Nabiasite $BaMn_9(VO_4)_6(OH)_2$

Crystal Data: Cubic. *Point Group*: $2/m\,\bar{3}$. Forms anhedral grains to 100 μm.

Physical Properties: *Cleavage*: None. *Fracture*: Conchoidal. Hardness = 5
VHN = 363-536, 465 average (25 g load). D(meas.) = >2.0 D(calc.) = 4.307 Non-fluorescent.

Optical Properties: Transparent. *Color*: Dark red. *Streak*: Dark yellow, almost orange.
Luster: Vitreous.
Optical Class: Isotropic (most grains display slight anisotropy). *n*(calc.) = 2.025-2.036

Cell Data: *Space Group*: $Pa\,\bar{3}$. a = 12.832(2) Z = 4

X-ray Powder Pattern: Pla de Labasse deposit, near Nabias hamlet, Central Pyrenees, France.
2.790 (100), 2.608 (100), 1.510 (99), 3.01 (87), 2.859 (82), 2.134 (53), 2.332 (44)

Chemistry

	(1)
SrO	0.07
As_20_5	6.03
V_2O_5	35.91
BaO	11.83
MnO	47.92
H_2O	[1.36]
Total	103.12

(1) Pla de Labasse deposit, near Nabias hamlet, Central Pyrenees, France; average of 20 electron microprobe analyses supplemented by Raman spectroscopy, H_2O calculated for 2 (OH) per formula unit; corresponds to $(Mn_{9.02}Sr_{0.01})_{\Sigma=9.03}(V_{5.27}As_{0.70})_{\Sigma=5.97}O_{24}(OH)_2$.

Occurrence: In an upper-greenschist-facies metamorphosed syn-sedimentary exhalative Mn deposit in radiolarian cherts along veinlets mineralized by hydrothermal remobilization.

Association: Rhodochrosite, barite, friedelite, quartz.

Distribution: From the Pla de Labasse deposit, near Nabias hamlet, Central Pyrenees, France.

Name: For the hamlet of *Nabias* near the deposit.

Type Material: "Musée Cantonal de Géologie", Lausanne, Switzerland (MGL65000).

References: (1) Brugger, J., M. Bonin, K.J. Schenk, N. Meisser, P. Berlepsch, and A. Ragu (1999) Description and crystal structure of nabiasite, $BaMn_9[(V,As)O_4]_6(OH)_2$, a new mineral from the Central Pyrénées (France). Eur. J. Mineral., 11, 879-890. (2) (2000) Amer. Mineral., 85, 875 (abs. ref. 1).