Nalipoite $NaLi_2PO_4$

Crystal Data: Orthorhombic. *Point Group:* $2/m\ 2/m\ 2/m$. As anhedral to subhedral blocky grains, to 2 mm.

Physical Properties: *Cleavage:* Good on {100}, {010}, {001}, {110}; distinct on probable {101}. *Fracture:* Uneven. *Tenacity:* Very brittle. Hardness = ∼4 D(meas.) = 2.58(1) D(calc.) = 2.587

Optical Properties: Transparent to translucent. *Color:* White, pale blue, pale yellow. *Streak:* White. *Luster:* Vitreous.
Optical Class: Biaxial (–). *Orientation:* $X = a$; $Y = c$; $Z = b$. $\alpha = 1.533(1)$ $\beta = 1.540(1)$ $\gamma = 1.541(1)$ 2V(meas.) = 49(1)° 2V(calc.) = 41°

Cell Data: *Space Group: Pmnb.* $a = 6.884(2)$ $b = 9.976(4)$ $c = 4.927(2)$ Z = 4

X-ray Powder Pattern: Mont Saint-Hilaire, Canada.
4.02 (100), 3.507 (100), 3.441 (100), 2.493 (90), 2.462 (90), 2.833 (40), 2.712 (40)

Chemistry:

	(1)	(2)
P_2O_5	51.76	53.83
Al_2O_3	0.06	
Na_2O	24.54	23.51
Li_2O	22.12	22.66
Total	98.48	100.00

(1) Mont Saint-Hilaire, Canada; by electron microprobe, average of six analyses, Li_2O calculated from stoichiometry and confirmed by crystal-structure analysis; corresponding then to $Na_{1.07}Li_{2.00}P_{0.99}O_4$. (2) $NaLi_2PO_4$.

Occurrence: Very rare in sodalite syenite xenoliths associated with an intrusive alkalic gabbro-syenite complex.

Association: Silinaite, revdite, serandite, lovozerite, villiaumite, ussingite, eudialyte, sodalite, analcime, microcline, aegirine.

Distribution: From Mont Saint-Hilaire, Quebec, Canada.

Name: For the principal chemical components in the composition, sodium NAtrium, LIthium, Phosphorus, and Oxygen.

Type Material: Canadian Museum of Nature, Ottawa, 56467, 56468; Royal Ontario Museum, Toronto, Canada, 44516, 44517.

References: (1) Chao, G.Y. and T.S. Ercit (1991) Nalipoite, sodium dilithium phosphate, a new mineral species from Mont Saint-Hilaire, Quebec. Can. Mineral., 29, 565–568. (2) Ercit, T.S. (1991) The crystal structure of nalipoite. Can. Mineral., 29, 569–573. (3) (1992) Amer. Mineral., 77, 449 (abs. refs. 1 and 2).