

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. $a = 5.149(1)$ $b = 8.915(1)$ $c = 10.304(1)$ $\beta = 102.03(1)^\circ$
 $Z = 2$

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)

Chemistry:	(1)
SiO ₂	55.90
Al ₂ O ₃	1.20
Mn ₂ O ₃	21.50
MgO	7.75
Fe ₂ O ₃	0.47
K ₂ O	9.37
Li ₂ O	0.71
F	0.35
-O = F ₂	0.15
H ₂ 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, H₂O estimated, Mn³⁺ confirmed by electron paramagnetic resonance spectroscopy; corresponds to $(\text{K}_{0.83}\square_{0.17})_{\Sigma=1.00}(\text{Mn}^{3+}_{1.14}\text{Mg}_{0.80}\text{Li}_{0.20}\text{Fe}^{3+}_{0.02})_{\Sigma=2.16}(\text{Si}_{3.89}\text{Al}_{0.10})_{\Sigma=3.99}\text{O}_{10}[(\text{OH})_{1.92}\text{F}_{0.08}]$.

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 Mn³⁺ 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).