

THE REGIOSELECTIVE LITHIATION OF FLUOROBENZOTRIFLUORIDE ISOMERS

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The lithiation reactions of the three fluorobenzotrifluoride isomers have been studied by using a variety of alkyllithium reagents. The position of metalation was determined by converting the intermediate aryllithium reagents to the corresponding carboxylic acids, and analysing the products by ¹³C nuclear magnetic resonance spectrometry. In two cases the identical products were synthesised by alternative routes. It was discovered that by suitable choice of alkyllithium reagent 2-fluoro-3-(trifluoromethyl)-, 2-fluoro-4-(trifluoromethyl)-, 2-fluoro-5-(trifluoromethyl)- and 2-fluoro-6-(trifluoromethyl)- benzoic acids could all be prepared, regiospecifically, in high yield.