

PENTAFLUOROPHENYL DERIVATIVES OF CHLORINE TRIFLUORIDE

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A reaction between C_6F_5Cl and elemental fluorine under pressure produced pentafluorophenylchlorine(III)difluoride⁽¹⁾ and 1,2-difluoro-1,2-bis(pentafluorophenyl)dichlorane, $C_6F_5Cl(F)Cl(F)C_6F_5$.

The dichlorane was a stable colorless liquid with a boiling point of 121 - 123°. Its characterization by elemental analysis, IR, NMR and Mass Spectra will be presented. It is believed to be the first stable compound with a chlorine-chlorine bond and may be considered to be a derivative of the unknown Cl_2F_4 .

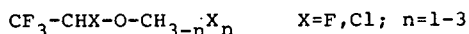
1 J.A. Obaleye and L.C. Sams, J. Fluorine Chem. 18 (1981) 31.

SYNTHESIS AND PROPERTIES OF FLUORINATED ETHYL-METHYL-ETHERS

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Starting from trichloro-acetaldehyde the two ethers $CF_3-CHCl-O-CH_3$ and $CF_3-CHF-O-CH_3$ are available by three reaction steps including a catalytic gas-phase fluorination. These ethers are used as key compounds in the preparation of fluorinated ethers of the general formula



The conditions of the photochemical chlorination and the advantages of the different used fluorination methods concerning the chlorine-fluorine exchange in the chlorinated methyl groups will be presented. The physical, chemical and anaesthetic properties of the obtained derivatives will be mentioned.