

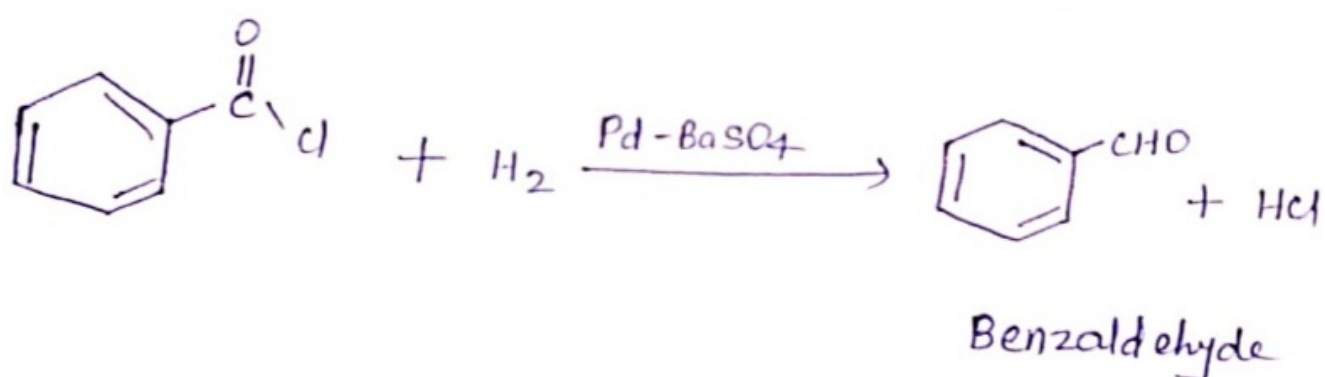
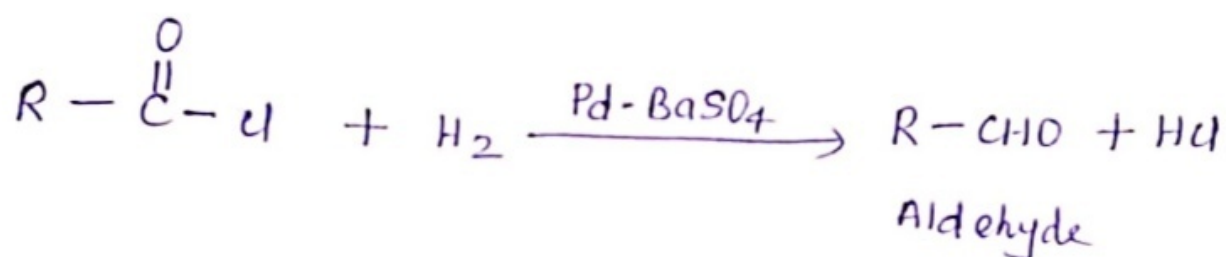
# ALDEHYDES KETONES AND <sup>1.</sup>

Lecture-4 CARBOXYLIC ACIDS 12 Dec.2020

CHEMISTRY , CLASS-XII ,UNIT-12

## PREPARATION OF ALDEHYDES

### 1. From acid chloride

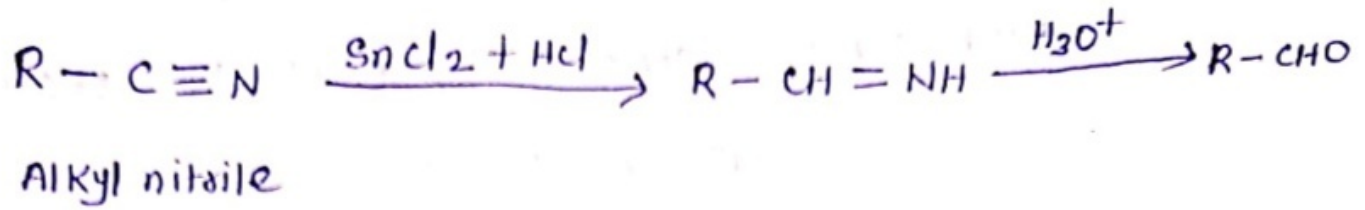


\* Acyl chloride (acid chloride) is hydrogenated over catalyst, palladium on barium sulphate. This reaction is called Rosenmund Reduction.

### 2. From Nitrile and esters

Nitriles are reduced to corresponding imine with stannous chloride in the presence of hydrochloric acid,

Which on hydrolysis gives corresponding aldehydes. **2.**



This reaction is called Stephen reaction.

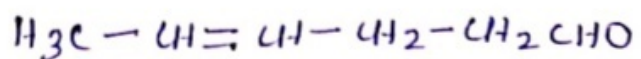
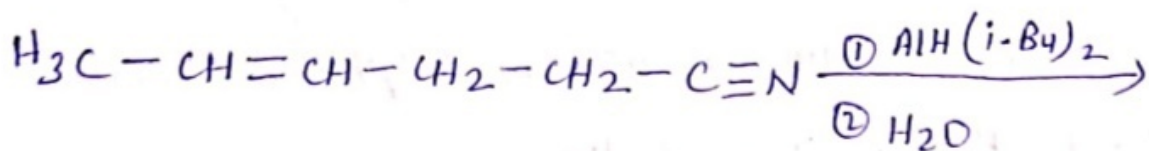
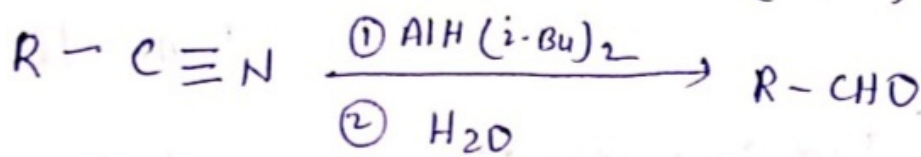
\* Nitriles are selectively reduced by diisobutyl aluminium hydride (DIBAL-H) to imines followed by hydrolysis to aldehydes.

DIBAL-H



Diisobutyl aluminium hydride

or,  $\text{AlH}(\text{i-Bu})_2$



\* Similarly esters are also reduced to aldehydes with DIBAL-H.

**To be continued in next lecture...**