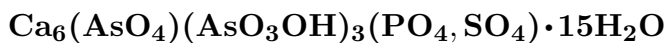


Machatschkiite



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Crystal Data: Hexagonal. *Point Group:* $3m$. As crusts of subparallel pseudorhomboidal crystals, $\{10\bar{1}1\}$ with minor $\{10\bar{1}2\}$, to 2 mm.

Physical Properties: *Fracture:* Conchoidal. Hardness = 2–3 D(meas.) = 2.5–2.6
D(calc.) = 2.594

Optical Properties: Transparent to translucent. *Color:* Colorless.
Optical Class: Uniaxial (–) or weakly biaxial (–). $\omega = 1.593(2)$ $\epsilon = 1.585(2)$

Cell Data: *Space Group:* $R3c$. $a = 15.127(2)$ $c = 22.471(3)$ $Z = 6$

X-ray Powder Pattern: Anton mine, Germany.
8.59 (10), 5.34 (8), 3.59 (8), 2.86 (8), 2.83 (8), 2.70 (8), 2.67 (8)

Chemistry:	(1)
	SO ₃ 2.6
	P ₂ O ₅ 2.6
	As ₂ O ₅ 41.0
	CaO 28.7
	<u>H₂O</u>
	Total

(1) Anton mine, Germany; by electron microprobe, average of two partial analyses; H₂O 29.2% determined on a separate sample.

Occurrence: A very rare secondary mineral in crusts on granite.

Association: Picropharmacolite, pharmacolite, cobaltian sainfeldite, gypsum.

Distribution: From the Anton mine, Heubachtal, near Schiltach, Black Forest, Germany.

Name: Honors Felix Karl Ludwig Machatschki (1895–1970), Professor of Mineralogy, University of Vienna, Vienna, Austria.

Type Material: National Museum of Natural History, Washington, D.C., USA, 137412.

References: (1) Walenta, K. (1977) Machatschkiit, ein neues Arsenatmineral aus der Grube Anton im Heubachtal bei Schiltach (Schwarzwald, Bundesrepublik Deutschland). *Tschermaks Mineral. Petrog. Mitt.*, 24, 125–132 (in German with English abs.). (2) (1977) *Amer. Mineral.*, 62, 1260 (abs. ref. 1). (3) Effenberger, H., K. Mereiter, M. Pimminger, and J. Zemmann (1982) Machatschkiite: crystal structure and revision of the chemical formula. *Tschermaks Mineral. Petrog. Mitt.*, 30, 145–155. (4) Walenta, K. (1982) Zum Chemismus von Admontit und Machatschkiit. *Schweiz. Mineral. Petrog. Mitt.*, 62, 177–183 (in German with English abs.).