



>>Entry Name: Dysprosium(III) oxide (Dy₂O₃)

Synonym(s): Dysprosia

CAS Registry Number: 1308-87-8

Extra CAS Registry Numbers(s): 37247-99-7

Type of Compound Code(s): NF0415 NF0420

Dy₂O₃

Molecular Formula: Dy₂O₃

Molecular Weight: 372.998

Accurate Mass: 375.843087

Percentage Composition: Dy 87.13%; O 12.87%

General Statement: Rare earth sesquioxide B and C structs.

Source/Synthesis: Obtd. on heating Dy salts

Physical Description: White solid

Melting Point: Mp 2340° (2228°)

Boiling Point: Bp 3900°

Other Data: $\mu_{\text{eff}} = 10.5\mu_{\text{B}}$

Aldrich: 28926-4

Fluka: 44650

Sigma: D0381

References:

Hoekstra, H.R., *Inorg. Chem.*, 1966, **5**, 754, (struct)

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

Gmelin Handbook Inorg. Chem., Syst. No. 39, 1974, **C1**, 404, (rev, bibl)

Boulesteix, C. *et al.*, *Phys. Status Solidi*, 1974, **23**, 597, (struct)

Konstantinov, V.L. *et al.*, *Spectrosc. Lett.*, 1977, **10**, 7, (uv-vis)

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

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

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

Tucker, L.A. *et al.*, *Appl. Spectrosc.*, 1984, **38**, 857, (Raman)

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

Uwamino, Y. *et al.*, *J. Electron Spectrosc. Relat. Phenom.*, 1984, **34**, 67, (pe)

Gruber, J.B. *et al.*, *J. Chem. Phys.*, 1985, **82**, 5373, (uv-vis)