

**Crystal Data:** Orthorhombic. *Point Group:* 2/m 2/m 2/m. Rarely as crystals; granular, cleavable massive.

**Physical Properties:** *Cleavage:* {001}, good; {100}, indistinct; {210}, interrupted.  
*Fracture:* Conchoidal. Hardness = 4.5–5 D(meas.) = 3.41 D(calc.) = 3.47

**Optical Properties:** Transparent to translucent. *Color:* Deep wine-yellow. *Luster:* Bright resinous to nearly adamantine, somewhat pearly on the {001} cleavage.

*Optical Class:* Biaxial (+). *Orientation:* X = b; Y = c; Z = a. *Dispersion:* r < v, strong.  
 $\alpha = 1.671(3)$   $\beta = 1.674(3)$   $\gamma = 1.684(3)$  2V(meas.) = 75(5)°

**Cell Data:** *Space Group:* Pnam. a = 10.523(5) b = 4.987(2) c = 6.312(3) Z = 4

**X-ray Powder Pattern:** Branchville, Connecticut, USA.

2.604 (10), 2.583 (10), 2.863 (8), 1.831 (7), 4.498 (6), 4.045 (6), 3.656 (5)

Chemistry:	(1)	(2)
P <sub>2</sub> O <sub>5</sub>	41.03	41.05
FeO	3.06	
MnO	38.19	41.03
Li <sub>2</sub> O	0.19	
Na <sub>2</sub> O	16.79	17.92
H <sub>2</sub> O	0.43	
insol.	0.81	
Total	100.50	100.00

(1) Branchville, Connecticut, USA. (2) NaMnPO<sub>4</sub>.

**Occurrence:** A rare mineral, replacing lithiophilite, in a complex granite pegmatite.

**Association:** Lithiophilite, triploidite, eosphorite, huréaulite, fairfieldite, dickinsonite.

**Distribution:** From Branchville, Fairfield Co., Connecticut, USA.

**Name:** For its content of sodium, *natrium*, and from the Greek for a friend.

**Type Material:** Yale University, New Haven, Connecticut, 3.2362–3.2364; Harvard University, Cambridge, Massachusetts, USA, 95263.

**References:** (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 670–671. (2) Moore, P.B. (1972) Natrophilite, NaMn(PO<sub>4</sub>), has ordered cations. Amer. Mineral., 57, 1333–1344.