Crystal Data: Tetragonal. \textit{Point Group}: 4/m 2/m 2/m. In porous massive aggregates of submicroscopic particles; a few grains show square or rectangular outlines under the electron microscope.

Physical Properties: Hardness = \sim 7 \quad D(\text{meas.}) = 5.5(1); 5.7 when corrected for stibiconite impurity. \quad D(\text{calc.}) = 5.80

Optical Properties: Transparent to translucent. \textit{Color}: Blue-gray to yellowish brown when in admixture with stibiconite; colorless in transmitted light. \textit{Streak}: Pale gray. \textit{Optical Class}: Uniaxial. \quad n = 1.855–1.915

Cell Data: \textit{Space Group}: P_{4_2}/nmm. \quad a = 4.68 \quad c = 9.21 \quad Z = 2

X-ray Powder Pattern: \textit{El Antimonio, Mexico}. \quad 3.32 (100), 2.57 (90), 1.73 (90), 4.19 (70), 2.34 (50), 4.63 (40), 2.96 (40)

Chemistry:

\begin{align*}
\text{Al}_2\text{O}_3 & \quad 0.08 \\
\text{Fe}_2\text{O}_3 & \quad 0.03 \\
\text{Sb}_2\text{O}_5 & \quad 89.05 \quad 90.37 \\
\text{MgO} & \quad 6.65 \quad 7.43 \\
\text{CaO} & \quad 1.44 \\
\text{H}_2\text{O}^+ & \quad 2.60 \quad 2.20 \\
\text{H}_2\text{O}^- & \quad 0.17 \\
\text{insol.} & \quad 0.25 \\
\hline
\text{Total} & \quad 100.27 \quad [100.00]
\end{align*}

(1) La Fortuna mine, Sonora, Mexico; \text{H}_2\text{O}^+ \text{ by the Penfield method; known to be slightly contaminated with stibiconite, insoluble is quartz.} (2) Do.; corrected for stibiconite impurity; then corresponding to \text{Mg}_{0.65}\text{Sb}_{1.97}\{\text{O}_{5.14}\text{(OH)}_{0.86}\} \Sigma = 6.00.

Mineral Group: \textit{Ferrotapiolite group}.

Occurrence: In quartz veins in an oxidized antimony deposit.

Association: Stibiconite, quartz.

Distribution: In the La Fortuna and San Jose mines, El Antimonio, 27 km southwest of Agua Prieta, Sonora, Mexico.

Name: For Dr. Anders Byström (1916–1956), Swedish crystal chemist, who made a structural analysis of the synthetic compound.
