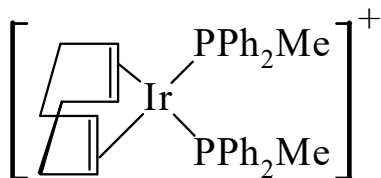




>>Entry Name: [(1,2,5,6-η)-1,5-Cyclooctadiene]bis(methyldiphenylphosphine)iridium(1+), 11Cl, 9Cl



CAS Registry Number: 38465-86-0

Molecular Formula: C<sub>34</sub>H<sub>38</sub>IrP<sub>2</sub><sup>(+)</sup>

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: C<sub>34</sub>H<sub>38</sub>F<sub>6</sub>IrP<sub>3</sub>

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)]<sub>2</sub> + PMePh<sub>2</sub> + [NH<sub>4</sub>]PF<sub>6</sub> in EtOH

Physical Description: Air-stable red solid

>>Derivative: Tetraphenylborate

CAS Registry Number: 118301-49-8

Molecular Formula: C<sub>58</sub>H<sub>58</sub>BIrP<sub>2</sub>

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)]<sub>2</sub> + PMePh<sub>2</sub> + NaBPh<sub>4</sub> in EtOH

#### References:

- Green, M. *et al.*, *Chem. Comm.*, 1970, 1553, (*use, isom of alkenes*)  
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*)