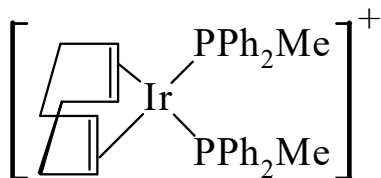




>>Entry Name: [(1,2,5,6-η)-1,5-Cyclooctadiene]bis(methyldiphenylphosphine)iridium(1+), 11Cl, 9Cl



CAS Registry Number: 38465-86-0

Molecular Formula: C₃₄H₃₈IrP₂⁽⁺⁾

Molecular Weight: 700.842

Accurate Mass: 701.207791

Percentage Composition: C 58.27%; H 5.46%; Ir 27.43%; P 8.84%

Use/Importance: Catalyst for isom. of alkenes, allylic alcohols and allyl ethers and conversion of allylic alcohols to carbonyl compds. Homogeneous alkene and cyclooctadiene hydrogenation catalyst. Catalyst for water gas shift reaction

Aldrich: 33745-5

Sigma: M4654

>>Derivative: Hexafluorophosphate

Molecular Formula: C₃₄H₃₈F₆IrP₃

Molecular Weight: 845.806

Percentage Composition: C 48.28%; H 4.53%; F 13.48%; Ir 22.73%; P 10.99%

Source/Synthesis: Synth. from [IrCl(cod)]₂ + PMePh₂ + [NH₄]PF₆ in EtOH

Physical Description: Air-stable red solid

>>Derivative: Tetraphenylborate

CAS Registry Number: 118301-49-8

Molecular Formula: C₅₈H₅₈BIrP₂

Molecular Weight: 1020.075

Percentage Composition: C 68.29%; H 5.73%; B 1.06%; Ir 18.84%; P 6.07%

Source/Synthesis: Synth. from [IrCl(cod)]₂ + PMePh₂ + NaBPh₄ in EtOH

References:

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Crabtree, R.H. *et al.*, *J. Organomet. Chem.*, 1977, **135**, 395; **141**, 205; 1979, **168**, 183, (*synth, use, hydrogenation of alkenes*)
Baudry, D. *et al.*, *Chem. Comm.*, 1978, 694, (*use, isom of allyl ethers*)
Baudry, D. *et al.*, *Nouv. J. Chim.*, 1978, **2**, 355, (*use, isom of allylic alcohols*)
Crabtree, R.H., *Acc. Chem. Res.*, 1979, **12**, 331, (*rev*)
Kaspar, J. *et al.*, *J. Organomet. Chem.*, 1981, **208**, C15, (*use, water gas shift reaction*)
Oltvoort, J.J. *et al.*, *Synthesis*, 1981, 305, (*use, isom of allyl ethers*)
Fieser and Fieser's Reagents for Organic Synthesis, Wiley, 1982, **10**, 115, (*use*)
Tadros, M.E. *et al.*, *J. Colloid Interface Sci.*, 1982, **85**, 389, (*use, hydrogenation of alkenes*)
Farnetti, E. *et al.*, *J.C.S. Dalton*, 1988, 947, (*use*)