

**Crystal Data:** Hexagonal. *Point Group:* 3*m*. As tabular to barrel-shaped crystals composed of {0001}, {11 $\bar{2}$ 0}, {11 $\bar{2}$ 1}, to 1 mm; typically as nodular aggregates. May form syntactic overgrowths and intergrowths with schairerite.

**Physical Properties:** Hardness = n.d. D(meas.) = 2.605 D(calc.) = 2.596

**Optical Properties:** Transparent. *Color:* Colorless.  
*Optical Class:* Uniaxial (+).  $\omega = 1.447(2)$   $\epsilon = 1.449(2)$

**Cell Data:** *Space Group:* P31*m*.  $a = 12.197(4)$   $c = 13.955(10)$   $Z = 3$

**X-ray Powder Pattern:** Searles Lake, California, USA.  
2.79 (10), 3.52 (8), 3.68 (7), 2.55 (7), 2.97 (6), 1.758 (6), 3.04 (4)

Chemistry:	(1)	(2)
SO <sub>4</sub>	51.2	51.28
Na	36.4	36.82
F	8.1	8.11
Cl	3.79	3.79
Total	99.49	100.00

(1) Searles Lake, California, USA; by electron microprobe. (2) Na<sub>15</sub>(SO<sub>4</sub>)<sub>5</sub>F<sub>4</sub>Cl.

**Occurrence:** In a playa lake deposit.

**Association:** Schairerite, gaylussite, northupite, pirssonite, tychite, trona, hanksite, calcite.

**Distribution:** From Searles Lake, San Bernardino Co., California, USA.

**Name:** Honors Dr. William Alexander Gale (1898–1985), Director of Research of the American Potash and Chemical Corporation.

**Type Material:** National Museum of Natural History, Washington, D.C., USA, 107385.

**References:** (1) Pabst, A., D.L. Sawyer, and G. Switzer (1963) Galeite and related phases in the system Na<sub>2</sub>SO<sub>4</sub>–NaF–NaCl. *Amer. Mineral.*, 48, 485–510. (2) Brown, F.H. and A. Pabst (1971) New data of galeite and schairerite. *Amer. Mineral.*, 56, 174–178. (3) Fanfani, L., A. Nunzi, P.F. Zanazzi, and A.R. Zanzari (1975) The crystal structure of galeite, Na<sub>15</sub>(SO<sub>4</sub>)<sub>5</sub>F<sub>4</sub>Cl. *Mineral. Mag.*, 40, 357–361.