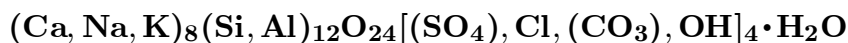


Liottite

©2001 Mineral Data Publishing, version 1.2

Crystal Data: Hexagonal. *Point Group:* $\bar{6}m2$. As short prismatic crystals with pyramidal and pinacoidal terminations, up to 1 cm.

Physical Properties: Hardness = 5 D(meas.) = 2.56(2) D(calc.) = 2.61

Optical Properties: Transparent. *Color:* Colorless.

Optical Class: Uniaxial (-). $\omega = 1.530$ $\epsilon = 1.528$

Cell Data: *Space Group:* $P\bar{6}m2$. $a = 12.842(3)$ $c = 16.091(5)$ $Z = 6$

X-ray Powder Pattern: Pitigliano, Italy.

3.715 (100), 3.315 (75), 4.84 (36), 2.141 (24), 2.686 (10), 2.471 (10), 1.801 (10)

Chemistry:

	(1)
SiO ₂	30.51
Al ₂ O ₃	24.92
Fe ₂ O ₃	0.36
CaO	16.71
Na ₂ O	7.97
K ₂ O	4.98
Cl	2.57
H ₂ O	1.8
CO ₂	2.1
SO ₃	8.66
-O = Cl ₂	0.58
Total	100.00

(1) Pitigliano, Italy; by AA and XRF, corresponds to $(\text{Ca}_{3.59}\text{Na}_{3.10}\text{K}_{1.27}\text{Fe}_{0.05}^{3+})_{\Sigma=8.01}$
 $(\text{Si}_{6.11}\text{Al}_{5.89})_{\Sigma=12.00}\text{O}_{24}[(\text{SO}_4)_{1.30}\text{Cl}_{0.87}(\text{CO}_3)_{0.57}(\text{OH})_{1.19}]_{\Sigma=3.93} \cdot 0.61\text{H}_2\text{O}$.

Mineral Group: Cancrinite group.

Occurrence: In cavities in ejecta blocks of metasomatized carbonate rocks in a pumice deposit.

Association: Melilite, latiumite, clintonite, anorthite, vesuvianite, grossular, andradite, pyroxene.

Distribution: At Pitigliano, near Grosseto, Tuscany, Italy.

Name: For mineral collector Luciano Liotti, who donated the specimen in which this mineral was first found.

Type Material: University of Pisa, Pisa, 3209; University of Modena, Modena, Italy.

References: (1) Merlino, S. and P. Orlandi (1977) Liottite, a new mineral in the cancrinite-davyne group. *Amer. Mineral.*, 62, 321–326.