

NEW MINERAL NAMES

Lueshite

A. SAFIANNIKOFF. Un nouveau mineral de niobium. *Acad. royale sci. d'outre-mer, Bull.*, 5, 1251-1255 (1959).

The mineral occurs as black cubes up to 1.5 cm. on an edge, but mostly 0.5-1 cm. The cube faces are lightly striated. Cleavage (001) imperfect, but easy. Color black, streak gray. Biaxial, anisotropic, sign not given, n (Na) (in S-Se melts) 2.30 ± 0.03 . G. 4.44, H. $5\frac{1}{2}$.

Analysis by Haine and Copette, Centre recherches miniere de Bukavu, gave Nb₂O₅ 79.74, Ta₂O₅ traces, Na₂O 12.23, K₂O traces, CaO 0.76, MgO 0.62, R₂O₃+SiO₂ 5.62, loss on ignition 0.49, sum 99.46% (given as 100.46% M.F.). A separate analysis by the Kamituga Laboratory gave Fe₂O₃ 1.27, TiO₂ 3.62, leaving 0.73% for SiO₂. This corresponds nearly to NaNbO₃. (The analysis calculates to (Na_{1.32} Ca_{0.05}) (Nb_{2.00} Ti_{0.15})O₆ indicating a deficiency in the A position. Possibly the loss on ignition should be calculated as hydroxyl. M. F.). Before the blowpipe, gives a sodium flame. No data are given on solubility.

Indexed x-ray powder data agree well with A.S.T.M. data on synthetic NaNbO₃. The strongest lines are 3.91 (I=100) (110), 2.77 (69) (200, 020, 114), 1.955 (43) (221, 215), 1.96 (34) (220), and 1.596 (30) (314). The mineral is orthorhombic, perovskite-type, space group *P* 221, with a 5.51 ± 0.006 , b 5.53 ± 0.01 , c 1.550 ± 0.12 Å. (The value for c is evidently a misprint for 15.50. M. F.), $Z=8$.

The mineral occurs at Lueshe, 150 km. north of Goma, Belgian Congo, as incrustations on a compact yellow mica; the latter contains MgO 19.27, CaO 8.08, Na₂O 0.20% and behaves like vermiculite when heated. The mica occurs at the contact of cancrinite syenite with carbonatite containing pyrochlore.

The name is for the locality.

DISCUSSION.—The name igdloite was given to a mineral, apparently NaNbO₃, by Sørensen and Danø (see *Am. Mineral.*, 44, 1327, 1959). This is stated, according to a private communication from Sørensen to Sofiannikoff to contain appreciable SiO₂. It seems probably, however, that these represent the same mineral. The description of igdloite was inadequate, yet it would have been better not to give a new name to lueshite. E. M. Bonshtedt-Kupletskaya in an abstract in *Zapiski Vses. Mineral. Obshch.*, 90, 95 (1961) advocates dropping the name igdloite in favor of lueshite because the latter is better described. I agree with some reluctance.

MICHAEL FLEISCHER

Unnamed rare-earth calcium phosphate-silicate

I. V. BEL'KOV AND M. I. VOLKOVA. Rare-earth calcium phosphate-silicate. *Izvest. Karel. i Kolsk Filial, Akad. Nauk S.S.S.R.*, 1958, No. 2, 90-93; from an abstract by E. M. Bonshtedt-Kupletskaya in *Zapiski Vses. Mineral. Obshch.* 90, 108-109 (1961).

The mineral occurs as fine prismatic crystals with acute terminations and hexagonal cross-section. Color reddish-brown, streak light-yellow. No cleavage. H. about 6, G. 4.08, isotropic, n 1.756. Amorphous to x-rays; after being heated gives an x-ray pattern close to that of the apatite group (a_0 9.40, c_0 6.96 kX); and becomes uniaxial, n 1.81.

Analysis gave SiO₂ 17.88, P₂O₅ 2.56, Al O₃ (+BeO) 0.49, Nb₂O₅ 0.41, TiO₂ and ZrO₂ not found, MgO 0.11, MnO 0.62, CaO 12.64, SrO 0.07, Ce₂O₃ 19.04, Σ La₂O₃ 18.04, Σ Y₂O₃ 19.36, ThO₂ 0.32, CO₂ 2.34, F 2.38, H₂O 0.83, loss on ignition 4.03, sum 101.12—(O=F₂) 1.00 = 100.12%.

DISCUSSION.—This is very close to britholite.

M. F.