



>>Entry Name: Ytterbium(III) acetate

Synonym(s): Ytterbium triacetate

CAS Registry Number: 31298-17-6

Related CAS Registry Numbers(s): 20981-49-1

Yb(OAc)₃

Molecular Formula: C₆H₉O₆Yb

Molecular Weight: 350.173

Accurate Mass: 348.975293

Percentage Composition: C 20.58%; H 2.59%; O 27.41%; Yb 49.42%

Physical Description: White solid

Solubility: Sol. H₂O

>>Derivative: Tetrahydrate

CAS Registry Number: 15280-58-7

Molecular Formula: C₆H₁₇O₁₀Yb

Molecular Weight: 422.234

Percentage Composition: C 17.07%; H 4.06%; O 37.89%; Yb 40.98%

Use/Importance: Commercially available

Physical Description: Hygroscopic colourless cryst.

Solubility: V. sol. H₂O

Other Data: Loses H₂O on heating to 70°. Loses 4H₂O at 100°. Dec. >300° to YbO(OAc) and Yb₂O₃

Aldrich: 32601-1

>>Derivative: 2,2'-Bipy complex

Molecular Formula: C₁₆H₁₇N₂O₆Yb

Molecular Weight: 506.36

Accurate Mass: 505.044041

Percentage Composition: C 37.95%; H 3.38%; N 5.53%; O 18.96%; Yb 34.17%

Physical Description: Cryst.

Other Data: Dec. at 240-245°

>>Derivative: Phen complex

Molecular Formula: C₁₈H₁₇N₂O₆Yb

Molecular Weight: 530.382

Accurate Mass: 529.044041

Percentage Composition: C 40.76%; H 3.23%; N 5.28%; O 18.10%; Yb 32.63%

Physical Description: White cryst.

Other Data: Dec. at 288-290°

References:

Moeller, T. *et al.*, *J. Inorg. Nucl. Chem.*, 1960, **15**, 259, (*synth*)

Witt, J.R. *et al.*, *J. Inorg. Nucl. Chem.*, 1963, **24**, 637, (*synth*)

Grigorev, A.I. *et al.*, *Zh. Neorg. Khim.*, 1964, **9**, 1060; *Russ. J. Inorg. Chem. (Engl. Transl.)*, 1964, **9**, 580, (*synth, ir*)

Hart, F.A. *et al.*, *J. Inorg. Nucl. Chem.*, 1965, **27**, 1605; 1825, (*complex*)

Karraker, D.G., *J. Inorg. Nucl. Chem.*, 1969, **31**, 2815, (*synth, ir*)

Batkibekova, M. *et al.*, *Zh. Neorg. Khim.*, 1979, **24**, 2983; *Russ. J. Inorg. Chem. (Engl. Transl.)*, 1979, **24**, 1658, (*thermodyn*)

Gmelin Handbook Inorg. Chem., Syst No. 39. Suppl. Vol., 1984, **D5**, 31, (*rev*)

Ogawa, M. *et al.*, *Tokyo Kogei Daigaku Kogakubu Kiyo*, 1984, **7**, 41; *CA*, **105**, 34572q, (*synth, dta, tga*)