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**5-CHLORO-1-(DIFLUOROCHLORO)-2,3,4,5,6,6-HEXAFLUORO-1,3-CYCLOHEXA-  
DIENE: SYNTHESIS AND CHARACTERIZATION**

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5-Chloro-1-(difluorochloro)-2,3,4,5,6,6-hexafluoro-1,3-cyclohexadiene has been synthesized by reactions of chloropentafluorobenzene at  $-78^{\circ}\text{C}$  with chlorine trifluoride. This new product has been characterized by elemental analysis, mass, infrared, and fluorine NMR spectroscopy. Reactions of chloropentafluorobenzene with chlorine trifluoride formed solid compounds in addition to the liquid products; emphasis will also be laid towards this. Influence of air on the products from the interaction of chloropentafluorobenzene and  $\text{ClF}_3$  will be briefly mentioned.