



>>Entry Name: Yttrium(III) oxide (Y₂O₃)

Synonym(s): Yttria. Yttrium oxide

CAS Registry Number: 11130-29-3

Extra CAS Registry Numbers(s): 1314-36-9

Y₂O₃

Molecular Formula: O₃Y₂

Molecular Weight: 225.81

Accurate Mass: 225.796443

Percentage Composition: O 21.26%; Y 78.74%

Use/Importance: Used to make range of ceramics (Sialon) optical glasses, refractories. Has been used as secondary Mp standard. At 400° catalyses formation of ethane from CO + H₂: reaction enhanced by addition of In₂O₃. Similar results obt. from CeO₂, La₂O₃

Physical Description: White solid

Melting Point: Mp 2432° (2376°)

Solubility: Insol. H₂O; sol. acid

Aldrich: 34328-5

References:

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Kunzmann, P. *et al.*, *J. Solid State Chem.*, 1975, **14**, 229

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

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

Hattori, H. *et al.*, *Yuki Gosei Kagaku Kyokaishi*, 1984, **42**, 21, (*catal, rev*)

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