

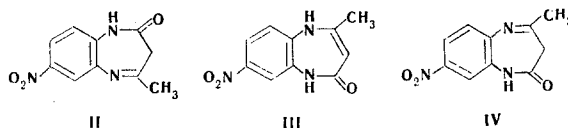
REACTION OF 4-NITRO-*o*-PHENYLENEDIAMINE
WITH ACETOACETIC ESTER

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The reaction of aromatic diamines with substituents in the aromatic ring with acetoacetic ester (AAE) has been studied in the case of 4-chloro- and 4-methyl-*o*-phenylenediamines [1, 2]. Since these diamines have nonequivalent amino groups, the formation of two isomeric dihydrobenzodiazepinones might have been expected. However, only one of the possible isomers could be isolated in [1, 2].

We have shown that three isomeric benzodiazepinones can be obtained from the reaction of 4-nitro-*o*-phenylenediamine (I) with acetoacetic ester:



4-Methyl-7-nitro-1H-2,3-dihydro-1,5-benzo-2-diazepinone (II) is formed from ethyl 3-(2-amino-5-nitrophenylamino)crotonate — the product of the condensation of the diamine with AAE at room temperature. The reaction of amine I with AAE in refluxing xylene leads to isomeric 4-methyl-8-nitro-1H-2,5-dihydro-1,5-benzo-2-diazepinone (III) or 4-methyl-8-nitro-1H-2,3-dihydro-1,5-benzo-2-diazepinone (IV), which are readily interconvertible. The structures of the compounds were proved by means of UV, IR, PMR, and mass spectra.

LITERATURE CITED

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