

Crystal Data: Monoclinic. *Point Group:* $2/m$. Crystals tabular on {001} and generally stacked into elongate curved multiple crystals, to 0.5 mm.

Physical Properties: *Cleavage:* {001}, {100}, {010}; imperfect. *Parting:* Perfect on (001). *Fracture:* Irregular. *Tenacity:* Brittle. Hardness = ~1 VHN = 440 (20 g. load). $D(\text{meas.}) = \text{n.d.}$ $D(\text{calc.}) = 2.398$

Optical Properties: Transparent to translucent. *Color:* Orange-yellow. *Streak:* Yellow. *Luster:* Subadamantine.

Optical Class: Biaxial (+). $\alpha = 1.735(5)$ $\beta = 1.770(5)$ $\gamma(\text{calc.}) = 1.825(5)$
 $2V(\text{meas.}) = 77(6)^\circ$ $2V(\text{calc.}) = \text{n.d.}$ *Dispersion:* Strong; $v < r$. *Orientation:* $X = b$; $Y \approx c$.
Pleochroism: $X = \text{yellow}$; $Y = \text{orange}$; $Z = \text{yellow}$. *Absorption:* $Y > X > Z$.

Cell Data: *Space Group:* $C2/m$. $a = 19.848(2)$ $b = 10.1889(11)$ $c = 13.1184(15)$
 $\beta = 130.187(9)^\circ$ $Z = 2$

X-ray Powder Pattern: West Sunday mine, San Miguel County, Colorado, USA.
 10.01 (100), 8.44 (72), 8.09 (46), 20997 (29), 2.795 (21), 2.1443 (18), 1.9707 (18)

Chemistry:	(1)
Na ₂ O	6.77
K ₂ O	0.05
CaO	3.34
Al ₂ O ₃	0.02
V ₂ O ₅	62.1
<u>H₂O</u>	<u>27.73</u>
Total	100.01

(1) West Sunday mine, San Miguel County, Colorado, USA; electron microprobe analysis, H₂O from structure analysis, corresponding to $(\text{Na}_{3.20}\text{K}_{0.02}\text{Ca}_{0.87})_{\Sigma=4.09}[\text{H}_{1.06}(\text{V}_{9.99}\text{Al}_{0.01})_{\Sigma=10}\text{O}_{28}] \cdot 22\text{H}_2\text{O}$.

Occurrence: In efflorescent crusts on mine walls and in fractures in sandstone, formed by the oxidation of montroseite–corvusite assemblages.

Association: Montroseite, corvusite, huemulite, rossite, calcite, hewettite, hughesite, munirite, paramontroseite, pascoite, sherwoodite, rakovanite.

Distribution: At the West Sunday mine, Slick Rock district, San Miguel County, Colorado, USA.

Name: Honors Professor Mickey Eugene Gunter (b. 1953), University of Idaho, Moscow, Idaho, USA, for his studies in optical mineralogy and the mineralogy of asbestos minerals.

Type Material: Natural History Museum of Los Angeles County, California, USA; 63506 and 63507.

References: (1) Kampf, A.R., J.M. Hughes, J. Marty, and B. Nash (2011) Gunterite, $\text{Na}_4(\text{H}_2\text{O})_{16}(\text{H}_2\text{V}_{10}\text{O}_{28}) \cdot 6\text{H}_2\text{O}$, a new mineral species with a doubly-protonated decavanadate polyanion: crystal structure and descriptive mineralogy. *Can. Mineral.*, 49, 1243-1251. (2) (2013) *Amer. Mineral.*, 98, 1631-1632 (abs. ref. 1).