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Conformation preference of 5-nitro group in 1,3-dioxanes

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Abstract

1. The protonation of the 2-phenyl-5-nitro-1,3-dioxane anion with water leads via equatorial attack to the cis-isomer. 2. 2-Aryl-5-nitro-1,3-dioxanes have a cis-configuration with an axial NO2 group. 3. 2,2-Dimethy1-5-nitro-1,3-dioxane as a liquid or in CCl4 and CH3CN solutions under-goes conformational inversion, in which connection the fraction of the less polar form is greater in the liquid and in CCl4 solution, while the more polar form predominates in CH3CN solution. The latter is also true in the crystals. © 1976 Plenum Publishing Corporation.

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