

**Crystal Data:** Cubic. *Point Group:*  $4/m\bar{3}2/m$ . Crystals cubic, to 1 m, or octahedral; elongated along [100] or [111], skeletal with hopper-shaped faces. Rarely capillary or stalactitic; granular, compact, massive.

**Physical Properties:** *Cleavage:* {001}, perfect. *Fracture:* Conchoidal. *Tenacity:* Brittle. Hardness = 2–2.5  $D(\text{meas.}) = 2.168$   $D(\text{calc.}) = 2.165$  Soluble in H<sub>2</sub>O, saline taste; rarely fluoresces red under SW UV.

**Optical Properties:** Transparent. *Color:* Colorless or white when pure; gray, yellow, orange, pink, red, blue, purple; colorless to faintly tinted in thin section. *Streak:* White. *Luster:* Vitreous.

*Optical Class:* Isotropic; weakly anisotropic due to stress. *Dispersion:* Moderately strong.  $n = 1.5443$

**Cell Data:** *Space Group:*  $Fm\bar{3}m$ .  $a = 5.6404(1)$   $Z = 4$

**X-ray Powder Pattern:** Synthetic.  
2.821 (100), 1.994 (55), 1.628 (15), 3.258 (13), 1.261 (11), 1.1515 (7), 1.410 (6)

Chemistry:	(1)	(2)
Na	39.00	39.34
K	0.12	
Mg	0.03	
Ca	0.08	
Cl	60.27	60.66
SO <sub>4</sub>	0.27	
Total	99.77	100.00

(1) Cardona, Barcelona, Spain. (2) NaCl.

**Occurrence:** Typically in sedimentary rocks of evaporite association, may form immense beds; also as volcanic sublimates, efflorescences, cave deposits. Crystals are common in multiphase fluid inclusions; may be included in other minerals as a product of intermediate-grade metamorphism.

**Association:** Sylvite, polyhalite, kieserite, carnallite, gypsum, anhydrite, dolomite.

**Distribution:** Of worldwide occurrence. Well-studied deposits include: in Austria, around Hallstadt, Salzburg, and Hall, near Innsbruck, Tirol. From Bex, Vaud, Switzerland. In Germany, from Stassfurt-Leopoldshall, 34 km south of Magdeburg, Saxony-Anhalt. Deposits with large crystals at Wieliczka (Galicia) and Bochnia, Poland. At Girgenti and Racalmuto, Sicily, Italy. In the Salt Range, Punjab, India. In the USA, in the Michigan Basin, underlying Ohio, Michigan, and New York; as numerous salt domes along the Gulf Coast; and in the Permian Basin of Texas and New Mexico; large crystals at the Potash Corporation of America mine, Carlsbad potash district, Eddy Co., New Mexico.

**Name:** From the Greek for *salt*.

**References:** (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 3–7. (2) Deer, W.A., R.A. Howie, and J. Zussman (1962) Rock-forming minerals, v. 5, non-silicates, 357–363. (3) Bragg, W.L. (1914) The structure of some crystals as indicated by their diffraction of X-rays. Proc. Royal Soc. London, A, 89, 248. (4) (1953) NBS Circ. 539, 2, 41.