

Reyerite**(Na, K)₂Ca₁₄Al₂Si₂₂O₅₈(OH)₈•6H₂O**

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Crystal Data: Hexagonal. *Point Group:* $\bar{3}$. In radiating aggregates of thin hexagonal plates. Massive, and intergrown with chlorite.

Physical Properties: *Cleavage:* Perfect on {0001}, micaceous. *Hardness* = 3.5–4.5
D(meas.) = 2.51–2.58 D(calc.) = 2.59

Optical Properties: Transparent to translucent. *Color:* Colorless to white, pale green with chlorite inclusions. *Luster:* Vitreous.

Optical Class: Uniaxial (-). ω = 1.563–1.568 ϵ = 1.558–1.563

Cell Data: *Space Group:* $P\bar{3}$. a = 9.767 c = 19.067 Z = 1

X-ray Powder Pattern: Niaqornat, Greenland; can resemble gyrolite or truscottite.
3.17 (vs), 2.855 (s), 2.659 (s), 1.846 (s), 4.23 (ms), 3.52 (m), 3.035 (m)

Chemistry:	(1)	(2)	(3)
SiO ₂	53.2	54.7	53.4
Al ₂ O ₃	3.8	4.4	4.7
CaO	32.3	31.6	31.8
Na ₂ O	2.3	3.5	1.5
K ₂ O	1.6	2.2	5.2
H ₂ O	6.0	[3.6]	[3.4]
Total	99.2	[100.0]	[100.0]

(1) Niaqornat, Greenland. (2) Do.; by electron microprobe, H₂O by difference; corresponds to (Na_{2.7}K_{1.1})_{Σ=3.8}Ca_{13.6}Al_{2.1}Si_{21.9}O₆₀(OH)_{4.6}•5H₂O. (3) Rawlings quarry, Virginia, USA; by electron microprobe, H₂O by difference; corresponds to (K_{1.1}Na_{2.7})_{Σ=3.8}Ca_{13.9}Al_{2.3}Si_{21.7}O₆₀(OH)_{5.2}•5H₂O.

Occurrence: In tuff (Niaqornat, Greenland); in basalt, within the contact aureole of a volcanic plug (Isle of Mull, Scotland); in a low-grade regionally metamorphosed diabase dike (Rawlings quarry, Virginia, USA).

Association: Calcite, chlorite, gyrolite, analcime, pectolite, thomsonite, natrolite.

Distribution: In Greenland, at Niaqornat (Niaqornak). In Scotland, at 'S Airde Beinn, five km west of Tobermory, Isle of Mull, and at Allt Coir' a' Ghobhainn, near Drynoch, Isle of Skye. In the USA, in the Rawlings quarry, south of McKenney, Brunswick Co., Virginia.

Name: For Professor Eduard Reyer (1849–1914), geologist of Vienna, Austria.

Type Material: University of Copenhagen, Copenhagen, Denmark.

References: (1) Dana, E.S. and W.E. Ford (1909) Dana's system of mineralogy, (6th edition), app. II, 88. (2) Chalmers, R.A., V.C. Farmer, R.I. Harker, S. Kelly, and H.F.W. Taylor (1964) *Reyerite*. *Mineral. Mag.*, 33, 821–840. (3) Clement, S.C. and P.H. Ribbe (1973) New locality, formula, and proposed structure for reyerite. *Amer. Mineral.*, 58, 517–522. (4) Merlino, S. (1988) The structure of reyerite, (Na,K)₂Ca₁₄Si₂₂Al₂O₅₈(OH)₈•6H₂O. *Mineral. Mag.*, 52, 247–256.