

Crystal Data: Hexagonal. *Point Group:* $\bar{3} 2/m$. As hexagonal plates to 50 μm , flattened on {0001}, also as bladed crystals elongated along [1000] and often at the ends of iyoite dendrites.

Physical Properties: *Cleavage:* n.d. *Tenacity:* Brittle. *Fracture:* Uneven. *Hardness* = n.d. $D(\text{calc.}) = 3.42$

Optical Properties: Transparent. *Color:* Emerald-green. *Streak:* n.d. *Luster:* Vitreous. *Optical Class:* Uniaxial (-). $\omega = 1.770(3)$ $\varepsilon = 1.750(3)$ *Pleochroism:* Slight, $O = \text{green-blue}$, $E = \text{light green-blue}$.

Cell Data: *Space Group:* $P\bar{3} m1$. $a = 6.4156(4)$ $c = 5.7026(5)$ $Z = 1$

X-ray Powder Pattern: Sadamisaki Peninsula, Ehime Prefecture, Japan. 5.7024 (100), 2.4971 (76), 1.9892 (27), 2.7779 (24), 1.5439 (20), 1.6038 (17), 2.7961 (12)

Chemistry:	(1)
MnO	19.82
CuO	53.49
Cl	17.72
H ₂ O	[12.65]
- O = Cl	4.00
Total	99.68

(1) Sadamisaki Peninsula, Ehime Prefecture, Japan; average of 7 electron microprobe analyses supplemented by Raman spectroscopy, H₂O calculated from stoichiometry; corresponds to Cu_{2.826}Mn_{1.174}(OH)_{5.900}Cl_{2.100}.

Mineral Group: Atacamite family.

Occurrence: A secondary mineral formed by reaction between seawater and primary ore minerals (hausmannite, tephroite, alleghanyite, rhodonite, rhodochrosite, copper, chalcocite) in greenschist facies, metamorphosed, volcanogenic massive sulfide deposits.

Association: Cuprite, kutnohorite, malachite, chrysocolla, iyoite.

Distribution: From the Sadamisaki Peninsula, Ehime Prefecture, Japan.

Name: For the Sea of *Misaki*, located near the Sadamisaki Peninsula, Japan.

Type Material: National Museum of Nature and Science, Tokyo, Japan (M43864) and the Mineral Sciences Department, Natural History Museum of Los Angeles County, Los Angeles, California, USA (66625).

References: (1) Nishio-Hamane, D., K. Momma, M. Ohnishi, N. Shimobayashi, R. Miyawaki, N. Tomita, R. Okuma, A.R. Kampf, and T. Minakawa (2017) Iyoite, MnCuCl(OH)₃ and misakiite, Cu₃Mn(OH)₆Cl₂: new members of the atacamite family from Sadamisaki Peninsula, Ehime Prefecture, Japan. *Mineral. Mag.*, 81(3), 485-498. (2) (2017) *Amer. Mineral.*, 102, 2342-2343 (abs. ref. 1).