



>>Entry Name: Yttrium(III) iodide (YI₃)

Synonym(s): Yttrium triiodide

CAS Registry Number: 13470-38-7

YI₃

Molecular Formula: I₃Y

Molecular Weight: 469.619

Accurate Mass: 469.619268

Percentage Composition: I 81.07%; Y 18.93%

Physical Description: Deliquescent white to yellow cryst.

Melting Point: Mp 997°

Boiling Point: Bp_{0.02} 650-700°

Solubility: Sol. H₂O, EtOH, Me₂CO

Aldrich: 41301-1

>>Derivative: Hexahydrate

Molecular Formula: H₁₂I₃O₆Y

Molecular Weight: 577.711

Accurate Mass: 577.682658

Percentage Composition: H 2.09%; I 65.90%; O 16.62%; Y 15.39%

>>Derivative: Octahydrate

CAS Registry Number: 75179-69-0

Molecular Formula: H₁₆I₃O₈Y

Molecular Weight: 613.741

Accurate Mass: 613.703788

Percentage Composition: H 2.63%; I 62.03%; O 20.85%; Y 14.49%

Physical Description: Hygroscopic colourless needles

Solubility: Sol. H₂O

Other Data: Forms hexahydrate *in vacuo* at r.t. or on heating to 160-210°

References:

Asprey, L.B. *et al.*, *Inorg. Chem.*, 1964, **3**, 1137, (*struct*)

Krause, B. *et al.*, *Acta Cryst.*, 1965, **16**, 848

Brown, D., *Halides of the Lanthanides and Actinides*, Wiley-Interscience, 1968, 219, (*rev*)

Shevstova, Z.N. *et al.*, *Zh. Neorg. Khim.*, 1973, **18**, 2555; *Russ. J. Inorg. Chem. (Engl. Transl.)*, 1973, **18**, 1355, (*octahydrate, synth*)

Yastrebova, L.F. *et al.*, *Zh. Neorg. Khim.*, 1975, **20**, 2496; *Russ. J. Inorg. Chem. (Engl. Transl.)*, 1975, **20**, 1383, (*octahydrate, synth*)

Kwestroo, W. *et al.*, *J. Inorg. Nucl. Chem.*, 1976, **38**, 1019, (*octahydrate, synth*)

Gmelin Handbook Inorg. Chem., Syst. No. 39, 1978, **C6**, 180, (*rev*)

Sengodan, V. *et al.*, *Indian J. Phys., B*, 1979, **53**, 288, (*ir*)

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, (*octahydrate, synth, struct, tga*)

Inorg. Synth., 1983, **22**, 31, (*synth*)

Uwamino, Y. *et al.*, *Bull. Chem. Soc. Jpn.*, 1986, **59**, 2263, (*pe*)