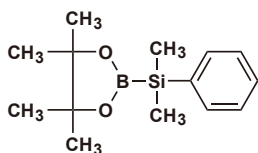
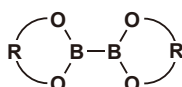


# Boration Reagents

## Borylation



**(Dimethylphenylsilyl)boronic Acid Pinacol Ester**  
1g / 5g [D4357]



**Tetrahydroxydiboron** 5g / 25g [T2953]

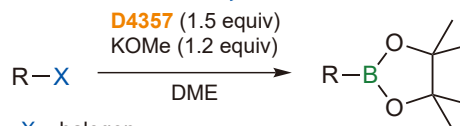
**Bis(pinacolato)diboron** 1g / 5g / 25g / 100g [B1964]

**Bis(neopentyl Glycolato)diboron**  
1g / 5g / 25g [B2254]

**Bis(hexylene Glycolato)diboron** 1g / 5g [B2906]

**Bis(catecholato)diboron** 1g / 5g [B3757]

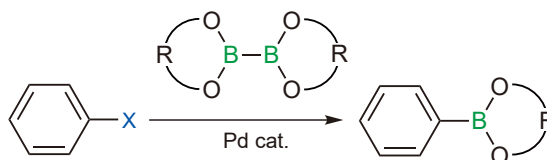
## Transition Metal-free Borylation



X = halogen  
R = alkyl, alkenyl, aryl

References H. Ito et al., *J. Am. Chem. Soc.*, **2012**, *134*, 19997.

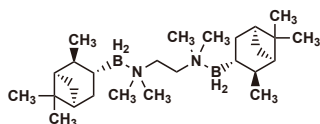
## Miyaura-Ishiyama-Hartwig Borylation



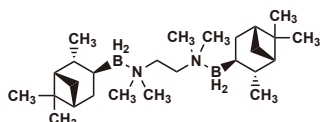
X = halogen

References T. Ishiyama, M. Murata, N. Miyaura, *J. Org. Chem.* **1995**, *60*, 7508.  
G. A. Molander et al., *J. Am. Chem. Soc.* **2010**, *132*, 17701

## Hydroboration

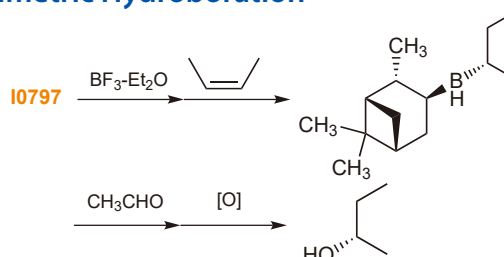


**(+)-Isopinocampheylborane TMEDA Complex**  
5g [I0796]

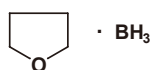


**(-)-Isopinocampheylborane TMEDA Complex**  
5g [I0797]

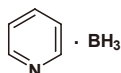
## Asymmetric Hydroboration



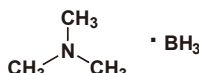
References H. C. Brown, et al., *Bull. Chem. Soc. Jpn.* **1988**, *61*, 93.  
H. C. Brown, et al., *J. Organomet. Chem.* **1995**, *500*, 1



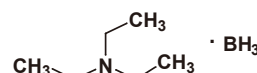
**Borane - Tetrahydrofuran Complex**  
(8.5% in Tetrahydrofuran, ca. 0.9mol/L)  
100mL / 500mL  
[T2346]



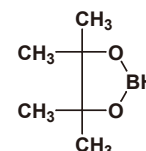
**Borane - Pyridine Complex**  
25mL  
[B1569]



**Trimethylamine Borane**  
25g  
[T1181]



**Triethylamine Borane**  
25g  
[T1180]



**Pinacol Borane**  
5g / 25g  
[T2572]

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