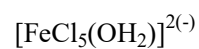




>>Entry Name: Aquapentachloroferrate(III)(2-), 11Cl

ENTRY UNDER REVIEW

Synonym(s): Pentachloroaquoferrate(III)



Molecular Formula: $\text{Cl}_5\text{FeH}_2\text{O}^{2(-)}$

Molecular Weight: 251.126

Accurate Mass: 248.789764

Percentage Composition: Cl 70.59%; Fe 22.24%; H 0.80%; O 6.37%

General Statement: Distorted octahedral anion

>>Derivative: Di-K salt

CAS Registry Number: 15132-22-6

Molecular Formula: $\text{Cl}_5\text{FeH}_2\text{K}_2\text{O}$

Molecular Weight: 329.322

Percentage Composition: Cl 53.83%; Fe 16.96%; H 0.61%; K 23.74%; O 4.86%

>>Derivative: Di-Rb salt

CAS Registry Number: 25500-42-9

>>Derivative: Di-Cs salt

CAS Registry Number: 25500-43-0

Source/Synthesis: Formed from μ -trichlorohexachlorodiferrate(III) in air

>>Derivative: Di-NH₄ salt

CAS Registry Number: 16774-56-4

>>Derivative: Dihydrogen, compd. with 1,4,8,11-tetracyclotetradecane dihydrochloride (1:1)

CAS Registry Number: 148541-13-3

Source/Synthesis: Synth. from hydrtd. FeCl_2 or FeCl_3 + cyclam in 4M HCl/EtOH aq.

Physical Description: Orange-red plates (ratio H₂O: EtOH important in recryst.)

Other Data: Darken above 195°; dec. 250°

References:

- Linqvist, I., *Acta Chem. Scand.*, 1948, **2**, 530, (*struct*)
Yamatera, H. *et al.*, *Bull. Chem. Soc. Jpn.*, 1954, **27**, 244, (*synth*)
Hatfield, W.E. *et al.*, *J.A.C.S.*, 1963, **85**, 265, (*synth, uv*)
Soetofte, I. *et al.*, *Acta Chem. Scand., Ser. A*, 1981, **35**, 821, (*struct*)
Kambli, U. *et al.*, *Inorg. Chem.*, 1982, **21**, 1270, (*electronic struct*)
Gupta, G.P. *et al.*, *J. Magn. Magn. Mater.*, 1983, **31**, 761, (*Mössbauer*)
McCarthy, P.J. *et al.*, *Spectrochim. Acta A*, 1983, **39**, 827, (*ir*)
Subramanian, S. *et al.*, *Can. J. Chem.*, 1993, **71**, 433, (*struct, synth, ir*)