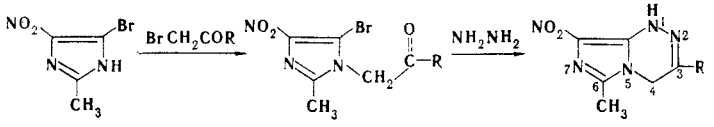
SYNTHESIS OF A NEW HETEROCYCLIC SYSTEM — IMIDAZO[3,4-c]-1,2,4-TRIAZINE

M. V. Povstyanoi, M. A. Klykov,
N. M. Gorban', and P. M. Kochergin

UDC 547.785.8'873.07

1-Acylmethyl-2-methyl-4-nitro-5-bromoimidazoles (II, III) were obtained by reaction of 2-methyl-4(5)-bromo-5(4)-nitroimidazole (I) with α-halo ketones in an organic solvent and in the presence of alkaline agents.

Derivatives of a new heterocyclic system — imidazo[3,4-c]-1,2,4-triazine (IV, V) — are formed when II and III are heated with hydrazine hydrate.



I II-III IV-V

II-III R = C_6H_5; C_6H_4Cl-*p*

The structure of II and V was established on the basis of the IR and PMR spectra; the individuality of the compounds was confirmed by thin-layer chromatography on a fixed layer of silica gel. The results of elementary analysis coincide satisfactorily with the calculated values.

TABLE 1. Characteristics of Derivatives II-V

Compound	R	mp, °C *	IR spectrum, cm^{-1} (mineral oil)			PMR spectrum, δ, ppm (CF_3COOH)			Yield, %
			CO	NO_2	NH	CH_2	CH_3	C_6H_5	
II	C_6H_5	190—191	1700	1530, 1350	—	5,05	2,54	7,15—7,30	63
III	*p*-ClC_6H_4	203—204	1695	1525, 1340	—	5,08	2,58	7,24—7,60	50
IV	C_6H_5	273—275	—	1520, 1340	3215 3290	4,95	2,49	7,10—7,28	93
V	*p*-ClC_6H_4	268—270	—	1520, 1345	3180 3300	4,98	2,50	7,20—7,58	94

*Acetone—water was used to crystallize I, whereas acetic acid was used to crystallize II-IV.

Kherson Branch of the M. V. Lomonosov Odessa Technological Institute of the Food Industry. Translated from Khimiya Geterotsiklicheskikh Soedinenii, No. 6, p. 855, June, 1975. Original article submitted June 26, 1974.