## REACTION OF ORGANIC NITRILES WITH BENZAMIDOXIME

V. N. Yarovenko, I. V. Zavarzin, and M. M. Krayushkin

UDC 542.91:547.239.2:547.574:547.787

We are the first to report that the reaction of organic nitriles with amidoximines gives disubstituted 1,2,4-oxadiazoles.

Thus, 5-alkyl-3-phenyl-1,2,4-oxadiazoles were obtained by heating benzamidoxime with acetonitrile and propionitrile:

Pho NOH 
$$+ RC \equiv N \rightarrow 0$$
  $+ RC \equiv N \rightarrow 0$  (I), (II)

R = Me(I), Et(II)

This reaction was carried out in a medium of the organic nitrile in a sealed glass ampul at 180°C for 12 h. After removal of the excess nitrile, the product was extracted with hexane and purified by thin-layer chromatography on silica gel using 2:1 benzene—hexane as the eluent. The melting point of (I) was 40-41°C [1], while the boiling point of (II) was 100-102°C (2 mm) [2]. The structures of (I) and (II) were supported by their IR and PMR spectra.

## LITERATURE CITED

- 1. M. A. Perez, C. A. Dorado, and J. L. Soto, Synthesis, 483 (1983).
- 2. G. Polozzo and G. Corsi, Gazz. Chim. Ital., 1196 (1963).

N. D. Zelinskii Institute of Organic Chemistry, Academy of Sciences of the USSR, Moscow. Translated from Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, No. 5, p. 1213, May, 1986. Original article submitted January 8, 1986.