

Efficient Synthesis of (*1R,4S,6R*)-4-Isopropenyl-1,3,3-trimethyl-7- oxabicyclo[4.1.0]heptan-2-one

N. K. Selezneva, F. A. Gimalova, R. F. Valeev, and M. S. Miftakhov

*Institute of Organic Chemistry, Ufa Scientific Center, Russian Academy of Sciences,
Ufa, 450054 Russia
e-mail: bioreg@anrb.ru*

Received April 15, 2010

Abstract—A simple and convenient one-pot synthesis of (*1R,4S,6R*)-4-isopropenyl-1,3,3-trimethyl-7-oxabicyclo[4.1.0]heptan-2-one was developed consisting in a thermodynamic methylation of carvone (NaH, MeI, THF, 20°C) followed by the epoxidation with alkalinized hydrogen peroxide. The reduction of the obtained epoxyketone with sodium borohydride proceeded stereoselectively to give a β -alcohol. The attempts to convert its isopropenyl fragment into an acetate group by a rearrangement of products or intermediates of the oxidative fragmentation resulted only in obtaining intermediate acyl derivatives.

DOI: 10.1134/S1070428011020047