

Dollaseite-(Ce)**CaCeMg₂Al(SiO₄)(Si₂O₇)(OH, F)₂**

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Crystal Data: Monoclinic. *Point Group:* 2/*m*. As subhedral crystals, to 0.3 mm; as fibrous and felted radiating aggregates of thin laths; as irregularly rounded grains, massive. *Twinning:* Simple twins common, “similar to a type exhibited by allanite.”

Physical Properties: Hardness = n.d. D(meas.) = 3.9 D(calc.) = [3.86]

Optical Properties: Translucent. *Color:* Brown; very light brown with a pinkish tinge in thin section. *Luster:* Vitreous.

Optical Class: Biaxial (+). $\alpha = 1.715$ $\beta = 1.718$ $\gamma = 1.733$ 2V(meas.) = n.d.

Cell Data: *Space Group:* $P2_1/m$. $a = 8.934(18)$ $b = 5.721(7)$ $c = 10.176(22)$
 $\beta = 114.31(12)^\circ$ $Z = 2$

X-ray Powder Pattern: Östanmossa mine, Sweden.

2.915 (100), 2.709 (70), 2.852 (30), 9.29 (20), 3.52 (20), 2.150 (20), 3.26 (15)

Chemistry:

	(1)
SiO ₂	32.4
Al ₂ O ₃	8.9
La ₂ O ₃	6.0
Ce ₂ O ₃	13.2
Pr ₂ O ₃	2.6
Nd ₂ O ₃	6.0
Sm ₂ O ₃	2.4
Gd ₂ O ₃	2.1
FeO	3.3
MgO	13.1
CaO	9.2
F	3.0
H ₂ O	2.02
—O = F ₂	1.3
Total	102.9

(1) Östanmossa mine, Sweden; by electron microprobe, H₂O from Geijer (1927); corresponds to (Ca_{0.91}Ce_{0.45}La_{0.20}Nd_{0.20}Pr_{0.09}Sm_{0.08}Gd_{0.06}) $_{\Sigma=1.99}$ (Mg_{1.81}Fe_{0.25}) $_{\Sigma=2.06}$ Al_{0.97}Si₃O_{10.99}[(OH)_{1.25}F_{0.88}] $_{\Sigma=1.13}$.

Mineral Group: Epidote group.

Occurrence: In tactite replacement deposits developed during metamorphism of dolomitic limestone.

Association: Tremolite, norbergite, magnetite, dolomite, calcite.

Distribution: In the Östanmossa mine, Norberg, Västmanland, Sweden.

Name: Honors Professor Wayne A. Dollase, University of California, Los Angeles, California, USA, for his crystal chemical research on minerals of the epidote group, and its *cerium* content.

Type Material: National Museum of Natural History, Washington, D.C., USA, R6505.

References: (1) Peacor, D.R. and P.J. Dunn (1988) Dollaseite-(Ce) (magnesium orthite redefined): structure refinement and implications for F + M²⁺ substitutions in epidote-group minerals. *Amer. Mineral.*, 73, 838–842. (2) Geijer, P. (1927) Some mineral associations from the Norberg district. *Sveriges Geologiska Undersökning*, 20, 1–32.

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