

Sample	SiO ₂	Na ₂ O	K ₂ O	Age	Tectonic setting
CPVN36109	47.77	1.56	4.17	Miocene and younger	Within plate
CPVN36109	54.32	2.03	7.28	Miocene and younger	Within plate
R640n	57.83	2.3	4.73	Late Permian (247–255 Ma)	Post-collisional
R64061	51.09	1.1	5.47	Late Permian (247–255 Ma)	Post-collisional
R64062	51.2	1.63	6.56	Late Permian (247–255 Ma)	Post-collisional
R64063	56.45	2.5	4.09	Late Permian (247–255 Ma)	Post-collisional
R64064	50.37	2.08	5.58	Late Permian (247–255 Ma)	Post-collisional
R64065	52.51	1.26	5.66	Late Permian (247–255 Ma)	Post-collisional
R64066	57.3	2.38	4.21	Late Permian (247–255 Ma)	Post-collisional
R64067	56.7	2.72	3.68	Late Permian (247–255 Ma)	Post-collisional
R64068	56.57	2.66	3.39	Late Permian (247–255 Ma)	Post-collisional
R64069	57.99	2.2	4.05	Late Permian (247–255 Ma)	Post-collisional
R64070	53.89	1.59	3.29	Late Permian (247–255 Ma)	Post-collisional
R64071	52.83	0.94	5.63	Late Permian (247–255 Ma)	Post-collisional
R64072	58.26	3.32	4.34	Late Permian (247–255 Ma)	Post-collisional
R64073	45.02	1.52	1.9	Late Permian (247–255 Ma)	Post-collisional
R64075	47.97	0.94	4.67	Late Permian (247–255 Ma)	Post-collisional
R64074	57.86	1.98	5.47	Late Permian (247–255 Ma)	Post-collisional
R64076	50.25	2.49	4.42	Late Permian (247–255 Ma)	Post-collisional
R64078	54.1	0.32	7.66	Late Permian (247–255 Ma)	Post-collisional
1A	52.06	1.92	6.63	Early Carboniferous (331 Ma)	Continent collision
1B	50.27	1.45	5.37	Early Carboniferous (331 Ma)	Continent collision
3B	58.62	2.13	6.99	Early Carboniferous (331 Ma)	Continent collision
3C	56.73	2.5	4.92	Early Carboniferous (331 Ma)	Continent collision
3D	56.68	2.08	5.47	Early Carboniferous (331 Ma)	Continent collision
3E	48.71	1.78	3.68	Early Carboniferous (331 Ma)	Continent collision
4A	60.26	2.17	5.69	Early Carboniferous (331 Ma)	Continent collision
4B	52.48	2.25	5.55	Early Carboniferous (331 Ma)	Continent collision
4C	50.7	1.74	4.15	Early Carboniferous (331 Ma)	Continent collision
4D	43.61	1.22	4.01	Early Carboniferous (331 Ma)	Continent collision
5	56.86	2.14	3.74	Early Carboniferous (331 Ma)	Continent collision
6A	60.26	2.22	6.33	Early Carboniferous (331 Ma)	Continent collision
6B	48.29	1.39	7.31	Early Carboniferous (331 Ma)	Continent collision
7	55.43	1.78	5.72	Early Carboniferous (331 Ma)	Continent collision

8	56	2.33	7.25	Early Carboniferous (331 Ma)	Continent collision
10A	53.38	1.94	4.51	Early Carboniferous (331 Ma)	Continent collision
10B	55.88	2.24	6.8	Early Carboniferous (331 Ma)	Continent collision
11C	47.53	2.86	2.71	Early Carboniferous (331 Ma)	Continent collision
11D	50.28	3.19	4.29	Early Carboniferous (331 Ma)	Continent collision
11D	47.98	1.8	3.08	Early Carboniferous (331 Ma)	Continent collision
AB9319	45.98	1.48	4.59	Eocene (50 ± 0.3 Ma)	Craton
AB9333	46.49	1.46	5.05	Eocene (50 ± 0.3 Ma)	Craton
G70II	43.15	1.44	8.85	Eocene (50 ± 0.3 Ma)	Craton
G92273	45.32	1.1	6.86	Eocene (50 ± 0.3 Ma)	Craton
MR9209	52.09	2.21	6.4	Eocene (50 ± 0.3 Ma)	Craton
MR9210	48.49	1.75	6.26	Eocene (50 ± 0.3 Ma)	Craton
OC71	48.26	1.62	4.72	Eocene (50 ± 0.3 Ma)	Craton
OC816	49.98	1.82	4.89	Eocene (50 ± 0.3 Ma)	Craton
RAB90	45.34	1.3	4.44	Eocene (50 ± 0.3 Ma)	Craton
BP22	56.08	2.83	4.48	Late Caledonian (400-390 Ma)	Post collisional
DO931	50.83	2.55	5.61	Late Caledonian (400-390 Ma)	Post collisional
DO933	51.43	1.49	3.99	Late Caledonian (400-390 Ma)	Post collisional
DO936	51.91	2.81	5.41	Late Caledonian (400-390 Ma)	Post collisional
DO937	51.4	2.48	5.24	Late Caledonian (400-390 Ma)	Post collisional
GA 931	53.62	3.14	3.58	Late Caledonian (400-390 Ma)	Post collisional
PFT03	55.78	2.33	5.88	Late Caledonian (400-390 Ma)	Post collisional
PHR29	46.18	1	5.03	Late Caledonian (400-390 Ma)	Post collisional
PJH208	45.6	1.19	4.93	Late Caledonian (400-390 Ma)	Post collisional
PU22	57.59	2.7	5.94	Late Oligocene-Early Miocene (24-22 Ma)	Arc-related collision
PU 37	59.2	0.83	8	Late Oligocene-Early Miocene (24-22 Ma)	Arc-related collision
PU67	62.45	2.38	5.55	Late Oligocene-Early Miocene (24-22 Ma)	Arc-related collision
PU128	58.3	2.54	5.04	Late Oligocene-Early Miocene (24-22 Ma)	Arc-related collision
PU146	55.27	0.08	4.41	Late Oligocene-Early Miocene (24-22 Ma)	Arc-related collision
M3A	49.86	2.7	5.7	Pleistocene-Holocene (< 2 Ma)	Extensional graben
M4Asmall	49.27	2.89	5.17	Pleistocene-Holocene (< 2 Ma)	Extensional graben
M4Alarge	49.32	2.93	5.16	Pleistocene-Holocene (< 2 Ma)	Extensional graben
M6	49.86	2.95	4.48	Pleistocene-Holocene (< 2 Ma)	Extensional graben
M11	49.97	2.53	5.55	Pleistocene-Holocene (< 2 Ma)	Extensional graben
M15	50.26	2.98	4.66	Pleistocene-Holocene (< 2 Ma)	Extensional graben

M18	48.79	3.96	5.41	Pleistocene-Holocene (< 2 Ma)	Extensional graben
M39	48.68	2.7	5.85	Pleistocene-Holocene (< 2 Ma)	Extensional graben
M49	53.59	3.33	6.27	Pleistocene-Holocene (< 2 Ma)	Extensional graben
MI77b	50.76	2.82	5.83	Pleistocene-Holocene (< 2 Ma)	Extensional graben
MI77c	50.44	2.81	5.97	Pleistocene-Holocene (< 2 Ma)	Extensional graben
AXO0A	47.18	3.03	4.58	Cenozoic	Within plate
AXO0B	47.29	2.4	4.75	Cenozoic	Within plate
HQII	52.15	2.01	3.52	Oligocene (23-29 Ma)	Transpression with local extension
YDBI	56.64	1.62	5.88	Oligocene (23-29 Ma)	Transpression with local extension
YD20	47.92	1.7	3.92	Oligocene (23-29 Ma)	Transpression with local extension
YD52	50.81	1.42	6.18	Oligocene (23-29 Ma)	Transpression with local extension
YD60	50.64	1.64	5.09	Oligocene (23-29 Ma)	Transpression with local extension
YD70	51.17	1.46	5.35	Oligocene (23-29 Ma)	Transpression with local extension
YD77	49.78	1.86	5.37	Oligocene (23-29 Ma)	Transpression with local extension
YKI	51.81	1.53	3.55	Oligocene (23-29 Ma)	Transpression with local extension
YL3	53	1.96	4.24	Oligocene (23-29 Ma)	Transpression with local extension
YLWCI	51.05	1.75	4.7	Oligocene (23-29 Ma)	Transpression with local extension
YLW21	53.37	1.07	6.57	Oligocene (23-29 Ma)	Transpression with local extension
YLW36	51.23	2.23	4.49	Oligocene (23-29 Ma)	Transpression with local extension
YLW41	50.66	2.82	3.62	Oligocene (23-29 Ma)	Transpression with local extension
YLW42	50.27	2.43	4.03	Oligocene (23-29 Ma)	Transpression with local extension
YLW44	47.97	2.38	4.38	Oligocene (23-29 Ma)	Transpression with local extension
YLW72	50.55	1.5	4.66	Oligocene (23-29 Ma)	Transpression with local extension
YLW79	50.46	1.29	5.04	Oligocene (23-29 Ma)	Transpression with local extension
YLW81	49.63	1.59	5.07	Oligocene (23-29 Ma)	Transpression with local extension
YLW891	52.4	1.76	5.1	Oligocene (23-29 Ma)	Transpression with local extension
YLW892	51.75	1.84	4.96	Oligocene (23-29 Ma)	Transpression with local extension
YT6	54.35	2.54	4.4	Oligocene (23-29 Ma)	Transpression with local extension
Mi1	58.32	1.83	6.12	Carboniferous (336 Ma)	Continent collision
Mi2	56.22	1.34	7.2	Carboniferous (336 Ma)	Continent collision
EGL72 024	49.16	2.88	2.4	Tertiary	Plume
MTLSWEE491 11	49.98	2.64	5.02	Tertiary	Within plate
OKA0C	49.98	2.64	5.02	Tertiary	Within plate
SPP37105	47.63	1.98	5.4	Oligocene (23-29 Ma)	Within plate

AKI0A	45.59	1.82	3.9	Late Tertiary	Within plate
AEN0J	52.79	2.44	6.38	Cenozoic	Within plate
AEE0A	54.3	1.56	5.04	Carboniferous	Continent collision
AEE0B	53.81	1.61	4.87	Carboniferous	Continent collision
AEE0C	55.14	1.61	6.02	Carboniferous	Continent collision
AEE0D	58.2	1.91	6.5	Carboniferous	Continent collision
AEE0E	57.27	1.89	6.66	Carboniferous	Continent collision
AEE0F	58.75	1.72	7.05	Carboniferous	Continent collision
AEE0G	59.41	1.82	6.93	Carboniferous	Continent collision
AEE0H	58.68	1.44	8.03	Carboniferous	Continent collision
AEE0J	60.17	2.17	6.36	Carboniferous	Continent collision
56D12	46.39	0.66	3.47	Paleoproterozoic (1850-1810 Ma)	Craton
P91LBIF	57.7	2.1	7.56	Paleoproterozoic (1850-1810 Ma)	Craton
P96110	45.27	0.99	8.56	Paleoproterozoic (1850-1810 Ma)	Craton
P96168A	50.69	2.4	3.41	Paleoproterozoic (1850-1810 Ma)	Craton
P9792	48.83	1.6	6.42	Paleoproterozoic (1850-1810 Ma)	Craton
P97C32	59.57	3.36	3.57	Paleoproterozoic (1850-1810 Ma)	Craton
P97T138A	46.84	0.6	5.84	Paleoproterozoic (1850-1810 Ma)	Craton
P97T138B	51.14	1.46	4.13	Paleoproterozoic (1850-1810 Ma)	Craton
MTLHIGH47110	46.04	2.42	5.77	Pleistocene	Within plate
MTLLBLT4711	52.26	2.8	3.87	Eocene	Within plate
VM013	52.87	0.51	6.51	Oligocene-Early Miocene (34-22 Ma)	Intracontinental post-collisional collaps
VM96VII	50.25	0.04	5.77	Oligocene-Early Miocene (34-22 Ma)	Intracontinental post-collisional collaps
VMVII	56.81	0.14	5.74	Oligocene-Early Miocene (34-22 Ma)	Intracontinental post-collisional collaps
VMVIII	54.73	0.21	7.81	Oligocene-Early Miocene (34-22 Ma)	Intracontinental post-collisional collaps
VMV2	58.86	0.95	5.46	Oligocene-Early Miocene (34-22 Ma)	Intracontinental post-collisional collaps
VMV4	59.1	0.55	6.02	Oligocene-Early Miocene (34-22 Ma)	Intracontinental post-collisional collaps
VMVI2	50.61	0.3	7.1	Oligocene-Early Miocene (34-22 Ma)	Intracontinental post-collisional collaps
VMVII7	53.36	0.09	6.95	Oligocene-Early Miocene (34-22 Ma)	Intracontinental post-collisional collaps
VMXII1	52.49	0.11	6.68	Oligocene-Early Miocene (34-22 Ma)	Intracontinental post-collisional collaps
VMXII2	53.13	0.14	6.56	Oligocene-Early Miocene (34-22 Ma)	Intracontinental post-collisional collaps
VMXII3	55.61	0.59	5.89	Oligocene-Early Miocene (34-22 Ma)	Intracontinental post-collisional collaps
VMXII4	58.26	1.41	4.51	Oligocene-Early Miocene (34-22 Ma)	Intracontinental post-collisional collaps
VMXIV2	57.02	1.37	4.98	Oligocene-Early Miocene (34-22 Ma)	Intracontinental post-collisional collaps

VMXIV4	59.98	1.53	5.27	Oligocene-Early Miocene (34-22 Ma)	Intracontinental post-collisional collaps
VMXIV6	61.12	1.42	6.48	Oligocene-Early Miocene (34-22 Ma)	Intracontinental post-collisional collaps
TAP04	47.83	4	6.57	Plio-Quaternary (3 Ma)	Intracontinental post-collisional collaps
TAP08	51.82	3.37	4.72	Plio-Quaternary (3 Ma)	Intracontinental post-collisional collaps
EGL72 025	47.1	3.16	5.85	Tertiary	Intracontinental post-collisional collaps
CPVNB36109	56.8	2.47	6.93	Tertiary	Within plate
CPVNB36109	48.7	1.29	5	Tertiary	Within plate
CPVNB36109	58	2.72	7.1	Tertiary	Within plate
CPVNB36109	54.4	2.72	7.2	Tertiary	Within plate
R11	52.9	1.1	7.95	Oligocene-Early Miocene (25-17.5 Ma)	Syn-collisional
R74	51.7	1.9	8.57	Oligocene-Early Miocene (25-17.5 Ma)	Syn-collisional
5491	49.18	1.01	7.44	Paleoproterozoic (1831 Ma)	Late orogenic
5491	49.89	0.8	7.66	Paleoproterozoic (1831 Ma)	Late orogenic
113391	49.77	1.89	7.41	Paleoproterozoic (1831 Ma)	Late orogenic
113392	46.02	1.69	6.16	Paleoproterozoic (1831 Ma)	Late orogenic
113393	46.01	2.22	5.99	Paleoproterozoic (1831 Ma)	Late orogenic
113394	46.73	2.34	5.82	Paleoproterozoic (1831 Ma)	Late orogenic
113395	46.04	1.76	6.71	Tertiary	Late orogenic
113396	46.12	2.39	5.08	Paleoproterozoic (1831 Ma)	Late orogenic
113397	47.22	2.18	6.49	Paleoproterozoic (1831 Ma)	Late orogenic
PIN2	49	1.02	6.1	Tertiary (24 Ma and 7-8 Ma)	Within plate
SCOI	45.33	0.52	4.65	Tertiary (24 Ma and 7-8 Ma)	Within plate
WAT12	47.4	2.14	2.41	Tertiary (24 Ma and 7-8 Ma)	Within plate
Wv1	51.66	1.81	5.42	Stephanian (292 Ma)	Within plate
wierz1	60.2	0.81	9.03	Not specified	Within plate
CPVN37109	58.75	2.22	6.44	Pliocene	Within plate
CPVN37110	49.05	1.92	5	Pliocene	Within plate
CPVN37110	49.8	2.8	4.23	Pliocene	Within plate
CPVNSR37109	51.5	2.55	5.65	Pliocene	Within plate
CPVNSR37109	51.8	2.25	5.97	Pliocene	Within plate
MTLLBLT4711	52.2	3.6	3.2	Tertiary	Within plate
MTL.LBLT4711 1	50	2.4	4.9	Tertiary	Within plate
OJXOI	52.2	3.6	3.2	Pleistocene-Holocene (< 2Ma)	Within plate

AD	47.2	1.6	4.2	Archean (2674 Ma)	Craton
A2	43.6	1.88	3.09	Archean (2674 Ma)	Craton
A6	47.9	1.66	2.94	Archean (2674 Ma)	Craton
A7	45.9	3.95	2.93	Archean (2674 Ma)	Craton
A3B	44.7	1.37	2.25	Archean (2674 Ma)	Craton
A3P	45.3	1.72	2.49	Archean (2674 Ma)	Craton
AD2	49.1	2.1	2.96	Archean (2674 Ma)	Craton
AD3	51.3	2.8	3.3	Archean (2674 Ma)	Craton
BA	46.2	2.68	3.03	Archean (2674 Ma)	Craton
BB	51	3.92	3.14	Archean (2674 Ma)	Craton
BC	52.2	2.84	2.54	Archean (2674 Ma)	Craton
BEA	47.7	2.43	2.37	Archean (2674 Ma)	Craton
B3	43	0.41	1.76	Archean (2674 Ma)	Craton
B5	44.3	1.99	2.24	Archean (2674 Ma)	Craton
CR1	51.2	3.05	4.55	Archean (2674 Ma)	Craton
H11	43.2	1.5	5.6	Archean (2674 Ma)	Craton
H114	44.5	1.38	5.58	Archean (2674 Ma)	Craton
IA	44.3	0.21	3.7	Archean (2674 Ma)	Craton
MACI	46.9	1.41	2.32	Archean (2674 Ma)	Craton
MB3	50.1	4.5	3.36	Archean (2674 Ma)	Craton
MB4	50.9	4.31	3.31	Archean (2674 Ma)	Craton
MUA	52.2	4.82	2.24	Archean (2674 Ma)	Craton
MUB	51.2	4.4	2.64	Archean (2674 Ma)	Craton
SIB	46	1.66	3.35	Archean (2674 Ma)	Craton
SIR	48.2	1.81	3.22	Archean (2674 Ma)	Craton
S8	43.9	1.08	3.43	Archean (2674 Ma)	Craton

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Mascota, Western Mexico	Carmichael et al. (1996)
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Laowangzhai, Yunnan Province, China	Huang et al. (2002)
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East Greenland	Kapp (1960)
Montana, USA	Kemp & Billingsley (1921)
Sweetgrass Hills, Montana, USA	Kemp & Billingsley (1921)
Spanish Peaks, Colorado	Knopf (1936)

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Veliki Majdan, Serbia	Prelevic et al. (2004)
Western Mexico	Righter & Rosas-Elguera (2001)
Western Mexico	Righter & Rosas-Elguera (2001)
East Greenland	Rittman (1940)
Colorado Plateau, Arizona, New Mexico, Utah, USA	Schmitt et al. (1974)
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Baltoro, Karakoram, Himalayas	Searle et al. (1992)
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Mount Bunday, Northern Territory, Australia	Sheppard & Taylor (1992)
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Colorado Plateau, Arizona, New Mexico, Utah, USA	Williams (1936)
Colorado Plateau, Arizona, New Mexico, Utah, USA	Williams (1936)
Colorado Plateau, Arizona, New Mexico, Utah, USA	Williams (1936)
Montana, USA	Witkind (1973)
Montana, USA	Witkind (1973)
Montana, USA	Witkind (1973)

