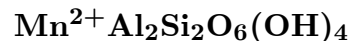


Carpholite



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Crystal Data: Orthorhombic. *Point Group:* $2/m\ 2/m\ 2/m$. Crystals acicular, prismatic; fibrous, as radiated tufts, to 2 cm. *Twinning:* On {100}.

Physical Properties: *Cleavage:* Perfect on {010}. *Tenacity:* Very brittle. Hardness = 5.5–6 D(meas.) = 2.935–3.031 D(calc.) = [3.07]

Optical Properties: Semitransparent. *Color:* Yellow. *Luster:* Silky, glistening. *Optical Class:* Biaxial (–). *Pleochroism:* Distinct; $X = Y$ = pale yellow; Z = colorless. $\alpha = 1.624$ $\beta = 1.629$ $\gamma = 1.638$ $2V(\text{meas.}) = \text{n.d.}$ $2V(\text{calc.}) = 67^\circ$

Cell Data: *Space Group:* $Ccca$. $a = 13.714(2)$ $b = 20.079(2)$ $c = 5.105(1)$ $Z = 8$

X-ray Powder Pattern: Fukuzumi mine, Japan.
5.73 (100), 5.08 (70), 2.620 (50), 3.46 (30), 3.04 (30), 3.39 (20), 2.761 (20)

Chemistry:	(1)	(2)	(3)
SiO ₂	36.61	38.38	36.52
TiO ₂	trace	trace	
Al ₂ O ₃	29.36	29.45	30.98
Fe ₂ O ₃	1.53	1.47	
V ₂ O ₅		0.06	
FeO	3.05	0.22	
MnO	18.08	17.77	21.55
ZnO		0.12	
MgO		1.92	
CaO	trace		
Na ₂ O		0.19	
K ₂ O		0.08	
H ₂ O ⁺	11.03		
H ₂ O [–]	0.32		
H ₂ O		10.19	10.95
Total	99.98	99.85	100.00

(1) Fukuzumi mine, Japan. (2) Near Meuville, Belgium; Loss on ignition taken as H₂O.

(3) MnAl₂Si₂O₆(OH)₄.

Polymorphism & Series: Forms a series with ferrocapholite.

Occurrence: In low-grade metamorphosed shales.

Association: Sudoite, manganoan garnet, chlorotoid, fluorite.

Distribution: At Horní Slavkov (Schlaggenwald), Czech Republic. From near Meuville, Ardennes Mountains, Belgium. At Wippra, Harz Mountains, Germany. In England, from the Carrock mine, Caldbeck Fells, Cumbria; at Kit Hill Consols, Stokeclimsland, in the Hingston Down Consols mine, near Calstock, and in the Stenna Gwynn mine, St. Stephen-in-Brannel, Cornwall. In the Fukuzumi mine, Kyoto Prefecture, Japan.

Name: From the Greek for *straw*, in allusion to its color.

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