Dervillite Ag_2AsS_2

Crystal Data: Monoclinic. *Point Group:* $2/m$. Minute crystals, to 0.3 mm.

Physical Properties: Hardness = n.d. VHN = 19.5 (100 g load). D(meas.) = n.d. D(calc.) = 5.62

Optical Properties: Opaque. *Color:* White in reflected light. *Anisotropism:* Moderate. R_1–R_2: (400) 29.7, (420) 25.6, (440) 24.9, (460) 24.2, (480) 23.7, (500) 23.5, (520) 23.1, (540) 22.2, (560) 22.2, (580) 21.9, (600) 21.5, (620) 21.2, (640) 20.9, (660) 20.6, (680) 20.4, (700) 20.4 (averages)

Cell Data: *Space Group:* $P2/a$. $a = 6.833$ $b = 12.932$ $c = 9.638$ $\beta = 99°33'$ Z = [8]

X-ray Powder Pattern: Sainte-Marie-aux-Mines, France.
3.075 (10), 3.019 (8), 2.843 (5), 3.251 (3), 2.659 (3), 3.170 (2), 2.742 (2)

Chemistry:

	(1)	(2)
Ag	61.39	60.81
As	19.03	21.11
S	18.06	18.08
Total	98.48	100.00

(1) Sainte-Marie-aux-Mines, France; by electron microprobe; Pb, Sb and Bi not detected; corresponds to $Ag_{2.02}As_{0.91}S_{2.00}$. (2) Ag_2AsS_2.

Occurrence: In a Co–Ni–Fe–As deposit.

Association: Arsenic, rammelsbergite, safflorite, proustite, calcite, quartz.

Distribution: Found on a museum specimen from the Gabe-Gottes mine, Rauenthal, near Sainte-Marie-aux-Mines, Haut-Rhin, France [TL].

Name: For Dr. Henri Derville, French paleontologist, Strasbourg University, Strasbourg, France, who noted the original specimen.

Type Material: Museum of Natural History, 1531; National School of Mines, Paris, France.

References: (1) Bari, H. (1982) Dervillite Ag_2AsS_2, monoclinic, new definition of the species described by Weil, 1941. Pierres et Terre, 23–24, 62–67 (in French). (2) (1983) Amer. Mineral., 68, 1041 (abs. ref. 1). (3) Bari, H., F. Cesbron, Y. Moëlo, F. Permingeat, P. Picot, R. Perriot, H.-J. Schubnel, and R. Weil (1983) La dervillite, Ag_2AsS_2, nouvelle définition de l'espèce. Bull. Minéral., 106, 519–524 (in French with English abs.).