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Table DR3. Chemical compositions of K-feldspar, garnet, cordierite and sillimenite from the diorite and schist

Number	Point	Mineral	Structural domain	SiO ₂	TiO ₂	Al ₂ O ₃	FeO	MnO	MgO	CaO	Na ₂ O	K ₂ O	Total	Si	Ti	Al	Fe	Mn	Mg	Ca	Na	K	Ab	An	Or
Line 2	123-2-7	Kfs	Outer shell	65.48	0.01	18.18	0.02	0.00	0.01	0.01	0.61	15.43	99.80	3.037	0.000	0.994	0.001	0.000	0.000	0.000	0.055	0.913	0.057	0.000	0.943
Line 3	123-2-7	Kfs	Outer shell	65.34	0.00	18.58	0.05	0.00	0.00	0.00	2.55	12.61	99.14	3.016	0.000	1.011	0.002	0.000	0.000	0.000	0.228	0.743	0.235	0.000	0.765
Line 8	123-2-7	Kfs	Outer shell	65.77	0.03	17.66	0.00	0.05	0.00	0.12	1.17	14.22	99.06	3.068	0.001	0.971	0.000	0.002	0.000	0.006	0.106	0.846	0.111	0.006	0.883
Line 9	123-2-7	Kfs	Outer shell	65.58	0.03	18.04	0.01	0.01	0.00	0.06	1.01	14.68	99.43	3.047	0.001	0.988	0.000	0.000	0.000	0.003	0.091	0.870	0.095	0.003	0.902
Line 10	123-2-7	Kfs	Outer shell	64.69	0.03	18.53	0.04	0.02	0.02	0.14	0.88	14.94	99.28	3.008	0.001	1.016	0.001	0.001	0.001	0.007	0.079	0.886	0.081	0.007	0.911
Line 12	123-2-7	Kfs	Outer shell	65.34	0.02	18.38	0.00	0.00	0.01	0.07	0.82	15.16	99.80	3.025	0.001	1.003	0.000	0.000	0.000	0.003	0.073	0.895	0.075	0.003	0.921
Line 13	123-2-7	Kfs	Outer shell	65.06	0.02	18.48	0.02	0.00	0.00	0.04	0.98	15.03	99.64	3.012	0.001	1.009	0.001	0.000	0.000	0.002	0.088	0.888	0.090	0.002	0.908
Line 16	123-2-7	Kfs	Outer shell	66.16	0.04	17.69	0.02	0.02	0.00	0.00	0.65	14.89	99.51	3.083	0.002	0.971	0.001	0.001	0.000	0.000	0.058	0.885	0.062	0.000	0.938
Line 18	123-2-7	Kfs	Outer shell	65.13	0.00	18.09	0.00	0.01	0.02	0.02	0.46	15.83	99.57	3.027	0.000	0.991	0.000	0.000	0.001	0.001	0.041	0.938	0.042	0.001	0.957
Line 19	123-2-7	Kfs	Outer shell	65.18	0.00	18.14	0.02	0.01	0.00	0.00	0.53	15.46	99.35	3.037	0.000	0.996	0.001	0.000	0.000	0.000	0.048	0.919	0.049	0.000	0.951
Line 39	123-2-7	Kfs	Outer shell	65.08	0.02	19.02	0.01	0.00	0.01	0.02	1.00	14.82	99.97	3.002	0.001	1.034	0.000	0.000	0.001	0.001	0.089	0.872	0.093	0.001	0.906
Line 40	123-2-7	Kfs	Outer shell	65.58	0.02	17.63	0.00	0.04	0.00	0.01	0.88	15.05	99.26	3.055	0.001	0.968	0.000	0.001	0.000	0.001	0.079	0.895	0.081	0.001	0.918
Line 59	123-2-3	Kfs	Outer shell	65.39	0.00	17.77	0.03	0.00	0.00	0.01	0.83	15.05	99.12	3.051	0.000	0.977	0.001	0.000	0.000	0.000	0.075	0.895	0.077	0.000	0.923
Line 60	123-2-3	Kfs	Outer shell	65.64	0.00	17.99	0.00	0.00	0.00	0.02	1.02	14.62	99.30	3.053	0.000	0.986	0.000	0.000	0.000	0.001	0.092	0.867	0.096	0.001	0.903
Line 68	123-2-3	Kfs	Outer shell	65.77	0.04	17.59	0.00	0.00	0.00	0.02	0.79	14.85	99.10	3.072	0.001	0.968	0.000	0.000	0.000	0.001	0.072	0.885	0.075	0.001	0.924
Line 69	123-2-3	Kfs	Outer shell	65.95	0.04	17.90	0.00	0.00	0.00	0.04	0.89	14.68	99.53	3.065	0.002	0.980	0.000	0.000	0.000	0.002	0.081	0.870	0.085	0.002	0.913
Line 79	123-2-3	Kfs	Outer shell	66.08	0.03	17.66	0.21	0.00	0.00	0.04	0.75	15.25	100.05	3.058	0.001	0.963	0.008	0.000	0.000	0.002	0.067	0.900	0.069	0.002	0.929
Line 90	123-2-3	Kfs	Outer shell	64.32	0.02	18.87	0.02	0.00	0.01	0.01	0.97	15.01	99.28	2.987	0.001	1.033	0.001	0.000	0.001	0.001	0.087	0.889	0.089	0.001	0.910
Line 92	123-2-3	Kfs	Outer shell	64.68	0.02	19.09	0.03	0.03	0.01	0.05	0.88	15.13	99.90	2.987	0.001	1.039	0.001	0.001	0.000	0.002	0.078	0.891	0.081	0.002	0.917
Line 113	123-2-3	Kfs	Outer shell	65.80	0.02	18.32	0.06	0.00	0.01	0.02	0.84	15.04	100.13	3.038	0.001	0.997	0.002	0.000	0.001	0.001	0.075	0.886	0.078	0.001	0.921
Line 114	123-2-3	Kfs	Outer shell	66.61	0.00	18.10	0.00	0.00	0.00	0.03	0.92	15.01	100.68	3.058	0.000	0.979	0.000	0.000	0.000	0.002	0.082	0.879	0.085	0.002	0.913
Line 115	123-2-3	Kfs	Outer shell	66.59	0.00	18.02	0.03	0.00	0.02	0.02	0.88	14.87	100.45	3.067	0.000	0.978	0.001	0.000	0.001	0.001	0.079	0.874	0.083	0.001	0.917
Line 142	123-2-3	Kfs	Outer shell	66.48	0.05	17.69	0.08	0.00	0.00	0.03	0.69	15.33	100.34	3.068	0.002	0.962	0.003	0.000	0.000	0.001	0.062	0.903	0.064	0.001	0.935
Line 244	123-2-3	Kfs	Outer shell	64.57	0.01	18.83	0.00	0.00	0.00	0.06	0.81	15.16	99.52	2.996	0.000	1.030	0.000	0.000	0.000	0.003	0.073	0.897	0.075	0.003	0.922

Number	Sample	Mineral	Structural domain	SiO ₂	TiO ₂	Al ₂ O ₃	FeO	MnO	MgO	CaO	Na ₂ O	K ₂ O	Total	Si	Al	Ti	Fe	Mn	Mg	Ca	Na	K	O
12	1-2-2-7	Crd	Outer shell and matrix	49.55	0.00	30.99	7.35	0.18	8.20	0.02	0.83	0.22	97.37	5.212	3.839	0.000	0.647	0.016	1.286	0.002	0.169	0.030	18
13	1-2-2-8	Crd	Outer shell and matrix	51.32	0.04	31.35	7.82	0.13	8.24	0.00	0.30	0.02	99.22	5.265	3.788	0.003	0.671	0.011	1.260	0.000	0.060	0.003	18
14	1-2-2-9	Crd	Outer shell and matrix	50.14	0.00	31.83	8.13	0.11	8.53	0.01	0.37	0.00	99.15	5.144	3.845	0.000	0.697	0.010	1.304	0.001	0.074	0.000	18

Number	Sample	Mineral	Structural domain	SiO ₂	TiO ₂	Al ₂ O ₃	Fe ₂ O ₃	MnO	MgO	CaO	Na ₂ O	K ₂ O	Total	Si	Al	Ti	Fe ³⁺	Mn	Mg	Ca	Na	K	O
Line 144	123-2-7	Sil	Metamorphic core	36.89	0.00	61.67	0.42	0.03	0.00	0.00	0.00	0.05	99.08	4.026	7.927	0.000	0.038	0.003	0.000	0.000	0.000	0.007	20
Line 145	123-2-7	Sil	Metamorphic core	37.41	0.00	62.32	0.23	0.03	0.03	0.02	0.01	0.00	100.10	4.038	7.921	0.000	0.021	0.003	0.005	0.002	0.002	0.000	20
Line 146	123-2-7	Sil	Metamorphic core	36.91	0.04	62.52	0.15	0.00	0.00	0.00	0.00	0.03	99.67	3.999	7.978	0.003	0.014	0.000	0.000	0.000	0.000	0.004	20
Line 147	123-2-7	Sil	Metamorphic core	37.03	0.00	62.51	0.21	0.02	0.05	0.01	0.02	0.02	99.87	4.005	7.963	0.000	0.019	0.002	0.008	0.001	0.004	0.003	20
Line 149	123-2-7	Sil	Metamorphic core	36.87	0.02	62.74	0.45	0.00	0.00	0.02	0.01	0.02	100.16	3.983	7.982	0.002	0.041	0.000	0.000	0.002	0.002	0.003	20
Line 150	123-2-7	Sil	Metamorphic core	37.16	0.00	62.08	0.24	0.01	0.02	0.06	0.04	0.07	99.68	4.029	7.926	0.000	0.022	0.001	0.003	0.007	0.008	0.010	20
Line 151	123-2-7	Sil	Metamorphic core	37.15	0.00	62.45	0.22	0.00	0.02	0.00	0.00	0.01	99.90	4.017	7.953	0.000	0.020	0.000	0.003	0.000	0.000	0.001	20
Line 168	123-2-7	Sil	Metamorphic core	37.45	0.04	62.26	0.49	0.01	0.03	0.05	0.00	0.03	100.43	4.036	7.902	0.003	0.044	0.001	0.005	0.006	0.000	0.004	20
Line 172	123-2-7	Sil	Metamorphic core	37.89	0.01	60.50	0.28	0.01	0.02	0.17	0.20	0.97	100.11	4.118	7.743	0.001	0.025	0.001	0.003	0.020	0.042	0.134	20

Table DR5 The Hf isotopic data of zircons

Spots	Domains	176Hf/177Hf	1 σ	176Lu/177Hf	1 σ	176Yb/177Hf	1 σ	Age (Ma)	$\epsilon_{\text{Hf}}(t)$	$\pm(2s)$	T _{DM1} (Ma)	T _{DMC} (Ma)
T123-1-07	Inherited magmatic core	0.282292	0.000015	0.001209	0.000034	0.030769	0.000898	500	-6.7	0.5	1.36	1.88
T123-1-10	Inherited magmatic core	0.282498	0.000015	0.001432	0.000043	0.038466	0.001339	500	0.5	0.5	1.08	1.42
T123-1-13	Inherited magmatic core	0.282409	0.000011	0.001650	0.000091	0.042191	0.002518	500	-2.7	0.4	1.21	1.63
T123-1-18	Inherited magmatic core	0.282234	0.000011	0.000599	0.000029	0.015353	0.000730	500	-8.5	0.4	1.42	2.00
T123-1-21	Inherited magmatic core	0.282393	0.000046	0.000882	0.000027	0.023496	0.000784	500	-3.0	1.6	1.21	1.65
T123-2-01	Inherited magmatic core	0.282376	0.000017	0.000992	0.000038	0.025994	0.001096	500	-3.7	0.6	1.24	1.69
T123-3-04	Inherited magmatic core	0.282440	0.000020	0.000280	0.000029	0.007525	0.000760	500	-1.2	0.7	1.13	1.53
T123-3-05	Inherited magmatic core	0.282292	0.000012	0.001193	0.000029	0.030929	0.000631	500	-6.7	0.4	1.36	1.88
T123-3-09	Inherited magmatic core	0.282463	0.000016	0.001800	0.000049	0.045185	0.001211	500	-0.9	0.6	1.14	1.51
T123-4-01	Inherited magmatic core	0.282343	0.000017	0.001247	0.000033	0.031751	0.000845	500	-4.9	0.6	1.29	1.77
T123-4-09	Inherited magmatic core	0.282288	0.000018	0.000543	0.000012	0.014219	0.000420	500	-6.6	0.6	1.35	1.88
T123-4-11	Inherited magmatic core	0.282479	0.000020	0.001540	0.000091	0.040347	0.002294	500	-0.2	0.7	1.11	1.47
T123-4-19	Inherited magmatic core	0.282426	0.000019	0.001423	0.000013	0.034181	0.000311	500	-2.1	0.7	1.18	1.59
T123-4-21	Inherited magmatic core	0.282234	0.000019	0.000722	0.000038	0.016696	0.001010	500	-8.6	0.6	1.43	2.00
T123-1-01	Metamorphic mantle	0.282490	0.000011	0.000021	0.000000	0.000714	0.000015	24	-9.9	0.4	1.05	1.70
T123-1-02	Metamorphic mantle	0.282486	0.000015	0.000578	0.000033	0.015144	0.000703	24	-10.1	0.5	1.07	1.71
T123-1-15	Metamorphic mantle	0.282577	0.000013	0.000029	0.000001	0.001063	0.000016	24	-6.8	0.5	0.93	1.51
T123-1-16	Metamorphic mantle	0.282507	0.000012	0.000046	0.000002	0.001551	0.000047	24	-9.3	0.4	1.03	1.66
T123-1-22	Metamorphic mantle	0.282522	0.000012	0.000101	0.000009	0.002952	0.000255	24	-8.8	0.4	1.01	1.63
T123-1-27	Metamorphic mantle	0.282498	0.000011	0.000068	0.000002	0.001883	0.000042	24	-9.6	0.4	1.04	1.68
T123-2-05	Metamorphic mantle	0.282218	0.000014	0.000003	0.000000	0.000090	0.000006	24	-19.5	0.5	1.42	2.30
T123-3-12	Metamorphic mantle	0.282503	0.000018	0.002110	0.000112	0.053659	0.002956	24	-9.5	0.6	1.09	1.68
T123-4-04	Metamorphic mantle	0.282343	0.000015	0.000471	0.000024	0.012171	0.000562	24	-15.1	0.5	1.27	2.03
T123-4-07	Metamorphic mantle	0.282342	0.000017	0.000211	0.000004	0.005667	0.000089	24	-15.1	0.6	1.26	2.03
T123-1-03	Magmatic rim	0.282283	0.000021	0.001017	0.000024	0.025507	0.000536	16	-17.4	0.7	1.37	2.16
T123-1-04	Magmatic rim	0.282500	0.000014	0.000767	0.000023	0.018575	0.000653	16	-9.7	0.5	1.06	1.69
T123-1-05	Magmatic rim	0.282316	0.000014	0.000950	0.000070	0.023656	0.001654	16	-16.2	0.5	1.32	2.09
T123-1-12	Magmatic rim	0.282483	0.000018	0.000510	0.000013	0.012822	0.000284	16	-10.3	0.6	1.08	1.72
T123-1-14	Magmatic rim	0.282507	0.000013	0.001382	0.000028	0.032550	0.000614	16	-9.5	0.5	1.07	1.67
T123-1-20	Magmatic rim	0.282368	0.000013	0.000783	0.000020	0.019759	0.000464	16	-14.4	0.5	1.24	1.98
T123-1-23	Magmatic rim	0.282427	0.000013	0.001410	0.000040	0.034691	0.000863	16	-12.3	0.4	1.18	1.85
T123-1-24	Magmatic rim	0.282353	0.000023	0.001113	0.000071	0.027507	0.001667	16	-14.9	0.8	1.28	2.01
T123-1-25	Magmatic rim	0.282565	0.000033	0.001558	0.000011	0.040826	0.000353	16	-7.4	1.2	0.99	1.54
T123-1-26	Magmatic rim	0.282331	0.000024	0.000723	0.000046	0.018583	0.001146	16	-15.7	0.8	1.29	2.06
T123-2-02	Magmatic rim	0.282329	0.000023	0.001018	0.000018	0.026676	0.000404	16	-15.8	0.8	1.30	2.06
T123-3-01	Magmatic rim	0.282375	0.000027	0.000972	0.000010	0.024804	0.000237	16	-14.1	0.9	1.24	1.96
T123-3-02	Magmatic rim	0.282435	0.000013	0.001171	0.000008	0.029588	0.000096	16	-12.0	0.5	1.16	1.83
T123-3-03	Magmatic rim	0.282381	0.000016	0.001073	0.000024	0.026767	0.000586	16	-14.0	0.6	1.23	1.95
T123-3-06	Magmatic rim	0.282211	0.000013	0.000746	0.000013	0.018286	0.000233	16	-20.0	0.5	1.46	2.32
T123-3-07	Magmatic rim	0.282381	0.000014	0.001200	0.000011	0.029319	0.000174	16	-13.9	0.5	1.24	1.95
T123-3-08	Magmatic rim	0.282302	0.000016	0.000733	0.000033	0.018580	0.000742	16	-16.7	0.6	1.33	2.12
T123-3-13	Magmatic rim	0.282558	0.000012	0.000364	0.000017	0.010786	0.000451	16	-7.7	0.4	0.97	1.56
T123-4-02	Magmatic rim	0.282367	0.000013	0.001019	0.000023	0.025688	0.000482	16	-14.4	0.5	1.25	1.98
T123-4-03	Magmatic rim	0.282348	0.000015	0.001405	0.000022	0.035153	0.000573	16	-15.1	0.5	1.29	2.02
T123-4-05	Magmatic rim	0.282379	0.000018	0.000835	0.000020	0.020983	0.000450	16	-14.0	0.6	1.23	1.95
T123-4-06	Magmatic rim	0.282451	0.000019	0.000670	0.000018	0.017157	0.000518	16	-11.5	0.7	1.12	1.79
T123-4-08	Magmatic rim	0.282334	0.000022	0.000663	0.000004	0.016813	0.000124	16	-15.6	0.8	1.29	2.05
T123-4-10	Magmatic rim	0.282446	0.000018	0.000623	0.000019	0.016157	0.000508	16	-11.7	0.6	1.13	1.81
T123-4-12	Magmatic rim	0.282376	0.000017	0.000665	0.000017	0.017463	0.000429	16	-14.1	0.6	1.23	1.96
T123-4-13	Magmatic rim	0.282390	0.000017	0.000591	0.000006	0.015154	0.000144	16	-13.6	0.6	1.21	1.93
T123-4-14	Magmatic rim	0.282351	0.000023	0.000909	0.000021	0.023168	0.000457	16	-15.0	0.8	1.27	2.01
T123-4-15	Magmatic rim	0.282351	0.000028	0.001307	0.000018	0.032884	0.000414	16	-15.0	1.0	1.28	2.01
T123-4-16	Magmatic rim	0.282362	0.000029	0.001121	0.000034	0.028311	0.000834	16	-14.6	1.0	1.26	1.99
T123-4-17	Magmatic rim	0.282372	0.000027	0.001489	0.000038	0.037161	0.000841	16	-14.3	1.0	1.26	1.97
T123-4-20	Magmatic rim	0.282644	0.000017	0.001683	0.000073	0.042848	0.001942	16	-4.7	0.6	0.88	1.36
T123-4-22	Magmatic rim	0.282442	0.000025	0.000744	0.000020	0.018340	0.000503	16	-11.8	0.9	1.14	1.81