Vismirnovite

Crystal Data: Cubic. Point Group: 4/m 3 2/m. [Massive.]


Luster: Vitreous.

Optical Class: Isotropic. n = 1.735

Cell Data: Space Group: Pn3m. a = 7.72(2) Z = 4

X-ray Powder Pattern: Mushiston deposit, Tajikistan.
3.840 (10), 1.728 (9), 1.570 (8), 2.217 (7), 1.031 (6), 1.117 (5), 1.287 (4)

Chemistry:

(1) (2)
Sn 41.8 41.49
Fe 0.9
Cu 0.3
Zn 20.45 22.85
OH 36.0 35.66
Total 99.5 100.00

(1) Mushiston deposit, Tajikistan; by electron microprobe, average of six analyses; corresponding
to (Zn0.89Fe0.08Cu0.01)Σ=0.98Sn1.00(OH)6.04. (2) ZnSn4+(OH)6.

Mineral Group: Schoenfliesite group.

Occurrence: Formed by oxidation of earlier tin sulfides in tin deposits.

Association: Stannite, natanite, malachite, azurite, goethite (Mushiston deposit, Tajikistan).

Distribution: In the Trudovoye tin deposit, Inyl’chek Mountains, eastern Kyrgyzstan. From
the Mushiston tin deposit, Kaznok Valley, Zeravshan Mountains, 35 km south of Pendzhikent,
Tajikistan.

Name: Honors Academician Vladimir Ivanovich Smirnov (1910–1988), Moscow University,
Moscow, Russia, an early investigator of tin deposits in Central Asia.

Type Material: Mining Institute, St. Petersburg, 1997/1; A.E. Fersman Mineralogical
Museum, Academy of Sciences, Moscow, Russia, 81651.

References: (1) Marshukova, N.K., A.B. Palovskii, G.A. Sidorenko, and N.I. Chistyakova
hydroxystannates CaSn(OH)6 et ZnSn(OH)6 à l’aide de la diffractométrie X et de la résonance magnétique