



>>Entry Name: Holmium(III) perchlorate

Synonym(s): Holmium triperchlorate

CAS Registry Number: 14017-54-0

Related CAS Registry Numbers(s): 14692-16-1 14692-19-4 61565-06-8 68028-00-2

$\text{Ho}(\text{ClO}_4)_3$

Molecular Formula: $\text{Cl}_3\text{HoO}_{12}$

Molecular Weight: 463.281

Accurate Mass: 461.775855

Percentage Composition: Cl 22.96%; Ho 35.60%; O 41.44%

Source/Synthesis: Synth. from hydrates at 200-250° in Ar

Physical Description: Solid

Solubility: Sol. H_2O

Other Data: Several hydrates known

Hazard & Toxicity: Potentially explosive

Aldrich: 44387-5

>>Derivative: Hexahydrate

Molecular Formula: $\text{Cl}_3\text{H}_{12}\text{HoO}_{18}$

Molecular Weight: 571.372

Accurate Mass: 569.839245

Percentage Composition: Cl 18.61%; H 2.12%; Ho 28.87%; O 50.40%

Physical Description: Yellow cryst.

Solubility: Sol. H_2O

Other Data: Prob. contains $[\text{Ho}(\text{H}_2\text{O})_6]^{3(+)}$ ions

References:

Moeller, T. *et al.*, *J. Inorg. Nucl. Chem.*, 1965, **27**, 1477, (*synth*)

Bel'kova, M.M. *et al.*, *Zh. Neorg. Khim.*, 1965, **10**, 1374; *Russ. J. Inorg. Chem. (Engl. Transl.)*, 1965, **10**, 747, (*synth, ir*)

Forsberg, J.H. *et al.*, *Inorg. Chem.*, 1969, **8**, 883, (*synth*)

Gmelin Handbook Inorg. Chem., Syst. No 39, 1977, **C5**, 83, (*rev*)

Wickleder, M.S. *et al.*, *Z. Anorg. Allg. Chem.*, 1999, **625**, 309-312, (*synth, xrd, anhyd*)