

**Crystal Data:** Hexagonal. *Point Group:* 3. As acicular crystals elongate along [0001], to 0.15 mm, in randomly oriented groupings ('nests').

**Physical Properties:** *Cleavage:* None. *Fracture:* Splintery. *Tenacity:* Brittle. Hardness = n.d. D(meas.) = n.d. D(calc.) = 2.464

**Optical Properties:** Translucent. *Color:* Colorless. *Streak:* White. *Luster:* Vitreous to satiny. *Optical Class:* Uniaxial (-).  $\omega = 1.612(2)$   $\varepsilon = 1.604(2)$

**Cell Data:** *Space Group:* P3.  $a = 9.937(1)$   $c = 7.004(1)$   $Z = 1$

**X-ray Powder Pattern:** Poudrette quarry, Mont Saint-Hilaire, Quebec, Canada. 8.608 (100), 3.260 (31), 4.312 (25), 3.675 (25), 2.870 (20), 7.005 (19), 1.836 (14)

| Chemistry:                     | (1)     | (2)    |
|--------------------------------|---------|--------|
| Na <sub>2</sub> O              | 8.88    | 10.40  |
| K <sub>2</sub> O               | 0.26    |        |
| CaO                            | 0.22    |        |
| TiO <sub>2</sub>               | 0.58    |        |
| Nb <sub>2</sub> O <sub>5</sub> | 43.64   | 44.59  |
| SiO <sub>2</sub>               | 26.87   | 26.88  |
| H <sub>2</sub> O               | [17.93] | 18.13  |
| Total                          | 98.38   | 100.00 |

(1) Poudrette quarry, Mont Saint-Hilaire, Quebec, Canada; average of 12 electron microprobe analyses, H<sub>2</sub>O inferred from Raman spectroscopy and crystal structure analysis; corresponding to  $(\text{Nb}_{0.99}\text{Ti}_{0.01})_{\Sigma=1.00}\text{O}(\text{H}_2\text{O})_3(\text{Si}_{2.00}\text{O}_7)_2[(\text{Na}_{0.86}\square_{0.10}\text{K}_{0.02}\text{Ca}_{0.01})_{\Sigma=0.99}(\text{H}_2\text{O})_2]_3$ .  
 (2)  $[\text{NbO}(\text{H}_2\text{O})]_3(\text{Si}_2\text{O}_7)_2[\text{Na}(\text{H}_2\text{O})_2]_3$ .

**Occurrence:** From a highly oxidized waste-rock pile of siderite-dominant pods attributed to altered sodalite syenite. The mineral is likely a late-stage alteration product.

**Association:** Quartz, pyrite, franconite, rutile, lepidochrochite.

**Distribution:** At the Poudrette quarry, Mont Saint-Hilaire, Montérégie (formerly Rouville County), Quebec, Canada.

**Name:** For Laurentian University, Sudbury, Ontario, Canada, where the research characterizing this mineral as a new species was conducted.

**Type Material:** Royal Ontario Museum, Toronto, Canada (M55369).

**References:** (1) Haring, M.M.M., A.M. McDonald, M.A. Cooper, and G.A. Poirier (2012) Laurentianite,  $[\text{NbO}(\text{H}_2\text{O})]_3(\text{Si}_2\text{O}_7)_2[\text{Na}(\text{H}_2\text{O})_2]_3$ , a new mineral from Mont Saint-Hilaire, Quebec: description, crystal-structure determination and paragenesis. *Can. Mineral.*, 50, 1265-1280.  
 (2) (2014) *Amer. Mineral.*, 99, 1516 (abs. ref. 1).