

**Crystal Data:** Cubic. *Point Group:* 23. As irregular grains, to 5 mm.

**Physical Properties:** *Cleavage:* On {100}, distinct. *Fracture:* Semiconchoidal.  
*Tenacity:* Brittle. Hardness = ~2 D(meas.) = 2.3 D(calc.) = 2.26 Readily dehydrates in air; partly decomposed in H<sub>2</sub>O. Fluoresces pale violet under UV.

**Optical Properties:** Transparent, turbid with alteration. *Color:* Colorless, snow-white with alteration. *Luster:* Dull vitreous [sic].  
*Optical Class:* Isotropic.  $n = 1.504(1)$

**Cell Data:** *Space Group:* P2<sub>1</sub>3.  $a = 10.711(9)$   $Z = 4$

**X-ray Powder Pattern:** Mt. Yukspor, Kola Peninsula, Russia.  
 2.598 (10), 2.866 (9), 5.36 (8), 4.81 (8), 2.102 (8), 3.575 (7), 3.794 (6)

| Chemistry:                    | (1)      | (2)    |
|-------------------------------|----------|--------|
| P <sub>2</sub> O <sub>5</sub> | 18.86    | 17.00  |
| CaO                           | 0.04     |        |
| SrO                           | 0.86     |        |
| BaO                           | 37.00    | 36.74  |
| Na <sub>2</sub> O             | 6.31     | 7.42   |
| H <sub>2</sub> O              | 36.94    | 38.84  |
| Total                         | [100.01] | 100.00 |

(1) Mt. Yukspor, Kola Peninsula, Russia; by electron microprobe, average of three analyses, recalculated to 100%, H<sub>2</sub>O by TGA; corresponding to Na<sub>0.80</sub>(Ba<sub>0.95</sub>Sr<sub>0.03</sub>)<sub>Σ=0.98</sub>P<sub>1.05</sub>O<sub>4</sub>•8.07H<sub>2</sub>O.  
 (2) NaBaPO<sub>4</sub>•9H<sub>2</sub>O.

**Occurrence:** A rare late-stage hydrothermal mineral in cavities in ijolite-urtite pegmatite in a differentiated alkalic massif.

**Association:** Natrolite, pectolite, shcherbakovite, wadeite, eudialyte, lamprophyllite, ferrian biotite, aegirine, microcline.

**Distribution:** On Mt. Yukspor, Khibiny massif, Kola Peninsula, Russia.

**Name:** For sodium, NAtrium, BArium, and PHosphorus in the composition.

**Type Material:** Geology Museum, Kola Branch, Academy of Sciences, Apatity, 5713/2; Mining Institute, St. Petersburg, 1635/1; A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia, 80819.

**References:** (1) Khomyakov, A.P., M.F. Korobitsyn, Y.P. Men'shikov, and L.I. Polezhaeva (1982) Nabaphite, NaBaPO<sub>4</sub>•9H<sub>2</sub>O, a new mineral. Doklady Acad. Nauk SSSR, 266, 707–710 (in Russian). (2) Baturin, S.V., Y.A. Malinovskii, and N.V. Belov (1982) Crystal structure of nabaphite, NaBaPO<sub>4</sub>•9H<sub>2</sub>O. Doklady Acad. Nauk SSSR, 266, 624–627 (in Russian). (3) (1983) Amer. Mineral., 68, 643–644 (abs. refs. 1 and 2). (4) (1983) Mineral. Abs., 34, 348 and (1987) Mineral. Abs., 38, 531 (abs. ref. 1).