Dritsite $Li_2Al_4(OH)_{12}Cl_2 \cdot 3H_2O$

Crystal Data: Hexagonal. *Point Group*: 6/*m* 2/*m* 2/*m*. As lamellar or tabular hexagonal crystals to 0.25 mm flattened on dominant {00*1}, single or in stacked groups.

Physical Properties: Cleavage: Perfect on {00*1}. *Tenacity*: Flexible. *Fracture*: Laminated. Hardness = 2 (by analogy in the supergroup). D(meas.) = n.d. D(calc.) = 2.123 Nonfluorescent.

Optical Properties: Transparent. *Color*: Colorless. *Streak*: White. *Luster*: Vitreous. *Optical Class*: Uniaxial (+). $\varepsilon = 1.583(2)$ $\omega = 1.546(2)$ Non-pleochroic.

Cell Data: *Space Group*: $P6_3/mcm$. $a = 5.0960(3)$ $c = 15.358(1)$ Z = 1

X-ray Powder Pattern: Verkhnekamskoe K-salt deposit, Perm Krai, Western Urals, Russia. 7.68 (100), 3.832 (99), 4.422 (61), 2.561 (30), 1.445 (26), 2.283 (25), 1.807 (20)

Chemistry:

	(1)	(2)
Li_2O	6.6	6.63
Al_2O_3	45.42	45.23
SiO_2	0.11	
Cl	14.33	15.72
SO_3	0.21	
H_2O	[34.86]	35.97
-O = Cl	3.24	3.55
Total	98.29	100.00

(1) Verkhnekamskoe K-salt deposit, Perm Krai, Western Urals, Russia; average electron microprobe, Raman spectroscopic, and ICP-MS analyses, H_2O calculated from structure; corresponding to $Li_{1.99}Al_{4.00}Si_{0.01}[(OH)_{12.19}Cl_{1.82}(SO_4)_{0.01}]_{\Sigma=14.02} \cdot 2.60(H_2O)$.
(2) $Li_2Al_4(OH)_{12}Cl_2 \cdot 3H_2O$.

Polymorphism & Series: Occurs as the 2H polytype.

Mineral Group: Hydrotalcite supergroup.

Occurrence: A result of diagenesis in the halite-carnallite rock salt deposit.

Association: Dolomite, magnesite, quartz, Sr-bearing baryte, kaolinite, potassic feldspar, krasnoshteinite, congolite, members of the goyazite-woodhouseite series, fluorite, hematite, anatase.

Distribution: In drillcore of borehole #2001 (depth 248 m), Romanovskiy area of the Verkhnekamskoe K-salt deposit, 30 km south of Berezniki, Perm Krai, Western Urals, Russia.

Name: Honors Russian crystallographer and mineralogist Professor Victor Anatol'evich *Drits* (b. 1932), Geological Institute of the Russian Academy of Sciences, Moscow, for contributions to the studies of the crystal chemistry and systematics of layered minerals, including the hydrotalcite supergroup. Professor Drits is a specialist in the mineralogy of sedimentary rocks and crystal chemistry of compounds with layered structures, especially clay minerals.

Type Material: A.E. Fersman Mineralogical Museum, Russian Academy of Sciences, Moscow, Russia (5380/1).

References: (1) Zhitova, E.S., I.V. Pekov, I.I. Chaikovskiy, E.P. Chirkova, V.O. Yapaskurt, Y.V. Bychkova, D.I. Belakavskiy, N.V. Chukanov, N.V. Zubkova, S.V. Krivovichev, and V.N. Bocharov (2019) Dritsite, $Li_2Al_4(OH)_{12}Cl_2 \cdot 3H_2O$, a new gibbsite-based hydrotalcite supergroup mineral. Minerals, 9(8), 492, 1-15.