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REACTIVITY OF CYCLIC ACETALS AND THEIR HETEROANOLOGUES IN RELATON TO OXYGEN- AND CARBON-CENTERED RADICALS

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It was stated by EPR method that hydroxyl radicals abstract hydrogen atoms from cyclic acetals with cyclic di- and mono-alkoxyalkyl radicals formation. The influence of cycle size and position of alkyl substituents on radical formation selectivity is discussed.

Alkoxyl radicals abstract hydrogen atom either from methylene or methin group adjacent with two heteroatoms much more selectively than from other positions in a molecule. The influence of 1,3-diheterocyclanes structure on relative constant of velocity of hydrogen abstracting by tert-butoxyl radicals was *determined*.

As a result of investigation of liquid-phase initiated oxidation constants of velocity of reactions of peroxyl radicals with cyclic acetals were measured. It was shown that cyclic radicals are mainly formed with a single electron on hydrogen atoms being in α-position to heteroatoms.

Reactivity of 1,3 oxaheterocyclanes in relation to primary, secondary, tertiary and α,α-dichlor-alkyl radicals is estimated. Factors determining activity of cyclic acetals and their heteroanalogues in homolytic liquid phase reactions were defined.

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AN INVESTIGATION OF FURFURAL NITRATION IN ACETIC ANHYDRIDE

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