Magbasite $\mathbf{KBa(Mg,Fe^{2+})_6(Al,Sc)Si_6O_{20}F_2}$

Crystal Data: n.d. *Point Group:* n.d. As acicular crystals forming fibrous, fan-shaped aggregates, to 5 mm.

Physical Properties: Hardness = ∼5 D(meas.) = 3.41 D(calc.) = n.d.

Optical Properties: Transparent to translucent. *Color:* Colorless or pinkish violet. *Luster:* Vitreous.
Optical Class: Biaxial (–). *Pleochroism:* $X = Y$ = colorless; Z = lilac. *Orientation:* $Z \wedge c = 10°$. $\alpha = 1.579$ $\beta = 1.609$ $\gamma = 1.615$ 2V(meas.) = 70°

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

X-ray Powder Pattern: "Russia."
3.63 (100), 3.23 (100b) 3.16 (100b), 2.59 (80), 2.43 (80), 1.407 (70), 9.5 (50)

Chemistry:

	(1)
SiO_2	39.7
Al_2O_3	4.0
Sc_2O_3	2.1
FeO	8.9
MgO	21.4
CaO	1.7
BaO	14.8
K_2O	4.9
F	5.5
$-O = F_2$	2.3
Total	100.7

(1) "Russia;" corresponds to $K_{0.94}(Ba_{0.81}Ca_{0.27})_{\Sigma=1.08}(Mg_{4.81}Fe^{2+}_{1.12})_{\Sigma=5.93}(Al_{0.71}Sc_{0.28})_{\Sigma=0.99}Si_{6.00}O_{20}F_{2.62}$.

Occurrence: In hydrothermally altered dolostone invaded by alkalic ferro-hornblende-bearing granosyenite.

Association: Fluorite, barite, parisite.

Distribution: In "one of the [unspecified] Asiatic hydrothermal formations, Russia."

Name: For MAGnesium and BArium in its chemical composition.

Type Material: n.d.

References: (1) Semenov, E.I., A.P. Khomyakov, and A.V. Bykova (1965) Magbasite, a new mineral. Doklady Acad. Nauk SSSR, 163, 718–719 (in Russian). (2) (1966) Amer. Mineral., 51, 530–531 (abs. ref. 1).