Crystal Data: Hexagonal. Point Group: \([\overline{3}2/m\) or 3\] (by analogy to the hydrotalcite group). Microcrystalline, platy, to 1 \(\mu\)m; commonly in veinlets and massive.

Physical Properties: Hardness = [\(\sim 2\)] \(D(meas.) = 2.80\) \(D(calc.) = 2.95\)


Cell Data: Space Group: \([\overline{3}3m\) or \(R3\)] (by analogy to the hydrotalcite group). \(a = 3.025–3.028\) \(c = 22.45–22.595\) \(Z = 3/8\)

X-ray Powder Pattern: Takovo, Serbia; very close to comblineite. 7.566 (10), 3.767 (9), 2.552 (9), 1.917 (9), 2.264 (8), 1.510 (8), 1.481 (8)

Chemistry:

\[
\begin{align*}
\text{SiO}_2 &\quad 10.17 &\quad 6.2 &\quad \text{Na}_3\text{O} &\quad 0.46 \\
\text{Al}_2\text{O}_3 &\quad 20.16 &\quad 16.0 &\quad \text{K}_2\text{O} &\quad 0.09 \\
\text{Fe}_2\text{O}_3 &\quad 1.78 &\quad 1.16 &\quad \text{H}_2\text{O}^+ &\quad 26.60 \\
\text{NiO} &\quad 37.24 &\quad 41.15 &\quad \text{H}_2\text{O}^- &\quad 3.48 \\
\text{ZnO} &\quad 0.03 &\quad \text{H}_2\text{O} &\quad 25.38 &\quad 26.68 \\
\text{MgO} &\quad 0.45 &\quad \text{CO}_2 &\quad \text{n.d.} &\quad 11.14 &\quad 5.43 \\
\text{CaO} &\quad 0.47 &\quad 0.11 &\quad \text{Total} &\quad 100.45 &\quad 101.62 &\quad 100.00 \\
\end{align*}
\]

(1) Takovo, Serbia; quartz 10.17%, goethite 2%, and calcite 0.8% considered as impurities.
(2) Agnew, Australia; after deduction of SiO\(_2\) impurity, corresponds to Ni\(_{4.94}\)Fe\(_{0.13}\)Mg\(_{0.10}\)Ca\(_{0.02}\)Al\(_{2.81}\)Σ=8.00(\OH)\(_{14.42}\)(CO\(_3\))\(_{2.27}\)•5.42H\(_2\)O. (3) Ni\(_6\)Al\(_2\)(OH)\(_{16}\)CO\(_3\)•4H\(_2\)O.

Mineral Group: Hydrotalcite group.

Occurrence: In a karstitic bauxite at the contact of limestone and metamorphosed serpentinite (Takovo, Serbia); an alteration product of nickel sulfides (Western Australia).

Association: Gibbsite, allophane (Takovo, Serbia); glaukospherite, népouite, gaspétite, paratacamite, nickelooan magnesite, gypsum, (Kambalda, Australia).

Distribution: From Takovo, Serbia. In the Blangvette West mine, Le Thoronet, Var, France. On Mueo, New Caledonia. In Western Australia, at the Carr Boyd Rocks nickel mine; the Agnew nickel deposit, north of Kalgoorlie; from Kambalda, 56 km south of Kalgoorlie; and the Dordie North nickel deposit. In the USA, at Wells Canyon, Oquirrh Mountains, Utah Co., Utah, and at the Alpine mine, Clear Creek, San Benito Co., California.

Name: For Takovo, Serbia, from which it was first described.
