Pararealgar AsS

Crystal Data: Monoclinic. *Point Group:* m or $2/m$. As fine powder, rarely as granular (to < 0.02 mm) aggregates.

Physical Properties: *Fracture:* Uneven. *Tenacity:* Brittle. Hardness = 1–1.5 VHN = n.d. D(meas.) = 3.52(5) D(calc.) = 3.499

Optical Properties: Translucent when coarsely granular. *Color:* Bright yellow when powdery, to yellow-orange and orange-brown when granular, with internal reflections from gold to red-orange. *Streak:* Bright yellow. *Luster:* Vitreous to resinous.
Optical Class: n.d. *Pleochroism:* High. $n = > 2.02$ *Anisotropism:* Distinct.
R_1–R_2: n.d.

Cell Data: *Space Group:* $P2_1/c$. $a = 9.902(2)$ $b = 9.655(1)$ $c = 8.502(1)$ $\beta = 97.29(1)^\circ$ $Z = 16$

X-ray Powder Pattern: Mount Washington, Canada.
5.14 (100), 5.56 (91), 3.75 (78), 2.795 (71), 3.025 (51), 3.299 (50), 3.105 (33)

Chemistry:

	(1)	(2)
As	69.81	70.03
S	29.97	29.97
Total	99.78	100.00

(1) Mount Washington, Canada; by electron microprobe, average of two analyses. (2) AsS.

Polymorphism & Series: Trimorphous with alacránite and realgar.

Occurrence: An alteration product of realgar in stibnite-bearing quartz veins, the alteration typically a result of exposure to light.

Association: Realgar, stibnite, tetrahedrite, arsenopyrite, duranusite, arsenic, arsenolite, sulfur, lepidocrocite, pyrite.

Distribution: In Canada, in British Columbia, from Mount Washington, Comox district, on Vancouver Island [TL]; at Siwash Creek, in the Kamloops district; and from the Gray Rock property, head of Traux Creek, in the Bridge River Area, Lillooet district; from Ontario, in the Hemlo gold deposit, Thunder Bay district. From the Golconda and Getchell mines, Humboldt Co., Nevada, USA. At the Lengenbach quarry, Binntal, Valais, Switzerland. From the Geschieber vein, Jáchymov (Joachimsthal), Czech Republic. At Wittichen, Black Forest, Germany. Probably to be found at a number of other arsenic-rich localities.

Name: In allusion to its chemical identity with realgar.

Type Material: Canadian Geological Survey, Ottawa, Canada, 61566, 61567.

References: (1) Roberts, A.C., H.G. Ansell, and M. Bonardi (1980) Pararealgar, a new polymorph of AsS, from British Columbia. Can. Mineral., 18, 525–527. (2) (1981) Amer. Mineral., 66, 1277 (abs. ref. 1). (3) Bonazzi, P., S. Menchetti, and G. Pratesi (1995) The crystal structure of pararealgar, As_4S_4. Amer. Mineral., 80, 400–403.