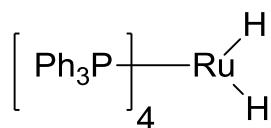
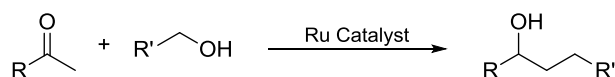


Catalog # 44-0460 Dihydrotetrakis(triphenylphosphine)ruthenium(II), 95%

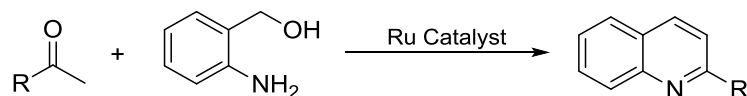


Technical Notes:

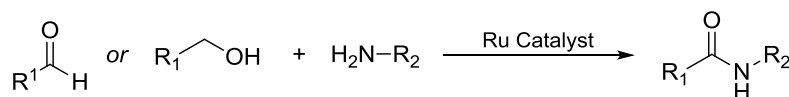
1. Catalyst for transfer hydrogenation of ketones with alcohols involving carbon-carbon bond formation.
2. Catalyst for oxidative cyclisation of 2-aminobenzyl alcohol with ketones.
3. Amidation catalyst of alcohols or aldehydes with amines.
4. Stereoselective semireduction of internal alkynes to Z-olefins under transfer hydrogenation conditions.
5. Catalyst for synthesis of cyclic imides from nitriles and diols via hydrogen transfer mechanism.
6. Catalyst for direct hydrogenation of carboxylic acids using triphos-type ligands.



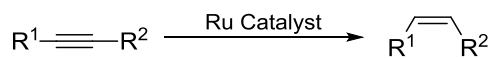
**Tech. Note (1)**  
**Ref. (1)**



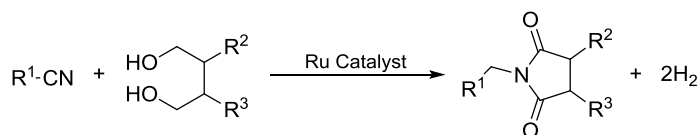
**Tech. Note (2)**  
**Ref. (2)**



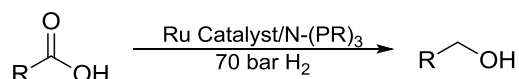
**Tech. Note (3)**  
**Ref. (3)**



**Tech. Note (4)**  
**Ref. (4)**



**Tech. Note (5)**  
**Ref. (5)**



**Tech. Note (6)**  
**Ref. (6)**

References:

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2. *Chem. Commun.*, **2001**, 2576.
3. *J. Org. Chem.*, **2010**, 75, 3002.
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5. *Org. Lett.*, **2014**, 16, 4404.
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