

Crystal Data: Orthorhombic (?). *Point Group:* n.d. Platy lamellar crystals, to 1 mm, in aggregates.

Physical Properties: Hardness = 2 $D(\text{meas.}) = \text{n.d.}$ $D(\text{calc.}) = \text{n.d.}$

Optical Properties: Semitransparent. *Color:* Light blue.

Optical Class: Biaxial (-). *Pleochroism:* X = light blue; Y = Z = greenish blue.

Dispersion: $r < v$. $\alpha = 1.640$ $\beta = 1.690$ $\gamma = 1.690$ $2V(\text{meas.}) = \text{Small.}$

Cell Data: *Space Group:* n.d. $Z = \text{n.d.}$

X-ray Powder Pattern: n.d.

Chemistry:	(1)	(2)
As ₂ O ₅	41.43	43.08
CuO	37.32	39.76
CaO	7.33	7.01
Cl	2.7	2.21
H ₂ O		8.44
-O = Cl ₂	[0.6]	0.50
insol.	1.66	
Total	[89.84]	100.00

(1) Khovu-Aksy deposit, Russia. (2) $\text{Ca}_2\text{Cu}_8(\text{AsO}_4)_6\text{Cl}(\text{OH})\cdot 7\text{H}_2\text{O}$.

Occurrence: Found in the zone of oxidation of copper bearing ores.

Association: n.d.

Distribution: From the Khovu-Aksy Ni-Co deposit, Tuva, Siberia, Russia.

Name: To honor Aleksei Vasil'evich Shubnikov (1887-1970), Director of the Crystallographic Institute, Russian Academy of Sciences, Moscow, Russia.

Type Material: Mining Institute, St. Petersburg, 456/1-3; A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia, 57262.

References: (1) Nefedov, Y.I. (1953) [Report on new minerals] in: V.A. Mokievsky, The scientific session of the Federov Institute together with the All-Union Mineralogical Society. *Zap. Vses. Mineral. Obshch.*, 82, 311-317 (in Russian). (2) (1955) *Amer. Mineral.*, 40, 551-552 (abs. ref. 1). (3) Pekov, I.V. (1998) Minerals first discovered on the territory of the former Soviet Union, 186.