Batiferrite $BaFe_2^{2+}Fe_8^{3+}Ti_2O_{19}$

Crystal Data: n.d. *Point Group:* n.d. As dense, fine-grained aggregates.

Physical Properties: Hardness = 5 VHN = 372–380 (100 g load). ?? D(meas.) = 5.283–5.420 ?? D(calc.) = n.d.

Optical Properties: Semitransparent. *Color:* Reddish brown.
Optical Class: Biaxial (–). α = 1.911–1.916 β = n.d. γ = 1.920–1.932 2V(meas.) = 81°

Cell Data: *Space Group:* n.d. Z = n.d.

X-ray Powder Pattern: Oktyabr deposit, Russia.
3.09 (10), 3.41 (7), 1.98 (6), 1.948 (6), 1.908 (6), 1.723 (6), 1.667 (6)

Chemistry:

	(1)	(2)	(3)
UO_3	63.74	67.37	66.88
SiO_2	0.48	0.97	3.54
CO_2	3.20	0.60	0.39
PbO	0.53	0.55	0.74
CaO	2.62	0.40	0.47
BaO	21.21	21.14	17.43
H_2O	8.24	8.19	10.07
Total	100.02	99.22	99.52

(1–3) Oktyabr deposit, Russia; respectively corresponding to $BaO \cdot 1.94UO_3 \cdot 4H_2O$; $BaO \cdot 1.75UO_3 \cdot 3.4H_2O$; and $BaO \cdot 2UO_3 \cdot 4.8H_2O$.

Occurrence: In the oxidation zone of a U–Mo deposit, replacing "pitchblende" and replaced by uranophane.

Association: Uraninite, uranophane, calciouranoite, metacalciouranoite, protasite.

Distribution: From the Oktyabr U–Mo deposit, 12 km southeast of Krasnokamensk, Strel'tsov district, eastern Transbaikal, Russia.

Name: For BArium, URANium, and Oxygen in the composition.

Type Material: A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia, 76547, 76548.

References: (1) Rogova, V.P., L.N. Belova, G.N. Kiziyarov, and N.N. Kuznetsova (1973) Bauranoite and metacaltsuranoite [metacalciouranoite] – new minerals of the group of hydrous uranium oxides. Zap. Vses. Mineral. Obshch., 102, 75–81 (in Russian). (2) (1973) Amer. Mineral., 58, 1111 (abs. ref. 1). (3) Pekov, I.V. (1998) Minerals first discovered on the territory of the former Soviet Union. Ocean Pictures, Moscow, 37.