Glagolevite $Na(Mg, Al)_6(Si_3Al)O_{10}(OH, O)_8$

Crystal Data: Triclinic. *Point Group*: 1. As poikilitic grains to 3 cm; platy grains to 15 mm.

Physical Properties: *Cleavage*: Perfect {001}. *Fracture*: Stepped. *Tenacity*: Flexible, sectile. Hardness = 3-5 D(meas.) = 2.66 D(calc.) = 2.61

Optical Properties: Transparent. *Color*: Colorless. *Streak*: White. *Luster*: Vitreous to pearly. *Optical Class*: Biaxial (+). $\alpha \approx \beta \approx 1.569(2)$ $\gamma = 1.571(2)$ 2V(meas.) = 17(3)° *Orientation*: $Z \approx c$.

Cell Data: *Space Group: C*1. $a = 5.3580(11)$ $b = 9.2810(19)$ $c = 14.574(3)$ $\alpha = 90.00(3)°$ $\beta = 97.08(3)°$ $\gamma = 90.00(3)°$ Z = 2

X-ray Powder Pattern: Kovdor Phlogopite quarry, Kovdor massif, Kola Peninsula, Russia. 2.556 (100), 1.544 (100), 2.597 (60), 2.457 (50), 2.992 (40), 7.266 (30), 4.629 (30)

Chemistry:

	(1)
Na_2O	3.94
MgO	37.23
FeO	0.38
MnO	0.11
Al_2O_3	13.36
SiO_2	29.24
H_2O	14.5
Total	98.76

(1) Kovdor Phlogopite quarry, Kovdor massif, Kola Peninsula, Russia; average of four electron microprobe analyses, H_2O by TGA; corresponds to $Na_{0.75}(Mg_{5.50}Fe_{0.03}Mn_{0.01}Al_{0.46})_{\Sigma=6.00}(Si_{2.90}Al_{1.10})_{\Sigma=4.00}O_{10}(OH_{7.88}O_{0.12})_{\Sigma=8.00}\cdot 0.85H_2O$.

Mineral Group: A trioctahedral chlorite group mineral with several polytypes intergrown.

Occurrence: In lenses within altered melilitic rocks in a phlogopite deposit in an alkaline massif.

Association: Pectolite, monticellite, diopside, phlogopite, andradite, calcite, olivine, magnetite, vesuvianite.

Distribution: From the Kovdor Phlogopite quarry, Kovdor massif, Kola Peninsula, Russia.

Name: Honors Russian mineralogist A.A. *Glagolev* (1927-1993).

Type Material: A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia.

References: (1) Seredkin, M.V., N.I. Organova, S.V. Krivovichev, T. Armbruster, M.M. Moiseev, N.V. Chukanov, V.M. Chukanova, P.C. Burns, I.M. Marsiy, B.B. Zvyagin, N.N. Kononkova, and A.V. Sivtsov (2003) Glagolevite, $NaMg_6[Si_3AlO_{10}](OH,O)_8\cdot H_2O$, a new mineral. Zap. Vseross. Mineral. Obshch., 132(1), 67-75 (in Russian, English abs.). (2) (2004) Amer. Mineral., 89(1), 250 (abs. ref. 1). (3) (2004) Can. Mineral., 42(1), 227 (abs. ref. 1). (4) Krivovichev, S.V., T. Armbruster, N.I. Organova, P.C. Burns, M.V. Seredkin, and N.V. Chukanov (2004) Incorporation of sodium into the chlorite structure: the crystal structure of glagolevite, $NaMg_6[Si_3AlO_{10}](OH,O)_8$. Amer. Mineral., 89, 1138-1141.