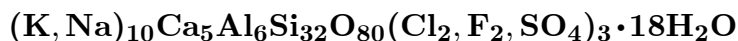


Delhayelite

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Crystal Data: Orthorhombic. *Point Group:* $2/m\ 2/m\ 2/m$ or $mm2$. Crystals platy.**Physical Properties:** *Cleavage:* Distinct on {010}. *Hardness* = n.d. $D(\text{meas.}) = 2.60(3)$
 $D(\text{calc.}) = [2.50]$ **Optical Properties:** Semitransparent. *Color:* Colorless; in thin section, abnormally bluish gray in sections cut normal to [010].*Optical Class:* Biaxial (-). *Orientation:* $X = a$; $Y = c$; $Z = b$. $\alpha = 1.532(2)$ $\beta = 1.532(2)$
 $\gamma = 1.532(2)$ $2V(\text{meas.}) = 83(3)^\circ$ **Cell Data:** *Space Group:* $Pm\bar{m}n$ or $Pmn2_1$. $a = 24.86(1)$ $b = 7.07(2)$ $c = 13.06(2)$
 $Z = 1$ **X-ray Powder Pattern:** Mt. Shaheru, Congo.

3.078 (100), 12.3 (35), 6.158 (25), 3.482 (10), 2.961 (5), 2.788 (5), 1.760 (5)

Chemistry:

	(1)		(1)
SiO ₂	52.60	K ₂ O	9.27
TiO ₂	0.09	F	0.33
Al ₂ O ₃	9.22	Cl	3.91
Fe ₂ O ₃	2.72	H ₂ O ⁺	5.93
MnO	0.07	H ₂ O ⁻	3.35
MgO	1.03	SO ₃	1.31
CaO	7.99	-O = (F, Cl) ₂	1.01
Na ₂ O	3.20	<hr/>	
		Total	100.01

(1) Mt. Shaheru, Congo; total Fe as Fe₂O₃; corrected for nepheline 2%.**Occurrence:** In a kalsilite-bearing melilite-nepheline lava (Mt. Shaheru, Congo).**Association:** Kalsilite, nepheline, götzenite, combeite, kirschsteinite (Mt. Shaheru, Congo); fenaksite, eudialyte, lomonosovite (Khibiny massif, Russia).**Distribution:** On Mt. Shaheru, the extinct southern cone of Mt. Nyiragongo, Kivu Province, Congo (Zaire). On Mts. Rasvumchorr and Yukspor, Khibiny massif, Kola Peninsula, Russia.**Name:** Honoring Fernard Delhaye (1880–1946), Belgian geologist, a pioneer in the geological exploration of the northern Kivu region of Congo (Zaire).**Type Material:** Royal Museum of Central Africa, Tervuren, Belgium, RGM8037.**References:** (1) Sahama, T.G. and K. Hytönen (1959) Delhayelite, a new silicate from the Belgian Congo. *Mineral. Mag.*, 32, 6–9. (2) (1959) *Amer. Mineral.*, 44, 1321–1322 (abs. ref. 1). (3) Cannillo, E., G. Rossi, and L. Ungaretti (1969) The crystal structure of delhayelite. *Rend. Soc. Ital. Mineral. Petrol.*, 26, 63–75 (in English).