

<p>15-1457 R-MARUOKA CAT P-NB</p>	<p>15-1458 S-Maruoka CAT P-NB</p>	<p>15-1464 R-MARUOKA CAT P-TB</p>	<p>15-1465 S-MARUOKA CAT P-TB</p>
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96-3750 Maruoka Chiral Phase-Transfer Phosphonium Organocatalyst Kit

Components also available for individual sale.

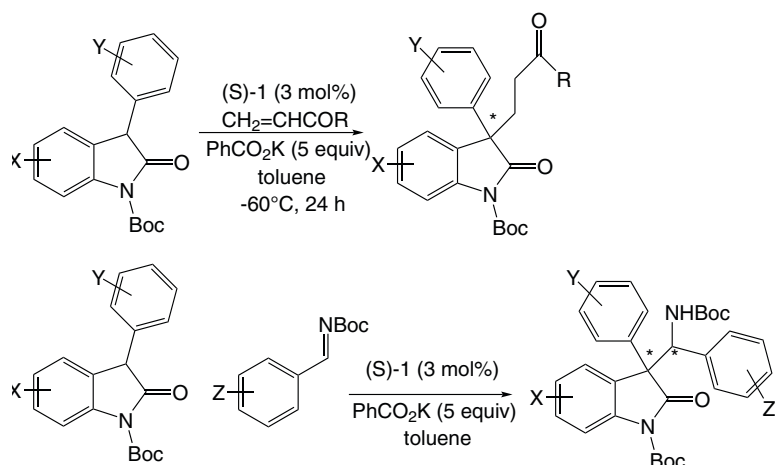
Contains the following:

15-1457 (11bR)-(+)-4,4-Dibutyl-2,6-bis[3,5-bis(trifluoromethyl)phenyl]-4,5-dihydro-3H-dinaphtho[2,1-c:1',2'-e]phosphepinium bromide, 99% 50mg
R-MARUOKA CAT P-NB 250mg

[C₄₆H₃₈F₁₂P]⁺Br⁻; FW: 929.65; white xtl.; m.p. 262-263°

Technical Note:

- Chiral, phase-transfer catalyst for the asymmetric Michael and Mannich reactions of 3-aryloxindoles.



Tech. Note (1)
Ref. (1)

Tech. Note (1)
Ref. (1)

References:

- Angew. Chem. Int. Ed.*, **2009**, *48*, 4559.

15-1458 (11bS)-(-)-4,4-Di-*t*-butyl-2,6-bis[3,5-bis(trifluoromethyl)phenyl]-4,5-dihydro-3H-dinaphtho[2,1-c:1',2'-e]phosphepinium bromide, 99% 50mg
S-MARUOKA CAT P-NB (1110711-01-7) 250mg

[C₄₆H₃₀F₁₂P]⁺Br⁻; FW: 929.65; white xt.; m.p. 262-263°

Technical Note:

- See 15-1457

15-1464 (11bR)-(+)-4,4-Di-*t*-butyl-2,6-bis[3,5-bis(trifluoromethyl)phenyl]-4,5-dihydro-3H-dinaphtho[2,1-c:1',2'-e]phosphepinium bromide, 99% R-MARUOKA CAT P-TB 50mg
[C₄₆H₃₈F₁₂P]⁺Br⁻; FW: 929.65; white xtl.; m.p. 202-204° 250mg

Technical Note:

- See 15-1457

15-1465 (11bS)-(-)-4,4-Di-*t*-butyl-2,6-bis[3,5-bis(trifluoromethyl)phenyl]-4,5-dihydro-3H-dinaphtho[2,1-c:1',2'-e]phosphepinium bromide, 99% S-MARUOKA CAT P-TB 50mg
[C₄₆H₃₀F₁₂P]⁺Br⁻; FW: 929.65; white xtl.; m.p. 202-203° 250mg

Technical Note:

- See 15-1457

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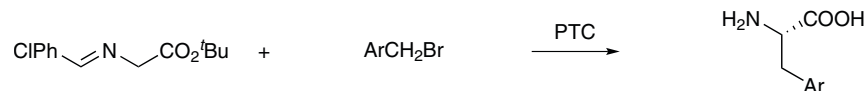
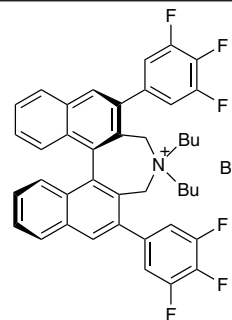
07-0380 (11bR)-4,4-Dibutyl-2,6-bis(3,4,5-trifluorophenyl)-4,5-dihydro-3H-dinaphtho[2,1-c:1',2'-e]azepinium bromide (887938-70-7)
 [C₄₂H₃₆F₆N]⁺Br⁻; FW: 748.64; brown pwdr.

50mg
250mg

Note: Sold in collaboration with Nagase for research purposes only. US Patent 6,340,753.

Technical Notes:

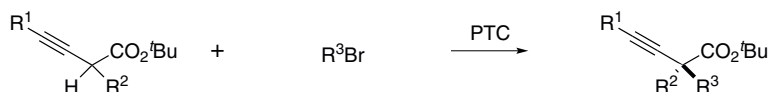
1. 2nd Generation Maruoka chiral phase transfer catalyst, for enantioselective alkylation of α-amino acid derivatives, that is easily recovered for recycle by extraction with fluorous solvent.
2. Catalyst for asymmetric conjugate addition of α-substituted-α-cyanoacetates to α,β-unsaturated acetylenic esters.
3. Phase transfer catalyzed enantioselective α-alkylation.
4. Asymmetric amination of β-keto esters.
5. Diastereo- and enantioselective conjugate addition of α-substituted nitroacetates to maleimides.
6. Cyclization of β-alkynyl hydrazines.



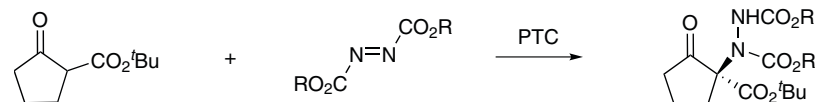
Tech. Note (1)
Ref. (1)



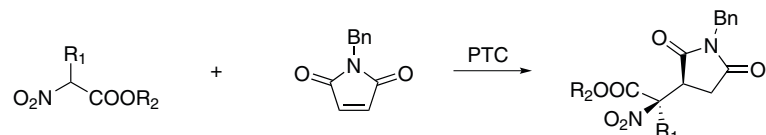
Tech. Note (2)
Ref. (2)



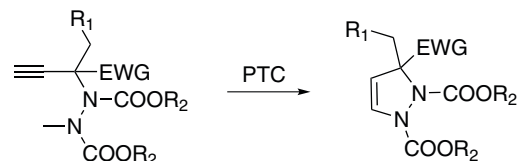
Tech. Note (3)
Ref. (3)



Tech. Note (4)
Ref. (4)



Tech. Note (5)
Ref. (5)



Tech. Note (6)
Ref. (6)

References:

1. *Tetrahedron Asymm.*, **2006**, 17, 603
2. *J. Am. Chem. Soc.*, **2007**, 129, 1038
3. *Angew. Chem. Int. Ed.*, **2009**, 48, 5014
4. *Tetrahedron Lett.*, **2009**, 50, 3280
5. *Chem. Commun.*, **2011**, 47, 10557
6. *Angew. Chem. Int. Ed.*, **2011**, 50, 8338

07-0381 (11bS)-4,4-Dibutyl-2,6-bis(3,4,5-trifluorophenyl)-4,5-dihydro-3H-dinaphtho[2,1-c:1',2'-e]azepinium bromide (851942-89-7)

50mg
250mg

[C₄₂H₃₆F₆N]⁺Br⁻; FW: 748.64; brown pwdr.

Note: Sold in collaboration with Nagase for research purposes only. US Patent 6,340,753.

Technical Note:

1. See 07-0380

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