



>>Entry Name: Hexaamminecobalt(III)(3+), 10Cl

CAS Registry Number: 14695-95-5

Related CAS Registry Numbers(s): 18459-96-6

$[\text{Co}(\text{NH}_3)_6]^{3(+)}$ (O_h)

Molecular Formula: $\text{CoH}_{18}\text{N}_6^{3(+)}$

Molecular Weight: 161.116

Accurate Mass: 161.092492

Percentage Composition: Co 36.58%; H 11.26%; N 52.16%

>>Derivative: Trichloride

Synonym(s): Hexaamminecobalt(III) chloride. Cobalt(III) chloride hexaammine

CAS Registry Number: 10534-89-1

Molecular Formula: $\text{Cl}_3\text{CoH}_{18}\text{N}_6$

Molecular Weight: 267.474

Accurate Mass: 265.999048

Percentage Composition: Cl 39.76%; Co 22.03%; H 6.78%; N 31.42%

Use/Importance: Commercially available

Physical Description: Reddish brown cryst.

Solubility: Sol. H_2O

Aldrich: 20309-2

Fluka: 52740

Sigma: H8887

>>Derivative: Triiodide

Synonym(s): Hexaamminecobalt(III) iodide. Cobalt(III) iodide hexaammine

CAS Registry Number: 18372-69-5

Molecular Formula: $\text{CoH}_{18}\text{I}_3\text{N}_6$

Molecular Weight: 541.829

Accurate Mass: 541.805911

Percentage Composition: Co 10.88%; H 3.35%; I 70.26%; N 15.51%

>>Derivative: Trinitrate

CAS Registry Number: 10534-86-8

Physical Description: Yellow prisms

>>Derivative: Tris(trifluoroacetate)

CAS Registry Number: 59561-55-6

Use/Importance: Used in photothermographic imaging compositions

References:

Aldrich Library of FT-IR Spectra, 1st edn., 1985, **2**, 1302A, (*ir*)

Linhard, M., *Z. Elektrochem.*, 1944, **50**, 224, (*uv*)

Inorg. Synth., 1946, **2**, 217, (*synth, props*)

Brauer, G., *Handb. Prep. Inorg. Chem.*, 2nd edn., Academic Press, 1965, **2**, 1526, (*nitrate, synth*)

Kime, N.E. *et al.*, *Acta Cryst. B*, 1969, **25**, 168, (*synth, cryst struct*)

Gowda, H. *et al.*, *Acta Cryst. A*, 1970, **26**, 483-488, (*nitrate, cryst struct*)

Kruger, G.J. *et al.*, *Acta Cryst. B*, 1978, **34**, 915, (*struct*)