

Loudounite**NaCa₅Zr₄Si₁₆O₄₀(OH)₁₁•8H₂O**

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Crystal Data: n.d. *Point Group:* n.d. As radiating fibrous crystals, forming spherules, to 0.1 mm.

Physical Properties: Hardness = ~5 D(meas.) = 2.48(3) D(calc.) = n.d.

Optical Properties: Transparent. *Color:* Light green to white in aggregates; in thin section, colorless. *Streak:* White.

Optical Class: Biaxial. $\alpha = 1.536(4)$ $\beta = \text{n.d.}$ $\gamma = 1.550(4)$ 2V(meas.) = n.d.

Cell Data: *Space Group:* n.d. Z = n.d.

X-ray Powder Pattern: Goose Creek quarry, Virginia, USA.
2.931 (10b), 4.06 (7b), 7.37 (6), 5.81 (5), 3.527 (4), 2.694 (4), 4.56 (3)

Chemistry:	(1)
	SiO ₂ 45.8
	ZrO ₂ 25.7
	Al ₂ O ₃ 0.8
	FeO 2.0
	MnO trace
	MgO 0.3
	CaO 12.1
	Na ₂ O 1.3
	K ₂ O 0.2
	H ₂ O [11.8]
	<hr/> Total [100.0]

(1) Goose Creek quarry, Virginia, USA; by electron microprobe, H₂O by difference; corresponds to (Na_{0.85}K_{0.09}Ca_{0.06})_{Σ=1.00}(Ca_{4.31}Fe_{0.56}Mg_{0.15})_{Σ=5.02}Zr_{4.22}(Si_{15.44}Al_{0.32})_{Σ=15.76}O₄₀(OH)_{10.70}•7.92H₂O.

Occurrence: A late-stage mineral in the alteration of diabase.

Association: Ancyrite, epidote, prehnite, chlorite, actinolite, stilbite, albite, zircon, apophyllite, apatite, titanite, quartz, calcite.

Distribution: In the Goose Creek quarry, Leesburg, Loudoun Co., and the Fairfax quarry, Centreville, Fairfax Co., Virginia, USA.

Name: For the occurrence in Loudoun Co., Virginia, USA.

Type Material: National Museum of Natural History, Washington, D.C., USA, 149397.

References: (1) Dunn, P.J. and D. Newbury (1983) Loudounite, a new zirconium silicate from Virginia. *Can. Mineral.*, 21, 37–40. (2) (1983) *Amer. Mineral.*, 68, 1039 (abs. ref. 1).