SHORT COMMUNICATIONS

Acidity of New Exhaustively Substituted *p*-Nitrosophenols

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Received June 6, 2011

DOI: 10.1134/S1070428011090296

A number of exhaustively substituted *p*-nitrosophenols **I** having ester groups in the *ortho* positions with respect to the hydroxy group were reported in [1].

R = Me (**a**), Et (**b**), Pr (**c**), Bu (**d**), *i*-Bu (**e**),
C₅H₁₁ (**f**), *iso*-C₅H₁₁ (**g**).

We recently showed by the X-ray powder diffraction method that these compounds, unlike all known nitrosophenols, exist as dimers like azodioxides [2]. Hydrogenation of such polysubstituted nitrosophenols makes it possible to readily obtain the corresponding exhaustively substituted aminophenols [3] which are used in the synthesis of modern antiarrhythmic agents [4]. On the other hand, the acidity of compounds **I** was not studied. Only the acidity constant of diethyl 2-hydroxy-4,6-dimethyl-5-nitrosobenzene-1,3-dicarboxylate (**Ib**) was reported (pK_a 5.35±0.04) [5].

We now report on the acidity of a series nitrosophenols **Ia–Ig** and its relation to the nature of alkyl group in the ester moieties. The acidity constants were determined by spectrophotometry [6] at 25.0±0.1°C using citrate buffer [7]. The pK_a values are as follows:

Ia, 5.33±0.01; **Ib**, 5.35±0.04; **Ic**, 5.35±0.03; **Id**, 5.38±0.04; **Ie**, 5.58±0.03; **If**, 5.42±0.03; **Ig**, 5.64±0.06.

These data show that the acidity constant almost does not depend on the alkyl group in the ester fragments of exhaustively substituted *p*-nitrosophenols. We can only note some tendency of pK_a to increase with increase in the size of the alkyl group.

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