

Crystal Data: Monoclinic. *Point Group:* [2/*m*.] As reaction rims on other minerals.

Physical Properties: *Cleavage:* [Perfect on {110}.] *Tenacity:* [Brittle.] *Hardness* = [5–6] D(meas.) = n.d. D(calc.) = [3.04]

Optical Properties: Semitransparent. *Color:* [Bluish.] *Luster:* [Vitreous.] *Optical Class:* [Biaxial.] *Pleochroism:* *X'* = pale violet; *Z'* = colorless. α = n.d. β = n.d. γ = n.d. $2V$ (meas.) = n.d.

Cell Data: *Space Group:* [C2/*m*.] $a = 9.665(1)$ $b = 17.752(2)$ $c = 5.303(1)$
 $\beta = 104.11(1)^\circ$ $Z = [2]$

X-ray Powder Pattern: n.d.

Chemistry:

| | (1) | (2) |
|--------------------------------|-------|-------|
| SiO ₂ | 53.84 | 50.89 |
| TiO ₂ | 0.16 | 0.08 |
| Al ₂ O ₃ | 12.92 | 12.09 |
| FeO | 5.03 | 9.76 |
| MnO | 0.02 | 0.07 |
| NiO | 0.11 | |
| MgO | 14.21 | 12.42 |
| CaO | 2.33 | 2.93 |
| Na ₂ O | 9.26 | 8.42 |
| K ₂ O | 0.14 | 0.27 |
| Cl | 0.01 | |
| Total | 98.03 | 96.93 |

(1) Nordfjord, Norway; by electron microprobe, Fe²⁺:Fe³⁺ calculated; corresponding to (Na_{0.72}K_{0.24})_{Σ=0.96}(Na_{1.67}Ca_{0.33})_{Σ=2.00}(Mg_{2.82}Fe_{0.18}²⁺)_{Σ=3.00}(Al_{1.43}Mg_{0.32}Fe_{0.24}³⁺Ti_{0.02})_{Σ=2.01}(Si_{7.24}Al_{0.76})_{Σ=8.00}O₂₂(OH)₂. (2) Jianchang, China; by electron microprobe, Fe²⁺:Fe³⁺ calculated from stoichiometry; corresponding to (Na_{0.75}K_{0.05})_{Σ=0.80}(Na_{1.56}Ca_{0.44})_{Σ=2.00}(Mg_{2.17}Fe_{0.82}²⁺Mn_{0.01})_{Σ=3.00}(Al_{1.22}Mg_{0.45}Fe_{0.33}³⁺Ti_{0.01})_{Σ=2.01}(Si_{7.20}Al_{0.80})_{Σ=8.00}O₂₂(OH)₂.

Mineral Group: Amphibole (alkali) group: Fe³⁺/(Fe³⁺ + Al^{vi}) 0.5; Mg/(Mg + Fe²⁺) ≥ 0.5; (Na + K)_A ≥ 0.5; Na_B ≥ 1.34; (Ca + Na)_B ≥ 1.34; 6.5 < Si < 7.5.

Occurrence: In a compositionally-layered eclogite that has undergone high-pressure amphibolite facies metamorphism (Nordfjord, Norway).

Association: Taramite, omphacite, jadeitic clinopyroxene, aegirine-augite, paragonite, apatite, albite, garnet, epidote, kyanite, quartz, coesite (Lanshantou, China).

Distribution: In the Nybö eclogite pod, Nordfjord, Norway. From the Dora-Maira massif, Parigi, near Martiniana Po, Piedmont, Italy. In China, near Lanshantou, Jianchang, Jiangsu Province. At Tawmaw, Myitkyina-Mogaung district, Kachin State, northern Myanmar (Burma).

Name: Apparently for the type locality, the Nybö eclogite, Nordfjord, Norway.

Type Material: n.d.

References: (1) Ungaretti, L., D.C. Smith, and G. Rossi (1981) Crystal-chemistry by X-ray structure refinement and electron microprobe analysis of a series of sodic-calcic to alkali amphiboles from the Nybö eclogite pod, Norway. *Bull. Minéral.*, 104, 400–412. (2) (1982) *Amer. Mineral.*, 67, 858 (abs. ref. 1). (3) Hirajima, T., R. Zhang, J. Li, and B. Cong (1992) Petrology of the nyböite-bearing eclogite in the Donghai area, Jiangsu Province, eastern China. *Mineral. Mag.*, 56, 37–46. (4) Rock, N.M.S. and B.E. Leake (1984) The International Mineralogical Association amphibole nomenclature scheme: computerization and its consequences. *Mineral. Mag.*, 48, 211–227.

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