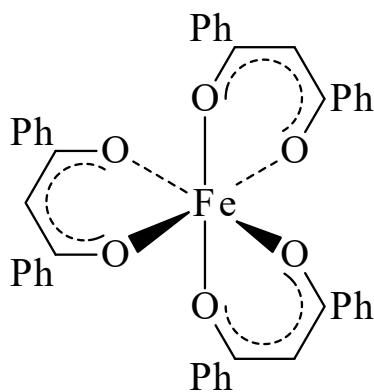




>>Entry Name: Tris(1,3-diphenyl-1,3-propanedionato-*O,O'*)iron(III)

Synonym(s): Tris(dibenzoylmethanato)iron(III)



CAS Registry Number: 14405-49-3

Molecular Formula: $C_{45}H_{33}FeO_6$

Molecular Weight: 725.599

Accurate Mass: 725.162654

Percentage Composition: C 74.49%; H 4.58%; Fe 7.70%; O 13.23%

Source/Synthesis: Synth. from $Fe(acac)_3$ + HL in xylene or EtOH

Use/Importance: Catalyst for cross-coupling etc. Model for penicillin acylase. Also catalyses dimethylation of *gem*-dichlorocyclopropanes by methyl Grignard reagents

Physical Description: Red brown cryst. (C_6H_6 /hexane)

Melting Point: Mp 263-264 dec.°

Solubility: Sol. $CHCl_3$

Other Data: $E^\circ = -0.5V$

Aldrich: 39112-3

References:

- Singh, P.R. *et al.*, *Inorg. Chim. Acta*, 1968, **2**, 102, (*synth*)
Fatta, A.M. *et al.*, *Inorg. Chem.*, 1972, **11**, 88, (*uv*)
Kochi, J.K. *et al.*, *J.O.C.*, 1975, **40**, 599; 1976, **41**, 502, (*synth, use*)
Fieser and Fieser's Reagents for Organic Synthesis, Wiley, 1979, **7**, 410, (*synth, use*)
Kaitner, B. *et al.*, *Cryst. Struct. Commun.*, 1980, **9**, 487, (*cryst struct*)
Blomquist, J. *et al.*, *Inorg. Chim. Acta*, 1983, **69**, 17, (*esca, Mössbauer*)
Nekhoroshkov, V.P. *et al.*, *Koord. Khim.*, 1984, **10**, 459, (*ir*)
Tsiamis, C. *et al.*, *Inorg. Chim. Acta*, 1986, **120**, 1, (*electrochem*)
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Nishii, Y. *et al.*, *Synlett*, 1998, 67-69, (*use*)