

Crystal Data: Cubic. *Point Group:* $4/m\bar{3}2/m$. As rounded inclusions to 100 μm .

Physical Properties: *Cleavage:* None. *Fracture:* n.d. *Tenacity:* Brittle. *Hardness* = n.d. VHN = 724-736, 730 average (10 g load). *D(meas.)* = n.d. *D(calc.)* = 7.42

Optical Properties: Opaque. *Color:* Light gray with a bluish tint in reflected light. *Luster:* Metallic. *Optical Class:* Isotropic. No internal reflections.
R: (460) 38.3, (500) 39.0, (540) 39.0, (580) 39.1, (660) 38.8

Cell Data: *Space Group:* $Pm\bar{3}m$ (probable). $a = 10.024(5)$ $Z = 2$

X-ray Powder Pattern: Miass River, southern Urals, Russia.
1.774 (100), 3.02 (90), 2.24 (90), 1.931 (80), 3.17 (70), 2.68 (50), 3.33 (20)

Chemistry:	(1)	(2)
Ru	0.4	7.72
Rh	59.3	56.90
Pd	6.4	
Os	0.3	
Ir	0.5	
Pt	6.8	4.54
Fe	1.4	4.24
Ni	1.9	2.22
Cu	1.8	1.82
<u>S</u>	<u>21.0</u>	<u>21.90</u>
Total	99.8	99.39

(1) Miass River, southern Urals, Russia; average electron microprobe analysis; corresponding to $(\text{Rh}_{12.98}\text{Pd}_{1.36}\text{Pt}_{0.79}\text{Ni}_{0.73}\text{Cu}_{0.64}\text{Fe}_{0.56}\text{Ru}_{0.09}\text{Ir}_{0.06}\text{Os}_{0.04})_{\Sigma=17.26}\text{S}_{14.76}$. (2) Anabar Basin, northeastern Siberian Platform, Russia; average electron microprobe analysis; corresponding to $(\text{Rh}_{11.94}\text{Ru}_{1.65}\text{Fe}_{1.64}\text{Ni}_{0.82}\text{Cu}_{0.6}\text{Pt}_{0.502})_{\Sigma=17.17}\text{S}_{14.83}$.

Occurrence: In heavy-mineral concentrates from fluvial placer deposits derived from ophiolites or layered mafic intrusions.

Association: Isoferroplatinum, cuprorhodsitite, bowieite, vasilite, cooperite, keithconnite.

Distribution: From the upper part of the Miass River, near Zlatoust, southern Urals, Russia [TL]. From Burwash Creek, a tributary of the Klauane River, southeastern Yukon Territory, Canada. In the Anabar Basin placer, northeastern Siberian Platform, Russia. From the Moopetsi River and its subsidiary creeks, farm Maandagshoek, eastern Bushveld, South Africa.

Name: For the *Miass* River, Russia. Similar material formally named "prassoite".

Type Material: Mining Museum, Saint Petersburg Mining Institute, Russia (3073/2).

References: (1) Britvin, S.N., N.S. Rudashevsky, A.N. Bogdanova, and D.K. Shcherbachev (2001) Miassite Rh₁₇S₁₅, a new mineral from a placer of the Miass River, Urals. *Zap. Vseross. Mineral. Obshch.*, 130(2), 41-45 (in Russian, English abs.). (2) (2002) *Amer. Mineral.*, 87, 1511 (abs. ref. 1). (3) Burke, E.A.J. (Chairman) and G. Ferraris (Vice-Chairman) (2004) New minerals approved in 2003 and nomenclature modifications approved in 2003 by the Commission on New Minerals and Mineral Names, International Mineralogical Association. *Amer. Mineral.*, 89, 1573. (4) Pekov, I.V. (2007) New minerals from former Soviet Union countries, 1998-2006: new minerals approved by the IMA commission on new minerals and mineral names. *Mineral. Almanac* 11, 35. (5) Airiyants, E.V., S.M. Zhmodik, P.O. Ivanov, D.K. Belyanin, and L.V. Agafonov (2014) Mineral inclusions in Fe-Pt solid solution from the alluvial ore occurrences of the Anabar basin (northeastern Siberian Platform). *Russian Geology and Geophysics*, 55, 945-958.