

Table S5 A summary of mineral/silicate liquid partition coefficients of selected elements

	Min.	Max.	Ave.	No. of values	References
$D_i^{Mt/Liq}$					
Cr	19.3	340	67.4	11	Dudas et al. 1971; Ewart et al. 1973; Lindstrom 1976; Leeman et al. 1978; Okamoto 1979; Luhr and Carmichael 1980; Esperanca 1997; Toplis and Corgne 2002
Ni	12.2	77	30	10	Lindstrom 1976; Leeman et al. 1978; Toplis and Corgne 2002; Nielsen et al. 1992
V	6.9	130	26	9	Luhr and Carmichael 1980; Reid 1983; Latourrette et al. 1991; Nielsen et al. 1992; Esperanca et al. 1997; Toplis and Corgne 2002
Zn	2.6	26.6	7.8	6	Luhr and Carmichael 1980; Lemarchand et al. 1987; Ewart and Griffin 1994a; Esperanca et al. 1997
Co	2.16	24.7	7.5	8	Lindstrom 1976; Okamoto 1979; Lemarchand et al. 1987; Esperanca et al. 1997; Toplis and Corgne 2002
Ti	4	16.5	7.0	5	Okamoto 1979; Nielsen et al. 1992; Toplis and Corgne 2002
Mn	1.4	14.1	3.0	7	Lindstrom 1976; Lemarchand et al. 1987; Latourrette et al. 1991; Nielsen et al. 1992; Ewart and Griffin 1994a; Toplis and Corgne 2002
Ga	2	4.1	2.8	3	Lemarchand et al. 1987; Ewart and Griffin 1994a
Mg	1	10.3	2.6	9	Latourrette et al. 1991; Toplis and Corgne 2002
Sc	0.73	5.76	1.6	9	Lindstrom 1976; Okamoto 1979; Luhr and Carmichael 1980; Lemarchand et al. 1987; Nielsen et al. 1992; Nielsen et al. 1994
Al	0.12	0.29	0.17	3	Latourrette et al. 1991; Toplis and Corgne 2002
Hf	0.074	2.3	0.25	10	Okamoto 1979; Luhr and Carmichael 1980; Lemarchand et al. 1987; Nielsen et al. 1992; Nielsen et al. 1994; Nielsen and Beard 2000; Thompson and Malpas 2000
Zr	0.02	3.9	0.21	9	Lemarchand et al. 1987; Nielsen et al. 1992; Ewart and Griffin 1994a; Nielsen et al. 1994; Nielsen and Beard 2000; Thompson and Malpas 2000
Ta	0.01	2.53	0.21	7	Haskin et al. 1966; Lemarchand et al. 1987; Green and Pearson 1987; Nielsen et al. 1992; Nielsen et al. 1994; Nielsen and Beard 2000; Thompson and Malpas 2000
Nb	0.01	1.8	0.13	7	Haskin et al. 1966; Green and Pearson 1987; Nielsen et al. 1992; Nielsen et al. 1994; Nielsen and Beard 2000; Thompson and Malpas 2000

D_i^{Ilm/Liq}					
Ti	150	235	205	6	Stimac and Hickmott 1994
Cr	1.5	40	13.8	18	Ringwood 1970; Jang and Naslund 2003; Klemme et al. 2006; van Kan Parker et al. 2011; Dygert et al. 2013
Mg			9.5	1	Latourrette et al. 1991
V	1.4	22	8.0	16	Ringwood 1970; Jang and Naslund 2003; Klemme et al. 2006; van Kan Parker et al. 2011; Dygert et al. 2013
Ni	3.8	8.5	6.0	4	Ewart and Griffin 1994b; Jang and Naslund 2003
Co	1.36	3.5	2.1	17	Paster et al. 1974; Jang and Naslund 2003; Klemme et al. 2006; van Kan Parker et al. 2011; Dygert et al. 2013
Mn	1.2	1.9	1.7	4	Paster et al. 1974; Jang and Naslund 2003
Ta	0.62	3.3	1.7	19	Green and Pearson 1987; Jang and Naslund 2003; Klemme et al. 2006; van Kan Parker et al. 2011; Dygert et al. 2013
Nb	0.4	3.8	1.3	20	McCallum and Charette 1978; Green and Pearson 1987; Jang and Naslund 2003; Klemme et al. 2006; van Kan Parker et al. 2011; Dygert et al. 2013
Sc	0.35	3.04	1.3	15	Paster et al. 1974; Jang and Naslund 2003; Klemme et al. 2006; van Kan Parker et al. 2011; Dygert et al. 2013
Hf	0.23	3.1	0.88	18	Jang and Naslund 2003; Klemme et al. 2006; van Kan Parker et al. 2011; Dygert et al. 2013
Zr	0.17	3.1	0.88	19	McCallum and Charette 1978; Jang and Naslund 2003; Klemme et al. 2006; van Kan Parker et al. 2011; Dygert et al. 2013
Zn	0.45	1.19	0.77	12	Paster et al. 1974; Jang and Naslund 2003; Dygert et al. 2013
Ga	0.25	0.34	0.26	4	Paster et al. 1974; Dygert et al. 2013
Al	0.025	0.025	0.03	1	Latourrette et al. 1991
D_i^{Cpx/Liq}					
Cr	1.66	55.2	16.29	8	Hart and Dunn 1993; Hauri et al. 1994; Dygert et al. 2014
Ni	2.60	11.5	5.49	9	Mysen 1978; Dygert et al. 2014; Laubier et al. 2014
V	1.81	10.6	4.50	9	Hart and Dunn 1993; Hauri et al. 1994; Dygert et al. 2014
Mg			2.61	1	Laubier et al. 2014
Co	0.95	2.53	1.74	9	Paster et al. 1974; Dygert et al. 2014; Laubier et al. 2014

Sc	0.808	2.28	1.44	11	Hart and Dunn 1993; Hauri et al. 1994; Jenner et al. 1994; Dygert et al. 2014; Laubier et al. 2014
Mn	0.69	1.44	0.99	9	Bougault and Hekinian 1974; Dygert et al. 2014; Laubier et al. 2014
Ga	0.30	1.06	0.730	9	Hart and Dunn 1993; Dygert et al. 2014; Laubier et al. 2014
Zn	0.41	0.87	0.553	10	Bougault and Hekinian 1974; Paster et al. 1974; Matsui et al. 1977; Dygert et al. 2014
Ti	0.14	0.64	0.32	9	Johnson 1998; Dygert et al. 2014; Laubier et al. 2014
Al			0.236	1	Laubier et al. 2014
Hf	0.061	0.476	0.225	10	Hart and Dunn 1993; Hauri et al. 1994; Johnson 1998; Dygert et al. 2014; Laubier et al. 2014
Zr	0.032	0.268	0.129	11	Hart and Dunn 1993; Hauri et al. 1994; Johnson 1998; Dygert et al. 2014; Laubier et al. 2014
La	0.02	0.061	0.039	10	Paster et al. 1974; Hart and Dunn 1993; Hauri et al. 1994; Dygert et al. 2014
Ta	0.001	0.0248	0.010	7	Dygert et al. 2014
Nb	0.0007	0.05	0.011	7	Dygert et al. 2014; Laubier et al. 2014
D_i^{Ol/Liq}					
Ni			22.28 ± 9.12	1	Laubier et al. 2014
Mg			6.60	1	KloECK and Palme 1988
Co			5.21 ± 1.5	1	Laubier et al. 2014
Mn			1.63 ± 0.51	1	Laubier et al. 2014
Zn	0.80	1.8	1.153	3	Bougault and Hekinian 1974; Paster et al. 1974; KloECK and Palme 1988
Cr	0.63	1.85	1.120	6	KloECK and Palme 1988; Beattie 1994
Sc			0.25 ± 0.11	1	Laubier et al. 2014
Ga	0.04	0.25	0.145	2	Paster et al. 1974; KloECK and Palme 1988
V			0.035 ± 0.031	1	Laubier et al. 2014
Zr	0.0172	0.025	0.021	2	Fujimaki et al. 1984
Hf			0.010	1	McKenzie and O'Nions 1991
Ta	0.065	0.17	0.101	3	Dunn and Sen 1994
Nb	0.0016	0.01	0.005		McKenzie and O'Nions 1991; Dunn and Sen 1994

Ti			0.0094 ± 0.0045	1	Laubier et al. 2014
Al			0.004	1	Laubier et al. 2014
D_i^{Pl/Liq}					
Al			2.1 ± 0.27	1	Laubier et al. 2014
Ga			0.692 ± 0.383	1	Laubier et al. 2014
Zn	0.11	0.18	0.140	3	Bougault and Hekinian 1974; Paster et al. 1974; Kravuchuk et al. 1981
Cr	0.019	0.365	0.095	6	Aignertorres et al. 2007
V			0.09 ± 0.029	1	Laubier et al. 2014
Ni			0.089 ± 0.033	1	Laubier et al. 2014
Nb	0.039	0.0139	0.097	4	Aignertorres et al. 2007
Ta	0.031	0.17	0.080	4	Aignertorres et al. 2007
Hf	0.036	0.153	0.082	3	Aignertorres et al. 2007
Co			0.042 ± 0.041	1	Laubier et al. 2014
Ti			0.043 ± 0.02	1	Laubier et al. 2014
Mg			0.037 ± 0.008	1	Laubier et al. 2014
Mn			0.031 ± 0.021	1	Laubier et al. 2014
Sc			0.016 ± 0.015	1	Laubier et al. 2014
Zr	0.001	0.022	0.009	10	Aignertorres et al. 2007

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