



>>Entry Name: Ytterbium(III) oxide (Yb₂O₃)

Synonym(s): Ytterbia

CAS Registry Number: 1314-37-0

Yb₂O₃

Molecular Formula: O₃Yb₂

Molecular Weight: 394.078

Accurate Mass: 391.855501

Percentage Composition: O 12.18%; Yb 87.82%

Source/Synthesis: Synth. on thermal dec. of Yb salts

Physical Description: White solid

Melting Point: Mp 2355°

Boiling Point: Bp 4070°

Solubility: Insol. H₂O; sol. hot acid

Other Data: μ_{eff} = 4.34μ_B

Aldrich: 20488-9

Fluka: 95780

Sigma: Y3250

References:

Coutures, J.P. *et al.*, *C. R. Hebd. Seances Acad. Sci. Ser. C*, 1972, **275**, 1203, (*synth, struct*)

Faithful, D.B. *et al.*, *Rev. Chim. Miner.*, 1973, **10**, 291, (*ir*)

Gmelin Handbook Inorg. Chem., Syst. No. 39, 1974, **C1**, 426, (*rev, bibl*)

Lal, H.B. *et al.*, *Pramana*, 1978, **10**, 409, (*magnetism*)

Gouteron, J. *et al.*, *C. R. Hebd. Seances Acad. Sci. Ser. C*, 1979, **289**, 243, (*Raman*)

Eyring, L., *Handbook on the Physics and Chemistry of Rare Earths*, 1979, **3**, 337, (*rev*)

Klasse, J.C.P. *et al.*, *Physica B+C (Amsterdam)*, 1981, **106**, 178, (*magnetism*)

McPherson, R., *J. Mater. Sci.*, 1983, **18**, 1341, (*synth*)

Fierro, J.L.G. *et al.*, *J. Colloid Interface Sci.*, 1984, **100**, 303, (*use*)

Saiki, A. *et al.*, *Yogyo Kyokaishi*, 1985, **93**, 649; *CA*, **103**, 204127, (*cryst struct*)