

# STEREOCHEMISTRY OF FLUORINATION OF ALPHA-SUBSTITUTED BENZYLIC ALCOHOLS USING SEVERAL FLUORINATING REAGENTS

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Fluorinations of several benzylic alcohols  $\text{PhCH(OH)CH(R)X}$ , where  $\text{C}_\beta$  is a secondary or a tertiary carbon ( $\text{R} = ^2\text{H, Me}$ ) and  $\text{X} = -\text{N} \langle \bigcirc \rangle$ ,  $\text{NHCH}_3$ ,  $\text{N}_3$ ,  $\text{Et}$ ,  $\text{Br}$  and  $\text{CO}_2\text{Et}$  in  $\text{HF} : \text{pyridine}$  or using FAR, were studied.

The structures and the stereochemistry of the fluorocompounds obtained were unambiguously determined through  $^1\text{H}$ ,  $^{19}\text{F}$  and  $^{13}\text{C}$  NMR spectroscopy taking advantage of the chirality of the  $\text{C}_\beta$  carbon. Substitution, transposition, inversion or retention of configuration (on the deuterated compounds for secondary  $\text{C}_\beta$ ) were observed.

A discussion on the regio and stereoselectivity of these reactions with literature data also will be presented taking into account medium effects (non-ionizing power in the FAR reaction, and the variable acidity and ionizing power of  $\text{HF} : \text{pyridine}$  according the  $\text{HF} : \text{pyridine}$  molar ratio) or structural effects (evolution of the incipient carbenium ion, transposition of the positive charge, occurrence of a bridged structure...).