

Georgeericksenite

$\text{Na}_6\text{CaMg}(\text{IO}_3)_6(\text{CrO}_4)_2 \cdot 12\text{H}_2\text{O}$

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Crystal Data: Monoclinic. *Point Group:* $2/m$. As acicular to prismatic [001] crystals, slightly flattened on {110}, to 0.2 mm, with dominant forms {110}, {100}, $\{\bar{2}33\}$; in nodular aggregates.

Physical Properties: *Tenacity:* Brittle. Hardness = 3–4 D(meas.) = n.d. D(calc.) = 3.035 Readily soluble in H_2O .

Optical Properties: Transparent to translucent. *Color:* Bright lemon-yellow to pale yellow. *Streak:* Pale yellow. *Luster:* Vitreous.

Optical Class: Biaxial (+). *Pleochroism:* Slight; X = very pale yellow; Z = distinct yellow-green. *Orientation:* $Z \simeq c$. $\alpha = 1.647(2)$ $\beta = 1.674(2)$ $\gamma = 1.704(2)$ $2V(\text{meas.}) = \text{n.d.}$ $2V(\text{calc.}) = 88.4^\circ$

Cell Data: *Space Group:* $C2/c$. $a = 23.645(2)$ $b = 10.918(1)$ $c = 15.768(1)$
 $\beta = 114.42(6)^\circ$ $Z = 4$

X-ray Powder Pattern: Oficina Chacabuco, Chile.

10.69 (100), 3.121 (80), 3.051 (80), 3.590 (70), 6.36 (50), 5.65 (50), 4.36 (40)

Chemistry: (1) Oficina Chacabuco, Chile; major elemental components and anion groups confirmed by qualitative electron microprobe and IR; by crystal-structure analysis, corresponds to $\text{Na}_{6.00}\text{Ca}_{1.00}\text{Mg}_{1.00}(\text{IO}_3)_{6.00}[(\text{Cr}_{0.84}\text{S}_{0.16})_{\Sigma=1.00}\text{O}_4]_2 \cdot 12\text{H}_2\text{O}$.

Occurrence: On a museum specimen from a nitrate deposit.

Association: Halite, nitratine, niter.

Distribution: From Oficina Chacabuco, Taltal district, Antofagasta, Chile.

Name: Honors George E. Ericksen (1920–1996), research geologist, U.S. Geological Survey, Reston, Virginia, USA, who studied Chilean nitrate deposits.

Type Material: Canadian Museum of Nature, Ottawa, Canada, 82914.

References: (1) Cooper, M.A., F.C. Hawthorne, A.C. Roberts, J.D. Grice, J.A.R. Stirling, and E.A. Moffatt (1998) Georgeericksenite, $\text{Na}_6\text{CaMg}(\text{IO}_3)_6(\text{CrO}_4)_2(\text{H}_2\text{O})_{12}$, a new mineral from Oficina Chacabuco, Chile: description and crystal structure. *Amer. Mineral.*, 83, 390–399.