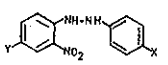
In the present paper, we will deal with our results concerning that step of the reaction in which 2-nitrohydrazo compounds (B) are converted into 2-phenylbenzotriazole-1-oxide (C).
As given in Scheme II, a series of 2-nitrohydrazobenzene derivatives was prepared.



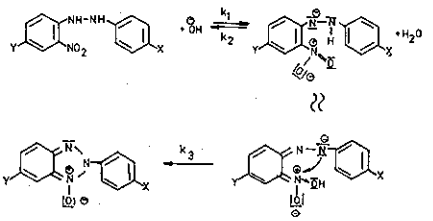
X	Y
OCH_3	NO_2
CH_3	NO_2
H	NO_2
Cl	NO_2
CN	NO_2
NO_2	NO_2
H	H

Scheme II

Cyclization thereof gave the corresponding 2-(4-X-phenyl)-6-Y--benzotriazole-1-oxides, respectively.

Hydrazocompounds were prepared by reacting 2-nitrofluorobenzene with the corresponding 4-X-phenylhydrazine, which, in turn, were prepared by $SnCl_2$ or Na_2SO_3 reduction of 4-X-benzene diazonium salts.

The cyclisation reaction was followed spectrophotometricaly in 40% aqueous propanol by measuring the intensity of an absorption band around 300 nm corresponding to benzotriazole oxide. The effect of pH and substitution was investigated.
The kinetic measurements showed the reaction to be 1 st order in hydrazocompound (at constant pH in the region of 5,5—10,5) and the reaction rate to be pH dependent. Rate constants for cyclisation of hydrazocompounds are linearly pH dependent (the pH dependence of log k has a slope equal to 1).
Obviously, the reactions rate depends on concentration of the hydrazocompound, on concentration of hydroxide ions, and ón the substituent. A mechanism of the cyclisation suggested on the basis of the above data is also in agreement with some quantum mechanical calculations.



Scheme III

REFERENCES

1) BELUSA J., KRCHŇAK V., POTÁČEK M., RABUSIC E.: Chem. Zvesti 26, 53 (1972).
POTÁČEK M., PICKA K.: Chem. Zvesti 30, 568 (1976).

PO 9

SYNTHESES AND REACTIONS OF 2-AMINO-3-CYANO-4,5-BIS (HETARYL) FURANS AND 4-R-5,6-BIS(HETARYL) FUROPYRIMIDINES

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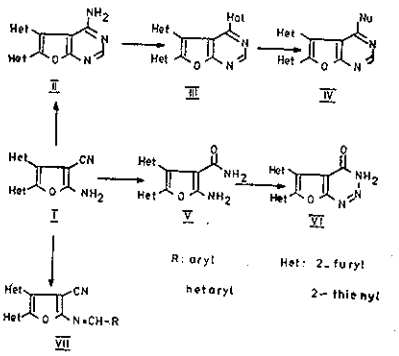
2-Amino-3-cyanofuran derivatives are not only interesting in aspect of their preparation but as the possibility of their use in another syntheses as well[1—3].

In this report, 2-amino-3-cyano-4,5-bis(2-furyl)furan Ia and 2-amino-3-cyano-4,5-bis(2-thienyl)furan Ib have been obtained by reaction from the corresponding acyloines and malononitrile. These derivatives have been utilized in another synthesis for the preparation of the furopyrimidines II—IV, furo-1,2,3-triazinones VI and Schiff's bases VII as shown the following chart[4]:



The structures of the synthesized compounds were determined by means of their IR, UV, ^{1}H-NMR and mass spectra. Spectral data of 2-furyl- and 2-thienyl derivatives have been compared with each other. The biological activity of some compounds mentioned above has been studied also.

REFERENCES

1) Gewald K.: Chem. Ber. 99, 1002 (1966).
2) Sharanin J. A., Karovan V. S., Temnikova T. I.: Zh. Org. Khim. 3(11), 1987 (1967).
3) Taylor E. C., McKillop A.: The Chemistry of Cyclic Enaminonitriles and o-Aminonitriles, in Advances in Organic Chemistry: Methods and Results E. C. Taylor, Ed., Interscience Publishers, Wiley and Sons (1970).
4) Prousek J., Jurášek A., Kováč J.: Coll. Czech. Chem. Commun. - in press.

PO 10

MANNICH BASES OF 2-MERCAPTOBENZOTHIAZOLE AND THEIRS ANTIMYCOBACTERIAL AND ANTIVIRAL ACTIVITY

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The present data on the Mannich reaction of 2-mercaptobenzothiazole (2-MBT) with primary amines do not offer a satisfactory explanation, why with some amines monoderivatives and with the others bisderivatives are obtained[1].