Crystal Data: Hexagonal. Point Group: 6/m 2/m 2/m. As a tabular crystal, to 35 µm, partly included in platinum; granular.


R₁–R₂: (400) 68.8, (420) 69.1, (440) 69.5, (460) 70.0, (480) 70.3, (500) 70.6, (520) 70.7, (540) 70.5, (560) 70.1, (580) 69.5, (600) 68.8, (620) 67.9, (640) 67.0, (660) 66.0, (680) 65.2, (700) 64.7


X-ray Powder Pattern: Synthetic. 2.056 (100), 2.343 (40), 2.142 (35), 1.5808 (25), 1.3530 (25), 1.2189 (25), 1.1434 (25)

Chemistry:

\[
\begin{align*}
\text{Ru} &:\quad 64.43 \\
\text{Ir} &:\quad 14.62 \\
\text{Pt} &:\quad 9.14 \\
\text{Rh} &:\quad 7.05 \\
\text{Os} &:\quad 5.29 \\
\text{Pd} &:\quad 0.49 \\
\text{Fe} &:\quad 0.21 \\
\text{Ni} &:\quad \text{trace} \\
\text{Cu} &:\quad \text{trace}
\end{align*}
\]

Total 101.23

(1) Uryu River, Japan; by electron microprobe, corresponding to (Ru₀.₇₄Ir₀.₉₀Rh₀.₀₆Pt₀.₀₅O₅₀₃Pd₀.₀₁)Σ=1.₀₀.

Occurrence: In a platinum grain (Uryu River, Japan).

Association: Platinum, other PGE minerals.

Distribution: In gravels of the Uryu River, near Horokanai, Hokkaido, Japan [TL]. In Russia, from Niznhi Tagil, Ural Mountains, and in a placer on the Upper Miass River, Southern Ural Mountains. In the Waiau River, western Southland, New Zealand. From the Kraubath ultramafic massif, Styria, Austria. In the USA, in the Yuba River, Nevada Co., California; at Tennessee Pass, Josephine Co., Oregon. In concentrates from the Wellgreen Cu–Ni–Pt–Pd deposit, Yukon Territory, Canada. At Rio Pilpe, Guapi Co., Colombia. Additional poorly specified localities are recorded.

Name: From the Latin Ruthenia, for Ukraine or Russia, as the element was found associated with platinum in the Ural Mountain placers, Russia; the name applied to hexagonal alloys with dominant Ru.

Type Material: University of Kagoshima, Kagoshima, Japan.


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