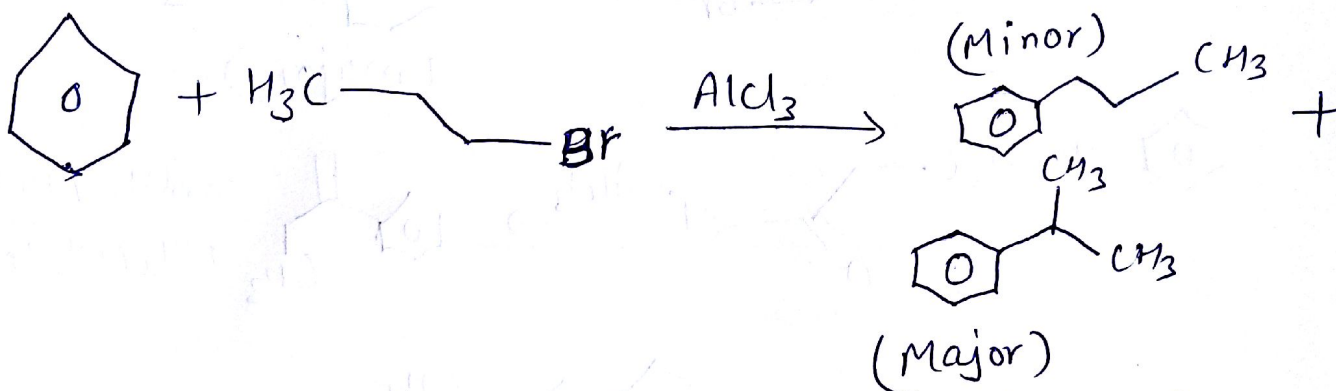


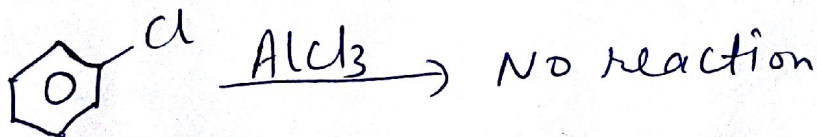
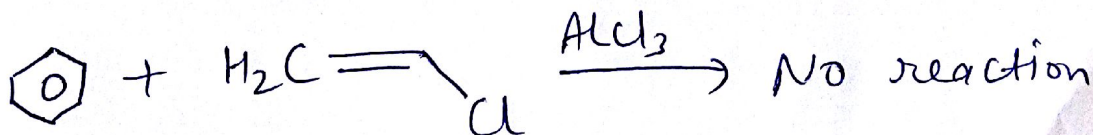
#73093 'Limitations of Friedel-Crafts Reactions'

- ① In alkylation carbocation can rearrange to more stable form (irrespective of whether it is formed from alkyl halide, alkene or alcohol).



Rearrangements do not occur in Friedel-Craft acylations. The acylium ion is resonance stabilized, so there is no need for it to rearrange.

- ② If the groups present are $-\text{NH}_2$, $-\text{NHR}$, $-\text{NR}_2$ or $-\text{OH}$, Friedel-Crafts reactions give very poor yields.
- ③ Aryl and vinylic halides can't be used as halide component because of the difficulty in producing the corresponding carbocations!



① Poly alkylations take place frequently during alkylation reactions but in case of acylation no such difficulty arises. Synthetic applications of Friedel-Craft reactions:

