

Crystal Data: Orthorhombic. *Point Group:* $2/m\ 2/m\ 2/m$. Crystals are fibrous, needlelike, or flattened laths, with dominant {101}, untruncated, to 1 mm; in clusters of radiating needles.

Physical Properties: *Cleavage:* The fibrous character is probably due to one or more perfect cleavages. *Tenacity:* Friable. Hardness = Very soft. D(meas.) = 2.877 (synthetic). D(calc.) = 2.926 Readily soluble in H₂O.

Optical Properties: Semitransparent. *Color:* Colorless.
Optical Class: Biaxial (+). *Orientation:* $X = a$; $Y = c$; $Z = b$. $\alpha = 1.780(2)$ (synthetic).
 $\beta = 1.800(2)$ $\gamma = \text{n.d.}$ $2V(\text{meas.}) = 30^\circ\text{--}40^\circ$

Cell Data: *Space Group:* $Pnma$. $a = 14.134(7)$ $b = 3.648(2)$ $c = 5.357(2)$ $Z = 4$

X-ray Powder Pattern: San Miguel Co., Colorado, USA; intensities from synthetic material. 5.05 (100), 2.957 (35), 3.530 (25), 3.241 (18), 3.016 (13), 2.685 (12), 7.07 (11)

Chemistry:	(1)	(2)
V ₂ O ₅	75.2	74.58
Na ₂ O	24.8	25.42
Total	[100.0]	100.00

(1) Deremo-Snyder mine, Colorado, USA; by electron microprobe, average of 31 determinations, recalculated to 100% to account for 8–10 wt% deficiency due to epoxy mounting medium between fibers. (2) NaVO₃.

Occurrence: Extremely rare, in cavities in vanadium-bearing sandstone.

Association: Rossite, metarossite, pascoite, clay minerals.

Distribution: From the Burro and Deremo-Snyder mines, near Slick Rock, San Miguel Co., Colorado, USA.

Name: For its relation to *munirite*, from which it may form by dehydration.

Type Material: National Museum of Natural History, Washington, D.C., USA, 168386.

References: (1) Evans, H.T., Jr. (1991) Metamunirite, a new anhydrous sodium metavanadate from San Miguel County, Colorado. *Mineral. Mag.*, 55, 509–513. (2) (1992) *Amer. Mineral.*, 77, 1116–1117 (abs. ref. 1). (3) Kato, K. and E. Takayama (1984) Das Entwässerungsverhalten des Natriummetavanadatdihydrats und die Kristallstruktur des β -Natriummetavanadats. *Acta Cryst.*, 40, 102–105 (in German with English abs.). (4) Haynes, P.E. (1992) Metamunirite, haynesite, and other microminerals from the four-corners states. Thirteenth annual New Mexico mineral symposium, Socorro, New Mexico, 9 (abs.).