



>>Entry Name: Samarium(III) bromide (SmBr₃)

Synonym(s): Samarium tribromide

CAS Registry Number: 13759-87-0

SmBr₃

Molecular Formula: Br₃Sm

Molecular Weight: 390.072

Accurate Mass: 388.734737

Percentage Composition: Br 61.45%; Sm 38.55%

Physical Description: Yellow solid

Melting Point: Mp 664°

Aldrich: 45123-1

>>Derivative: Hexahydrate

CAS Registry Number: 13517-12-9

Molecular Formula: Br₃H₁₂O₆Sm

Molecular Weight: 498.163

Accurate Mass: 496.798127

Percentage Composition: Br 48.12%; H 2.43%; O 19.27%; Sm 30.18%

Physical Description: Deliquescent pale yellow cryst.

Solubility: Sol. H₂O

Other Data: Loses H₂O >100°. Possesses NdCl₃·6H₂O struct.

Aldrich: 41664-9

References:

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Selwood, P.W., *J.A.C.S.*, 1934, **56**, 2392, (*magnetism*)
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Mayer, I. *et al.*, *J. Inorg. Nucl. Chem.*, 1965, **27**, 1905, (*hydrate, synth, tga*)
Brown, D., *Halides of the Lanthanides and Actinides*, Wiley-Interscience, 1968, 194, (*rev*)
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Wood, A.B. *et al.*, *Rare Earths Mod. Sci. Technol.*, 1982, **3**, 153, (*synth, uv-vis*)
Meyer, G. *et al.*, *Inorg. Chem.*, 1985, **24**, 3504, (*synth*)
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Meyer, G. *et al.*, *J. Less-Common Met.*, 1987, **127**, 155, (*synth*)
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