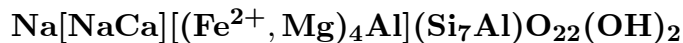


Katophorite



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Crystal Data: Monoclinic. *Point Group:* $2/m$. Prismatic, granular, also as fibrous aggregates or dendrites and skeletal crystals. Commonly rimming other minerals.

Twinning: $\parallel \{100\}$.

Physical Properties: *Cleavage:* Perfect on $\{110\}$, intersecting at $\sim 56^\circ$ and $\sim 124^\circ$; parting on $\{010\}$. *Tenacity:* Brittle. Hardness = 5–6 D(meas.) = 3.2–3.5 D(calc.) = [3.31]

Optical Properties: Transparent to translucent. *Color:* Black, dark green-black, bluish black; reddish yellow, bluish green in thin section. *Luster:* Vitreous.

Optical Class: Biaxial (-). *Pleochroism:* Strong; reddish yellow, reddish brown, and dark green to black. *Orientation:* $Z = b$. *Dispersion:* $r > v$. *Absorption:* $Z > Y > X$. $\alpha = 1.639\text{--}1.681$
 $\beta = 1.658\text{--}1.688$ $\gamma = 1.600\text{--}1.690$ $2V(\text{meas.}) = \sim 0^\circ\text{--}50^\circ$

Cell Data: *Space Group:* $C2/m$. $a = 10.019(2)$ $b = 18.036(7)$ $c = 5.286(3)$
 $\beta = 104.98(3)^\circ$ $Z = 2$

X-ray Powder Pattern: n.d.

Chemistry:	(1)	(2)	(1)	(2)	
SiO ₂	48.04	45.98	MnO	1.11	1.12
TiO ₂	2.09	1.92	MgO	6.42	5.21
Al ₂ O ₃	3.86	2.79	CaO	8.08	5.76
Cr ₂ O ₃	0.09		Na ₂ O	4.18	4.85
FeO	25.58	28.97	K ₂ O	1.34	1.23
			Total	100.79	97.83

(1) Baie-des-Moutons complex, Canada; by electron microprobe, corresponds to $(\text{Na}_{0.54}\text{K}_{0.26})_{\Sigma=0.80}(\text{Ca}_{1.31}\text{Na}_{0.69})_{\Sigma=2.00}(\text{Fe}_{3.25}^{2+}\text{Mg}_{1.45}\text{Ti}_{0.23}\text{Mn}_{0.15})_{\Sigma=5.08}(\text{Si}_{7.29}\text{Al}_{0.69}\text{Ti}_{0.01}\text{Cr}_{0.01})_{\Sigma=8.00}\text{O}_{22}(\text{OH})_2$. (2) Rallier-du-Baty Peninsula, Kerguelen Island; by electron microprobe, corresponds to $(\text{Na}_{0.80}\text{K}_{0.25})_{\Sigma=1.05}(\text{Ca}_{0.98}\text{Na}_{0.70}\text{Fe}_{0.32}^{2+})_{\Sigma=2.00}(\text{Fe}_{3.54}^{2+}\text{Mg}_{1.24}\text{Mn}_{0.15}\text{Ti}_{0.07})_{\Sigma=5.00}(\text{Si}_{7.32}\text{Al}_{0.52}\text{Ti}_{0.16})_{\Sigma=8.00}\text{O}_{22}(\text{OH})_2$.

Polymorphism & Series: Forms a series with magnesiokatophorite.

Mineral Group: Amphibole (sodic-calcic) group: $\text{Mg}/(\text{Mg} + \text{Fe}^{2+}) < 0.5$; $(\text{Na} + \text{K})_{\text{A}} \geq 0.5$; $0.67 \text{ Na}_{\text{B}}$ 1.33 ; $(\text{Ca} + \text{Na})_{\text{B}} \geq 1.34$; 6.5 Si 7.49 .

Occurrence: In alkalic volcanic and plutonic igneous rocks; in blueschist facies jadeitites.

Association: Arfvedsonite, aegirine, nepheline, pyroxenes, eckermannite, chromite.

Distribution: May occur in the Oslo (Christiania) district, Norway, from where it was originally described. On the Rallier-du-Baty Peninsula, Kerguelen Island, in the south Indian Ocean. In the Baie-des-Moutons complex, La Tabatière, Quebec, Canada. At Tawmaw, Kachin State, northern Myanmar (Burma).

Name: From the Greek for *a carrying down*, in allusion to its volcanic origin.

Type Material: n.d.

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