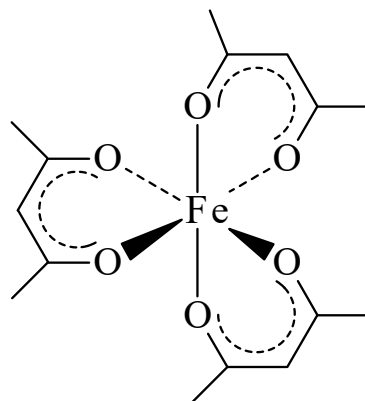




>>Entry Name: **Tris(2,4-pentanedionato-*O,O'*)iron, 11Cl**

Synonym(s): Tris(acetylacetonato)iron(III). Ferric acetylacetonate. Iron(III) acetylacetonate. Fe(acac)₃



CAS Registry Number: 14024-18-1

Molecular Formula: C₁₅H₂₁FeO₆

Molecular Weight: 353.174

Accurate Mass: 353.068754

Percentage Composition: C 51.01%; H 5.99%; Fe 15.81%; O 27.18%

Source/Synthesis: Synth. by various methods from Fe(0) or Fe^{III}

Use/Importance: Combustion, oxidn., polym. coupling catalyst; bonding agent; curing accelerator; synthetic intermed. NMR relaxation reagent

Physical Description: Red cryst. (EtOH)

Melting Point: Mp 175°

Solubility: Sl. sol. H₂O; sol. EtOH, Me₂CO, CHCl₃, CH₂Cl₂

Other Data: Δ*H*_f^o -1314.7 kJ mol⁻¹

Hazard & Toxicity: Irritant. LD₅₀ (mus, ivn) 100 mg/kg

Aldrich: F30-0

Fluka: 44920

Other: Gelest AKI410

References:

- Aldrich Library of FT-IR Spectra*, 1st edn., 1985, **2**, 1279D, (*ir*)
Charles, R.G. *et al.*, *J. Phys. Chem.*, 1958, **62**, 315, (*synth*)
Nakamoto, K. *et al.*, *J.A.C.S.*, 1961, **83**, 1066, (*ir*)
Dunne, T.G. *et al.*, *Inorg. Chem.*, 1963, **2**, 263, (*synth, magnetism*)
Iball, J. *et al.*, *Acta Cryst.*, 1967, **23**, 239, (*struct*)
Bancroft, G.M. *et al.*, *Inorg. Chem.*, 1968, **7**, 870, (*ms*)
Larsson, R. *et al.*, *Acta Chem. Scand.*, 1969, **23**, 1765, (*ir*)
Lintvedt, R.L. *et al.*, *Inorg. Chem.*, 1970, **9**, 491, (*uv, electronic struct*)
Hancock, R.D. *et al.*, *Theor. Chim. Acta*, 1970, **18**, 67, (*uv, nmr, ir, bonding*)
Levy, G.C. *et al.*, *J. Magn. Reson.*, 1973, **10**, 231, (*use*)
Chaudhuri, M.K. *et al.*, *J.C.S. Dalton*, 1983, 839, (*synth*)
Nekhoroshkov, V.P. *et al.*, *Koord. Khim.*, 1984, **10**, 459, (*ir*)
Yamauchi, S. *et al.*, *Bull. Chem. Soc. Jpn.*, 1985, **58**, 442, (*Mössbauer*)
Kolesov, B.A. *et al.*, *Koord. Khim.*, 1985, **11**, 485, (*Raman*)
Srivastava, S. *et al.*, *Polyhedron*, 1985, **4**, 409, (*pe*)
Hedewy, S. *et al.*, *Phys. Status Solidi A*, 1986, **97**, 129, (*epr*)
Collison, D. *et al.*, *Inorg. Chem.*, 1990, **29**, 4735, (*epr*)
Ustinov, A.Y. *et al.*, *Zh. Fiz. Khim.*, 1991, **65**, 1811; *CA*, **115**, 265866m, (*pe*)
Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, IGL000