Sarabauite $ext{CaSb}_{10} ext{O}_{10} ext{S}_6$

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Crystal Data: Monoclinic. *Point Group:* 2/m. Crystals tabular and prismatic \parallel [010], to 1 mm.

Physical Properties: Tenacity: Somewhat sectile. Hardness = n.d. VHN = 272 (20 g load). $D(\text{meas.}) = 4.8 \quad D(\text{calc.}) = 4.99$

Optical Properties: Translucent. Color: Carmine-red; gray-white in polished section with remarkable reddish orange internal reflections. Streak: Orange. Luster: Resinous. Optical Class: Biaxial (-) (synthetic). Pleochroism: Discernible in reflected light, from brownish to purplish tint; in transmitted light, reddish yellow $\parallel Y$; brownish red $\parallel Z'$. $2V(\text{meas.}) = \sim 90^{\circ}$ R₁-R₂: (486) 20.1–25.8, (546) 19.7–24.7, (589) 19.1–23.5, (656) 14.0–20.0

Cell Data: Space Group: C2/c. a = 25.37(2) b = 5.654(1) c = 16.87(1) $\beta = 117.58(4)^{\circ}$ Z = 4

X-ray Powder Pattern: Sarabau mine, Malaysia. 3.215 (100), 2.817 (88), 3.466 (78), 3.182 (60), 3.164 (50), 4.227 (42), 2.583 (40)

Chemistry:

	(1)	(2)
Ca	2.43	2.49
Sb	74.89	75.62
\mathbf{S}	11.91	11.95
O	9.61	9.94
Total	98.84	100.00

- (1) Sarabau mine, Malaysia; by electron microprobe, corresponds to Ca_{0.99}Sb_{10.00}O_{9.76}S_{6.04}.
- (2) $CaSb_{10}O_{10}S_6$.

Occurrence: In hydrothermal mineral deposits, deposited at high temperature.

Association: Stibnite, sénarmontite, wollastonite, calcite, quartz (Sarabau mine, Malaysia).

Distribution: From the Sarabau mine [TL] and the Lucky Hill mine, Bau district, about 40 km southwest of Kuching, Sarawak, Malaysia.

Name: For its occurrence in the Sarabau mine, Malaysia.

Type Material: National Science Museum, Tokyo, Japan, MA7055; The Natural History Museum, London, England; National Museum of Natural History, Washington, D.C., USA, 146210.

References: (1) Nakai, I., H. Adachi, S. Matsubara, A. Kato, K. Masutomi, T. Fujiwara, and K. Nagashima (1978) Sarabauite, a new oxide sulfide mineral from the Sarabau mine, Sarawak, Malaysia. Amer. Mineral., 63, 715–719. (2) Nakai, I., K. Nagashima, K. Koto, and N. Morimoto (1978) Crystal chemistry of oxide-chalcogenide. I. The crystal structure of sarabauite CaSb₁₀O₁₀S₆. Acta Cryst., 34, 3569–3572.