

Camgasite

CaMg(AsO₄)(OH)·5H₂O

©2001-2005 Mineral Data Publishing, version 1

Crystal Data: Monoclinic. *Point Group:* 2/m. As euhedral to anhedral crystals, to 0.15 mm, prismatic along [010], showing {100}, {010}, and {001}, as radial aggregates in crusts.

Twinning: Polysynthetic || {010}, seen in thin section.

Physical Properties: *Cleavage:* {100}, {001}, distinct. *Fracture:* Conchoidal.

Hardness = ~2 D(meas.) = 2.4(1) D(calc.) = 2.335

Optical Properties: Transparent to translucent. *Color:* Colorless. *Luster:* Vitreous.

Optical Class: Biaxial (+). *Orientation:* X = b. $\alpha = 1.540(2)$ $\beta = [1.548]$ $\gamma = 1.563(2)$

2V(meas.) = 74°

Cell Data: *Space Group:* P2₁/m (probable). a = 9.18(3) b = 7.63(2) c = 16.27(5)

$\beta = 128.0(5)^\circ$ Z = 4

X-ray Powder Pattern: Johann mine, near Wittichen, Germany.

7.28 (10), 6.42 (10), 4.00 (8), 3.28 (8), 3.21 (8), 3.02 (8), 2.96 (8)

Chemistry:

	(1)	(2)
As ₂ O ₅	37.9	37.03
MgO	12.9	12.98
CaO	18.9	18.07
H ₂ O	[30.3]	31.92
Total	[100.0]	100.00

(1) Johann mine, near Wittichen, Germany; by electron microprobe, H₂O by difference; corresponds to Ca_{1.06}Mg_{1.01}(AsO₄)_{1.04}(OH)_{1.02}·4.82H₂O. (2) CaMg(AsO₄)(OH)·5H₂O.

Occurrence: A secondary mineral in a Co-U-rich zone in a polymetallic mineral deposit.

Association: Monohydrocalcite, gypsum, calcite, rapidcreekite, nováčekite, erythrite, hörnesite.

Distribution: In the Johann mine, near Wittichen, Black Forest, Germany.

Name: For Ca, calcium, Mg, magnesium, and As, arsenic, in the composition.

Type Material: Stuttgart University, Stuttgart, Germany.

References: (1) Walenta, K. and P.J. Dunn (1989) Camgasit, ein neues Calcium-Magnesiumarsenatmineral der Zusammensetzung CaMg(AsO₄)(OH)·5H₂O von Wittichen im mittleren Schwarzwald. Aufschluss, 40, 369-372 (in German with English abs.). (2) (1991) Amer. Mineral., 76, 2021 (abs. ref. 1).