carbonyl group were prepared (mp, °C): semicarbazone of **I** (169–171), **II** (176, decomp.), **III** (177–179); thiosemicarbazones of **I** (169–171), **II** (178–181), **III** (168–169); 2, 4-dinitrophenylhydrazone of **I** (208–209), 4-phenylsemicarbazone of **I** (187–188), 4-phenylthiosemicarbazone of **I** (164–166), guanylhydrazone of **I** · HNO_3 (114–120), guanylhydrazone of **I** · HCl (218–220), guanylhydrazone of **I** (~330, decomp.). The UV spectra of the semicarbazones and thiosemicarbazones are given.

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Institute of Organic Synthesis
AS Latvian SSR, Riga

SYNTHESIS AND REACTIONS OF FURAN DERIVATIVES

VIII. Derivatives of 6-Azauracil from Unsaturated α-Oxocarboxylic Acids of the Furan Series

N. O. Saldabol

Khimiya Geterotsiklicheskikh Soedinenii, Vol. 5, No. 3, pp. 571–572, 1969

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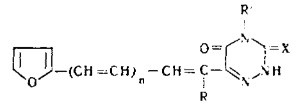
Derivatives of 6-azauracil (**I–VI**) have been prepared by the cyclization of semicarbazones and thiosemicarbazones of 2-furfurylidenepyruvic acid, β-(2-furfurylidene)-α-oxoglutaric acid, and [3-(2-furyl)allylidene]pyruvic acid. The cyclization was carried out by heating the substances with an aqueous solution of NaOH for 5 min and the products were precipitated by acidification with hydrochloric or acetic acid; yields 87–99%. Compound **VII** was obtained with a yield of 24% by boiling 2-furfurylidenepyruvic acid and 4-phenylthiosemicarbazide in ethanol for 3 hr. The products were purified by recrystallization from CH_3COOH (**I, VII**), aqueous dimethylformamide (**II, III**), aqueous dioxane (**IV**), or ethanol (**V, VI**).



The following information is listed: compound, n, R, R', X, empirical formula, mp, °C (decomp.), [λ_{max}, nm (log ε)]: **I**, o, H, H, O, $C_9H_7N_3O_3$, 285–286, [275, 325 (4.51, 4.05)]; **II**, o, H, H, S, $C_9H_7N_3O_2S$, 267–269, [253, 310, 365 (3.79, 4.18, 4.30)]; **III**, 1, H, H, O, $C_{11}H_9N_3O_3$, 280; [355 (4.44)]; **IV**, 1, H, H, S, $C_{11}H_9N_3O_2S$, 250, [277, 397 (4.00, 4.31)]; **V**, o, CH_2COOH, H, O, $C_{11}H_9N_3O_5$, 260, [221, 317 (3.85, 4.29)]; **VI**, o, CH_2COOH, H, S, $C_{11}H_9N_3O_4S$, 260–261, [220, 260, 299, 370 (3.81, 3.65, 3.90, 4.07)]; **VII**, o, H, C_6H_5, S, $C_{15}H_{11}N_3O_2S$, 264–265, [241, 309, 389 (3.48, 3.94, 4.13)]. The UV spectra were recorded for **III** and **IV** in 2 vol. % dimethylformamide and 98 vol. % ethanol solution and for **I**, **II**, and **V–VII** in ethanol.

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DERIVATIVES OF sym-OCTAHYDROACRIDINE

VI. Synthesis from 9-Chloro-sym-octahydroacridine N-Oxide

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Khimiya Geterotsiklicheskikh Soedinenii, Vol. 5, No. 3, p. 572, 1969

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The paper describes some reactions of 9-chloro-sym-octahydroacridine N-oxide (**I**). It is shown that under the action of acetic anhydride **I** undergoes a rearrangement and forms the acetate of 9-chloro-sym-octahydroacridin-4-ol (**II**), giving 9-chloro-sym-octahydroacridin-4-ol (**III**) on hydrolysis. On treatment with thionyl chloride at room temperature, **III** gives 4, 9-dichloro-sym-octahydroacridine, and on dehydration with polyphosphoric acid it forms 9-chloro-1, 2, 3, 4, 7, 8-hexahydroacridine. The latter adds a molecule of hydrocyanic acid at the double bond, giving a low yield of 9-chloro-3-cyano-sym-octahydroacridine.

The mobility of the chlorine in I has also been studied on the basis of the reaction with monoethanolamine. It has been shown that the main reaction is the splitting off of the N-oxide oxygen and the formation of 9-chloro-sym-octahydroacridine (**IV**); the substitution product 9-(β-hydroxyethylamino)-sym-octahydroacridine (**V**) is obtained in low yield. Compound **V** is formed in quantitative yield when **IV** is boiled with monoethanolamine.

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