



>>Entry Name: Lutetium acetate

Synonym(s): Lutetium triacetate

CAS Registry Number: 18779-08-3

Lu(OAc)₃

Molecular Formula: C₆H₉LuO₆

Molecular Weight: 352.1

Accurate Mass: 351.980685

Percentage Composition: C 20.47%; H 2.58%; Lu 49.69%; O 27.26%

Source/Synthesis: Obt. by cryst. at 120° from dil. HOAc soln. of Lu₂O₃ and CsOAc

Physical Description: Colourless solid

Solubility: Sol. H₂O

Other Data: Undergoes phase transition at *ca.* 256°. Dec. at 330°

>>Derivative: Tetrahydrate

CAS Registry Number: 15280-59-8

Molecular Formula: C₆H₁₇LuO₁₀

Molecular Weight: 424.161

Percentage Composition: C 16.99%; H 4.04%; Lu 41.25%; O 37.72%

Physical Description: Colourless cryst.

Other Data: Prob. has same struct. as the tetrahydrate of Erbium(III) acetate [HRP02-K](#) with 9-coord. Lu

>>Derivative: Phen complex

Molecular Formula: C₁₈H₁₇LuN₂O₆

Molecular Weight: 532.309

Accurate Mass: 532.049433

Percentage Composition: C 40.62%; H 3.22%; Lu 32.87%; N 5.26%; O 18.03%

Physical Description: Cryst.

Other Data: Dec. at 277-280°

References:

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, (*deriv*)

Batkibekova, M. *et al.*, *Zh. Neorg. Khim.*, 1979, **14**, 2983; *Russ. J. Inorg. Chem. (Engl. Transl.)*, 1979, **14**, 1658, (*thermodyn*)

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

Ogawa, M. *et al.*, *Nippon Seramikkusu Kyokai Gakujutsu Ronbunshi*, 1988, **96**, 672; *CA*, **109**, 78473, (*tetrahydrate, thermal dec*)

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