

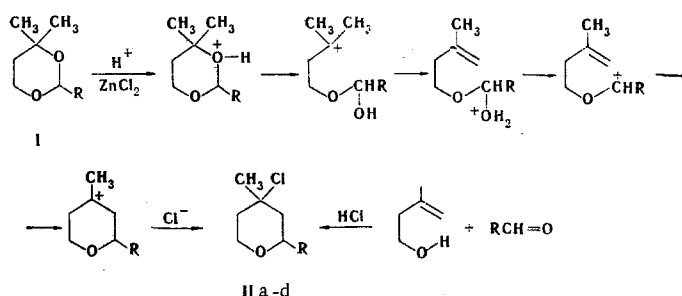
# RECYCLIZATION OF 1,3-DIOXANES TO TETRAHYDROPYRANS

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.



II a R = C<sub>3</sub>H<sub>7</sub>; b R = iso-C<sub>3</sub>H<sub>7</sub>; c R = iso-C<sub>4</sub>H<sub>9</sub>; d R = C<sub>6</sub>H<sub>5</sub>

According to results of gas-liquid chromatography (with a 3-m long column filled with 3% tricyno-ethoxypropane 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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