

Tab. S1 Approximate coefficients for log-ratios of major element-based DF1 and DF2 equations for the set of five diagrams for intermediate magmas proposed by Verma and Verma (2013) and for two sets for acid magmas by Verma et al. (2012, 2013)

Equation characteristics DFn _{(TF1-TF2-TF3)figt}	Equation Number (A)	Approximate coefficient values obtained from LDA										
		C ₁	C ₂	C ₃	C ₄	C ₅	C ₆	C ₇	C ₈	C ₉	C ₁₀	C _C
DF1 _{(IA+CA-CR+OI-Col)mint}	(1)	-2.456	1.120	-2.225	2.489	-0.212	-0.067	1.291	-0.284	-0.402	0.031	-11.431
DF2 _{(IA+CA-CR+OI-Col)mint}	(2)	-0.578	-0.011	0.691	-1.998	-1.720	0.305	0.816	-1.792	0.871	0.335	-12.202
DF1 _{(IA-CA-CR+OI)mint}	(3)	-2.519	0.542	-3.790	3.846	-0.363	-0.177	1.426	0.112	-0.219	-0.072	-14.315
DF2 _{(IA-CA-CR+OI)mint}	(4)	-1.049	3.440	-3.433	4.807	-3.499	0.374	-2.148	3.002	-0.774	1.062	-13.489
DF1 _{(IA-CA-Col)mint}	(5)	-0.887	-0.782	-2.432	4.106	2.050	-0.387	-0.740	1.360	-0.816	-0.468	4.312
DF2 _{(IA-CA-Col)mint}	(6)	1.760	-4.329	2.601	-4.961	2.897	-0.362	2.230	-2.967	0.790	-1.326	7.586
DF1 _{(IA-CR+OI-Col)mint}	(7)	-2.436	1.539	-1.517	1.456	0.496	-0.050	1.258	-0.827	-0.488	0.112	-7.895
DF2 _{(IA-CR+OI-Col)mint}	(8)	-0.737	-0.079	0.066	-1.130	-2.131	0.246	0.682	-1.328	0.771	0.296	-15.241
DF1 _{(CA-CR+OI-Col)mint}	(9)	-2.322	1.971	-0.537	0.431	-1.139	0.528	0.988	-0.894	0.161	0.078	-12.350
DF2 _{(CA-CR+OI-Col)mint}	(10)	-0.407	2.606	0.161	1.346	0.446	-0.260	-0.465	0.921	-1.277	-0.141	3.501
DF1 _{(IA+CA-CR-Col)m3}	(11)	0.361	0.957	-2.092	0.934	0.427	0.187	0.456	0.561	-1.652	-0.156	-1.583
DF2 _{(IA+CA-CR-Col)m3}	(12)	0.472	-0.955	0.110	0.699	0.740	-0.028	-0.245	0.232	0.174	-0.354	6.691
DF1 _{(IA-CA-CR)m3}	(13)	-0.479	-0.087	2.743	-1.066	-0.139	-0.191	-0.852	-0.714	1.717	0.339	6.257
DF2 _{(IA-CA-CR)m3}	(14)	-0.320	-1.758	-3.205	1.121	0.217	-0.074	1.250	1.314	1.662	0.019	0.998
DF1 _{(IA-CA-Col)m3}	(15)	-0.362	-0.034	0.520	-0.498	-0.722	-0.123	-0.139	-0.817	1.507	0.268	-3.083
DF2 _{(IA-CA-Col)m3}	(16)	-0.142	1.984	1.747	-0.735	-1.226	0.062	-1.152	-3.189	-2.339	0.495	-18.190
DF1 _{(IA-CR-Col)m3}	(17)	0.023	1.288	-2.641	2.949	0.197	0.067	0.062	0.622	-2.058	-0.075	-2.179
DF2 _{(IA-CR-Col)m3}	(18)	0.279	-1.054	0.827	0.303	0.408	-0.090	-0.326	0.152	0.670	-0.226	6.517
DF1 _{(CA-CR-Col)m3}	(19)	0.064	-1.794	0.526	0.638	0.341	-0.072	-0.326	0.106	1.810	-0.034	8.262
DF2 _{(CA-CR-Col)m3}	(20)	0.876	0.802	0.247	-0.880	0.754	-0.001	-0.062	-0.205	-3.309	-0.353	-3.896
DF1 _{(IA+CA-CR+OI-Col)macid}	(21)	0.051	0.226	-1.769	1.831	-0.065	0.134	0.225	0.742	-1.781	0.146	-2.115
DF2 _{(IA+CA-CR+OI-Col)macid}	(22)	1.091	-1.648	-1.189	1.030	0.823	0.026	0.023	0.212	0.085	-0.854	2.543
DF1 _{(IA-CA-CR+OI)macid}	(23)	0.130	0	0.623	-0.761	-0.083	-0.147	-0.239	-0.520	2.038	-0.164	2.65
DF2 _{(IA-CA-CR+OI)macid}	(24)	-0.045	0	5.102	-5.151	1.160	-0.253	-0.451	-2.448	-1.405	0.002	-2.979
DF1 _{(IA-CA-Col)macid}	(25)	-0.489	2.271	0.619	-1.238	-0.912	0.156	0	-1.231	1.154	0.409	-3.220
DF2 _{(IA-CA-Col)macid}	(26)	0.681	2.244	-3.899	3.691	-0.374	0.255	0	3.036	1.163	-0.226	12.688
DF1 _{(IA-CR+OI-Col)macid}	(27)	-0.144	-0.743	0	0	-0.443	0	0.075	0.383	2.577	-0.024	4.290
DF2 _{(IA-CR+OI-Col)macid}	(28)	-0.873	1.545	0	0	-0.753	0	0.023	0.150	-0.320	0.751	-2.595
DF1 _{(CA-CR+OI-Col)macid}	(29)	-0.022	1.065	-1.651	1.889	-0.296	0.119	0	0.650	-2.431	0.212	-4.332
DF2 _{(CA-CR+OI-Col)macid}	(30)	-1.084	1.626	0.992	-0.798	-0.779	-0.018	0	-0.223	0.651	0.726	-1.916