



>>Entry Name: Lutetium(III) bromide (LuBr₃)

Synonym(s): Lutetium tribromide

CAS Registry Number: 14456-53-2

LuBr₃

Molecular Formula: Br₃Lu

Molecular Weight: 414.679

Accurate Mass: 411.755778

Percentage Composition: Br 57.81%; Lu 42.19%

Physical Description: White solid

Melting Point: Mp 1025° (960°)

Boiling Point: Bp 1440°

Solubility: Sol. H₂O, THF

>>Derivative: Hexahydrate

CAS Registry Number: 15162-89-7

Molecular Formula: Br₃H₁₂LuO₆

Molecular Weight: 522.77

Accurate Mass: 519.819168

Percentage Composition: Br 45.85%; H 2.31%; Lu 33.47%; O 18.36%

Physical Description: Colourless cryst.

Solubility: Sol. H₂O

Other Data: Isostructural with corresp. chloride. Loses H₂O on controlled heating *in vacuo*

References:

- Gmelin Handbook Inorg. Chem., Syst. No. 39, 1928, **C6**, (rev)
Mayer, I. *et al.*, *J. Inorg. Nucl. Chem.*, 1965, **27**, 1905, (hexahydrate, synth, tga)
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)
Giricheva, N.I. *et al.*, *Izv. Vyssh. Uchebn. Zaved., Khim. Khim. Tekhnol.*, 1974, **17**, 616; *CA*, **81**, 42590, (ed)
Ruscic, B. *et al.*, *Ann. Isr. Phys. Soc.*, 1984, **6**, 173, (pe)
Loktyushina, N.S. *et al.*, *Zh. Fiz. Khim.*, 1984, **58**, 2631, (ir)
Uwamino, Y. *et al.*, *Bull. Chem. Soc. Jpn.*, 1986, **59**, 2263, (pe)
Meyer, G. *et al.*, *J. Less-Common Met.*, 1987, **127**, 155, (synth)