Serrabrancaite $Mn(PO_4)\cdot H_2O$

Crystal Data: Monoclinic. *Point Group*: 2/*m*. As equant or short prismatic crystals to 0.3 mm.

Physical Properties: *Cleavage*: None. *Tenacity*: Brittle. *Fracture*: Uneven. Hardness = 3.5
D(meas.) = 3.17(1) D(calc.) = 3.16

Optical Properties: Translucent. *Color*: Dark brown to dark greenish black. *Streak*: Olive-green. *Luster*: Adamantine.
Optical Class: Biaxial. α = 1.75(1) β = 1.79(1) γ = >1.79 2V(meas.) = n.d.
Pleochroism: Dark brown to olive greenish brown.

Cell Data: *Space Group*: *C*2/*c*. a = 6.914(2) b = 7.468(2) c = 7.364(2) β = 112.29(3)° Z = 4

X-ray Powder Pattern: Alto Serra Branca pegmatite, Paraiba State, Brazil.
3.503 (100), 2.516 (19), 4.633 (15), 4.856 (12), 2.104 (12), 3.271 (10), 2.957 (10)

Chemistry:

	(1)	(2)
Mn_2O_3	46.85	47.01
P_2O_5	42.72	42.27
H_2O	9.80	10.72
Total	99.37	100.00

(1) Alto Serra Branca pegmatite, Paraiba State, Brazil; average electron microprobe analysis, H_2O by TGA; corresponding to $Mn_{0.98}P_{1.00}O_{3.98}\cdot 0.90H_2O$.

Occurrence: A secondary alteration product of triplite in a granitic pegmatite.

Association: Vernadite, phosphosiderite.

Distribution: From the Alto Serra Branca granitic pegmatite, ~10 km southwest of the village Pedra Lavrada, Paraiba State, Brazil.

Name: For the Alto *Serra Branca* granitic pegmatite, Brazil.

Type Material: Mineral Collection, Bergakademie, Freiberg, Germany (78025) and the Mineral Collection, Martin-Luther Universität Halle, Geoscience Institute, Germany (010355).

References: (1) Witzke T, R. Wegner, T. Doering, H. Pöllmann, and W. Schuckmann (2000) Serrabrancaite, $MnPO_4\cdot H_2O$, a new mineral from the Alto Serra Branca pegmatite, Pedra Lavrada, Paraiba, Brazil. Amer. Mineral., 85, 847-849.