

Table 1S - Input parameters (crystal/liquid partition coefficients D and mineral modes) for the REE modelling of the pyroxenite parental liquids

	La	Ce	Nd	Sm	Eu	Gd	Dy	Er	Yb
D (Ol)	0.0001	0.0002	0.0004	0.00044	0.00056	0.00076	0.0014	0.00236	0.00364
D (Opx)	0.0002	0.0004	0.001	0.003	0.004	0.0128	0.0261	0.0474	0.0787
D (Cpx)	0.0536	0.0858	0.1873	0.291	0.35	0.4	0.442	0.387	0.43
D (Spl)	0.0004	0.0005	0.00058	0.00048	0.00045	0.00042	0.0004	0.00042	0.00048
D (Amp)	0.096	0.184	0.483	0.85	1.004	1.194	1.457	1.398	1.181

Mineral modes (vol %) of the orthopyroxenites

Sample	X (Ol)	X (Opx)	X (Cpx)	X (Spl)	X (Amp)
IRKJPX03	-	0.859	0.054	0.013	0.074
IRKJPX07	0.032	0.959	0.009	-	-

Crystal/liquid partition coefficients (D) for olivine, opx and spl from the compilation of Ionov et al. (2002); D (cpx) after Hart and Dunn (1993); D (Amp) after Nandedkar et al. (2016)