# RECYCLIZATION OF 1,3-DIOXANES TO TETRAHYDROPYRANS

A. A. Gevorkyan, L. A. Saakyan,
G. G. Tokmadzhyan, S. M. Kosyan,
and P. I. Kazaryan

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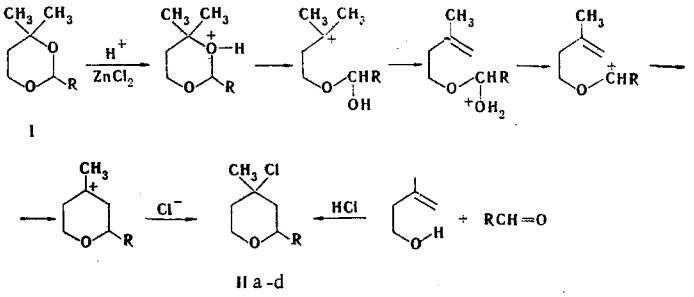
We have found that 2-alkyl(aryl)-4,4-dimethyl-1,3-dioxanes (I) are converted to 2-alkyl(aryl-4-methyl-4-chlorotetrahydropyrans (II), identical to the compounds formed by alkylation of 2-methyl-1-buten-4-ol, in 40-47% yields on reaction with hydrogen chloride and traces of zinc chloride at 30-50°C.

The following compounds were obtained in this way: IIa, bp 80° (10 mm), $d_4^{20}$ 0.9963, and $n_D^{20}$ 1.4510; IIb, bp 85-86° (15 mm). $d_4^{20}$ 1.0000, $n_D^{20}$ 1.4580; IIc, bp 93-94° (12 mm), $d_4^{20}$ 0.9769, and $n_D^{20}$ 1.4550; IId, bp 143-145° (10 mm), $d_4^{20}$ 1.1199, and $n_D^{20}$ 1.5292. Satisfactory results of analysis for chlorine were obtained for all of the compounds.



I



II a-d

II a R = $C_3H_7$; b R = iso-$C_3H_7$; c R = iso-$C_4H_9$; d R = $C_6H_5$

According to results of gas-liquid chromatography (with a 3-m long column filled with 3% tricyanoethoxypropane on Celite-545 and helium as the carrier gas at 100-150°C). IIa-d are mixtures of cis and trans isomers.

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