

Tatarskite**Ca₆Mg₂(SO₄)₂(CO₃)₂Cl₄(OH)₄•7H₂O**

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Crystal Data: Orthorhombic (probable). *Point Group:* n.d. As coarsely crystalline masses, to 3 cm.

Physical Properties: *Cleavage:* Two sets of distinct pinacoidal cleavages. *Hardness* = 2.5 D(meas.) = 2.341 D(calc.) = n.d. Soluble in boiling H₂O.

Optical Properties: Transparent. *Color:* Colorless to very pale yellow. *Luster:* Vitreous, pearly on cleavages.

Optical Class: Biaxial (-). *Orientation:* Positive elongation, parallel extinction. $\alpha = 1.567(2)$
 $\beta = 1.654(2)$ $\gamma = 1.722(2)$ $2V(\text{meas.}) = \text{n.d.}$ $2V(\text{calc.}) = 83^\circ$

Cell Data: *Space Group:* n.d. $Z = \text{n.d.}$

X-ray Powder Pattern: Chelkar salt dome, Kazakhstan.
2.967 (10), 2.625 (9), 5.34 (8), 2.004 (8), 2.917 (7), 1.585 (7), 2.522 (6)

Chemistry:	(1)	(2)
SO ₃	15.45	17.09
CO ₂	9.60	9.39
SiO ₂	0.23	
Al ₂ O ₃	0.25	
MgO	6.78	8.60
CaO	36.32	35.90
Na ₂ O	1.22	
K ₂ O	0.78	
F	0.10	
Cl	14.84	15.13
H ₂ O	17.00	17.30
-O = (F, Cl) ₂	3.35	3.41
Total	[99.22]	100.00

(1) Chelkar salt dome, Kazakhstan; original total given as 99.61%, stated to correspond to Ca_{6.14}Mg_{1.60}(K,Na)_{0.26}(SO₄)₂(CO₃)₂Cl₄(OH)₄•7H₂O. (2) Ca₆Mg₂(SO₄)₂(CO₃)₂Cl₄(OH)₄•7H₂O.

Occurrence: A rare secondary mineral found in drill core in a marine salt deposit.

Association: Anhydrite, halite, bischofite, magnesite, hilgardite.

Distribution: From the Chelkar salt dome, Ak-sai Valley, Uralsk district, Kazakhstan.

Name: Honors Professor Vitalii Borisovich Tatarskii (1907–1993), mineralogist, St. Petersburg University, St. Petersburg, Russia.

Type Material: Mining Institute, St. Petersburg, 948/1-2; A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia, 79820.

References: (1) Lobanova, V.V. (1963) The new mineral tatarskite. Zap. Vses. Mineral. Obshch., 92, 697–702 (in Russian). (2) (1964) Amer. Mineral., 49, 1151–1152 (abs. ref. 1). (3) Pekov, I.V. (1998) Minerals first discovered on the territory of the former Soviet Union. Ocean Pictures, Moscow, 206.