

Mineevite-(Y)**Na₂₅Ba(Y, Gd, Dy)₂(CO₃)₁₁(HCO₃)₄(SO₄)₂F₂Cl**

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Crystal Data: Hexagonal. *Point Group:* 6/*m*. Anhedral grains, to 1 cm.**Physical Properties:** *Cleavage:* On {0001}, perfect. *Fracture:* Irregular. *Tenacity:* Brittle. Hardness = 4 D(meas.) = 2.85(2) D(calc.) = 2.84 Pale yellowish green fluorescence under UV.**Optical Properties:** Transparent. *Color:* Pale green to yellowish green; nearly colorless in thin fragments. *Luster:* Vitreous, pearly on cleavages.*Optical Class:* Uniaxial (-). $\omega = 1.536(2)$ $\epsilon = 1.510(2)$ **Cell Data:** *Space Group:* *P*6₃/*m*. $a = 8.811(7)$ $c = 37.03(3)$ $Z = 2$ **X-ray Powder Pattern:** Mt. Alluaiv, Kola Peninsula, Russia.

2.829 (100), 2.270 (90), 2.531 (71b), 2.659 (51b), 1.660 (46), 3.32 (40), 7.61 (39)

Chemistry:

	(1)		(1)
SO ₃	7.63	Ho ₂ O ₃	0.15
CO ₂	30.83	Er ₂ O ₃	0.51
Y ₂ O ₃	5.90	Yb ₂ O ₃	0.06
La ₂ O ₃	0.19	BaO	7.33
Ce ₂ O ₃	0.58	Na ₂ O	36.87
Nd ₂ O ₃	0.50	F	1.80
Sm ₂ O ₃	0.95	Cl	1.70
Gd ₂ O ₃	2.33	H ₂ O	[1.66]
Tb ₂ O ₃	0.35	-O = (F, Cl) ₂	1.14
Dy ₂ O ₃	1.80	Total	[100.00]

(1) Mt. Alluaiv, Kola Peninsula, Russia; by electron microprobe, average of three analyses, CO₂ and F by wet methods, H₂O by difference; corresponds to Na_{25.30}Ba_{1.02}(Y_{1.11}Gd_{0.27}Dy_{0.20}Sm_{0.11}Ce_{0.07}Nd_{0.06}Er_{0.06}Tb_{0.04}La_{0.03}Ho_{0.02}Yb_{0.01})_{Σ=1.98}(CO₃)_{10.98}(HCO₃)_{3.92}(SO₄)_{2.03}F_{2.01}Cl_{1.02}.

Occurrence: Very rare in pegmatites in a differentiated alkalic massif.**Association:** Nahcolite, trona, thermonatrite, sidorenkite, neighborite, aegirine, albite, sphalerite, manganotychite.**Distribution:** On Mt. Alluaiv, Lovozero massif, Kola Peninsula, Russia.**Name:** Honoring Professor Dmitry Andreevich Mineev (1935–1992), Russian geochemist and mineralogist, founder of the Russian Academy of Sciences.**Type Material:** A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia, p575/1.

References: (1) Khomyakov, A.P., L.I. Polezhaeva, N.A. Yamnova, and D.Y. Pushcharovskiy (1992) Mineevite-(Y) – Na₂₅Ba(Y, Gd, Dy)₂(CO₃)₁₁(HCO₃)₄(SO₄)₂F₂Cl – a new mineral. Zap. Vses. Mineral. Obshch., 121(6), 138–143 (in Russian). (2) (1994) Amer. Mineral., 79, 764 (abs. ref. 1).