

Nifontovite



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Crystal Data: Monoclinic. *Point Group:* $2/m$. Tabular crystals, to 6 cm; granular.

Physical Properties: *Cleavage:* One, \parallel elongation, poor. *Hardness* = 3.5–5
D(meas.) = 2.35–2.36 D(calc.) = n.d. Fluoresces violet under LW UV.

Optical Properties: Semitransparent. *Color:* Colorless to gray; colorless in thin section.
Luster: Vitreous.

Optical Class: Biaxial (+), showing anomalous interference colors. *Orientation:* Positive elongation, inclined extinction. *Dispersion:* $r > v$, strong. $\alpha = 1.573\text{--}1.575$ $\beta = 1.577\text{--}1.578$
 $\gamma = 1.585\text{--}1.584$ $2V(\text{meas.}) = 66^\circ\text{--}76^\circ$

Cell Data: *Space Group:* $C2/c$. $a = 13.119\text{--}13.12$ $b = 9.500\text{--}9.526$ $c = 13.445\text{--}13.56$
 $\beta = 118.40^\circ\text{--}119.62^\circ$ $Z = 4$

X-ray Powder Pattern: Novofrolovskoye deposit, Russia.
2.41 (10), 7.04 (8), 2.21 (8), 3.79 (7), 3.66 (7), 3.02 (7), 2.05 (7)

Chemistry:	(1)	(2)	(3)
SiO ₂	2.09		
B ₂ O ₃	39.58	39.37	40.07
Al ₂ O ₃	0.72		
Fe ₂ O ₃	1.23		
FeO	0.00		
MnO	0.00		
MgO	0.47		
CaO	33.00	32.31	32.28
H ₂ O ⁺	23.35	27.08	
H ₂ O ⁻	0.00	0.83	
H ₂ O			27.65
Total	100.44	99.59	100.00

(1) Novofrolovskoye deposit, Russia. (2) Fuka, Japan; corresponds to $\text{Ca}_{3.05}\text{B}_{5.99}\text{O}_{6.04}(\text{OH})_{12}\cdot 1.96\text{H}_2\text{O}$. (3) $\text{Ca}_3\text{B}_6\text{O}_6(\text{OH})_{12}\cdot 2\text{H}_2\text{O}$.

Occurrence: In a skarn formed by quartz diorite intruding limestone (Novofrolovskoye deposit, Russia); near gehlenite-spurrite skarn (Fuka, Japan).

Association: Grossular–andradite, szaibélyite, sibirskite, calciborite, dolomite, calcite (Novofrolovskoye deposit, Russia); olshanskyite, pentahydroborite, sibirskite, calcite (Fuka, Japan).

Distribution: From the Novofrolovskoye copper deposit, near Krasnoturinsk, Turinsk district, Northern Ural Mountains, Russia. At Fuka, near Bicchu, Okayama Prefecture, Japan. Very large crystals from Charcas, San Luis Potosi, Mexico.

Name: Honors Roman Vladimirovich Nifontov (1901–1960), Russian geologist who studied sedimentary and placer deposits.

Type Material: Vernadsky Geological Museum, Moscow, 48611; A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia, 64942.

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