

Crystal Data: Triclinic. *Point Group:* $\bar{1}$. As tablets or blades with stepped faces, to 1 mm, also as irregularly stepped crystal masses to several millimeters.

Physical Properties: *Cleavage:* Good on $\{01\bar{1}\}$. *Fracture:* Irregular. *Tenacity:* Brittle. Hardness = ~ 1.5 D(meas.) = n.d. D(calc.) = 2.35

Optical Properties: Translucent. *Color:* Yellow-orange, sometimes with an orange-brown tint. *Streak:* Yellow. *Luster:* Subadamantine. *Optical Class:* Biaxial (-). $\alpha = 1.725(3)$ $\beta = 1.770(5)$ $\gamma = 1.785(3)$ $2V(\text{meas.}) = 56.6(3)^\circ$ $2V(\text{calc.}) = 58.7^\circ$ *Orientation:* $X^\wedge a = 15^\circ$, $Y \approx b$. *Pleochroism:* $X = Z = \text{orange-yellow}$, $Y = \text{orange}$. *Absorption:* $X = Z < Y$. *Dispersion:* Moderate, $r < v$.

Cell Data: *Space Group:* $P\bar{1}$. $a = 8.74899(19)$ $b = 10.9746(3)$ $c = 12.8216(9)$
 $\alpha = 114.492(8)^\circ$ $\beta = 105.093(7)^\circ$ $\gamma = 91.111(6)^\circ$ $Z = 1$

X-ray Powder Pattern: St. Jude mine, Slick Rock district, San Miguel County, Colorado, USA. 9.88 (100), 7.92 (35), 8.42 (33), 6.01 (31), 11.24 (30), 2.814 (28), 1.9613 (26)

| Chemistry: | (1) | (2) | (3) |
|-------------------------------|-------|--------|--------|
| Na ₂ O | 4.64 | 3.85 | 4.09 |
| K ₂ O | 0.04 | 0.03 | |
| CaO | 8.08 | 6.70 | 7.40 |
| SrO | 1.01 | 0.84 | |
| V ₂ O ₅ | 72.43 | 60.06 | 59.99 |
| H ₂ O | n.d. | 28.52 | 28.52 |
| Total | 86.20 | 100.00 | 100.00 |

(1) St. Jude mine, San Miguel County, Colorado, USA; average of 10 electron microprobe analyses, loss of H₂O during analysis. (2) Analysis (1) with H₂O calculated from stoichiometry and analytical results normalized; corresponding to $(\text{Na}_{1.88}\text{K}_{0.01})_{\Sigma=1.89}(\text{Ca}_{1.81}\text{Sr}_{0.12})_{\Sigma=1.93}(\text{V}_{10}\text{O}_{28})\cdot 24\text{H}_2\text{O}$. (3) $\text{Na}_2\text{Ca}_2(\text{V}_{10}\text{O}_{28})\cdot 24\text{H}_2\text{O}$.

Occurrence: In a moist part of the oxidation zone of a corvusite-montroseite-bearing sandstone.

Association: Gypsum, huemulite, metarossite, pascoite, rossite, wernerbaurite.

Distribution: From the St. Jude mine, Gypsum Valley, Slick Rock district, San Miguel County, Colorado, USA.

Name: Honors Michael (Mike) Kokinos (b. 1927) of Shingle Springs, California, USA., member of the Micromounters' Hall of Fame, and for his role as a mentor in the collecting community.

Type Material: The Natural History Museum of Los Angeles County, Los Angeles, California, USA (# 64004, 64074, 64075, 64076, 64077, 64078).

References: (1) Kampf, A.R., J.M. Hughes, B. Nash, and J. Marty (2014) Kokinosite $\text{Na}_2\text{Ca}_2(\text{V}_{10}\text{O}_{28})\cdot 24\text{H}_2\text{O}$, a new decavanadate mineral species from the St. Jude mine, Colorado: crystal structure and descriptive mineralogy. *Can. Mineral.*, 52, 15-25. (2) (2014) *Amer. Mineral.*, 99, 2440-2441 (abs. ref. 1).