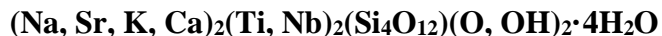


**Paratsepinite-Na**

**Crystal Data:** Monoclinic. *Point Group:* 2/m. As prismatic crystals epitactically overgrow on prismatic labuntsovite-Mn crystals. *Twinning:* Polysynthetic microtwinning on (001).

**Physical Properties:** *Cleavage:* n.d. *Tenacity:* n.d. *Fracture:* n.d. *Hardness =* n.d. *D(meas.) =* n.d. *D(calc.) =* 2.76

**Optical Properties:** Transparent. *Color:* Colorless. *Streak:* n.d. *Luster:* Vitreous. *Optical Class:* Biaxial (+).  $\alpha = 1.657$   $\beta = 1.666$   $\gamma = 1.765$   $2V(\text{meas.}) = 19-31^\circ$   $2V(\text{calc.}) = 35^\circ$

**Cell Data:** *Space Group:* C2/m.  $a = 14.596(2)$   $b = 14.249(2)$   $c = 15.852(3)$   $\beta = 117.270(3)^\circ$   $Z = 4$

**X-ray Powder Pattern:** Mt. Khibinpakhkchorr, Khibiny massif, Kola Peninsula, Russia. 7.09 (100), 3.24 (90), 3.15 (80), 3.11 (80), 2.54 (70), 2.491 (70)

**Chemistry:** (1) Mt. Khibinpakhkchorr, Khibiny massif, Kola Peninsula, Russia; average electron microprobe analysis, not given; corresponds to  $(\text{Na}_{3.68}\text{Sr}_{1.73}\text{K}_{0.76}\text{Ca}_{0.51}\text{Ba}_{0.16}\text{Mn}_{0.03}\text{Zn}_{0.03})_{\Sigma=7.99}$   $(\text{Ti}_{5.03}\text{Nb}_{2.87}\text{Fe}_{0.09})_{\Sigma=7.99}[\text{Si}_{15.92}\text{Al}_{0.08}\text{O}_{48}][\text{O}_{4.01}(\text{OH})_{3.99}]_{\Sigma=8.00} \cdot 7.75\text{H}_2\text{O}$ .

**Mineral Group:** Labuntsovite group.

**Occurrence:** In cavities in peralkaline pegmatite.

**Association:** Analcime, natrolite, tsepinite-Na, catapleite, apophyllite, fluorite, epididymite, sphalerite.

**Distribution:** From Mt. Khibinpakhkchorr, Khibiny massif, Kola Peninsula, Russia.

**Name:** The suffix, *Na*, indicates the sodium-dominant analogue of *paratsepinite-Ba*.

**Type Material:** A.E. Fersman Mineralogical Museum, Moscow, Russia (91051 and 91052).

**References:** (1) Organova N.I., S.V. Krivovichev, Z.V. Shlyukova, A.E. Zadov, I.V. Rozhdestvenskaya, and T.I. Ivanova (2004) Structure of the new mineral paratsepinite-Na and its place in the labuntsovite group. *Crystal. Reports*, 49, 946-952. (2) Burke, E.A.J. and G. Ferraris (2004) New minerals approved in 2003 and nomenclature modifications approved in 2003 by the Commission on New Minerals and Mineral Names, International Mineralogical Association. IMA No. 2003-008 [paratsepinite-Na]. *Amer. Mineral.*, 89, 1567. (3) Pekov, I.V. (2007) New minerals from former Soviet Union countries, 1998-2006: new minerals approved by the IMA commission on new minerals and mineral names. *Mineral. Almanac*, 11, 39.