	12.8	5.8			7.38
Lu	1.5	1.8	0.84			0.98

Hf	29.24	31.43	6.4			21.7
Ta	9.85	6.76	5.5			4.55
Pb				8		
Th	39.7	23.22	16	6		20.6
U	10.41	5.27	2			6.23
Li			10			
F			610			
Rb/Sr		4.27	3.83	0.32		1.53
Cen/Ybn	6.19	5.32	6.15			10.1
Eu*	0.24	0.19	0.19			
Zr/Hf	33.6	33.4	28.3			34.6
Ba/Rb	1.61	0.44	0.73	39.5		2.03
Rb/Th	4.63	8.18	12.9	9		7.04
87Sr/86Sr,l						
143Nd/144Nd						
206Pb/204Pb		17.82				
207Pb/204Pb		15.47				
208Pb/204Pb		37.73				

Sample	85601	TPC428	DM160	87601	H88-87	H82-61
Age, Ma	36.8		36.8	35.6	32.8	32
Long W	103 43.3	103 14	104 0.8	103 55	103 50.9	104 33
Lat N	30 54.0	29 17	30 53.5	30 35	30 32.3	29 56
SiO2	69.68	68.95	69.57	69.00	69.79	69.87
TiO2	0.49	0.27	0.51	0.50	0.17	0.57
Al2O3	13.67	14.53	12.06	14.20	15.10	14.91
Fe2O3		4.17	1.26			1.71
FeO		0.15	5.18			0.95
FeO*	4.73			2.95	2.81	
MnO	0.23	0.08	0.04	0.09	0.15	0.10
MgO	0.11	0.02	0.61	0.12	0.10	0.61
CaO	1.00	0.61	0.82	0.77	0.40	1.41
Na2O	4.75	4.81	3.97	4.99	6.43	4.47
K2O	5.27	5.31	5.56	6.21	5.02	5.40
P2O5	0.06	0.02	0.17	0.10	0.02	
H2O+		0.60			0.41	
H2O-		0.21				
CO2		0.13				
Total	99.99	99.86	99.75	98.93	99.67	100
SiO2'	69.69	69.70	69.74	69.75	69.79	69.87
(Na2O+K2O)'	10.02	10.23	9.55	11.32	11.45	9.87
Sc			1.39		4	
V						
Cr			2.68			
Ni					13	
Cu					3	
Zn		126	210		121	
Ga					22	
Rb	164	261	168	236	185	
Sr	12.5	15		25	10	
Y	57	77		113	66	
Zr	567	830	936	931	627	
Nb	53	79		122	83	
Cs			1.12			
Ba	27		121	144		
La			108		95	
Ce			225		175	
Pr						
Nd	74.1		103			
Sm	15.1		20.47			
Eu			1.14			
Gd						
Tb			4.31			
Dy						
Ho						
Er						
Tm						
Yb			12.03			
Lu			1.67			

Hf			26.64		
Ta			5.97		18
Pb	16.3				14
Th	12		14.63		
U	2.7		3.35		
Li					
F					
Rb/Sr	13.1	17.4		9.44	18.5
Cen/Ybn			5.06		
Eu*			0.15		
Zr/Hf			35.1		
Ba/Rb	0.16		0.72	0.61	
Rb/Th	13.7		11.5		13.2
87Sr/86Sr,l					
143Nd/144Nd	0.512565				
206Pb/204Pb	17.881				
207Pb/204Pb	15.471				
208Pb/204Pb	37.909				

Sample	81-173	DM106	DM111	J81-204	MS-2	SL-2
Age, Ma	36	36.5	36.8	32		32
Long W	104 22	103 56.9	103 48.4	104 33	103 52	104 32.7
Lat N	30 06.2	30 49.7	30 39	29 56	30 52	29 55.5
SiO2	69.35	70.59	69.46	69.94	70.00	69.13
TiO2	0.44	0.38	0.44	0.56	0.20	0.63
Al2O3	15.64	15.66	13.81	14.58	14.85	14.03
Fe2O3	1.90	0.74	0.92	2.55	2.37	1.73
FeO	0.33	3.04	3.79	0.17	1.11	1.80
FeO*						
MnO	0.07	0.05	0.04	0.08	0.22	0.12
MgO	0.29	0.15	0.41	0.46	0.12	0.73
CaO	1.18	0.37	0.70	2.09	0.37	1.50
Na2O	4.57	4.54	4.11	3.69	5.70	4.06
K2O	5.38	5.43	5.50	5.75	5.05	4.80
P2O5	0.08	0.05	0.16	0.13	0.05	0.24
H2O+	0.22				0.58	0.38
H2O-					0.24	0.22
CO2	0.10				0.05	0.03
Total	99.55	101.00	99.34	100	100.91	99.40
SiO2'	69.89	69.89	69.92	69.94	69.97	69.99
(Na2O+K2O)'	10.03	9.87	9.67	9.44	10.75	8.97
Sc		4.81	5.39			
V						
Cr		1.76	2.47			
Ni						
Cu						
Zn		138	187			98
Ga						
Rb	141	190	174		202	225
Sr	183	47	43.3		14	15
Y	37	138	144		55	152
Zr	401	1012	998		729	940
Nb	35*	74.7*	58.4*		102	214
Cs		1.95	2.25			
Ba	921	112	97		15	
La		162	135			
Ce		252	241			
Pr						
Nd		126	129			
Sm		23.33	23.72			
Eu		1.33	2.03			
Gd						
Tb		4.31	3.97			
Dy						
Ho						
Er						
Tm						
Yb		13.11	14.1			
Lu		1.7	1.92			

Hf		28.15	27.72			
Ta		6.09	5.21			
Pb						
Th		22.11	18.55			
U		5.53	3.21			
Li						
F						
Rb/Sr	0.77	4.04	4.02		14.4	15
Cen/Ybn		5.2	4.62			
Eu*		0.16	0.25			
Zr/Hf		36	36			
Ba/Rb	6.53	0.59	0.56		0.07	
Rb/Th		8.59	9.38			
87Sr/86Sr,l						
143Nd/144Nd						
206Pb/204Pb						
207Pb/204Pb						
208Pb/204Pb						

Sample	DM121	J81-224	DM136	77023	H89-68	PP111
Age, Ma	35.6		35.6-35.3	36.3	36.8	36.3
Long W	103 57.6	104 54	104 01.8	103 44	103 53.2	103 46
Lat N	30 36.6	31 26	30 39.9	30 20	30 48.4	30 17.5
SiO2	68.97	69.02	68.73	65.96	70.17	69.10
TiO2	0.50	0.48	0.50	0.38	0.57	0.29
Al2O3	14.25	16.39	14.30	13.71	13.75	15.72
Fe2O3	0.69	0.32	0.69	0.96	3.21	1.72
FeO	2.84	0.26	2.83	2.59	1.80	0.47
FeO*						
MnO	0.06	0.01	0.09	0.07	0.11	0.04
MgO	0.03	0.16	0.07	0.12	0.27	0.06
CaO	0.80	0.75	0.86	0.83	1.03	0.39
Na2O	4.33	4.69	4.53	3.75	3.57	5.45
K2O	5.88	6.33	5.28	5.63	4.59	5.17
P2O5	0.13	0.04	0.12	0.10	0.05	0.04
H2O+		0.26		3.66	3.50	0.62
H2O-				1.40		0.16
CO2		0.15		0.12		
Total	98.48	98.86	98.00	99.24	100.45	99.23
SiO2'	70.03	70.11	70.13	70.13	70.17	70.19
(Na2O+K2O)'	10.37	11.19	10.01	9.97	8.16	10.79
Sc	5.36		4.53			
V						
Cr	1.6		1.52			
Ni						
Cu		5				
Zn	114	52	99.7	105		
Ga					26	
Rb	223	274	215	320	304	172
Sr	65.7	61	53.3	11	40	
Y	117	70	125	49	99	84
Zr	890	1200	827	1070	937	1001
Nb	83*	106*	101	74*	61	140
Cs	1.91		2.18			
Ba	196	110	132		324	
La	112		137			
Ce	218		210			
Pr						
Nd	91		87.8			
Sm	15.59		15.85			
Eu	0.74		0.64			
Gd						
Tb	2.45		3.01			
Dy						
Ho						
Er						
Tm						
Yb	9.76		9.22			
Lu	1.34		1.25			

Hf	26.4		26.12		
Ta	6.91		6.78		
Pb					
Th	26.55	30	26.42		
U	8.18		8.03		
Li					
F		2600			
Rb/Sr	3.39	4.49	4.03	29.1	7.6
Cen/Ybn	6.04		6.16		
Eu*	0.14		0.12		
Zr/Hf	33.7		31.7		
Ba/Rb	0.88	0.4	0.61		1.07
Rb/Th	8.4	9.13	8.14		
87Sr/86Sr,l					
143Nd/144Nd					
206Pb/204Pb					
207Pb/204Pb					
208Pb/204Pb					

Sample	MN9	PP359	DM107A	DM138	H89-1	PP376
Age, Ma	36.3	36.3	36.8	35.3	35.6	
Long W	103 50.4		103 56.7	104 05.6	103 44.9	103 51
Lat N	30 18.7		30 49.3	30 40.5	30 46.9	30 24
SiO2	70.22	69.56	70.32	69.07	70.24	69.65
TiO2	0.14	0.30	0.48	0.46	0.56	0.41
Al2O3	14.74	15.04	11.87	14.78	14.55	13.04
Fe2O3	3.52	2.00	1.23	0.55	2.46	3.20
FeO		0.80	5.07	2.28	0.97	1.98
FeO*						
MnO	0.13	0.13	0.15	0.10	0.09	0.15
MgO	0.05	0.05	0.76	0.03	0.16	0.04
CaO	0.51	0.18	0.76	0.65	0.49	0.18
Na2O	5.76	6.11	4.08	4.59	4.40	6.19
K2O	4.89	4.74	5.26	5.73	6.03	4.22
P2O5	0.04	0.05	0.15	0.10	0.05	0.08
H2O+		0.27			0.53	0.25
H2O-		0.19				0.19
CO2						0.04
Total	100	99.50	100.13	98.34	99.40	99.62
SiO2'	70.22	70.23	70.23	70.24	70.24	70.25
(Na2O+K2O)'	10.65	10.96	9.33	10.49	10.43	10.50
Sc	1.93		1.59	2.59		
V	21					
Cr			3.06	0.97		
Ni						
Cu						
Zn	234		210	75.7		194
Ga						
Rb	219		183	214		335
Sr	43		43.8	62.7	30	
Y	145		117	122		297
Zr	1366		1044	587		2489
Nb	266		63.8	86.1		425
Cs			1.83	2.79		
Ba	762		160	131	310	
La	294		123	98.9		
Ce	342		268	176		
Pr						
Nd			104	63		
Sm			19.15	11.8		
Eu	0.69		1.17	0.5		
Gd						
Tb	4.43		3.36	2.11		
Dy						
Ho						
Er						
Tm						
Yb			13.21	7.46		
Lu			1.9	1.07		

Hf	33.9		30.49	18.07		
Ta	11.3		5.78	7.28		
Pb						
Th	31.1		21.28	36.13		
U			1.97	11.52		
Li						
F						
Rb/Sr	5.09		4.18	3.41		
Cen/Ybn			5.48	6.38		
Eu*			0.18	0.12		
Zr/Hf	40.3		34.2	32.5		
Ba/Rb	3.48		0.87	0.61		
Rb/Th	7.04		8.6	5.92		
$^{87}\text{Sr}/^{86}\text{Sr}_i$						
$^{143}\text{Nd}/^{144}\text{Nd}$						
$^{206}\text{Pb}/^{204}\text{Pb}$			17.92			
$^{207}\text{Pb}/^{204}\text{Pb}$			15.47			
$^{208}\text{Pb}/^{204}\text{Pb}$			37.86			

Sample	MN35	BSP	BB83-2	W96-28	H89-12	W95-4
Age, Ma	36.3	35.6		27.3-27.0	35.3	27.3-27.0
Long W	103 50.4	104 12.9	103 19	104 02	103 55.4	104 03.8
Lat N	30 18.7	30 31.7	29 17	29 27	30 38.6	29 24.3
SiO2	70.27	69.36	69.52	70.43	70.34	69.94
TiO2	0.29	0.48	0.12	0.33	0.38	0.30
Al2O3	13.58	14.05	13.90	15.82	14.68	13.85
Fe2O3	4.54	3.30	4.32			
FeO		0.29				
FeO*				2.02	2.64	3.44
MnO	0.11	0.02	0.04		0.08	0.17
MgO	0.12	0.13	0.21	0.40	0.16	0.41
CaO	0.60	0.82	0.67	0.36	0.95	0.98
Na2O	5.14	4.56	4.62	5.10	4.00	4.44
K2O	5.26	5.60	5.45	5.60	6.71	5.71
P2O5	0.09	0.06	0.06		0.05	0.17
H2O+		0.40			3.74	
H2O-		0.08				
CO2		0.38				
Total	100	99.53	99.01	100.19	99.98	99.41
SiO2'	70.27	70.29	70.29	70.30	70.34	70.37
(Na2O+K2O)'	10.40	10.30	10.18	10.68	10.71	10.21
Sc	8.69		0.57	8.09	5	6.52
V	15					
Cr			2.39		4	
Ni					15	
Cu					3	
Zn	114	92	151	114	86	154
Ga					26	
Rb	139	233	261	185	265	171
Sr	56	10	55	13	75	23
Y	92	90	105	78	78	78
Zr	993	1048	594	1136	605	996
Nb	103	176	114	161	85	143
Cs			2.95	1.14		
Ba			327		269	
La	109		147	155	100	154
Ce	198		292	312	219	299
Pr						
Nd	98		120	121		127
Sm	17.5		21.95	16.6		16.7
Eu	1.15		0.19	0.858		0.726
Gd						
Tb	2.58		3.76	2.69		2.06
Dy						
Ho						
Er						
Tm						
Yb	9.9		9.4	8.92		8.42
Lu	1.37		1.17	1.28		1.19

Hf	24.1		21.08	27.7		24.1
Ta	5.1		9.59	9.61	19	7.71
Pb					33	
Th	20		29.83	26.8		21.8
U			5.62			4.21
Li						
F						
Rb/Sr	2.48	23.3	4.75	14.2	3.53	7.43
Cen/Ybn	5.41		8.4	9.46		9.6
Eu*	0.2		0.03	0.15		0.14
Zr/Hf	41.2		28.2	41		41.3
Ba/Rb			1.25		1.02	
Rb/Th	6.95		8.8	6.9	8.03	7.84
87Sr/86Sr,l						
143Nd/144Nd						
206Pb/204Pb						
207Pb/204Pb						
208Pb/204Pb						

Sample	PP6	H89-51	MN37	MN8	PP47	C432
Age, Ma	36.3	35.3	36.3	36.3	36.3	32
Long W		103 57	103 50.4	103 50.4	103 42.5	104 29.5
Lat N		30 40.7	30 18.7	30 18.7	30 18	29 53.7
SiO2	69.60	70.42	70.44	70.46	69.20	69.29
TiO2	0.12	0.51	0.28	0.16	0.22	0.40
Al2O3	14.20	14.13	13.37	13.83	14.70	13.97
Fe2O3	2.77		4.34	4.24	2.53	0.97
FeO	0.62				0.60	2.38
FeO*		2.92				
MnO	0.20	0.09	0.12	0.06	0.06	0.05
MgO	0.06	0.40	0.13		0.14	0.51
CaO	0.17	0.82	0.81	0.68	0.50	0.75
Na2O	6.41	3.91	5.07	5.40	4.95	4.02
K2O	4.69	6.72	5.34	5.12	5.26	5.76
P2O5	0.04	0.07	0.10	0.06	0.05	0.18
H2O+	0.40	2.86			0.78	0.44
H2O-	0.08				0.14	0.20
CO2	0.10				0.02	0.36
Total	99.46	97.33	100	100	99.15	99.30
SiO2'	70.39	70.42	70.44	70.46	70.46	70.49
(Na2O+K2O)'	11.23	10.63	10.41	10.52	10.40	9.95
Sc			8.27	2.3		
V			31	22		
Cr						
Ni						
Cu						
Zn			121	256	84	74
Ga						
Rb	315		107	232	213	185
Sr	6	57	54	44	16	156
Y	148		101	144	166	50
Zr	1483		1018	1368	524	277
Nb	121		111	257	262	69
Cs						
Ba		300	754	688		
La			126	258		
Ce			208	446		
Pr						
Nd			117	202		
Sm			18.7	34.8		
Eu			1.17	0.97		
Gd						
Tb			2.79	4.19		
Dy						
Ho						
Er						
Tm						
Yb			9.4			
Lu			1.34	2.09		

Hf			23.8	37.6		
Ta			5.3	12		
Pb						
Th			20.2	34.5		
U						
Li						
F						
Rb/Sr	52.5		1.81	5.27	13.3	1.19
Cen/Ybn			5.98			
Eu*			0.19	0.09		
Zr/Hf			42.8	36.4		
Ba/Rb			7.05	2.97		
Rb/Th			5.3	6.72		
$^{87}\text{Sr}/^{86}\text{Sr}_i$						
$^{143}\text{Nd}/^{144}\text{Nd}$						
$^{206}\text{Pb}/^{204}\text{Pb}$						
$^{207}\text{Pb}/^{204}\text{Pb}$						
$^{208}\text{Pb}/^{204}\text{Pb}$						

Sample	H88-71	C487	87864	DM116	DM143	DM114
Age, Ma	36.8	36.8	35.3	36.5	35.6	36.5
Long W	103 34.9	104 21	104 02	103 56.9	104 12.9	103 56.9
Lat N	30 35.4	29 58	30 33.5	30 49.6	30 31.7	30 49.7
SiO2	70.54	70.03	70.66	69.18	68.93	69.40
TiO2	0.54	0.55	0.47	0.33	0.33	0.44
Al2O3	13.35	14.70	14.75	14.48	13.73	13.45
Fe2O3	1.26	1.74		0.70	0.52	0.79
FeO	3.75	1.37		2.90	2.19	3.27
FeO*			3.20			
MnO	0.16	0.09	0.11	0.11	0.12	0.06
MgO	0.14	0.66		0.37	0.53	0.21
CaO	1.51	0.12	0.14	0.60	1.00	0.78
Na2O	4.14	4.40	4.80	3.36	4.26	4.11
K2O	4.65	5.11	5.80	5.82	5.78	5.51
P2O5	0.05	0.21	0.06	0.04	0.10	0.12
H2O+	2.40	0.32				
H2O-		0.24				
CO2	0.18	0.01				
Total	100.49	99.75	99.99	97.89	97.49	98.14
SiO2'	70.54	70.61	70.67	70.67	70.70	70.72
(Na2O+K2O)'	8.79	9.59	10.60	9.38	10.30	9.80
Sc				7.05	3.31	4.92
V						
Cr				3.03		2.35
Ni						
Cu						
Zn		81		198	103	142
Ga	19					
Rb	232	162	296	262	337	190
Sr	34	208	9	47.8	62.2	47.9
Y	104	63	93	133		134
Zr	909	307	1039	1460	653	1020
Nb	60	70	162	80.4*		85*
Cs				2.61	3.72	2.55
Ba	323		56	64	143	65
La				143	155	134
Ce				342	285	224
Pr						
Nd			110.6	114	107	108
Sm			20.7	19.92	20.44	19.33
Eu				1.16	0.47	1.22
Gd						
Tb				4.47	3.43	3.06
Dy						
Ho						
Er						
Tm						
Yb				13	11.9	12.57
Lu				1.77	1.6	1.75

Hf				42.71	23.75	29.98
Ta				9.33	10.06	6.39
Pb			29.3			
Th			58	23.16	52.8	22.79
U			11.18	5.33	14.31	5.74
Li						
F						
Rb/Sr	6.82	0.78	32.9	5.48	5.42	3.97
Cen/Ybn				7.11	6.47	4.82
Eu*				0.16	0.07	0.19
Zr/Hf				34.2	27.5	34
Ba/Rb	1.39		0.19	0.24	0.42	0.34
Rb/Th			5.1	11.3	6.38	8.34
87Sr/86Sr,l			0.70517			
143Nd/144Nd			0.512676			
206Pb/204Pb			17.693			
207Pb/204Pb			15.458			
208Pb/204Pb			37.541			

Sample	DM145	J87-67	H89-151	DM113	H92-21	BS-4
Age, Ma	35.3	35.6	35.3	35.6	27.3-27.0	35.6
Long W	104 07.1	103 55.3	104 00.6	103 46	104 02.4	103 47.5
Lat N	30 42.5	30 35.9	30 34.4	30 49.1	29 27.7	30 50.1
SiO2	69.40	70.75	70.81	69.79	70.85	70.88
TiO2	0.36	0.49	0.38	0.51	0.30	0.53
Al2O3	14.32	14.08	14.12	13.99	14.67	14.24
Fe2O3	0.58		3.38	0.64		
FeO	2.40			2.64		
FeO*		3.22			3.24	3.41
MnO	0.03	0.09	0.09	0.04	0.06	0.04
MgO	0.13	0.02	0.09	0.38	0.13	0.10
CaO	0.91	0.64	0.57	0.83	0.48	0.39
Na2O	4.45	4.63	4.60	3.97	4.78	4.69
K2O	5.37	6.03	5.92	5.56	5.48	5.65
P2O5	0.14	0.06	0.02	0.17	0.02	0.07
H2O+		0.34	0.71			
H2O-						
CO2						
Total	98.09	99.67	99.33	98.52	98.78	99.99
SiO2'	70.75	70.75	70.81	70.84	70.85	70.89
(Na2O+K2O)'	10.01	10.66	10.52	9.67	10.26	10.34
Sc	3.62			5.69	6	
V						
Cr	1.43	1		2.91		
Ni		10			9	
Cu		4			4	
Zn	88.9	98		112	164	
Ga		25			30	
Rb	259	234		204	190	218
Sr	63.3	28	20	57.9	17	25
Y	93.7	92		87.5	83	72
Zr	704	883		902	896	697
Nb	46.5*	108		71.8	181.1	116
Cs	2.28			2.23		
Ba	216	115	83	309	21	190
La	143	108		112	238	
Ce	228	259		220	532	
Pr						
Nd	86.2			81.9		84.3
Sm	15.89			16.08		15.8
Eu	0.67			0.96		
Gd						
Tb	3.08			2.34		
Dy						
Ho						
Er						
Tm						
Yb	10.58			10.27		
Lu	1.4			1.43		

Hf	22			26.76		
Ta	10.7	23		7		
Pb		25			14	24.5
Th	39.36			26.82	31	28.6
U	7.64			5.83		5.62
Li						
F						
Rb/Sr	4.09	8.36		3.52	11.2	8.72
Cen/Ybn	5.83			5.79		
Eu*	0.12			0.18		
Zr/Hf	32			33.7		
Ba/Rb	0.83	0.49		1.51	0.11	0.87
Rb/Th	6.58	9.36		7.61	6.13	7.62
$^{87}\text{Sr}/^{86}\text{Sr}_i$						0.70673
$^{143}\text{Nd}/^{144}\text{Nd}$						0.512628
$^{206}\text{Pb}/^{204}\text{Pb}$	17.81					17.714
$^{207}\text{Pb}/^{204}\text{Pb}$	15.47					15.463
$^{208}\text{Pb}/^{204}\text{Pb}$	37.88					37.54

Sample	84205	81-83	MGE799	88526	TPC419	W96-30
Age, Ma	36.5	36	36	36.8	33	27.3-27.0
Long W	104 08	104 21	104 25.1	103 45	103 15	104 00.1
Lat N	30 56.3	30 6.2	30 03	30 33	29 15	29 26.8
SiO2	70.80	70.54	71.78	70.95	70.22	71.01
TiO2	0.42	0.43	0.45	0.63	0.31	0.32
Al2O3	13.30	14.82	14.87	13.49	12.18	15.08
Fe2O3		2.26	2.34		4.21	
FeO					1.30	
FeO*	4.12			4.67		2.96
MnO	0.13	0.07	0.05	0.13	0.07	0.03
MgO	0.13	0.37	0.25	0.11	0.03	0.33
CaO	0.41	1.15	0.98	0.35	0.42	0.20
Na2O	4.85	4.46	4.37	3.71	5.14	5.22
K2O	5.64	5.25	5.09	5.88	5.02	4.79
P2O5	0.03	0.09	0.09	0.07	0.05	0.11
H2O+		0.17	0.27		0.27	
H2O-					0.21	
CO2		0.05			0.05	
Total	99.83	99.66	100.54	99.99	99.48	100.05
SiO2'	70.92	70.94	70.94	70.96	70.97	70.98
(Na2O+K2O)'	10.51	9.76	9.51	9.59	10.27	10.01
Sc						
V						
Cr						
Ni					15	
Cu						
Zn					194	
Ga						
Rb	211	144	140	162	421	148
Sr	12	147	158	33.8	14	6
Y	97	37	36	84	139	72
Zr	1237	364	356	889	1907	967
Nb	130	57	37	74*	203	145
Cs						
Ba	139	820	898	393		
La						
Ce						
Pr						
Nd				88.6		
Sm				18.3		
Eu						
Gd						
Tb						
Dy						
Ho						
Er						
Tm						
Yb						
Lu						

Hf						
Ta						
Pb				22.5		
Th				16.4		
U				4.39		
Li						
F						
Rb/Sr	17.6	0.98	0.89	4.79	30.1	24.7
Cen/Ybn						
Eu*						
Zr/Hf						
Ba/Rb	0.66	5.69	6.41	2.43		
Rb/Th				9.88		
87Sr/86Sr,l						
143Nd/144Nd				0.512594		
206Pb/204Pb				17.941		
207Pb/204Pb				15.475		
208Pb/204Pb				37.891		