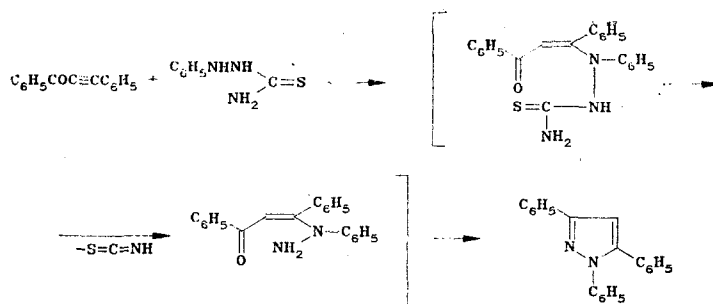


It has been shown that mixtures of stereoisomeric dimethyl- β -thiodiacrylic esters are formed in the reaction of 1-substituted thiosemicarbazides with methyl propiolate [1]. The reaction of terminal α -acetylenic ketones with 1-phenylthiosemicarbazide in alcohol at 20°C leads to 2-acylmethyl-5-imino-3-phenyl-4H-1,3,4-thiadiazoles [2].

We have found that 1,3,5-triphenylpyrazole, with mp 137-138°C (from alcohol) (mp 137-138°C [3]), is formed in 68% yield when equimolar amounts of 1-benzoyl-2-phenylacetylene and 1-phenylthiosemicarbazide are refluxed in methanol for 5 h.

The intermediately formed 1-benzoylvinylthiosemicarbazide is unstable and upon heating splits out a molecule of HNC=S to give 1-benzoylvinyl-1-phenylhydrazine. Under the reaction conditions



the latter readily undergoes dehydrocyclization to 1,3,5-triphenylpyrazole. IR spectrum: 700, 770, 980, 1070 ($=\text{CH}$ deformation vibrations); 1420, 1442, 1465, 1505 (pyrazole ring $\text{C}=\text{N}$ and $\text{C}=\text{C}$); 1600, 1620 (aromatic ring $\text{C}=\text{C}$); 3070 cm^{-1} ($=\text{CH}$ stretching vibrations). The results of elementary analysis were in agreement with the calculated values.

LITERATURE CITED

1. I. W. Lown and I. C. N. Ma, *Can. J. Chem.*, **45**, 953 (1967).
2. A. S. Nakhmanovich, T. E. Glotova, M. V. Sigalov, and V. Yu. Vitkovskii, *Khim. Geterotsikl. Soedin.*, No. 5, 703 (1984).
3. Beilstein, **23**, 254 (1936).