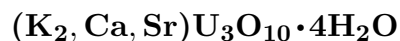


Agrinierite



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Crystal Data: Orthorhombic, pseudohexagonal. *Point Group:* $2/m\ 2/m\ 2/m$, $mm2$, or 222. Crystals tabular on {001}, pseudohexagonal in section. *Twinning:* Sector twinning with composition plane {110}.

Physical Properties: *Cleavage:* {001}, good. Hardness = n.d. $D(\text{meas.}) = 5.7$
 $D(\text{calc.}) = [5.55]$

Optical Properties: Transparent to translucent. *Color:* Orange.
Optical Class: Biaxial (-). *Orientation:* $X = a$; $Z = b$. $\alpha = \text{n.d.}$ $\beta = 2.01$ $\gamma = 2.06$
 $2V(\text{meas.}) = 55^\circ$

Cell Data: *Space Group:* $Cmmm$, $Cm2m$, $Cmm2$, or $C222$. $a = 14.04$ $b = 24.07$
 $c = 14.13$ $Z = [16]$

X-ray Powder Pattern: Margnac mine, France.
7.08 (vvs), 3.128 (vvs), 3.485 (vs), 3.153 (vs), 3.516 (s), 2.023 (s), 6.05 (ms)

Chemistry:	(1)
	UO ₃ 85.15
	CaO 2.20
	SrO 2.05
	BaO 0.00
	K ₂ O 3.35
	H ₂ O ⁺ 7.45
	<hr/>
	Total 100.20

(1) Margnac mine, France; by electron microprobe, H₂O by TGA; corresponding to $(\text{Ca}_{0.40}\text{K}_{0.36}\text{Sr}_{0.20})_{\Sigma=0.96}\text{U}_{3.00}\text{O}_{10} \cdot 4.17\text{H}_2\text{O}$.

Occurrence: In the oxidation zone of a uranium deposit.

Association: Uranophane, "gummite".

Distribution: From the Margnac mine, Compreignac, Haute-Vienne, France.

Name: For Henri Agrinier (1928–1971), an engineer in the Mineralogy Laboratory of the French Atomic Energy Commission, Paris, France.

Type Material: University of Pierre and Marie Curie, Paris; National School of Mines, Paris, France; National Museum of Natural History, Washington, D.C., USA, 137454.

References: (1) Cesbron, F., W.L. Brown, P. Bariand, and J. Geffroy (1972) Rameauite and agrinierite, two new hydrated complex uranyl oxides from Margnac, France. *Mineral. Mag.*, 38, 781–789. (2) (1973) *Amer. Mineral.*, 58, 805 (abs. ref. 1).