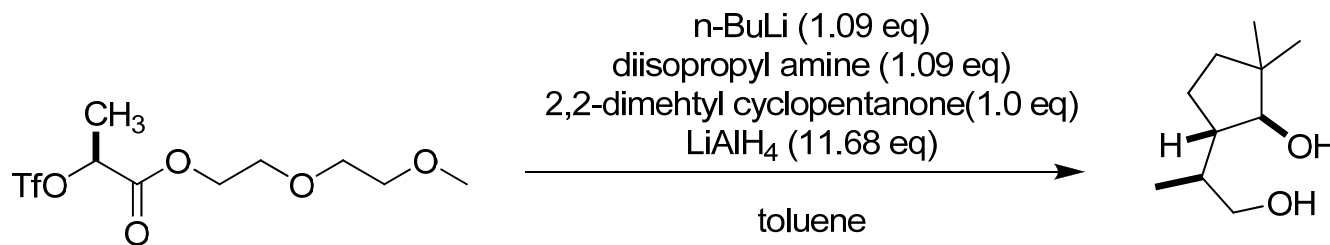
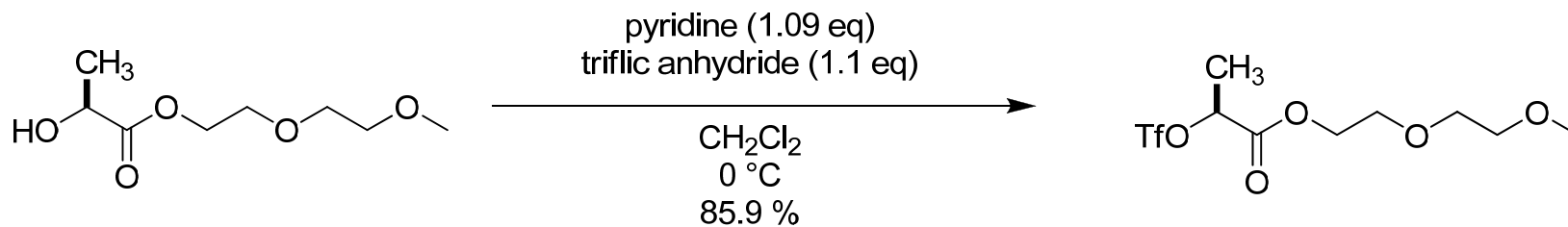
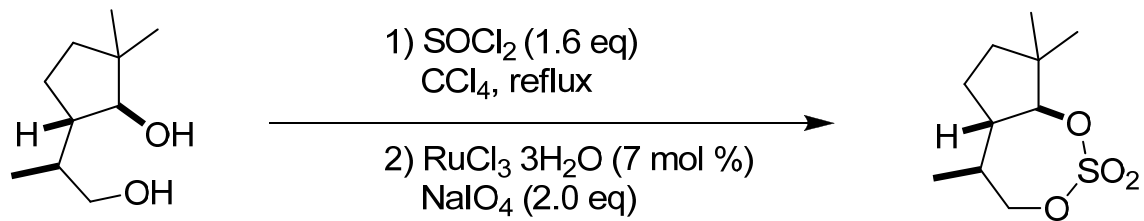


$[\alpha] = -11.97$  ( $c = 5.56$ , EtOAc, 20 °C)

Literature :  $[\alpha] = -10.9$  ( $c = 6.03$ , EtOAc)

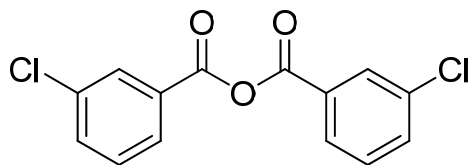
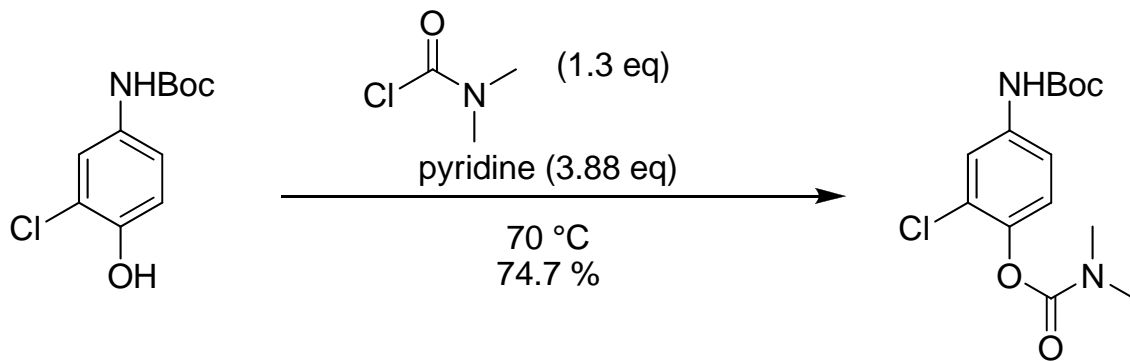




Impurity 0.4 ppm

$[\alpha] = -5.0$  ( $c = 1.3$ , EtOAc,  $20^\circ\text{C}$ )

Literature :  $[\alpha] = -28.4$  ( $c = 1.05$ , EtOAc)



Purification by recrystallization

$\Rightarrow$ HNMR, CNMR(O)

$\Rightarrow$ IR (no alcohol)

$\Rightarrow$ HRMS(X)