

Synthesis of New Substituted 2,3-Dihydro-1,4-dioxin-2-ones and 1,4-Dioxan-2-ones

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Abstract—3-Alkyl-6-methyl-2,3-dihydro-1,4-dioxin-2-ones reacted with acetyl chloride in the presence of zinc(II) chloride to give the corresponding 3-alkyl-5-acetyl-6-methyl-2,3-dihydro-1,4-dioxin-2-ones. Oxidation of the latter with hydrogen peroxide in formic acid, followed by treatment with magnesium bromide, afforded 3-alkyl-6-methyl-1,4-dioxane-2,5-diones. Successive chlorination and dechlorination of 6-hydroxymethyl-1,4-dioxan-2-ones yielded 6-methylene-1,4-dioxan-2-ones.