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tert-Butyl-3-methoxy-5,5-dimethyl-7-hydroxy-heptanoate

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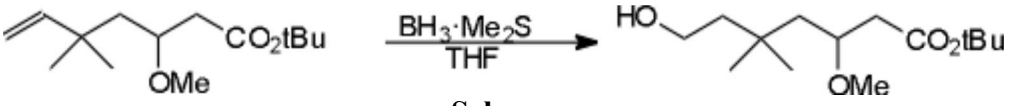

Scheme

Hydroboration of *tert*-butyl-3-methoxy-5,5-dimethyl-6-heptenoate [1] with either BH_3ÖTHF or BH_3ÖMe_2S provided the terminal alcohol title compound, in unoptimized, nonreproducable and disappointingly low 30% yield. The poor yield is presumably due to isolation problems. Typically, this compound was not isolated but was directly oxidized without purification.

To a solution of the olefin (2.5g, 10.3 mmol) in dry THF (20 ml) at 0 *f*C, borane-methyl sulfide complex (1.1 ml, 11 mmol) was added slowly. The solution was warmed to room temperature, stirred for 2 hours, and cooled to 0 *f*C. 3N NaOH (2 ml) was added, then 30% H_2O_2 (2 ml). The reaction mixture was refluxed for 2 hours. After drying over Na_2SO_4, flash chromatography (1 : 1 pet ether : ether) gave *tert*-butyl-3-methoxy-5,5-dimethyl-7-hydroxy-heptanoate, as a colorless oil in 30% unoptimized yield.

^{1}H NMR ($CDCl_3$): d: 3.68 (m, 3H), 3.31 (s, 3H), 2.54 (dd, J = 14.6, 4.8Hz, 1H), 2.23 (dd, J = 14.6, 8.0Hz, 1H), 1.64 (m, 2H), 1.43 (s, 10H), 1.4 - 1.0 (m, 2H), 0.93 (s, 3H), 0.92 (s, 3H).

IR (film): 3450, 2960, 1730, 1370, 1160, 920, 845, 735.

References and Notes

1. Smith, D. *tert*-Butyl-3-methoxy-5,5-dimethyl-6-heptenoate, *Molecules* **1997**, *2*, M30.

Sample Availability: No sample available.