COMPARISON OF THE TRIFLUOROMETHYLATING PROPERTIES OF (CF₃)₂Hg, CF₃I AND (CF₃)₂Te: REACTIONS WITH OLEFINIC AND AROMATIC COMPOUNDS

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The trifluoromethylation reactions of $(CF_3)_2Hg$, CF_3I and $(CF_3)_2Te$ with cyclohexene, benzene, pyridine and furan are compared under similar conditions. Photochemical as well as thermal reactions result in an increase of the reactivity in the series $(CF_3)_2Hg < CF_3I << (CF_3)_2Te$. The yields and the kind of products vary in dependence of the time of the irradiation and the temperature. With cyclohexene only trifluoromethylated addition products are observed. The reactions with pyridine yield a mixture of isomeric trifluoromethylpyridines. With benzene and furan mainly substitution products but in the case of $(CF_3)_2Te$ also addition products are formed.

All these reactions and the spectra are described.