

Crystal Data: Hexagonal. *Point Group:* $\bar{3} 2/m$. As acicular prismatic crystals, displaying $\{10\bar{1} 0\}$ and $\{0001\}$, that occur in either finely or coarsely fibrous aggregates to 3 cm.

Physical Properties: *Cleavage:* Good on $\{10\bar{1} 0\}$. *Fracture:* Uneven to conchoidal. *Tenacity:* Brittle. $D(\text{meas.}) = 2.59(1)$ $D(\text{calc.}) = 2.577$ *Hardness* = 6

Optical Properties: Translucent. *Color:* White to colorless. *Streak:* White. *Luster:* Vitreous to silky. *Optical Class:* Uniaxial (+). $\omega = 1.517(1)$ $\epsilon = 1.521(1)$

Cell Data: *Space Group:* $P\bar{3} m1$. $a = 14.3865(9)$ $c = 4.8733(4)$ $Z = 1$

X-ray Powder Pattern: Vesle Arøya island, Langesundsfjord district, Larvik, Vestfold, Norway. 3.161 (100), 3.386 (70), 2.466 (31), 4.710 (29), 4.153 (21), 2.217 (20), 2.398 (19)

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|--------------------------------|--------|
| Chemistry: | (1) |
| Na ₂ O | 13.38 |
| K ₂ O | 3.13 |
| Al ₂ O ₃ | 11.08 |
| SiO ₂ | 66.03 |
| F | 2.70 |
| BeO | [3.65] |
| -O=F | 1.14 |
| Total | 98.83 |

(1) Vesle Arøya island, Vestfold, Norway; average of 5 electron microprobe analyses supplemented by IR spectroscopy, BeO calculated from structure analysis; corresponds to $\text{K}_{0.91}\text{Na}_{5.92}[\text{Be}_2(\text{Si}_{15.07}\text{Al}_{2.98})_{\Sigma=18.05}]\text{O}_{39}(\text{F}_{1.95}\text{O}_{0.05})$.

Mineral Group: Leifite group.

Occurrence: A late-stage hydrothermal mineral in a dike of nepheline syenite pegmatite.

Association: Microcline, zircon, aegirine, polyolithionite, albite, eudialyte, catapleiite, pyrochlore.

Distribution: From Vesle Arøya island, Langesundsfjord district, Larvik, Vestfold, Norway; also from Tugtup Agtakorfiá, Ilimaussaq, South Greenland, and in the Sodovyi crosscut, Kukisvumchorr, Khibiny and at Alluaiv Mountain, Lovozero Complex, Kola Peninsula, Russia.

Name: Honors the Viking *Eirik* Raude (Eric the Red, born ~950, died ~1003), Norwegian emigrant, the discoverer of Greenland, and father of Leiv (Leif) Eirikson, for whom leifite was named.

Type Material: Department of Geology, Natural History Museum, University of Oslo, Norway (# 41773).

References: (1) Larsen, A.O., U. Kolitsch, R.A. Gault, and G. Giester (2010) Eirikite, a new mineral species of the leifite group from the Langesundsfjord district, Norway. *Eur. J. Mineral.*, 22, 875-880. (2) (2011) *Amer. Mineral.*, 96, 940-941 (abs. ref. 1).