

Ferri-kaersutite**NaCa₂(Mg₃TiFe³⁺)(Si₆Al₂)O₂₂O₂****Crystal Data:** Monoclinic. *Point Group:* 2/m. As prismatic crystals to 200 μm.**Physical Properties:** *Cleavage:* Perfect on {110}. *Fracture:* n.d. *Tenacity:* Brittle. Hardness = n.d. D(meas.) = n.d. D(calc.) = 3.190**Optical Properties:** Transparent. *Color:* Brown. *Streak:* n.d. *Luster:* Vitreous. *Optical Class:* n.d.**Cell Data:** *Space Group:* C2/m. *a* = 9.8378(8) *b* = 18.0562(9) *c* = 5.3027(3) *β* = 105.199(9)° *Z* = 2**X-ray Powder Pattern:** Harrow Peaks, Victoria Land, Antarctica.

8.4 (s), 2.707 (s), 3.379 (ms), 3.115 (ms), 2.598 (ms), 3.266 (m), 2.938 (m)

Chemistry:	(1)	(2)
SiO ₂	41.69	40.68
TiO ₂	5.30	9.01
Al ₂ O ₃	13.65	11.51
Cr ₂ O ₃	0.09	
Fe ₂ O ₃	4.52	9.01
MgO	15.54	13.64
CaO	11.03	12.65
MnO	0.11	
FeO	2.83	
Na ₂ O	2.88	3.50
K ₂ O	0.96	
H ₂ O	0.70	
F	0.24	
Cl	0.08	
-O = (F,Cl) ₂	0.12	
Total	99.50	100.00

(1) Harrow Peaks, Victoria Land, Antarctica; average of 10 electron microprobe analyses supplemented by SIM and Mössbauer spectroscopy; corresponds to

$$(\text{Na}_{0.816}\text{K}_{0.179})_{\Sigma=0.995}(\text{Ca}_{1.726}\text{Fe}^{2+}_{0.258}\text{Mn}_{0.014})_{\Sigma=1.998}(\text{Mg}_{3.383}\text{Fe}^{2+}_{0.088}\text{Ti}_{0.582}\text{Fe}^{3+}_{0.497}\text{Al}_{0.439}\text{Cr}_{0.011})_{\Sigma=5.00}(\text{Si}_{6.089}\text{Al}_{1.911})_{\Sigma=8.00}\text{O}_{22}[\text{O}_{1.187}(\text{OH})_{0.682}\text{F}_{0.111}\text{Cl}_{0.020}]_{\Sigma=2.00}$$
(2) NaCa₂(Mg₃TiFe³⁺)(Si₆Al₂)O₂₂O₂.**Mineral Group:** Amphibole supergroup, oxo-amphibole group.**Occurrence:** In an ultramafic (spinel-bearing lherzolite) mantle xenolith in alkaline mafic rock.**Association:** Forsterite, diopside, Cr-bearing spinel.**Distribution:** From Harrow Peaks, Victoria Land, Antarctica.**Name:** For an amphibole with sodium and calcium dominant in the A and B sites respectively, ferric iron in the C site and O²⁻ dominant in the W site.**Type Material:** Natural History Museum, University of Pisa, Italy (19689).**References:** (1) Gentili, S., C. Biagioni, P. Comodi, M. Pasero, C. McCammon, and C. Bonadiman (2016) Ferri-kaersutite, NaCa₂(Mg₃TiFe³⁺)(Si₆Al₂)O₂₂O₂, a new oxo-amphibole from Harrow Peaks, Northern Victoria Land, Antarctica. *Amer. Mineral.*, 101, 461-468.