

SUBJECT - CHEMISTRY

CLASS - B.Sc (Hons) PART - II

PAPER - IV GROUP - B

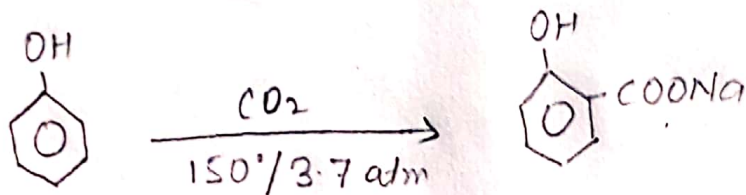
TOPIC - Kolbe Synthesis.

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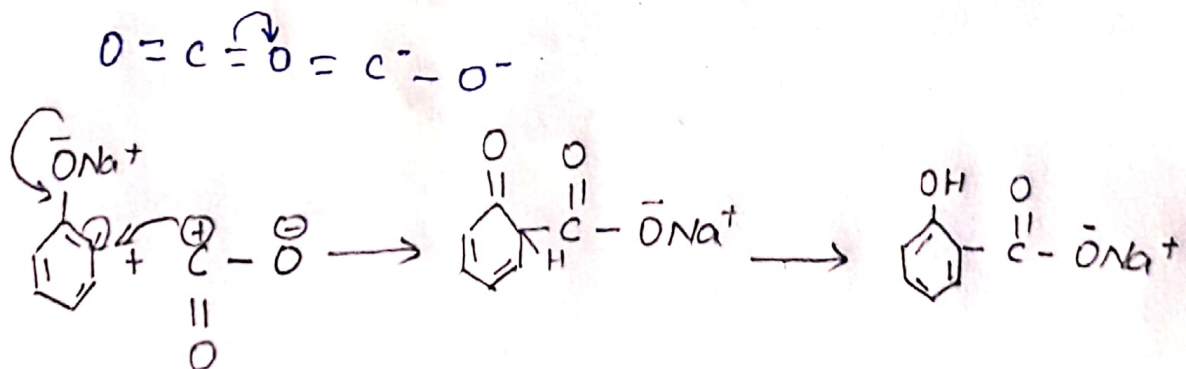
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Kolbe synthesis: When sodium phenoxide is heated with CO_2 (g) under pressure a $-\text{COOH}$ group is introduced preferably at o-position to the phenolic ($-\text{OH}$) group. This reaction is called 'Kolbe Synthesis'.



Sod. phenoxide

Here, electrophile CO_2 molecule attacks preferably at activated o-position followed by H^+ migration because o-isomer gets itself stabilised by intramolecular hydrogen bonding:



Upon acid hydrolysis this sodium salt finally gives Salicylic acid