



>>Entry Name: Bis[(1,2,5,6- η)-1,5-cyclooctadiene]di- μ -methoxydiiridium, 12Cl, 11Cl, 10Cl

Synonym(s): Bis[μ -methoxy(η^4 -1,5-cyclooctadiene)iridium]

CAS Registry Number: 12148-71-9

Related CAS Registry Numbers(s): 33087-83-1

As Di- μ -bromobis[(1,2,5,6- η)-1,5-cyclooctadiene]diiridium, [GKM05-Q](#) with
X = OMe

Molecular Formula: C₁₈H₃₀Ir₂O₂

Molecular Weight: 662.874

Accurate Mass: 664.150414

Percentage Composition: C 32.62%; H 4.56%; Ir 58.00%; O 4.83%

Source/Synthesis: Synth. from [IrCl(cod)]₂ + KOH in MeOH for 30 min.

Use/Importance: Useful precursor to Ir(η^4 -cod) complexes, to hydrosilylation and hydrogenation catalysts, and to a MeOH carbonylation catalyst; with PEt₂Ph, hydrogenates enones to give, in some cases, good selection for the allylic alcohol

Physical Description: Air-stable yellow cryst. (hexane or CH₂Cl₂/MeOH); air-sensitive in soln.

Melting Point: Mp 180 (145-165°) dec.°

Solubility: Sol. CHCl₃, CH₂Cl₂ chlorinated solvs.; sl. sol. hexane, C₆H₆, Et₂O, Me₂CO, MeOH; insol. H₂O

References:

Robinson, S.D. *et al.*, *J.C.S.*, 1965, 4997, (*synth, pmr*)

Tabrizi, D. *et al.*, *J. Less-Common Met.*, 1971, **23**, 443, (*cryst struct*)

Pannetier, G. *et al.*, *J. Less-Common Met.*, 1971, **24**, 83, (*synth, ir, nmr*)

Green, M. *et al.*, *J.C.S.(A)*, 1971, 2334, (*synth, pmr*)

Inorg. Synth., 1985, **23**, 126, (*synth, ir, pmr, props*)

Oro, L.A. *et al.*, *J. Mol. Catal.*, 1986, **37**, 151, (*use*)

Spogliarich, R. *et al.*, *Tetrahedron*, 1991, **47**, 1965, (*use, hydrogenation of enones*)