B. B. Aleksandrov, M. Yu. Dormidontov, V. S. Shklyaev, and Yu. V. Shklyaev

UDC 547.833

3,3-Dimethyl-1-methylthio-3,4-dihydroisoquinoline (I, $C_{12}H_{15}NS$) has been prepared via the Ritter reaction between 2-methyl-1-phenylpropan-2-ol and methyl thiocyanate in concentrated H_2SO_4 [90% yield. PMR spectrum (CCl₄): 1.06 (6H, s, (CH₃)₂); 2.30 (3H, s, SCH₃); 2.60 (2H, s, 4-H); 7.00-7.67 ppm (4H, m, H_{arom}). IR spectrum: 1625 (C=N), 1325 cm⁻¹ (S-CH₃)].

Other 3,3-dimethyl-3,4-dihydroisoquinoline derivatives, substituted in the 1-position of the heterocycle, can be prepared based on this thio ether I. Thus, for example, mixing equimolar amounts of malonodinitrile and thio ether I at 40°C for 5 min results in the formation of 3,3-dimethyl-1-dicyanomethylene-1,2,3,4-tetrahydroisoquinoline (II, $C_{14}H_{13}N_3$) [78% yield, mp 215-216°C (from ethyl acetate); R_f 0.85 (acetone-alcohol-chloroform, 1:3:6). PMR spectrum (CDCl₃): 1.32 (6H, s, (CH₃)₂); 2.90 (2H, s, 4-H); 6.61 (1H, s, NH); 7.20-8.33 ppm (4H, m, H_{arom}). IR spectrum: 3300 (N-H); 2210 cm⁻¹ (C \equiv N)].

The results of elemental analysis of compounds I and II corresponded with calculations.

Institute of Organic Chemistry, Ural Branch, Academy of Sciences of the USSR, Perm' 614600. Translated from Khimiya Geterotsiklicheskikh Soedinenii, No. 7, pp. 995-996, July, 1990. Original article submitted October 17, 1989.