

Note on the Preparation of 3-(2-Furyl)-propylamine

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In order to prepare some homologues of aminofurane directly from aldehydes and ammonia¹, 3-(2-furyl)-acrolein was catalytically hydrogenated in alcoholic ammonia solution over Raney nickel catalyst. Thus, 3-(2-furyl)-propylamine, b. p. 74—76°/11 mm., was obtained in 19,3% yield. The base was characterized as picrate, m. p. 158° (corr.).

Takamoto and Hirohashi obtained the same compound by sodium amalgam reduction of 3-(2-furyl)-acrolein oxime². This authors gave (probably by misprint) b. p. 34—35°/20 mm.; picrate m. p. 165—166°. Šorm and Brajdeš³ prepared 3-(2-furyl)-propylamine by reduction of 3-(2-furyl)- α -cyanopropionic acid with sodium in butanol and gave b. p. 90,5°/15 mm.

A sample of 3-(2-furyl)-propylamine picrate prepared by the method of Takamoto gave no melting point depression with the product prepared from 3-(2-furyl)-acrolein as stated above.

EXPERIMENTAL

76 grams (0,62 mole) of 3-(2-furyl)-acrolein, 300 ml. alcohol and 5 ml. of an alcoholic suspension of Raney nickel were saturated in an autoclave with gaseous ammonia and hydrogenated at 70—100° and 100 atm. pressure. After 4 hours the absorption of hydrogen ceased and the reaction mixture was cooled, filtered from the catalyst and the solvent removed by distillation. The thick, oily residue was fractionated in vacuo and the fraction boiling at 74—76° and 11 mm. collected. Thus, 15,1 g (19,3%) of a colorless oil were obtained. No defined products could be obtained from the higher fractions.

The picrate crystallises from alcohol in yellow prismatic leaflets with m. p. 158°.

Analysis: 6,035 mg., 0,817 ml. N₂ (18°, 753 mm.)

C₁₃H₁₄O₈N₄ calc'd N 15,81%

found N 15,73%

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IZVOD

Bilješka o pripremi 3-(2-furil)-propilamina

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Hidriranjem 3-(2-furil)-akroleina u zasićenoj alkoholnoj otopini amonijaka i uz Raney nikalj kao katalizator, dobiven je 3-(2-furil)-propilamin u 19,3%-tnom iskorištenju.