

STREM 1,1'-Bis(dialkyl/diarylphosphino)ferrocene Ligand and Catalyst Kits

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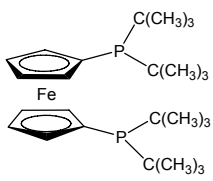
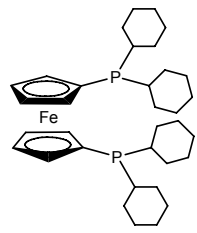
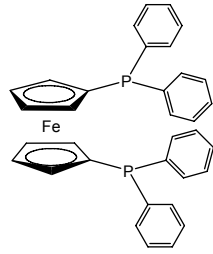
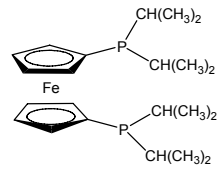
96-3730

NEW→

1,1'-Bis(dialkyl/diarylphosphino)ferrocene Ligand Kit

Components available for individual sale.

Contains the following:

			
26-0150	26-0155	26-0270	26-0275
500mg	500mg	1g	500mg
26-0150	26-0155	26-0270	26-0275
1,1'-Bis(di-t-butylphosphino)ferrocene, min. 98% [84680-95-5]	1,1'-Bis(dicyclohexylphosphino)ferrocene, min. 98% [146960-90-9]	1,1'-Bis(diphenylphosphino)ferrocene, 99% DPPF [12150-46-8]	1,1'-Bis(di-i-propylphosphino)ferrocene, min. 98% [97239-80-0]
500mg	500mg	1g	500mg

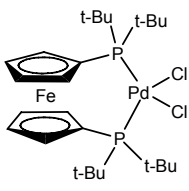
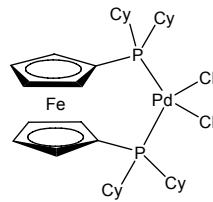
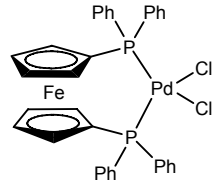
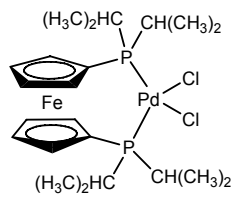
96-3735

NEW→

[1,1'-Bis(dialkyl/diarylphosphino)ferrocene]palladium(II) dichloro Catalyst Kit

Components available for individual sale.

Contains the following:

			
46-0445	46-0455*	46-0450*	46-0460
500mg	250mg	1g	500mg
*Note: CH ₂ Cl ₂ adduct			
46-0445	46-0450	46-0455	46-0460
Dichloro[1,1'-bis(di-t-butylphosphino)ferrocene]palladium(II), 99% [95408-45-0]	Dichloro[1,1'-bis(diphenylphosphino)ferrocene]palladium(II) dichloromethane adduct [95464-05-4]	Dichloro[1,1'-bis(dicyclohexylphosphino)ferrocene]palladium(II), dichloromethane adduct, 99% [917511-90-1]	Dichloro[1,1'-bis(di-i-propylphosphino)ferrocene]palladium(II), 99% [215788-65-1]
500mg	1g	250mg	500mg

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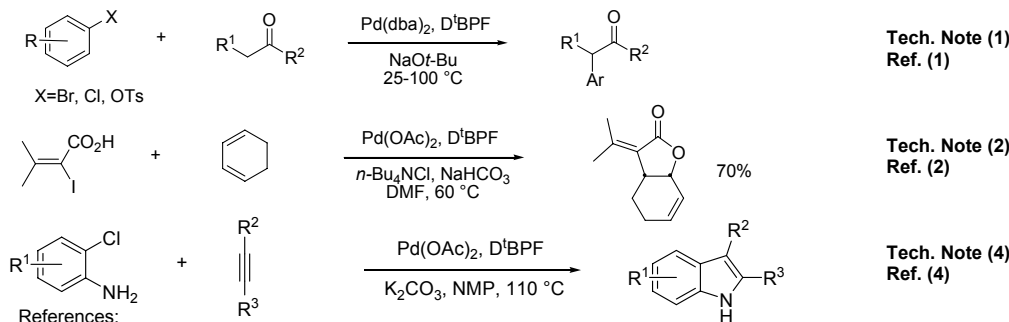
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26-0150 **1,1'-Bis(di-t-butylphosphino)ferrocene, min. 98%** [84680-95-5]
 [(C₄H₉)₂PC₅H₄]₂Fe; FW: 474.42

500mg
2g
10g

Technical Notes:

1. Ligand used in the Pd-catalyzed α -arylation of ketones.
2. Ligand used in the Pd-catalyzed heteroannulation of 1,3-dienes to form α -alkylidene- γ -butyrolactones.
3. 1-Aminoindanol derivatives via Pd-catalyzed intramolecular cyclization.
4. Indoles via regioselective Pd-catalyzed coupling of 2-chloroanilines with internal alkynes.
5. Synthesis of heterobiaryl compounds containing an NH₂ group via a Suzuki-Miyaura reaction.



Tech. Note (1)
Ref. (1)

Tech. Note (2)
Ref. (2)

Tech. Note (4)
Ref. (4)

References:

1. *J. Am. Chem. Soc.*, **1999**, 121, 1473.
2. *J. Org. Chem.*, **2000**, 65, 1525.
3. *Angew. Chem. Int. Ed.*, **2000**, 39, 2501.
4. *Org. Lett.*, **2004**, 6, 4129.
5. *Tetrahedron Lett.*, **2005**, 46, 3573.

26-0155 **1,1'-Bis(dicyclohexylphosphino)ferrocene, min. 98%** [146960-90-9]
 [(C₆H₁₁)₂P(C₆H₄)]₂Fe; FW: 578.57; orange powdr.

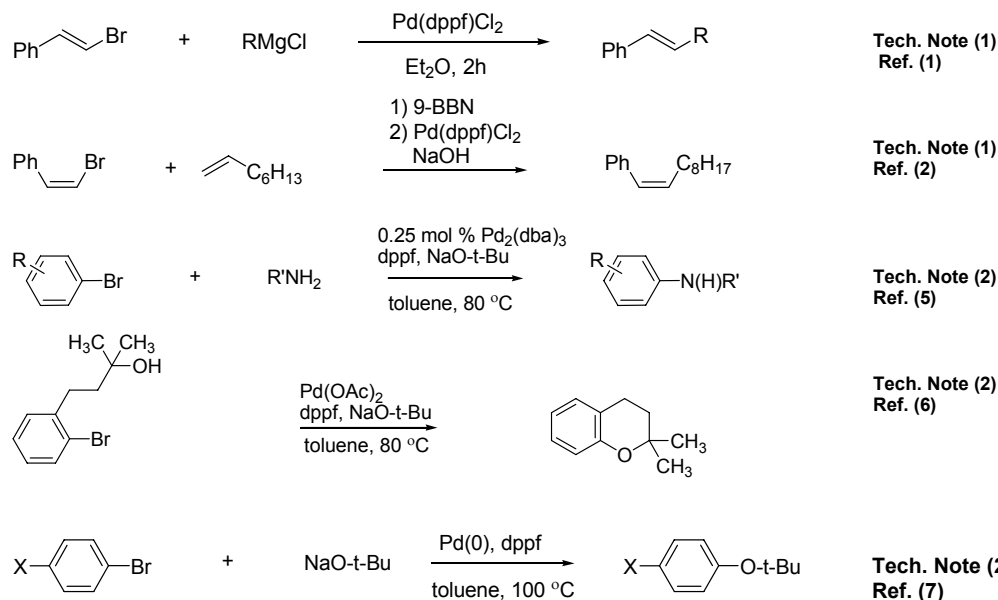
500mg
2g

26-0270 **1,1'-Bis(diphenylphosphino)ferrocene, 99% DPPF** [12150-46-8]
 (C₆H₅)₂PC₅H₄FeC₅H₄P(C₆H₅)₂; FW: 554.39; yellow to orange xtl.; m.p. 180°

1g
5g
25g

Technical Notes:

1. Ligand for Pd-catalyzed cross-coupling.
2. Useful ligand for Pd-catalyzed carbon-nitrogen and carbon-oxygen bond forming procedures.
3. Ligand for Ni-catalyzed amination of aryl chlorides.
4. Ligand for Pd-catalyzed conversion of aryl halides to aryl nitriles.
5. Ligand for Ni-catalyzed coupling of aryl halides to arylboronic acids.
6. Ni-catalyzed hydroamination of 1,3-dienes.
7. Pd-catalyzed hydrocarbonation and hydroamination of 3,3-dihexylcyclopropene.
8. Pd-catalyzed γ -arylation of β,γ -unsaturated ketones.



Tech. Note (1)
Ref. (1)

Tech. Note (1)
Ref. (2)

Tech. Note (2)
Ref. (5)

Tech. Note (2)
Ref. (6)

Tech. Note (2)
Ref. (7)

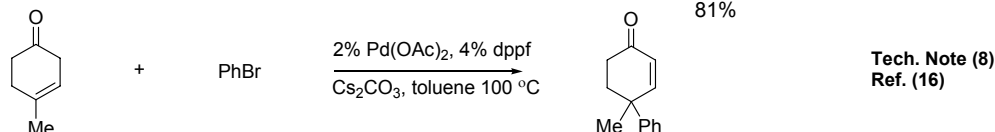
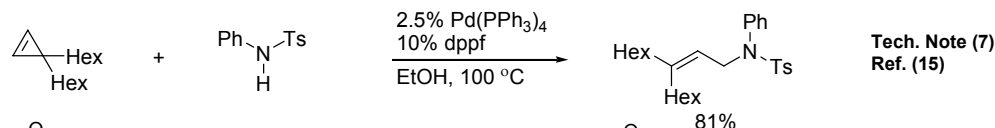
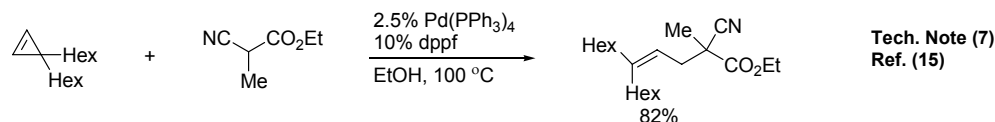
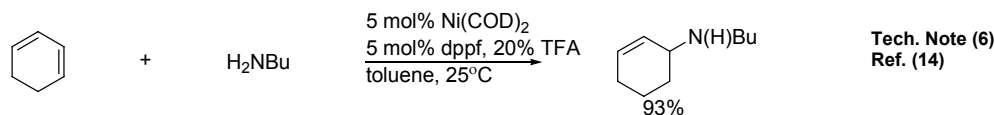
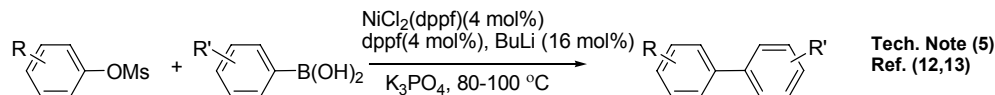
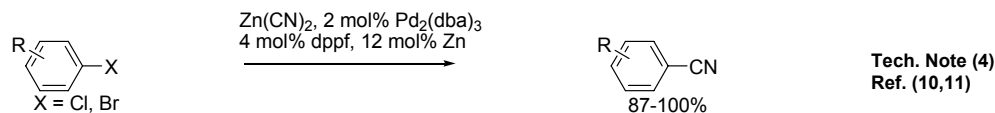
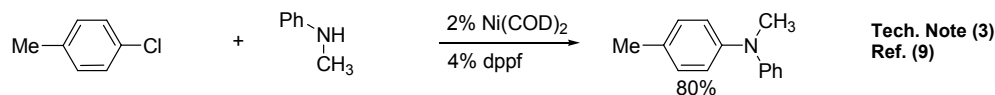
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26-0270 **1,1'-Bis(diphenylphosphino)ferrocene, 99% DPPF** [12150-46-8]
 (cont.)


References:

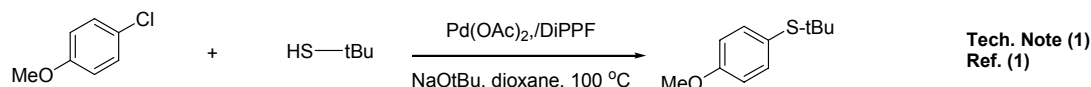
1. *Pure Appl. Chem.*, **1980**, 52, 669.
2. *J. Am. Chem. Soc.*, **1989**, 111, 314.
3. *Palladium Reagents in Organic Synthesis (R.F. Heck)*, **1985**, Chapter 6.
4. *Comprehensive Organic Synthesis*, **1991**, Vol. 3, Chapter 2.
5. *Acc. Chem. Res.*, **1998**, 31, 852. (review)
6. *J. Am. Chem. Soc.*, **1996**, 118, 10333.
7. *J. Am. Chem. Soc.*, **1996**, 118, 13109.
8. *Encyclopedia of Reagents for Organic Synthesis*, **1995**, Vol. 1, 518.
9. *J. Am. Chem. Soc.*, **1997**, 119, 6054.
10. *Tetrahedron Lett.*, **2000**, 41, 3271. (for ArCl)
11. *Tetrahedron Lett.*, **1999**, 40, 8193. (for ArBr)
12. *Tetrahedron Lett.*, **1998**, 54, 13079.
13. *J. Org. Chem.*, **1995**, 60, 1060.
14. *J. Am. Chem. Soc.*, **2002**, 124, 3669.
15. *J. Org. Chem.*, **2003**, 68, 2297.
16. *Angew. Chem. Int. Ed.*, **2008**, 47, 177.
17. *Coordination Chem. Rev.*, **2007**, 251, 2017. (review)

26-0275 **1,1'-Bis(di-i-propylphosphino)ferrocene, min. 98%** [97239-80-0]
 [(C₃H₇)₂PC₅H₄]₂Fe; FW: 418.33; orange-yellow powdr.

 500mg
 2g
 10g

Technical Note:

1. See 45-0205 (visit www.strem.com).
2. Efficient Pd-catalyzed cross-coupling of thiols and secondary phosphines.
3. Preparation of enamides via Pd-catalyzed amidation of enol tosylates.
4. Preparation of tricyclic indolines.

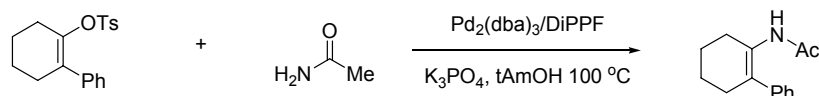
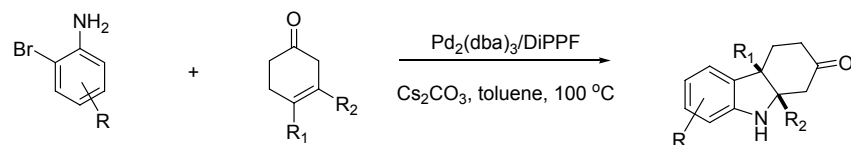

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26-0275 1,1'-Bis(di-i-propylphosphino)ferrocene, min. 98% [97239-80-0] (cont.)

Tech. Note (2)
Ref. (2)

Tech. Note (3)
Ref. (3)

References:

1. *Tetrahedron.*, **2004**, *60*, 7397.
2. *Org. Lett.*, **2005**, *7*, 1185.
3. *Angew. Chem. Int. Ed.*, **2008**, *47*, 177.

46-0445 Dichloro[1,1'-bis(di-t-butylphosphino)ferrocene]palladium(II), 99% [95408-45-0] [(C₅H₄P(C₄H₉)₂)₂Fe]PdCl₂; FW: 651.75; orange-red powdr.
500mg
2g
46-0455 Dichloro[1,1'-bis(dicyclohexylphosphino)ferrocene]palladium(II), dichloromethane adduct, 99% [917511-90-1] [(C₅H₄P(C₆H₁₁)₂)₂Fe]PdCl₂; FW: 755.89; red-orange microxtl.
250mg
1g

Technical Note:

1. Air-stable catalyst useful in the arylation of various ketones with aryl chlorides and aryl bromides.

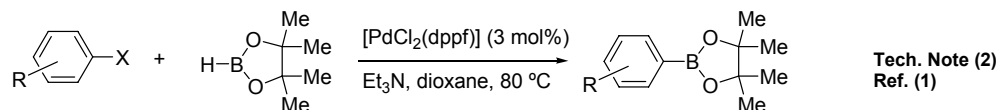
Reference:

1. *Org. Proc. Res. Dev.*, **2008**, *12*, 522.

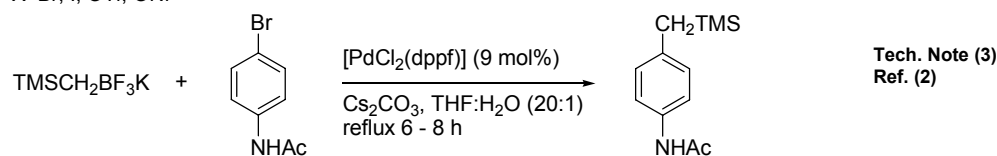
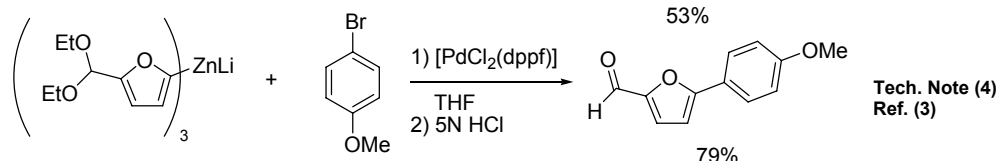
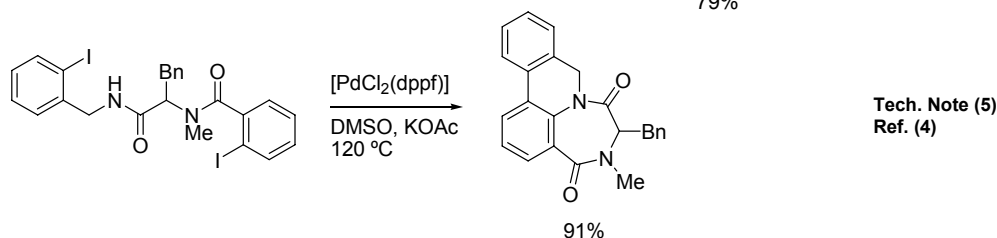
46-0450 Dichloro[1,1'-bis(diphenylphosphino)ferrocene]palladium(II) dichloromethane adduct [95464-05-4] [(C₅H₄P(C₆H₅)₂)₂Fe]PdCl₂·CH₂Cl₂; FW: 731.77 (816.65); orange-red powdr.
1g
5g
25g

Technical Notes:

1. See 26-0270 (page 2).
2. Catalyst for the borylation of aryl halides.
3. β-Alkyl Suzuki-Miyaura cross-coupling reactions with potassium alkyltrifluoroborates.
4. Catalyst for modified Negishi coupling.
5. Synthesis of polyheterocycles by a Pd-catalyzed intramolecular N-arylation/C-H bond activation/aryl-aryl bond-forming domino process.
6. Catalyst for Stille allylation.
7. Catalyst for the amination of aryl bromides.


Tech. Note (2)
Ref. (1)

X=Br, I, OTf, ONf


Tech. Note (3)
Ref. (2)

Tech. Note (4)
Ref. (3)

Tech. Note (5)
Ref. (4)

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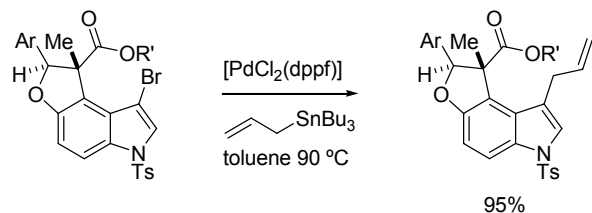
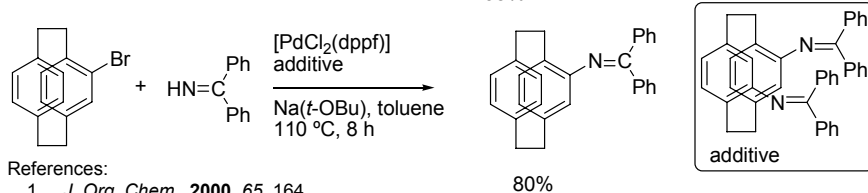
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46-0450
(cont.)

Dichloro[1,1'-bis(diphenylphosphino)ferrocene]palladium(II) dichloromethane adduct [95464-05-4]

Tech. Note (6)
Ref. (5)Tech. Note (7)
Ref. (6)

References:

1. *J. Org. Chem.*, **2000**, *65*, 164.
2. *J. Org. Chem.*, **2003**, *74*, 5534.
3. *Org. Lett.*, **2002**, *4*(3), 375.
4. *Angew. Chem. Int. Ed.*, **2003**, *42*, 4774.
5. *J. Am. Chem. Soc.*, **2008**, *130*, 16854.
6. *J. Org. Chem.*, **2009**, *74*, 6867.

46-0460

NEW →

Dichloro[1,1'-bis(di-i-propylphosphino)ferrocene]palladium (II), 99% [215788-65-1]

[[C₅H₄P(C₃H₇)₂]₂Fe]PdCl₂; FW: 595.64; yellow-orange solid500mg
2g

Technical Note:

1. Air-stable catalyst useful in challenging Suzuki coupling reactions.

Reference:

1. *Org. Lett.*, **2004**, *6*, 3731.

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