

**Crystal Data:** Monoclinic. *Point Group:* 2 or 2/m. As crusts of thin and extremely elongated lamellae in radial aggregates, micaceous. Lamellae resemble acicular crystals.

**Physical Properties:** *Cleavage:* {001}, perfect. *Tenacity:* n.d. *Fracture:* n.d. *Hardness* = n.d. *D(meas.)* = n.d. *D(calc.)* = 3.042

**Optical Properties:** Transparent. *Color:* Orange-brown. *Streak:* n.d. *Luster:* Silky. *Optical Class:* n.d. *Pleochroism:* Moderate; orange to greenish yellow.

**Cell Data:** *Space Group:* C2 or C2/m. *a* = 5.149(1) *b* = 8.915(1) *c* = 10.304(1) *β* = 102.03(1)°  
*Z* = 2

**X-ray Powder Pattern:** Cerchiara mine, Val di Vara, Eastern Liguria, Italy.  
10.06 (100), 3.359 (60), 3.328 (49), 3.034 (19), 2.015 (15), 5.03 (8), 4.482 (6)

<b>Chemistry:</b>	(1)
SiO <sub>2</sub>	55.90
Al <sub>2</sub> O <sub>3</sub>	1.20
Mn <sub>2</sub> O <sub>3</sub>	21.50
MgO	7.75
Fe <sub>2</sub> O <sub>3</sub>	0.47
K <sub>2</sub> O	9.37
Li <sub>2</sub> O	0.71
F	0.35
–O = F <sub>2</sub>	0.15
H <sub>2</sub> O	[4.14]
Total	101.24

(1) Cerchiara mine, Val di Vara, Eastern Liguria, Italy; average electron microprobe analysis, (OH) confirmed by Raman spectroscopy, Li by LA-ICP-MS, H<sub>2</sub>O estimated, Mn<sup>3+</sup> confirmed by electron paramagnetic resonance spectroscopy; corresponds to (K<sub>0.83</sub>□<sub>0.17</sub>)<sub>Σ=1.00</sub>(Mn<sup>3+</sup><sub>1.14</sub>Mg<sub>0.80</sub>Li<sub>0.20</sub>Fe<sup>3+</sup><sub>0.02</sub>)<sub>Σ=2.16</sub>(Si<sub>3.89</sub>Al<sub>0.10</sub>)<sub>Σ=3.99</sub>O<sub>10</sub>[(OH)<sub>1.92</sub>F<sub>0.08</sub>].

**Polymorphism & Series:** 1M polytype (by analogy to celadonite).

**Mineral Group:** Mica group.

**Occurrence:** Associated with manganeseiferous deposits in metacherts of an ophiolitic sequence.

**Association:** Calcite, hematite, braunite.

**Distribution:** From the Cerchiara mine, Val di Vara, Eastern Liguria, Italy.

**Name:** As the Mn<sup>3+</sup> analogue of *celadonite*.

**Type Material:** Museum of Natural History, University of Florence, Italy (3164/I).

**References:** (1) Lepore, G.O., L. Bindi, F. Di Benedetto, E. Mugnaioli, C. Viti, A. Zanetti, M.E. Ciriotti, and P. Bonazzi (2017) A multimethodic approach for the characterization of manganiceladonite, a new member of the celadonite family from Cerchiara mine, Eastern Liguria, Italy. *Mineral. Mag.*, 81(1), 167-173. (2) (2018) *Amer. Mineral.*, 103, 661 (abs. ref. 1).