

Which of the following reagents can be used to oxidise primary alcohols to aldehydes?

(a)  $\text{CrO}_3$  in anhydrous medium

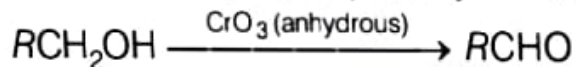
(b)  $\text{KMnO}_4$  in acidic medium

(c) Pyridinium chlorochromate

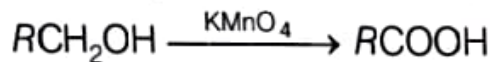
(d) Heat in the presence of Cu at 573K

**a, c, d)**

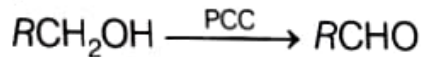
$\text{CrO}_3$  in anhydrous medium is used to oxidise primary alcohols to aldehydes.



Acidic  $\text{KMnO}_4$  is a very strong oxidising agent. It oxidises primary alcohols into carboxylic acid.



Pyridinium chlorochromate ( $\text{C}_5\text{H}_5\text{NH}^+\text{ClCrO}_3^-$ ) is a very good reagent for the oxidation of primary alcohols to aldehydes.



When the vapours of primary alcohols are passed over heated copper at 573 K, dehydrogenation takes place and an aldehyde is formed.

