



>>Entry Name: Dicarbonyl(2,4-pentanedionato-*O,O'*)iridium, 10Cl

Synonym(s): Dicarbonyl(acetylacetonato)iridium

CAS Registry Number: 14023-80-4

As Dicarbonyl(1,1,1,5,5,5-hexafluoro-2,4-pentanedionato-*O,O'*)iridium, [GLD09-I](#) with
R = Me

Molecular Formula: C₇H₇IrO₄

Molecular Weight: 347.35

Accurate Mass: 347.997352

Percentage Composition: C 24.21%; H 2.03%; Ir 55.34%; O 18.42%

Source/Synthesis: Synth. from di-Na salt of Tetracarbonylpentachlorodiiridate(2-) [JLP35-C](#) + NaHCO₃ + acacH in C₆H₆ under reflux for 6h, from [Ir(CO)₃Br]_n + either
Tl(acac) or acacH and NaHCO₃ in C₆H₆ under reflux or from Ir(acac)(C₂H₄)₂ + CO in hexane for 1h

Use/Importance: Useful precursor to (2,4-pentanedionato)Ir complexes. Catalyst for Fischer-Tropsch reactions

Physical Description: Air-stable violet-brown cryst. (hexane); yellow in CHCl₃ soln.

Melting Point: Mp 158-162 dec.°

Boiling Point: Subl._{0.1} 80-85°

Other Data: Ir ν_{CO} 2082, 2002 cm⁻¹ (hexane). 1D conductor

Aldrich: 42914-7

References:

- Bonati, F. *et al.*, *J. Organomet. Chem.*, 1968, **11**, 341, (*synth, ir, pmr*)
Oldham, G.C., *Diss. Abstr. B*, 1969, **29**, 4619; *CA*, **71**, 106300, (*struct*)
Aderjan, R. *et al.*, *J. Chem. Phys.*, 1976, **64**, 3748, (*Mössbauer*)
Jesse, A.C. *et al.*, *Inorg. Chim. Acta*, 1978, **26**, 129; **31**, 203, (*synth, ir, pmr*)
Williamson, R.C. *et al.*, *CA*, 1980, **92**, 25342, (*use, Fischer-Tropsch reaction*)
Rasmussen, P.G. *et al.*, *J.A.C.S.*, 1982, **104**, 6155, (*synth, reactions*)
Kogyo, G. *et al.*, *CA*, 1983, **99**, 175226, (*use*)