



>>Entry Name: Terbium(III) iodide (TbI₃)

Synonym(s): Terbium triiodide

CAS Registry Number: 13813-40-6

TbI₃

Molecular Formula: I₃Tb

Molecular Weight: 539.639

Accurate Mass: 539.638761

Percentage Composition: I 70.55%; Tb 29.45%

Physical Description: Deliquescent white cryst.

Melting Point: Mp 955° (946°)

Boiling Point: Bp 1300°

Solubility: Sol. H₂O

Aldrich: 42709-8

>>Derivative: Nonahydrate

CAS Registry Number: 75179-66-7

Molecular Formula: H₁₈I₃O₉Tb

Molecular Weight: 701.776

Accurate Mass: 701.733846

Percentage Composition: H 2.59%; I 54.25%; O 20.52%; Tb 22.65%

Physical Description: Hygroscopic colourless needles

Solubility: Sol. H₂O

Other Data: Forms hexahydrate *in vacuo* at r.t. Octahydrate also reported

References:

- Asprey, L.B. *et al.*, *Inorg. Chem.*, 1964, **3**, 1137, (*struct*)
Brown, D., *Halides of the Lanthanides and Actinides*, Wiley-Interscience, 1968, 219, (*rev*)
Carter, F.L. *et al.*, *Mater. Res. Bull.*, 1972, **7**, 519
Kwestroo, W. *et al.*, *J. Inorg. Nucl. Chem.*, 1976, **38**, 1019, (*nonahydrate, synth*)
Gmelin Handbook Inorg. Chem., Syst. No. 39, 1978, **C6**, 198, (*rev*)
Beck, H.P. *et al.*, *Z. Anorg. Allg. Chem.*, 1979, **453**, 79, (*struct*)
Heinio, O. *et al.*, *Acta Chem. Scand., Ser. A*, 1980, **34**, 207, (*nonahydrate, synth, struct, tga*)
Inorg. Synth., 1983, **22**, 31
Uwamino, Y. *et al.*, *Bull. Chem. Soc. Jpn.*, 1986, **59**, 2263, (*pe*)