



>>Entry Name: Holmium acetate

Synonym(s): Holmium triacetate

CAS Registry Number: 25519-09-9

Related CAS Registry Numbers(s): 70457-40-8 74392-05-5

$\text{Ho}(\text{OAc})_3$

Molecular Formula: $\text{C}_6\text{H}_9\text{HoO}_6$

Molecular Weight: 342.064

Accurate Mass: 341.970234

Percentage Composition: C 21.07%; H 2.65%; Ho 48.22%; O 28.06%

Source/Synthesis: Obt. by cryst. at 120° from dil. HOAc soln. of Ho_2O_3 and CsOAc

Physical Description: Yellow solid

Solubility: Sol. H_2O

Other Data: Undergoes phase transition at *ca.* 187°; dec. at 327°

>>Derivative: Dihydrate

CAS Registry Number: 85077-86-7

Physical Description: Cryst.

>>Derivative: Tetrahydrate

CAS Registry Number: 15280-56-5

Molecular Formula: $\text{C}_6\text{H}_{17}\text{HoO}_{10}$

Molecular Weight: 414.125

Percentage Composition: C 17.40%; H 4.14%; Ho 39.83%; O 38.63%

Physical Description: Yellow cryst.

Solubility: Sol. HOAc

Other Data: 9-Coord.; contains dimeric $\text{Ho}_2(\text{OAc})_6(\text{H}_2\text{O})_4$ units

>>Derivative: Phen complex

Molecular Formula: $\text{C}_{18}\text{H}_{17}\text{HoN}_2\text{O}_6$

Molecular Weight: 522.272

Percentage Composition: C 41.40%; H 3.28%; Ho 31.58%; N 5.36%; O 18.38%

Physical Description: Cryst.

Other Data: Dec. at 261-263°

References:

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

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

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

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

Bats, J.W. *et al.*, *Acta Cryst. B*, 1979, **35**, 1225, (*cryst struct*)

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*)

Mondry, A. *et al.*, *Inorg. Chim. Acta*, 1991, **186**, 135, (*dihydrate, uv-vis*)

Lossin, A. *et al.*, *Z. Anorg. Allg. Chem.*, 1993, **619**, 1609, (*anhyd compd, synth, cryst struct*)