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The relative yields of photoisomerization products of 4,4- and 2,6-dianisyl isomers 1 and 2 were compared with that of the unsubstituted model compound 3 under the identical experimental conditions.

INTRODUCTION

Following our studies on the photoisomerization of tetra- and hexasubstituted 4H-thiopyrans¹, recently it has been shown that the substitution of electron donating groups on the para position of the migratory 4-aryl group increase the relative rates of photoisomerization². The present investigation was undertaken to determine the effect of electron donating groups on the aryl substituents attached to 2,6-positions of tetrasubstituted 4H-thiopyrans.

RESULTS AND DISCUSSION

To compare the effects of 2,6-positions with 4-position, the new 4,4-dianisyl-2,6diphenyl-4H-thiopyran 1 and 2,6-dianisyl-4,4-diphenyl-4H-thiopyran 2 were synthesized and their relative yields of photoisomerization products compared with that of the unsubstituted 2,4,4,6-tetraphenyl-4H-thiopyran model compound 3 under the identical experimental conditions. Yields were determined by ¹H-NMR



1. $Ar_1 = Ph$, $Ar_2 = p \cdot McOC_6H_4$; 2. $Ar_1 = p \cdot McOC_6H_4$, $Ar_2 = Ph$ 3. $Ar_1 = Ar_2 = Ph$

spectroscopy using the ratios of characteristic signals of 4H-thiopyrans to the corresponding 2H-thiopyran isomers.

The results showed that on irradiation of thiopyrans 1, 2 and 3 with a low-pressure mercury lamp at a wavelength $\lambda = 254$ nm in benzene solutions under an argon atmosphere at room temperature, compound 1 gives the corresponding 2H-thiopyran isomers with a relative yields higher than the model compound 3, whereas the relative yields is lower for compound 2.

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