

Vincentite**(Pd, Pt)₃(As, Sb, Te)**

Crystal Data: Monoclinic. *Point Group:* n.d. As grains to 40 microns.

Physical Properties: *Cleavage:* n.d. *Tenacity:* n.d. Hardness = n.d.
VHN = 494 (15 g. load) D(meas.) = n.d. D(calc.) = 10.86

Optical Properties: Opaque. *Color:* In reflected light, light brownish-gray. *Anisotropism:* Weak, greenish gray to dark brown. *Luster:* n.d. *Birefractance:* Weak.
Optical Class: n.d.

R₁-R₂: (400) 36.0-36.5, (420) 36.4-37.3, (440) 36.4-38.7, (460) 38.0-41.8, (470) 38.8-43.1, (480) 40.5-44.2, (500) 42.0-46.1, (520) 43.4-48.9, (540) 45.1-51.1, (546) 45.4-51.3, (560) 46.3-52.2, (580) 47.6-53.8, (589) 48.0-54.2, (600) 48.4-54.8, (620) 48.9-55.8, (640) 50.4-55.9, (650) 50.8-55.9, (660) 51.6-56.0, (680) 53.1-55.8, (700) 54.2-56.2

Cell Data: *Space Group:* n.d. *a* = 11.226(3) *b* = 6.318(2) *c* = 8.047(2) *β* = 100.95(4)° *Z* = 8

X-ray Powder Pattern: Riam Kanen River, S.E. Borneo.

1.800 (10), 1.775 (9), 1.758 (8), 1.745 (8), 1.838 (6), 2.888 (4), 3.951 (3)

Chemistry:	(1)	(2)
Pd	61.3	60.31
Pt	14.4	16.70
As	7.3	6.99
Sb	6.3	9.18
Te	8.9	7.12
Total	98.2	100.30

(1) Riam Kanen River, S.E. Borneo; electron microprobe analysis, corresponding to (Pd_{2.66}Pt_{0.34})_{Σ=3.00}(As_{0.45}Sb_{0.24}Te_{0.42})_{Σ=1.11}. (2) Riam Kanen River, S.E. Borneo; electron microprobe analysis, corresponding to (Pd_{2.65}Pt_{0.34})_{Σ=2.99}(As_{0.45}Sb_{0.24}Te_{0.32})_{Σ=1.01}.

Occurrence: As inclusions in Fe-bearing palladium grains in sediment concentrates from the Riam Kanen River, S.E. Borneo.

Association: Platinum, osmium.

Distribution: Riam Kanen River, S.E. Borneo.

Name: Honors Professor E. A. Vincent of Oxford University, England.

Type Material: Not found.

References: (1) Stumpfl, E. F. and M. Tarkian (1974) Vincentite, a new palladium mineral from south-east Borneo. *Mineral. Mag.*, 39, 525-527. (2) (1974) *Amer. Mineral*, 59, 1332, (abs. ref 1). (3) Tarkian, M., K.-H. Klaska, and E.F. Stumpfl (2002) New data on vincentite. *Can. Mineral.*, 40, 457-461.