



>>Entry Name: Terbium(III) bromide (TbBr₃)

Synonym(s): Terbium tribromide

CAS Registry Number: 14456-47-4

TbBr₃

Molecular Formula: Br₃Tb

Molecular Weight: 398.637

Accurate Mass: 395.74035

Percentage Composition: Br 60.13%; Tb 39.87%

Physical Description: White solid

Melting Point: Mp 827°

Boiling Point: Bp 1490°

Solubility: Sol. H₂O

Aldrich: 46634-4

>>Derivative: Hexahydrate

Synonym(s): Hexaaquadibromoterbium(1+) bromide

CAS Registry Number: 15162-98-8

Molecular Formula: Br₃H₁₂O₆Tb

Molecular Weight: 506.728

Accurate Mass: 503.80374

Percentage Composition: Br 47.31%; H 2.39%; O 18.94%; Tb 31.36%

Physical Description: Colourless cryst.

Solubility: Sol. H₂O

Other Data: Loses H₂O on controlled heating *in vacuo*. Formulated as [TbBr₂(OH₂)₆]⁽⁺⁾Br⁽⁻⁾

Aldrich: 45005-7

References:

- Mayer, I. *et al.*, *J. Inorg. Nucl. Chem.*, 1965, **27**, 1905, (*hexahydrate, synth*)
Brown, D., *Halides of the Lanthanides and Actinides*, Wiley-Interscience, 1968, 194, (*rev*)
Brown, D. *et al.*, *J.C.S.(A)*, 1968, 1889, (*hexahydrate, synth, cryst struct*)
Basile, L.J. *et al.*, *J. Chem. Phys.*, 1971, **55**, 3729, (*ir*)
Gmelin Handbook Inorg. Chem., Syst. No. 39, 1978, **C6**, 73, (*rev*)
Uwamino, Y. *et al.*, *Bull. Chem. Soc. Jpn.*, 1986, **59**, 2263, (*pe*)
Meyer, G. *et al.*, *J. Less-Common Met.*, 1987, **127**, 155, (*synth*)