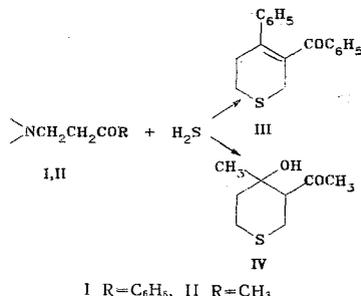


SIMPLE METHOD FOR THE SYNTHESIS OF THIOPYRAN DERIVATIVES

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We have found that thiopyran derivatives III and IV are formed in the reaction of hydrogen sulfide with ketone Mannich bases at room temperature:



The reaction with amino ketone I led to 3-benzoyl-4-phenyl-5,6-dihydrothiopyran (III), with mp 101°C, in virtually quantitative yield. IR spectrum: 1650 (C=C); 1685 (C=O); 1595, 1450, 745, and 690 cm⁻¹ (monosubstituted benzene ring). Mass spectrum, m/z (relative intensities, %): 280 (5), 134 (10), 133 (30), 132 (15), 106 (11), 105 (100), 104 (6), 91 (11), 78 (10), 77 (90), 69 (5), 60 (5), 57 (7), 55 (21), 51 (30), 50 (7).

3-Acetyl-4-methyltetrahydrothiopyran-4-ol (IV) was similarly obtained in 40% yield from amino ketone II and had bp 128-129°C (1.5 mm) and n_D²⁰ 1.5050. IR spectrum: 1709 (C=O); 3495 (OH); 1425 and 1360 cm⁻¹ (methyl group of a ketone). Mass spectrum, m/z (relative intensities, %): 174 (10), 156 (6), 146 (6), 71 (28), 61 (18), 60 (7), 55 (26), 45 (6), 43 (100).

The results of elementary analysis of III and IV were in agreement with the calculated values.

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