

**Crystal Data:** Tetragonal. *Point Group:* 422. As tabular crystals, to 30 μm, also in colloform to compact aggregates.

**Physical Properties:** *Cleavage:* {100}, perfect. *Tenacity:* Brittle. Hardness = 1  
D(meas.) = 1.9(1) D(calc.) = 1.93(2) Fluoresces pale blue under SW UV.

**Optical Properties:** Semitransparent. *Color:* White to pale blue. *Streak:* White.  
*Optical Class:* Uniaxial (+).  $\omega = 1.553(2)$   $\epsilon = 1.573(2)$

**Cell Data:** *Space Group:* P4<sub>1</sub>2<sub>1</sub>2.  $a = 6.77$   $c = 9.463$   $Z = 4$

**X-ray Powder Pattern:** Russia.

3.40 (100), 5.54 (90), 2.859 (80), 2.196 (70), 3.19 (60), 1.947 (60), 2.046 (50)

**Chemistry:**

	(1)	(2)
C	20.28	18.46
Mn	0.23	
Ca	29.80	30.80
Na	0.13	
K	0.10	
H	[1.90]	1.55
O	[49.19]	49.19
Total	[101.63]	100.00

(1) Russia; by electron microprobe and gas chromatography of combustion products, average of twelve analyses, H calculated for charge balance, O calculated for the ideal formula; corresponds to (Ca<sub>0.88</sub>Na<sub>0.01</sub>H<sub>0.23</sub>)<sub>Σ=1.12</sub>(HCO<sub>2</sub>)<sub>2</sub>. (2) Ca(HCO<sub>2</sub>)<sub>2</sub>.

**Occurrence:** Rare in hydrothermal veinlets cutting kurchatovite-sakhaite ore (Solongo deposit, Russia); in a veinlet in skarnitized marble (Novofrolovskoye deposit, Russia).

**Association:** Calcite, lizardite, frolovite, pentahydroborite, hexahydroborite, vimsite (Solongo deposit, Russia); calcite, vesuvianite, pentahydroborite, frolovite, calciborite, uralborite, johnbaumite (Novofrolovskoye deposit, Russia).

**Distribution:** In Russia, from the Solongo boron deposit, Buryatia, and the Novofrolovskoye copper deposit, near Krasnoturinsk, Turinsk district, Northern Ural Mountains.

**Name:** Alludes to the composition, a calcium formate.

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

**References:** (1) Chukanov, N.V., S.V. Malinko, A.Y. Lisitsyn, V.T. Dubinchuk, O.V. Kuz'mina, and A.E. Zadov (1999) Formicaite Ca(HCO<sub>2</sub>)<sub>2</sub> – a new mineral. Zap. Vses. Mineral. Obshch., 128(2), 43–48 (in Russian). (2) (2000) Amer. Mineral., 85, 1321–1322 (abs. ref. 1). (3) (1999) Mineral. Abs., 50, 520 (abs. ref. 1).