Indigirite $Mg_2Al_2(CO_3)_4(OH)_2 \cdot 15H_2O$

Crystal Data: n.d. *Point Group:* n.d. As plates and fibers to 1 mm; in radiating rosettelike aggregates.

Physical Properties: *Tenacity:* Flexible. Hardness = ∼2 D(meas.) = 1.6(1) D(calc.) = n.d.

Optical Properties: Semitransparent. *Color:* Snow-white. *Luster:* Vitreous to silky. *Optical Class:* Biaxial. *Orientation:* Positive elongation, parallel extinction. $\alpha = 1.472(2)$ β = n.d. $\gamma = 1.502(2)$ 2V(meas.) = n.d.

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

X-ray Powder Pattern: Sarylakh deposit, Russia.
5.80 (10), 7.62 (9), 5.24 (9), 2.70 (9), 2.60 (9), 4.56 (8), 1.625 (5)

Chemistry:

	(1)	(2)
SO_3	0.45	
CO_2	24.18	27.22
Al_2O_3	14.58	15.76
Fe_2O_3	0.64	
MgO	12.08	12.46
CaO	0.45	
H_2O	44.36	44.56
insol.	1.60	
Total	98.34	100.00

(1) Sarylakh deposit, Russia; $(CO_3)^{2-}$, $(OH)^{1-}$, H_2O confirmed by IR; after deduction of insoluble as quartz, CaO and SO_3 as gypsum, and Fe_2O_3 as "limonite", corresponds to $Mg_{2.00}Al_{2.00}(CO_3)_{3.86}(OH)_{2.00} \cdot 15.36H_2O$. (2) $Mg_2Al_2(CO_3)_4(OH)_2 \cdot 15H_2O$.

Occurrence: A rare filling in cracks in shale in the oxidized portions of a hydrothermal vein Au–Sb deposit.

Association: Gypsum, gibbsite, kaolinite, hexahydrite, melanterite, amorphous Fe oxide, stibnite, quartz.

Distribution: From the Sarylakh Au–Sb deposit, upper Indigirka River, northeast Sakha, Russia.

Name: For the Indigirka River, Russia, near where the first specimens were collected.

Type Material: Geological Museum, Yakutsk Scientific Center, Yakutsk, mk-192; A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia, 76565, 76566.

References: (1) Indolev, L.N., Y.Y. Zhdanov, K.I. Kashertseva, V.S. Suknev, and K.I. Delyanidi (1971) Hydrous carbonate of magnesium and aluminum – the new mineral indigirite. Zap. Vses. Mineral. Obshch., 100, 178–183 (in Russian). (2) (1972) Amer. Mineral., 57, 326–327 (abs. ref. 1).