TABLE DR1. NEODYMIUM ISOTOPE COMPOSITION OF A-TYPE GRANITE AT NIANZISHAN IN NORTHEAST CHINA

Sample number	Sm (ppm)	Nd (ppm)	$^{147}Sm/^{144}Nd$	$^{143}Nd/^{144}Nd$	$\varepsilon_{Nd}(t)$*	T_{DM} (Ma)	T_{DM2} (Ma)#
97NZS05	19.41	119.30	0.0984	0.512603	0.86	724	846
97NZS07	20.80	103.31	0.1217	0.512722	2.82	710	687
97NZS11	16.06	94.15	0.1031	0.512707	2.82	611	687
97NZS13	13.42	74.48	0.1090	0.512686	2.31	676	728
97NZS19	6.95	35.33	0.1190	0.512722	2.86	689	684
97NZS20	15.65	86.98	0.1088	0.512783	4.21	534	573
97NZS32	16.00	91.08	0.1062	0.512784	4.27	520	569
97NZS39	17.22	93.83	0.1109	0.512740	3.34	609	645
97NZS45	19.67	97.49	0.1220	0.512676	1.91	788	761
97NZS53	17.00	87.52	0.1175	0.512748	3.39	638	640

* Initial $^{143}Nd/^{144}Nd$ ratio is calculated by assuming t = 123 Ma for the time of magma crystallization (whole-rock Rb-Sr isochron age after Li and Yu, 1993).

T_{DM2} is calculated by the two-stage model of Liew and Hofmann (1988) with an average crustal $^{147}Sm/^{144}Nd$ ratio of 0.118 (Jahn and Condie, 1995).

TABLE DR2. $\delta^{18}O$ VALUES OF ZIRCON FROM NIANZISHAN A-TYPE GRANITE IN NORTHEAST CHINA

Sample	Color	Grain diameter (μm)	$\delta^{18}O$ (‰)
97NZS05	Clear	53–74	3.52
97NZS08	Light yellow	74–105	4.04, 4.08
97NZS11a	Light yellow	53–74	3.12
97NZS19	Clear to light yellow	74–105	3.54, 3.62
97NZS45	Clear to light yellow	74–105	4.14, 4.19
97NZS53	Clear to light yellow	74–105	4.01, 4.03, 4.03

TABLE DR3. $\delta^{18}O$ VALUES (‰) OF WHOLE-ROCK AND COMMON ROCK-FORMING MINERALS FROM NIANZISHAN A-TYPE GRANITE IN NORTHEAST CHINA

Sample	Whole-rock	Quartz	Alkali feldspar	Magnetite
97NZS05	–1.2	0.9	–2.6	–7.0
97NZS08	2.0	4.9	0.1	–2.1
97NZS11a	–1.6	1.2	–1.7	–6.2
97NZS19	0.6	5.5	–2.6	–1.5
97NZS45	1.6	5.8	–1.1	–2.0
97NZS53	1.6	5.8	–3.3	–4.4