

Table S1. The XRF test results of scapolite

Table S2. EPMA test results of scapolite

	Scap-cl-2	Scap-y-1
Na <sub>2</sub> O	5.32	1.48
Al <sub>2</sub> O <sub>3</sub>	16.185	15.83
SiO <sub>2</sub>	65.355	66.49
SO <sub>3</sub>	1.025	1.36
Cl	2.445	2.975
K <sub>2</sub> O	0.985	0.94
CaO	6.39	8.635
MnO	0.23	0.155
FeO	0.11	0.32
CuO	0.295	0.335
ZnO	0.41	0.38
BrO	0.75	0.83
SrO	0.49	0.27
Total	100	100
Me%	51.10%	77.30%

Table S3.icp-ms test results of scapolite

Sample number	Element	Concentration (mg/kg)
Scap-cl-3	Ce	2.3453
Scap-cl-3	Cu	14.8857
Scap-cl-3	Eu	1.5939
Scap-cl-3	Fe	494.6971
Scap-cl-3	La	3.8766
Scap-cl-3	Lu	0.0416
Scap-cl-3	Mg	38.7573
Scap-cl-3	Mn	9.1831
Scap-cl-3	Nd	43.8605
Scap-cl-3	Sc	4.2198
Scap-cl-3	Th	1.6767
Scap-cl-3	Ti	14.2158
Scap-cl-3	Tm	0.1114
Scap-cl-3	Y	0.0322
Scap-cl-3	Yb	0.0451
Scap-cl-3	Zn	16.2909
Scap-y-5	Ce	0.4411
Scap-y-5	Cu	1.856
Scap-y-5	Eu	0.0748
Scap-y-5	Fe	93.5511
Scap-y-5	La	2.505
Scap-y-5	Lu	0.0002
Scap-y-5	Mg	6.7192
Scap-y-5	Mn	8.3836
Scap-y-5	Nd	8.8087
Scap-y-5	Sc	0.1625
Scap-y-5	Th	0.6528
Scap-y-5	Ti	6.7205
Scap-y-5	Tm	0.0205
Scap-y-5	Y	0.023
Scap-y-5	Yb	0.0208
Scap-y-5	Zn	2.825