

**Crystal Data:** Triclinic. *Point Group:*  $\bar{1}$  or 1. As bundles of fibers, to 2 mm, in radial aggregates. *Twinning:* Lamellar || elongation.

**Physical Properties:** *Cleavage:* Perfect || elongation. *Tenacity:* Very brittle. Hardness = n.d. D(meas.) = 2.60 (low due to porosity of fibrous aggregates). D(calc.) = 2.85 Fluoresces violet under LW UV.

**Optical Properties:** Translucent to transparent. *Color:* White; colorless in transmitted light. *Luster:* Pearly.

*Optical Class:* Biaxial (+). *Orientation:*  $Y \wedge c = 6^\circ\text{--}22^\circ$ ; positive elongation. *Dispersion:* Moderately strong.  $\alpha = 1.559$   $\beta = 1.562$   $\gamma = [1.572]$   $2V(\text{meas.}) = 60^\circ$

**Cell Data:** *Space Group:*  $P\bar{1}$  or  $P1$ .  $a = 13.50$   $b = 14.10$   $c = 6.95$   $\alpha = 90^\circ$   $\beta = 92^\circ$   $\gamma = 119^\circ$   $Z = 2$

**X-ray Powder Pattern:** Sainte-Marie-aux-Mines, France.

12.33 (100), 3.92 (60), 3.122 (60), 6.94 (50), 2.748 (40), 4.40 (30), 3.400 (25)

**Chemistry:**

	(1)	(2)
As <sub>2</sub> O <sub>5</sub>	59.19	57.80
CaO	25.71	28.21
Na <sub>2</sub> O	3.40	3.12
H <sub>2</sub> O	11.32	10.87
Total	[99.62]	100.00

(1) Sainte-Marie-aux-Mines, France; by AA, original total given as 100.62%, H<sub>2</sub>O by TGA, average of two analyses; corresponding to H<sub>3.91</sub>Na<sub>1.09</sub>Ca<sub>4.99</sub>(AsO<sub>4</sub>)<sub>5.00</sub>•4.32H<sub>2</sub>O.

(2) NaCa<sub>5</sub>(AsO<sub>4</sub>)(HAsO<sub>3</sub>OH)<sub>4</sub>•4H<sub>2</sub>O.

**Occurrence:** A secondary mineral in the oxidized zone of an arsenic-bearing deposit.

**Association:** Picropharmacolite, pharmacolite, guérinite, haidingerite.

**Distribution:** From Sainte-Marie-aux-Mines, Haut-Rhin, France.

**Name:** Honors Elizabeth McNear, mineralogist and crystallographer, University of Geneva, Geneva, Switzerland.

**Type Material:** Natural History Museum, Geneva, Switzerland, 435/40.

**References:** (1) Sarp, H., J. Deferne, and B.W. Liebich (1981) La mcnearite, NaCa<sub>5</sub>H<sub>4</sub>(AsO<sub>4</sub>)<sub>5</sub>•4H<sub>2</sub>O, un nouvel arséniate hydraté de calcium et de sodium. Schweiz. Mineral. Petrog. Mitt., 61, 1–6 (in French with English abs.). (2) (1982) Amer. Mineral., 67, 856 (abs. ref. 1).