

Crystal Data: Triclinic. *Point Group:* $\bar{1}$. As narrow tabular to fibrous crystals in reniform crusts and radial spherical concretions, to 6mm. *Twining:* Polysynthetic.

Physical Properties: Hardness = 5 D(meas.) = n.d. D(calc.) = 4.898

Optical Properties: Semitransparent. *Color:* Olive-green.
Optical Class: Biaxial (-). *Pleochroism:* X = Y = brown; Z = green. *Orientation:* Positive elongation. *Dispersion:* $r > v$, strong. $\alpha = 2.00$ $\beta = 2.01$ $\gamma = 2.02$ $2V(\text{meas.}) = \text{Medium}$.

Cell Data: *Space Group:* $P\bar{1}$. $a = 5.3834(2)$ $b = 6.2736(3)$ $c = 6.8454(3)$ $\alpha = 86.169(1)^\circ$
 $\beta = 91.681(1)^\circ$ $\gamma = 92.425(1)^\circ$ $Z = 1$

X-ray Powder Pattern: Locality unknown [Tyuya-Muyun Cave, Kyrgyzstan].
4.76 (10), 7.25 (8), 2.56 (6), 2.70 (4), 2.47 (3), 2.29 (3), 2.11 (3)

Chemistry: (1)

CuO	62.94
V ₂ O ₅	28.90
<u>H₂O</u>	<u>5.85</u>
Total	97.69

(1) Tyuya-Muyun Cave, Kyrgyzstan; average of 4 electron microprobe analyses, H₂O from structural analysis, corresponding to $\text{Cu}^{2+}_{4.97}(\text{V}^{5+}\text{O}_4)_2(\text{OH})_{4.08}$.

Occurrence: A rare secondary oxidation mineral in vanadium-bearing mineral deposits.

Association: Tangeite, other vanadates, uranovanadates, malachite, calcite, barite.

Distribution: From the Tyuya-Muyun Cave, Fergana Valley, Alai Range, Kyrgyzstan. In Nevada, USA, at the Van-Nav-San claim, Gibellini district and Gold Quarry mine, Maggie Creek district.

Name: For the Turan region, Kyrgyzstan, where the mineral was first found.

Type Material: A.E. Fersman Mineral Museum, Moscow, Russia; #3578.

References: (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 818. (2) Guillemin, C. (1956) Contribution a la minéralogie des arsénates, phosphates et vanadates de cuivre. II. phosphates et vanadates de cuivre. Bull. Soc. fr. Minéral., 79, 219–275, esp. 245–246 (in French). (3) Sokolova, E., F.C. Hawthorne, V.V. Karpenko, A.A. Agakhanov, and L.A. Pautov (2004) Turanite, $\text{Cu}^{2+}_5(\text{V}^{5+}\text{O}_4)_2(\text{OH})_4$, from the Tyuya–Muyun radium–uranium deposit, Osh district, Kyrgyzstan: a new structure for an old mineral. Can. Mineral., 42, 731–739.