$\textcircled{\text{c}}$ 2001-2005 Mineral Data Publishing, version 1

Crystal Data: Monoclinic. Point Group: 2/m. Crystals are warped, canoe-shaped, showing only $\{\overline{1}11\}$, $\{001\}$, to 1.5 cm. Twinning: By reflection on $\{001\}$, common, giving a pseudo-orthorhombic outline.

Physical Properties: Cleavage: On $\{001\}$, good to perfect. Hardness = 3–4 D(meas.) = 2.67(2) D(calc.) = 2.62

Optical Properties: Semitransparent. *Color:* Chocolate-brown; colorless in thin fragments. *Optical Class:* Biaxial (+). *Orientation:* $X \perp \{001\}$. $\alpha = 1.575(5)$ $\beta = 1.585(5)$ $\gamma = 1.595(5)$ $2V(\text{meas.}) = 80^{\circ}-90^{\circ}$

Cell Data: Space Group: $P2_1/a$. a = 14.99(2) b = 6.96(1) c = 10.14(1) $\beta = 113^{\circ}19(6)'$ Z = 2

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X-ray Powder Pattern: Lavra da Ilha pegmatite; close to whiteite-(CaFeMg). 9.318 (100), 2.776 (90), 4.824 (50), 2.948 (45), 4.644 (40), 3.518 (35), 3.245 (35)

Chemistry:

	(1)
P_2O_5	36.4
Al_2O_3	12.7
FeO	7.9
MnO	7.6
MgO	10.1
CaO	1.4
$\rm H_2O$	n.d.
Total	

(1) Lavra da Ilha pegmatite, Brazil; by electron probe, partial analysis, total Fe as FeO, total Mn as MnO; corresponding approximately to $(Mn_{0.9}^{2+}Ca_{0.2})_{\Sigma=1.1}(Fe_{0.9}^{2+}Mn_{0.1}^{2+})_{\Sigma=1.0}Mg_{2.0}Al_{2.0}$ $(PO_4)_4(OH)_2 \cdot 8H_2O$.

Mineral Group: White ite group; $Al > Fe^{3+}$ in the M(3) structural site.

Occurrence: In complex zoned granite pegmatites.

Association: Eosphorite, zanazziite, wardite, albite, quartz (Lavra da Ilha pegmatite, Brazil).

Distribution: From the Lavra da Ilha pegmatite, in the Jequitinhonha River, three km north of Taquaral, and at the Énio pegmatite mine, northeast of Galiléia, Minas Gerais, Brazil.

Name: For its relation to white ite-(CaFeMg); the suffix indicates sequentially the dominant atom in the X, M(1), and M(2) structural positions.

Type Material: National Museum of Natural History, Washington, D.C., USA, 161211.

References: (1) Moore, P.B. and J. Ito (1978) I. Whiteite, a new species, and a proposed nomenclature for the jahnsite-whiteite complex series. II. New data on xanthoxenite. III. Salmonsite discredited. Mineral. Mag., 42, 309–323. (2) (1979) Amer. Mineral., 64, 465–466 (abs. ref. 1).