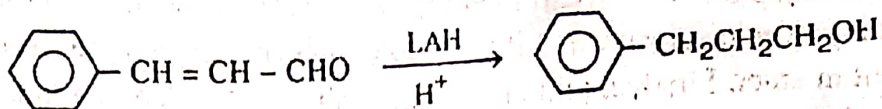
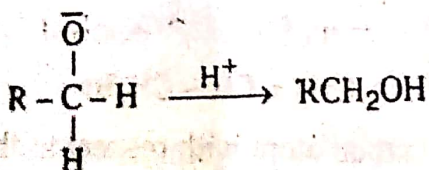
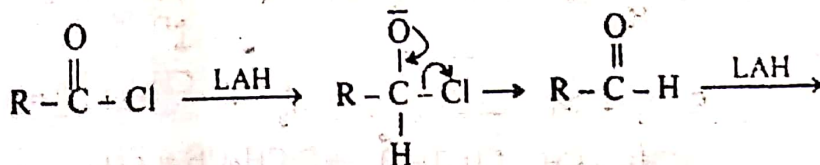
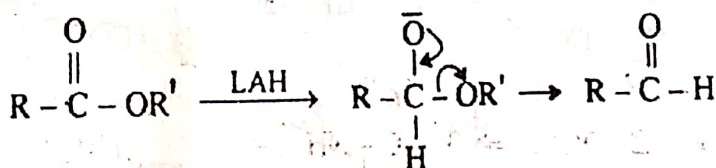
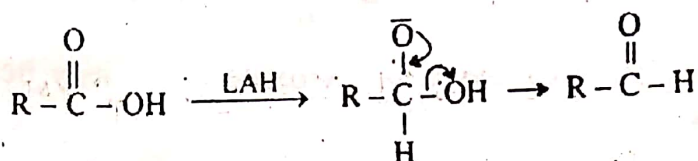


However a C - C multiple bond in conjugation with a aromatic system on one side and a carbonyl group on the other side gets reduced by LAH—



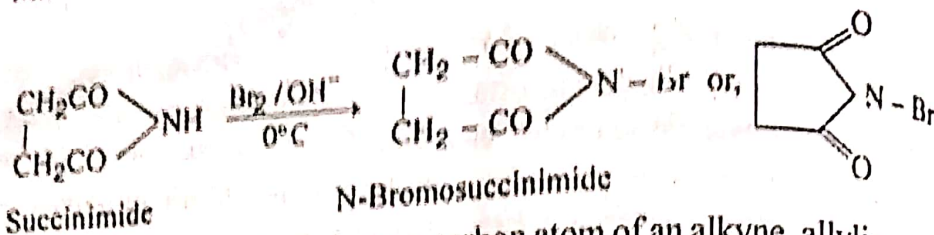
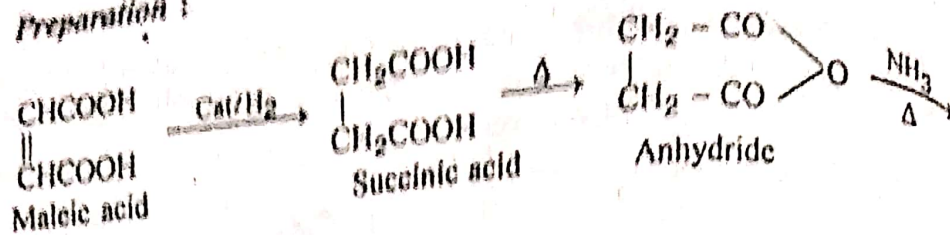
A C - C multiple bond is an electron rich moiety where electrophile attacks. A H^- ion is an electron rich species and thus behaves as a strong nucleophile, so a hydride ion experiences a repulsion when it comes close to a C - C multiple bond and thus fails to reduce it. The electron withdrawing nature of an aromatic system on one side and that of $> \text{C} = \text{O}$ group on the other side make a C - C multiple bond less electron rich and enable the hydride ion to attach with the C - C moiety. Hence a C - C multiple bond gets reduced by LAH.

Since LAH neutralises a carboxylic acid, hence the reduction of a carboxylic acid requires large excess of the reagent. To avoid this, the sodio salt of the carboxylic acid is usually treated with the reagent.

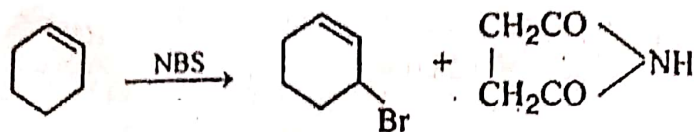


(5) N-Bromo succinimide (NBS) :

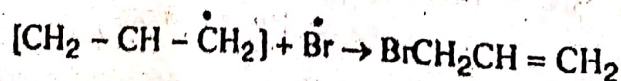
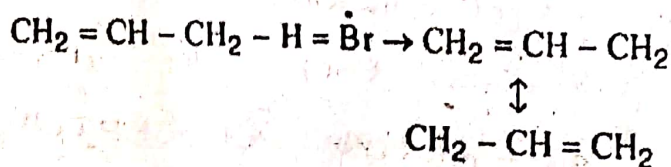
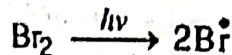
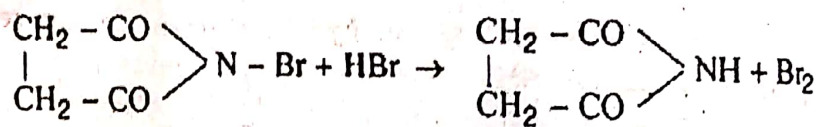
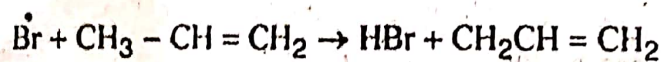
Preparation :



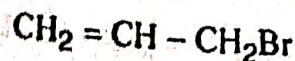
This reagent is used to brominate α carbon atom of an alkyne, allylic carbon and benzylic carbon atoms. More than one allylic hydrogen may be replaced at a time.



This reaction is catalysed by peroxide but it may be conducted photolytically.



+



In ethynes, it attacks the α carbon atom with respect to the triple bond preferentially.