

¹Campbell LS, Compston W, Sircombe KN and Wilkinson CC: Zircon from the East Orebody of the Bayan Obo Fe-Nb-REE deposit, China, and SHRIMP ages for carbonatite-related magmatism and REE mineralization events. *Contributions to Mineralogy and Petrology*. Linda.Campbell@manchester.ac.uk, University of Manchester, UK.

ESM 1 Electron microprobe analytical parameters.

(a) X-ray mapping

WD detector	PET 1	PET 2	LiF	TAP
	Y L α	U M β	Fe K α	Hf M α
Elements and X-ray lines	La L α	P K α	Ta L α	Si K α
	U M β	Ti K α	Mn K α	Al K α

(b) Quantitative spot analyses

Element	X-ray line	Detector	Time (sec)	Standard (label)
Ca	K α	PET 1	10	wollastonite (wol)
Ti [§]	K α	PET 1	20	rutile (rut)
La	L α	PET 1	20	La glass (lag)
Pb	M α	PET 1	10	galena (gal)
Th	M α	PET 1	30	monazite (mon)
U	M β	PET 1	30	uranium IV oxide (uuo)
P	K α	PET 2	20	monazite (mon)
Y	L α	PET 2	30	Y glass (yyg)
Zr	L α	PET 2	20	zircon (zir)
Nb	L α	PET 2	30	NaNbO ₃ (nan)
Mn	K α	LiF	10	pure Mn (pmn)
Fe	K α	LiF	20	aegirine (eag)
Hf	L α	LiF	30	pure Hf (phf)
Ta [†]	L α	LiF	30	Ta oxide (tao)
Na	K α	TAP	10	jadeite (jad)
Mg	K α	TAP	20	Mg oxide (mgo)
Al	K α	TAP	20	corundum (cor)
Si	K α	TAP	10	zircon (zir)

Relevant interferences (peak overlaps):

[§] Ba and Ce

[†] Si