

Name of Unit	Gneissose Border Tonalite				Stubby Hornblende Tonalite						Prismatic Hornblende Tonalite					Seriatic Porphyritic Tonalite				
	BC-I 5	Ba-JM 27a	Ba-JM 568a	Ba-JM 807	Ba-JM 25a	Ba-JM 39b	Ba-JM 68	Ba-JM 453	Ba-JM 492	Ba-JM 566	Ba-JM 36a	Ba-JM 26a	Ba-JM 93	Ba-JM 240#52	Ba-JM 240#53	BC-I 12	Ba-JM 528	Ba-JM 639	Ba-JM 701	Ba-JM 737
SiO ₂	66.08	67.21	65.50	64.19	60.92	61.56	61.24	60.12	61.96	62.05	60.40	64.86	65.24	61.61	59.43	63.01	61.88	64.11	62.41	61.78
TiO ₂	0.62	0.53	0.61	0.70	0.79	0.77	0.76	0.83	0.76	0.76	0.72	0.60	0.58	0.72	0.78	0.71	0.67	0.66	0.69	0.72
Al ₂ O ₃	16.46	16.39	17.00	17.16	18.14	18.26	17.94	18.38	17.86	17.92	18.92	17.30	17.11	18.42	19.36	17.79	18.57	17.76	18.64	18.68
FeO _t ^a	3.84	3.52	3.97	4.19	5.02	4.89	5.16	5.23	4.81	4.85	5.04	3.87	3.89	4.59	5.05	4.31	4.45	4.04	4.21	4.48
MgO	2.17	1.80	2.03	2.49	2.82	2.71	2.88	3.01	2.70	2.63	2.64	1.98	1.84	2.59	2.75	2.31	2.33	1.96	2.20	2.27
CaO	4.93	4.71	4.78	5.36	6.64	6.31	6.43	6.81	6.07	6.17	6.74	5.45	5.39	6.48	7.05	5.91	6.27	5.59	5.86	6.24
Na ₂ O	4.57	4.48	4.61	4.47	4.78	4.74	4.62	4.79	4.84	4.64	4.87	4.88	4.85	4.78	4.85	4.94	4.90	4.88	4.97	4.96
K ₂ O	1.25	1.24	1.38	1.30	0.72	0.61	0.81	0.65	0.82	0.79	0.50	0.95	0.95	0.65	0.55	0.83	0.74	0.81	0.84	0.70
P ₂ O ₅ ^b	0.07	0.11	0.12	0.15	0.19	0.17	0.16	0.19	0.18	0.18	0.17	0.15	0.16	0.17	0.17	0.19	0.19	0.19	0.18	0.18
TOTAL	99.99	99.99	100.00	100.01	100.02	100.02	100.00	100.01	100.00	99.99	100.00	100.04	100.01	100.01	99.99	100.00	100.00	100.00	100.00	100.01
Analyst ^c	B	M	M	M	IM	I	I	M	M	M	I	IM	IM	IM	I	B	M	M	M	M
FeO/(FeO+Fe ₂ O ₃) ^a	0.507	0.507 ^d	0.507 ^d	0.507 ^d	0.464	0.515	0.469	0.482 ^d	0.482 ^d	0.482 ^d	0.456	0.428	0.408	0.458	0.450	0.478	0.478 ^d	0.478 ^d	0.478 ^d	0.478 ^d
FeO _t /(FeO _t +MgO) ^a	0.639	0.662	0.662	0.627	0.640	0.643	0.642	0.635	0.640	0.648	0.656	0.662	0.679	0.639	0.647	0.651	0.656	0.673	0.657	0.664
A/(A+F+M) ^e	0.492	0.518	0.500	0.463	0.412	0.413	0.403	0.398	0.430	0.421	0.411	0.499	0.503	0.431	0.409	0.465	0.454	0.487	0.475	0.456
F/(A+F+M) ^e	0.325	0.319	0.331	0.337	0.376	0.378	0.383	0.382	0.365	0.376	0.386	0.331	0.337	0.364	0.383	0.348	0.358	0.346	0.345	0.361
K ₂ O/(K ₂ O+Na ₂ O+CaO)	0.116	0.119	0.128	0.116	0.059	0.052	0.068	0.053	0.070	0.068	0.042	0.084	0.084	0.055	0.044	0.071	0.062	0.072	0.071	0.059
Na ₂ O/(K ₂ O+Na ₂ O+CaO)	0.425	0.430	0.428	0.402	0.394	0.406	0.390	0.391	0.413	0.400	0.402	0.433	0.433	0.401	0.390	0.423	0.411	0.433	0.425	0.417
Larsen Index ^f	12.42	13.70	12.52	10.75	6.61	7.29	6.82	5.70	7.97	7.90	6.27	11.35	11.66	7.59	5.56	9.29	8.39	10.68	9.46	8.38
Sr (ppm) ^g	531(4)	518(2)	503(2)	543(2)	656(2)	665(2)	607(4)	638(2)	601(2)	626(2)	761(5)	617(2)	640(2)	681(3)	698(3)	742(2)	749(3)	675(2)	658(4)	693(5)
CIPW Normative Minerals																				
Quartz	21.21	23.77	20.17	18.45	13.28	14.58	14.21	11.92	14.56	15.67	12.69	19.21	20.22	14.58	10.99	15.94	14.41	18.35	14.93	14.22
Orthoclase	7.36	7.32	8.14	7.67	4.24	3.60	4.77	3.83	4.83	4.66	2.95	5.60	5.60	3.83	3.24	4.87	4.36	4.78	4.95	4.13
Albite	38.54	37.83	38.91	37.72	40.31	39.98	38.96	40.39	40.83	39.15	41.07	41.16	40.92	40.32	40.91	41.62	41.34	41.18	41.94	41.85
Anorthite	20.66	20.93	21.58	22.88	25.85	26.69	25.76	26.66	24.53	25.68	28.22	22.44	22.06	26.82	29.36	23.88	26.44	24.12	26.02	26.58
Diopside	2.61	1.34	1.03	2.12	4.54	2.73	3.96	4.57	3.42	2.91	3.17	2.78	2.78	3.25	3.47	3.26	2.66	1.83	1.43	2.47
Hypersthene	5.40	4.90	5.74	6.33	5.73	6.96	6.33	6.46	6.15	6.24	5.94	3.92	3.39	5.62	5.90	5.20	5.52	4.82	5.63	5.39
Magnetite	2.88	2.64	2.98	3.14	4.11	3.60	4.18	4.13	3.80	3.83	4.19	3.39	3.54	3.80	4.25	3.44	3.54	3.22	3.35	3.57
Ilmenite	1.18	1.01	1.16	1.33	1.50	1.46	1.44	1.57	1.44	1.44	1.36	1.14	1.10	1.36	1.48	1.34	1.27	1.25	1.31	1.36
Apatite	0.17	0.26	0.29	0.36	0.46	0.41	0.38	0.46	0.43	0.43	0.41	0.36	0.38	0.41	0.41	0.46	0.46	0.46	0.43	0.43
Ab+An	59.20	58.75	60.50	60.60	66.15	66.67	64.72	67.06	65.36	64.83	69.29	63.61	62.98	67.14	70.26	65.50	67.78	65.30	67.96	68.43
An/(Ab+An)	0.349	0.356	0.357	0.378	0.391	0.400	0.398	0.398	0.375	0.396	0.407	0.353	0.350	0.400	0.412	0.365	0.390	0.369	0.383	0.388
Color Index (CI)	12.07	9.89	10.90	12.92	15.87	14.75	15.91	16.74	14.81	14.42	14.66	11.22	10.82	14.04	15.09	13.23	12.99	11.12	11.72	12.79
Differentiation Index ^h	67.10	68.92	67.23	63.84	57.82	58.16	57.95	56.14	60.22	59.47	56.71	65.97	66.74	58.73	55.14	62.42	60.12	64.31	61.82	60.19
Or/(Or+Ab+An)	0.111	0.111	0.119	0.112	0.060	0.051	0.069	0.054	0.069	0.067	0.041	0.081	0.082	0.054	0.044	0.069	0.060	0.068	0.068	0.057
Ab/(Or+Ab+An)	0.579	0.573	0.567	0.553	0.573	0.569	0.561	0.570	0.582	0.563	0.569	0.595	0.597	0.568	0.556	0.591	0.573	0.588	0.575	0.577
Q/(Q+Or+Ab)	0.316	0.345	0.300	0.289	0.230	0.251	0.245	0.212	0.242	0.263	0.224	0.291	0.303	0.248	0.199	0.255	0.240	0.285	0.241	0.236
Or/(Q+Or+Ab)	0.109	0.106	0.121	0.121	0.073	0.062	0.082	0.068	0.080	0.078	0.052	0.085	0.087	0.065	0.058	0.078	0.072	0.074	0.080	0.068
Q/(Q+Or+(Ab+An))	0.242	0.265	0.227	0.213	0.159	0.172	0.170	0.144	0.172	0.184	0.149	0.217	0.228	0.170	0.130	0.185	0.167	0.208	0.170	0.164
Or/(Q+Or+(Ab+An))	0.084	0.081	0.092	0.088	0.051	0.042	0.057	0.046	0.057	0.055	0.035	0.063	0.063	0.045	0.038	0.056	0.050	0.054	0.056	0.048
Q/(Q+(Ab+An)+CI)	0.229	0.257	0.220	0.201	0.139	0.152	0.150	0.125	0.154	0.165	0.131	0.204	0.215	0.152	0.114	0.168	0.151	0.194	0.158	0.149
CI/(Q+(Ab+An)+CI)	0.131	0.107	0.119	0.140	0.167	0.154	0.168	0.174	0.156	0.152	0.152	0.120	0.115	0.147	0.157	0.140	0.137	0.117	0.124	0.134

a: FeO_t denotes total Fe as FeO; where subscript is omitted, only ferrous iron is represented.

b: All analyses normalized to 100% for nine oxides.

c: Analysts are: B = William Blake, California Institute of Technology; I = Shiro Imai, Japan Analytical Research Institute; M = J. D. Murray, electron microprobe analyses, California Institute of Technology; IM = Average of analyses by Shiro Imai and J. D. Murray.

d: Assumed value, based upon the average FeO/(FeO+Fe₂O₃) ratio from standard chemical analyses of other samples of the same textural unit.

e: A = Na₂O+K₂O; F = total Fe as FeO; M = MgO.

f: As defined by Larsen (1938).

g: Sr concentrations from x-ray fluorescence, analyst E. Bingham; the number in parentheses following each concentration is the number of determinations upon which the value is based; additional Sr analyses: Ba-JM-29 (SHbT): 642 ppm(2); Ba-JM-857 (PHbT): 714 ppm(2); Ba-JM-3a and Ba-JM-62a (SPT): 689 ppm(2) and 710 ppm(2), respectively.

h: As defined by Thornton and Tuttle (1960).