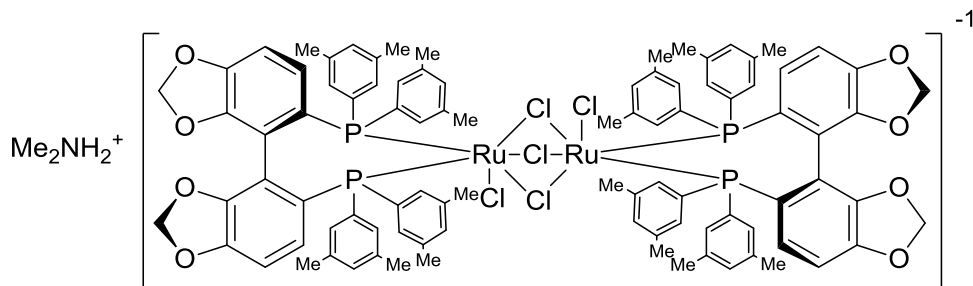


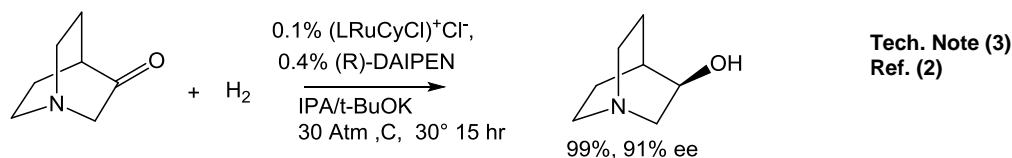
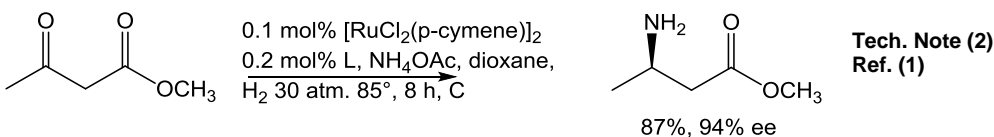
Catalog # 44-0520 Dimethylammonium dichlorotri(mu-chloro)bis((R)-(+)-5,5'-bis[di(3,5-xylyl)phosphino]-4,4'-bi-1,3-benzodioxole)diruthenate(II)  $[\text{NH}_2\text{Me}_2][\{\text{RuCl}(\text{R-dm-segphos}^\oplus)_2(\mu\text{-Cl})_3\}]^-$



Note: Sold in collaboration with Takasago. Takasago SEGPHOS<sup>®</sup> Catalyst Kit component.

Technical Notes:

1. Biaryl bisphosphine ligand with narrow dihedral angle. The DM-SEGPHOS<sup>®</sup> ligand, as the ruthenium complex, gives superior enantioselectivity and diastereoselectivity in the asymmetric hydrogenation of  $\alpha$ -substituted- $\beta$ -ketoesters. See [15-0066](#).
2. Ruthenium catalyzed enantioselective synthesis of  $\beta$  amino acids by hydrogenation.
3. Ruthenium catalyzed asymmetric hydrogenation of 3-quinuclidinone. See [44-0098](#) for Ru catalyst.



References:

1. U.S. Pat. **7626034**.
2. U.S. Pat. **7462722**.