$m Hieratite \ K_2SiF_6$

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Crystal Data: Cubic. Point Group: $4/m\overline{3}2/m$. As cubo-octahedra and octahedra; stalactitic concretionary, spongy to dense.

Physical Properties: Cleavage: {111}, perfect. Hardness = \sim 2.5 D(meas.) = 2.665 (synthetic). D(calc.) = 2.668 Soluble in H₂O.

Optical Properties: Transparent. Color: Colorless, white to gray; colorless in transmitted

light. Luster: Vitreous.

Optical Class: Isotropic. n = 1.340

Cell Data: Space Group: Fm3m (synthetic). a = 8.133 Z = 4

X-ray Powder Pattern: Synthetic.

4.699(100), 2.349(70), 2.877(65), 2.034(50), 1.438(16), 1.565(14), 1.661(12)

Chemistry:

	(1)	(2)
K	35.4	35.50
Si	12.7	12.75
F	51.9	51.75
Total	100.0	100.00

(1) Vulcano, Italy. (2) K₂SiF₆.

Occurrence: As a deposit around volcanic fumaroles.

Association: Sassolite, mirabilite, glauberite, selenian sulfur, realgar, alums (Vulcano, Italy); avogadrite, malladrite (Vesuvius, Italy).

Distribution: In Italy, on Vulcano, Lipari Islands, and from Vesuvius, Campania.

Name: From the Greek *Hiera*, an ancient name for Vulcano.

Type Material: n.d.

References: (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 103–104. (2) (1955) NBS Circ. 539, 5, 50.