

Crystal Data: Orthorhombic. *Point Group:* $2/m\ 2/m\ 2/m$. Crystals commonly long prismatic, to 1 cm, typically untruncated, alone or in columnar aggregates; forms include {100}, {010}, {110}, {120}, {103}, {021}, {111}, {121}. Coarse-grained cleavable, fine-grained massive. *Twinning:* Penetration and contact twins, rarely triplets at about 60°, with {011} as twin plane.

Physical Properties: *Cleavage:* Very poor on {001}. *Fracture:* Conchoidal. Hardness = ~6 D(meas.) = 3.407 D(calc.) = 3.465

Optical Properties: Semitransparent. *Color:* Bluish green; small crystals white or pinkish; may be brown when massive, perhaps due to manganese oxides. *Luster:* Vitreous. *Optical Class:* Biaxial (-). *Dispersion:* $r > v$, marked. $\alpha = 1.682\text{--}1.686$ $\beta = 1.716\text{--}1.722$ $\gamma = 1.729\text{--}[1.735]$ $2V(\text{meas.}) = 60^\circ 51'$

Cell Data: *Space Group:* $Pbnm$. $a = 4.92(3)$ $b = 11.19(2)$ $c = 6.51(2)$ $Z = 4$

X-ray Powder Pattern: Franklin, New Jersey, USA. (ICDD 14-376). 1.85 (100), 2.69 (80), 2.63 (80), 3.69 (60), 2.96 (60), 1.13 (50), 1.11 (50)

Chemistry:

	(1)	(2)
SiO ₂	31.48	32.2
FeO	trace	
MnO	38.00	37.5
ZnO		0.8
PbO	1.74	
MgO		0.2
CaO	28.95	29.5
Total	100.17	100.2

(1) Franklin, New Jersey, USA; neglecting PbO, corresponds to Ca_{0.99}Mn_{1.02}Si_{1.00}O₄. (2) Do.; by electron microprobe, corresponds to (Ca_{0.98}Zn_{0.02}Mg_{0.01})_{Σ=1.01}Mn_{0.99}Si_{1.00}O₄.

Occurrence: In a metamorphosed stratiform zinc deposit (Franklin, New Jersey, USA); in skarn at the contact between diabase and marble (Anakit Creek, Russia); in calc-silicate rocks with manganese ores (Kuruman, South Africa).

Association: Nasonite, willemite, andradite, hardystonite, tephroite, clinohedrite, esperite, leucophoenicite, hodgkinsonite, diopside, cuspidine, calcite, franklinite, zincite (Franklin, New Jersey, USA).

Distribution: At Franklin, Sussex Co., New Jersey, USA. From near Anakit Creek, at the mouth of the Lower Tunguska River, central Siberia, Russia. In the Wessels mine, near Kuruman, Cape Province, South Africa. From the Kombat mine, 49 km south of Tsumeb, Namibia.

Name: From the Greek for *blue green* and *color*, in allusion to its color.

Type Material: Yale University, New Haven, Connecticut, USA, 2.4359, 2.4360.

References: (1) Dana, E.S. (1899) Dana's system of mineralogy, (6th edition), app. I, 29; Dana, E.S. and W.E. Ford (1909) Dana's system of mineralogy, (6th edition), app. II, 46. (2) Palache, C. (1935) The minerals of Franklin and Sterling Hill, Sussex County, New Jersey. U.S. Geol. Sur. Prof. Paper 180, 79–80. (3) O'Mara, J.H. (1951) Unit cell and space group of glaucocroite. Amer. Mineral., 36, 918. (4) Pertsev, N.N. and I.P. Laputina (1974) Glaucocroite in the Anakit skarns, Lower Tunguska. Doklady Acad. Nauk SSSR, 216, 1379–1382 (in Russian). (5) Lager, G.A. and E.P. Meagher (1978) High-temperature structural study of six olivines. Amer. Mineral., 63, 365–377. (6) Leavens, P.B., P.J. Dunn, and D.M. Burt (1987) Glaucocroite (olivine, CaMnSiO₄) from Franklin, New Jersey: its composition, occurrence, and formation. Amer. Mineral., 72, 423–428.

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