Suseinargiuite $(Na_{0.5}Bi_{0.5})MoO_4$

Crystal Data: Tetragonal. *Point Group*: 4/*m.* Acicular crystals form hemispherical aggregates to 0.3 mm.

Physical Properties: *Cleavage*: n.d. *Fracture*: n.d. *Tenacity*: Brittle.
Hardness = n.d. D(meas.) = n.d. D(calc.) = 5.597

Optical Properties: Transparent. *Color*: Colorless. *Streak*: n.d. *Luster*: Pearly to adamantine.
Optical Class: n.d. Highly birefringent. *n*(calc.) = 2.11

Cell Data: *Space Group*: $I4_1/a$. $a = 5.296(1)$ $c = 11.673(2)$ $Z = 4$

X-ray Powder Pattern: Su Seinargiu, northwest of Sarroch, Cagliari, Sardinia, Italy.
3.146 (100), 1.964 (34), 1.616 (28), 1.728 (19), 2.652 (18), 1.875 (15), 2.912 (13)

Chemistry:	(1)	(2)	(3)
MoO_3	49.03	45.59	52.17
Bi_2O_3	42.97	34.47	42.21
PbO	2.89	12.04	
Na_2O	3.69	3.03	5.62
Total	98.58	95.13	100.00

(1) Su Seinargiu, Sardinia, Italy; average of 12 electron microprobe analyses supplemented by IR spectroscopy, outer zone of the crystal; corresponding to $(Na_{0.35}Bi_{0.54}Pb_{0.04})_{\Sigma=0.93}Mo_{0.99}O_4$.
(2) Su Seinargiu, Sardinia, Italy, average of 14 electron microprobe analyses supplemented by IR spectroscopy, low analytical total ascribed to porous sample, inner zone of the crystal; corresponding to $(Na_{0.31}Bi_{0.46}Pb_{0.17})_{\Sigma=0.94}Mo_{0.99}O_4$. (3) $(Na_{0.5}Bi_{0.5})MoO_4$.

Occurrence: Formed by hydrothermal and/or supergene alteration of a primary Mo-Bi mineral assemblage.

Association: Wulfenite, molybdenite, chalcopyrite, galena, sphalerite, bismuthinite.

Distribution: From Su Seinargiu, northwest of Sarroch, Cagliari, Sardinia, Italy.

Name: For the locality that produced the first specimens, *Su Seinargiu*, Italy.

Type Material: Museum of Natural History, University of Pisa, Pisa, Italy (19692).

References: (1) Orlandi, P., C. Biagioni, Y. Moëlo, J. Langlade, and E. Faulques (2015) Suseinargiuite, $(Na_{0.5}Bi_{0.5})MoO_4$, the Na-Bi analogue of wulfenite, from Su Seinargiu, Sardinia, Italy. Eur. J. Mineral., 27(5), 695-699. (2) (2016) Amer. Mineral., 101, 1924 (abs. ref. 1).