

NEW MINERALS APPROVED IN 2008
NOMENCLATURE MODIFICATIONS APPROVED IN 2008
BY THE
COMMISSION ON NEW MINERALS, NOMENCLATURE AND CLASSIFICATION
INTERNATIONAL MINERALOGICAL ASSOCIATION

Ernst A.J. Burke* (Chairman, CNMNC) and Frédéric Hatert** (Vice-Chairman, CNMNC)

*Faculteit der Aard- en Levenswetenschappen, Vrije Universiteit Amsterdam,
De Boelelaan 1085, 1081 HV Amsterdam, Netherlands — ernst.burke@falw.vu.nl

**Laboratoire de Minéralogie, Université de Liège, B-4000 Liège, Belgium –
fhatert@ulg.ac.be

The information given here is provided by the Commission on New Minerals and Mineral Names, I.M.A., for comparative purposes and as a service to mineralogists working on new species.

Each mineral is described in the following format:

- IMA number
- Type locality
- Corresponding author
- Chemical formula
- Relationship to other minerals
- Crystal system, Space group; Structure determined, yes or no
- Unit-cell parameters
- Strongest lines in the X-ray powder-diffraction pattern

The names of these approved species are considered confidential information until the authors have published their descriptions or released information themselves.

NO OTHER INFORMATION WILL BE RELEASED BY THE COMMISSION

PROPOSALS APPROVED IN APRIL 2008

IMA No. 2008-001

Khibinpakhchorr Mt., Khibiny massif, Kola Peninsula, Russia.

Yulya V. Azarova

$(\text{K,Na,Sr,Ba})_4\text{Ca}_2(\text{Ti,Nb})_8[\text{Si}_4\text{O}_{12}]_4(\text{OH,O})_8 \cdot 12\text{H}_2\text{O}$

Labuntsovite group

Monoclinic: $C2/m$; structure determined

a 14.529, b 14.203, c 7.899 Å, β 117.37°

7.08(70), 3.25(100), 3.11(70), 2.61(50), 2.49(70), 1.712(70), 1.577(70), 1.444(70)

IMA No. 2008-003

Dronino village, Kasimov District, Ryazan' Oblast, 350 km south-east of Moscow, Russia

Nikita V. Chukanov

$\text{Ni}_3\text{Fe}^{3+}\text{Cl}(\text{OH})_8 \cdot 2\text{H}_2\text{O}$

Hydrotalcite group

Trigonal: $R\bar{3}m$, $R3m$ or $R32$

a 6.206, c 46.184 Å

7.76(100), 3.88(40), 2.64(25), 2.32(20), 1.965(15), 1.546(10), 1.536(10), 1.337(10)

IMA No. **2008-004**

Premier Mine, Stewart, British Columbia, Canada

Luca Bindi

[Cu₆Sb₂S₇][Ag₉CuS₄]

Pearceite-polybasite group

Trigonal: $P\bar{3}m1$; structure determined

a 7.341, c 11.805 Å

11.81(44), 3.069(44), 2.951(100), 2.799(52), 2.473(43), 2.355(40), 2.163(43), 1.835(46)

CHANGES IN EXISTING NOMENCLATURE

07-E

The mineral hastite, orthorhombic CoSe₂ (marcasite group), is discredited. The type material has been shown to consist of ferroselite, FeSe₂.

STATUS OF OLGITE and BARIO-OLGITE

E.A.J. Burke, chairman IMA-CNMNC

It is stated, in several media, that bario-oligite, approved by the IMA-CNMMN as 2003-002 and published by Pekov *et al.* (2004), has been discredited, or should be discredited as a valid mineral. These opinions are based on the conclusion by Sokolova *et al.* (2005) that “bario-oligite is not distinct from oligite, the former should be considered for discreditation”. This consideration became reality when Sokolova and Hawthorne submitted in 2005, on invitation of the IMA-CNMMN, an official proposal to discredit bario-oligite. In the period from January to May 2006, this proposal was intensely discussed, guided by Giovanni Ferraris as vice-chairman of the CNMMN, between its authors, the authors of bario-oligite and the members of the CNMMN.

The history of oligite and bario-oligite is as follows:

1. Until 2004, oligite was considered in all mineralogical reference books to be a strontium mineral, due to the formula given in the original description by Khomyakov *et al.* (1980), Na(Sr,Ba)PO₄, and to the composition of the *M1* structural site as obtained by Sokolova *et al.* (1984), (Sr_{0.52}Ba_{0.48}), on type material from Mt. Karnasurt, Lovozero massif, Kola Peninsula, Russia.
2. Sokolova *et al.* (1990) published data on ‘oligite II’ and ‘oligite III’ (the original oligite being ‘oligite I’), two specimens from Mt. Alluaiv in the Lovozero massif having Ba as dominant constituent on the *M1* site. This paper failed to give a clear definition of oligite, no nomenclatural distinction was made between the 1984 oligite (Sr-dominant *M1*) and the 1990 oligite (Ba-dominant *M1*).
3. Pekov *et al.* started in 2002 a study on ‘oligite’ specimens from several pegmatites and hydrothermal veins at Mt. Kedykverpakhk in the Lovozero massif. The results indicated that ‘oligite’ consists of two mineral species, with either Sr or Ba dominant on the *M1* site. Because oligite was traditionally interpreted as a strontium mineral, Pekov *et al.* (2004) published their material with a Ba-dominant *M1* site as the new mineral bario-oligite after approval by the CNMMN in 2003. It is evident that ‘oligite II’ and ‘oligite III’ are also bario-oligite. Pekov (2005) published data of an ‘oligite’

specimen from one of the veins having a Sr-dominant *M1* composition of ($\text{Sr}_{0.57}\text{Ba}_{0.42}\text{K}_{0.01}$).

4. Sokolova *et al.* (2005) re-examined the material described previously as ‘oligite I’ (= the original type material) and ‘oligite III’. They found that the real space group of these specimens is $P-3m1$, not $P3$ as published in 1984 and 1990 and also by Pekov *et al.* (2004) for bario-oligite. The change of space group has no implications for the occupancy of the *M1* site, which is identical in both space groups. The new data obtained on the type ‘oligite I’ specimen, however, show that its *M1* site has a composition ($\text{Ba}_{0.76}\text{Sr}_{0.20}\text{K}_{0.04}$). Calculation of the empirical formula from the original analysis by Khomyakov *et al.* (1980) along the same crystal-chemical principles leads to essentially the same results. No convincing explanation was offered for the strong difference with the 1984 results (with a Sr-dominant *M1* site) on the same specimen.

Giovanni Ferraris proposed in June 2006 the following compromise to end the discussion:

1. It is evident that ‘re-examined oligite’ and ‘bario-oligite’ represent the same mineral species.
2. According to the CNMMN rules, the older name (oligite) should have priority. But taking into account the work done by Pekov in 2005 showing that in the near future a ‘strontio-oligite’ will be described, as an exception (but that would not be the first time!) to the priority rule, the name ‘oligite’ is discredited and the name ‘bario-oligite’ is retained.
3. The samples studied by Pekov *et al.* (2004) and by Sokolova *et al.* (2005) are the cotypes of the redefined ‘bario-oligite’.

It was at that time also agreed between Ferraris, Pekov, Sokolova and Hawthorne that:

1. Sokolova and Hawthorne have withdrawn their proposal to discredit bario-oligite after reading the comments of the CNMMN members.
2. In the future, ‘oligite’ will be used as the name of a series consisting of the species ‘bario-oligite’ and ‘strontio-oligite’ after approval of the latter as a mineral.
3. Pekov *et al.* will at some moment submit a proposal for the Mt. Kedykverpakhk ‘strontio-oligite’ together with an official discreditation of the old ‘oligite’ and a revision of the formula of ‘bario-oligite’.

Conclusions in 2008:

1. The 2006 compromise and agreements are taken over by the CNMNC: bario-oligite is to be redefined, oligite is to be discredited as a mineral name and is to be used as a series name (comparable to the apatite, columbite, apophyllite, *etc.*), and ‘strontio-oligite’ is to be proposed as a new mineral. The authors of the latter are invited to consider renaming the minerals of the oligite series along a suffix-based nomenclature: oligite-(Ba) and oligite-(Sr). Until that time, the names bario-oligite and oligite, respectively, are to be used for these two minerals.
2. Sokolova *et al.* (2005) would have avoided a lot of confusion and discussion if they had contacted the authors of bario-oligite and/or the CNMMN before publishing their results.
3. Publication of the results of the 2006 discussion within the CNMMN is necessary to correct wrong statements in several media.

References

- Khomyakov, A.P., Semenov, E.I., Shumyatskaya, N.G., Timoshenkov, I.M., Laputina, I.P., Smol'yaninova, N.N. (1980): Olgite, Na(Sr,Ba)PO₄ - a new mineral. Zapiski VMO, **109**, 3, 347-351 (in Russian).
- Pekov, I.V. (2005): Genetic Mineralogy and Crystal Chemistry of Rare Elements in High-Alkaline Postmagmatic Systems. D.Sc. Thesis. Moscow State University, 652 pp.
- Pekov, I.V., Chukanov, N.V., Kulikova, I.M., Zubkova, N.V., Krotova, O.D., Sorokina, N.I., Pushcharovsky, D.Yu. (2004): A new mineral bario-oligite and its crystal structure. Zapiski VMO, **133**, 1, 41-49 (in Russian)
- Sokolova, E.V., Egorov-Tismenko, Yu.K., Yamnova, N.A., Simonov, M.A. (1984): The crystal structure of oligite, Na(Sr_{0.52}Ba_{0.48})(Sr_{0.58}Na_{0.42})(Na_{0.81}Sr_{0.19})[PO_{3.40}][P_{0.76}O_{3.88}]. Kristallografiya, **29**, 6, 1079-1083 (in Russian).
- Sokolova, E.V., Nadezhina, T.N., Khomyakov, A.P. (1990): The X-ray study of high-barian oligite. Vestnik Moskovskogo Universiteta, ser. 4: Geology, No. 1, 87-91 (in Russian).
- Sokolova, E., Hawthorne, F.C., Khomyakov, A.P. (2005): Refinement of the crystal structure and revision of the chemical formula of oligite: (Ba,Sr)(Na,Sr,REE)₂Na[PO₄]₂. Can. Mineral., **43**, 1521-1526.