Nuragheite $Th(MoO_4)_2 \cdot H_2O$

Crystal Data: Monoclinic. *Point Group*: 2/*m*. As tabular crystals flattened on {100}, to 200 μm.

Physical Properties: *Cleavage*: Perfect on {100}. *Fracture*: n.d. *Tenacity*: Brittle. Hardness = n.d. D(meas.) = n.d. D(calc.) = 5.147

Optical Properties: Transparent. *Color*: Colorless. *Streak*: n.d. *Luster*: Pearly to adamantine.
Optical Class: n.d.

Cell Data: Space Group: $P2_1/c$. $a = 7.358(2)$ $b = 10.544(3)$ $c = 9.489(2)$ $\beta = 91.88(2)°$ Z = 4

X-ray Powder Pattern: Su Seinargiu, Sarroch, Cagliari, Sardinia, Italy.
3.546 (vs), 3.177 (s), 5.28 (m), 5.20 (m), 5.04 (m), 4.756 (m), 3.688 (m)

Chemistry:	(1)	(2)
MoO_3	49.38	46.33
ThO_2	45.39	50.51
H_2O	[3.09]	3.16
Total	97.86	100.00

(1) Su Seinargiu, Sarroch, Cagliari, Sardinia, Italy; average of 6 electron microprobe analyses, H_2O calculated from structure. (2) $Th(MoO_4)_2 \cdot H_2O$.

Mineral Group: Kamiokite group.

Occurrence: In hydrothermal quartz veins by alteration of a Mo-Bi deposit.

Association: Muscovite, xenotime-(Y), ichnusaite.

Distribution: In the Mo-Bi mineralization at Su Seinargiu, Sarroch, Cagliari, Sardinia, Italy.

Name: From "*nuraghe*", the main type of ancient megalithic building found in Sardinia, Italy, and the symbol of Sardinia and the Nuragic civilization.

Type Material: Natural History Museum, University of Pisa, Italy (19680).

References: (1) Orlandi, P., C. Biagioni, L. Bindi, and S. Merlino (2015) Nuragheite, $Th(MoO_4)_2 \cdot H_2O$, the second natural thorium molybdate and its relationships to ichnusaite and synthetic $Th(MoO_4)_2$. Amer. Mineral., 100, 267-273.