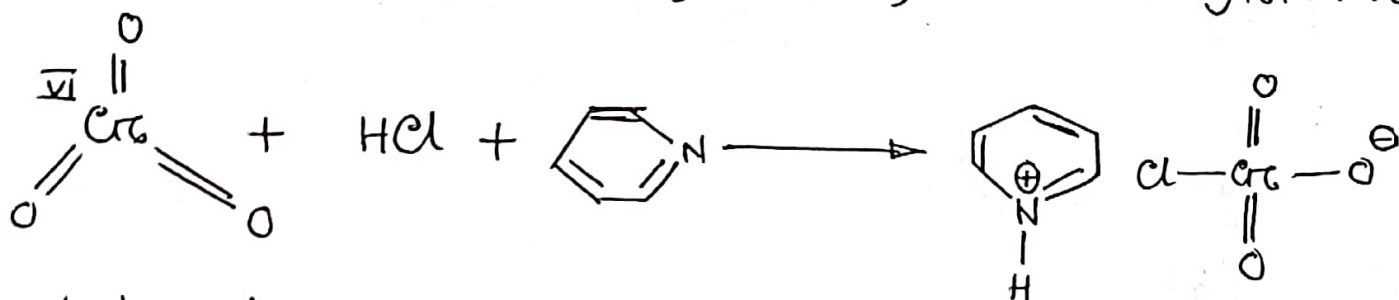


PCC

(Pyridinium chloro chromate)

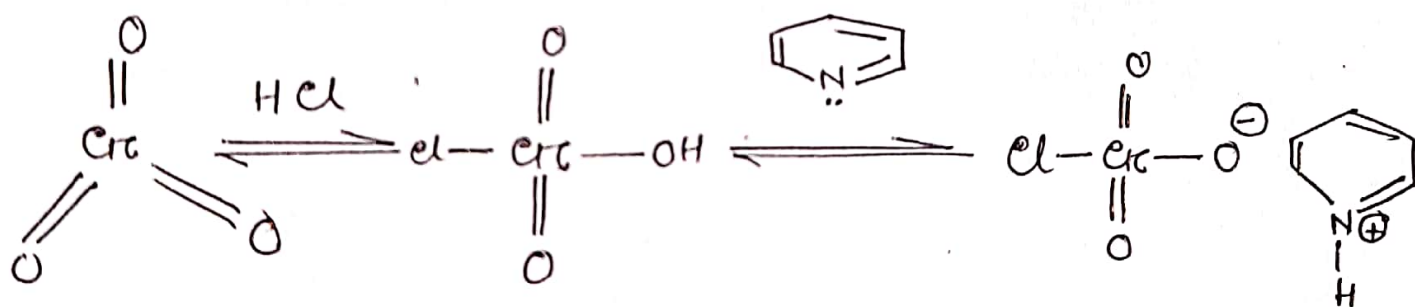
Preparation: It is prepared by the reaction of Cr(VI) oxide, HCl and Pyridine



It is also known as Corey-Suggs reagent.

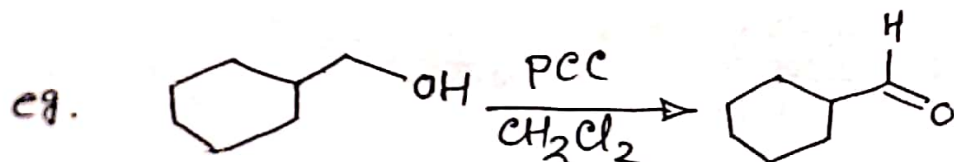
Pyridinium chloro-chromate.
(Yellow orange solid)
(mp- 205°C)

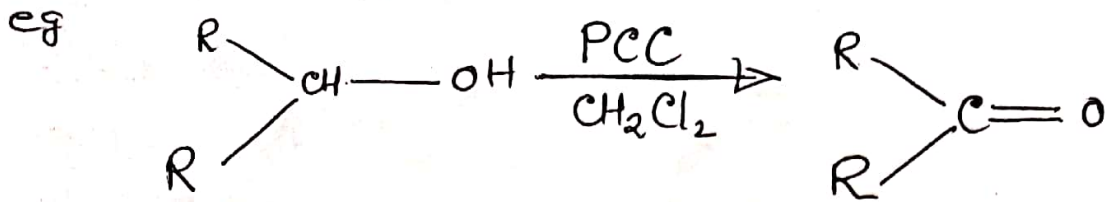
* Mechanism:



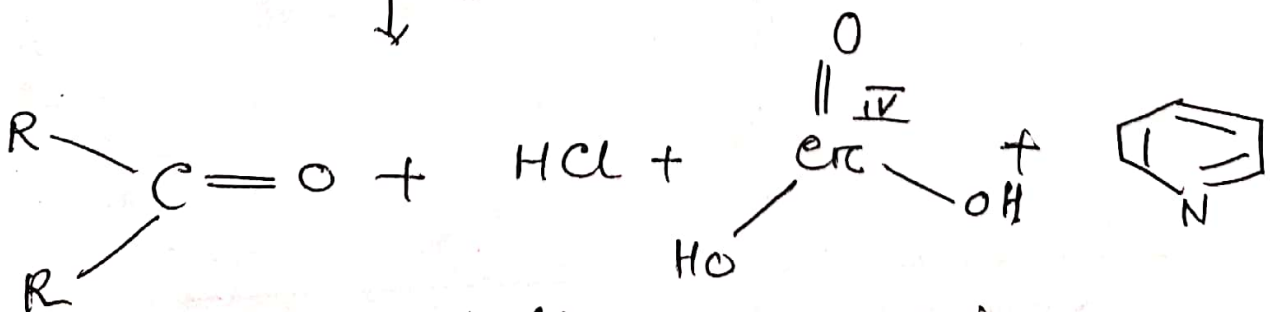
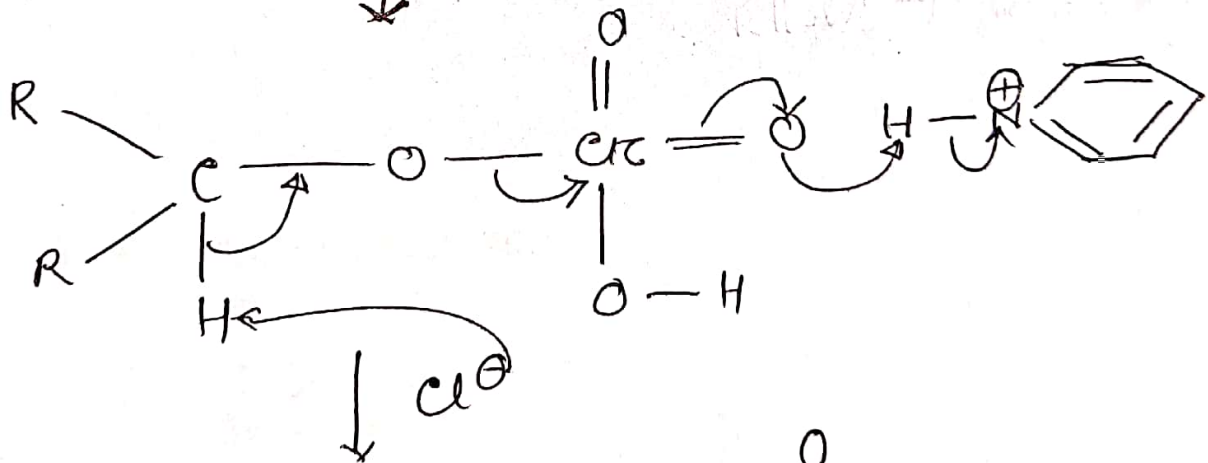
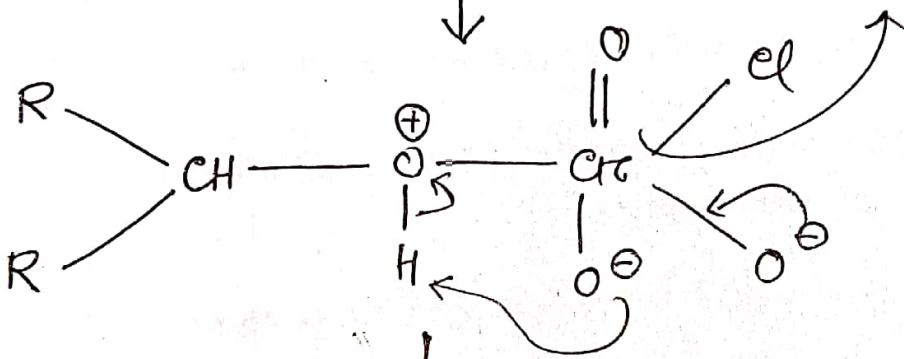
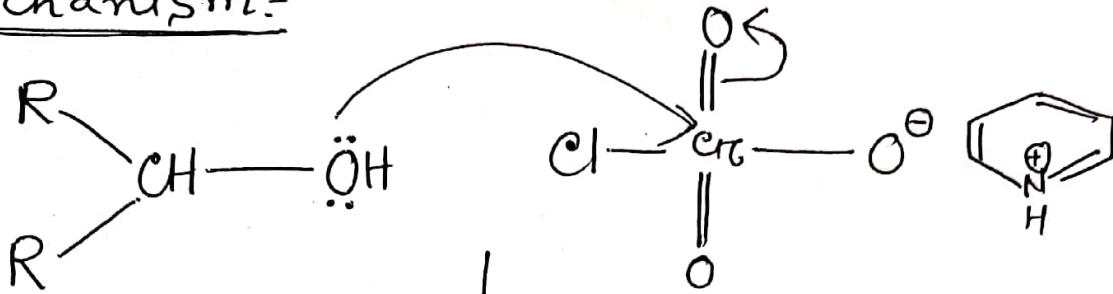
* Note: PCC is dissolved in DMF or it is used as a suspension in CH_2Cl_2 .

* It is a selective oxidising reagent for the conversion of 1° alcohol to aldehyde and 2° alcohol to ketone.





Mechanism:-

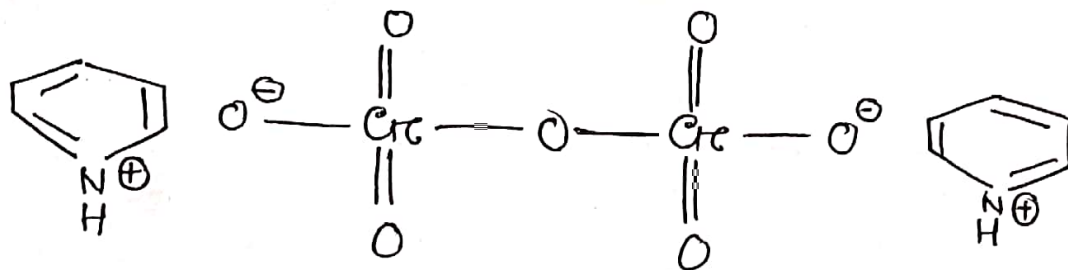


After oxidation $Cr(VI)$ is converted to $Cr(IV)$.

PDC

Pyridinium Dichromate

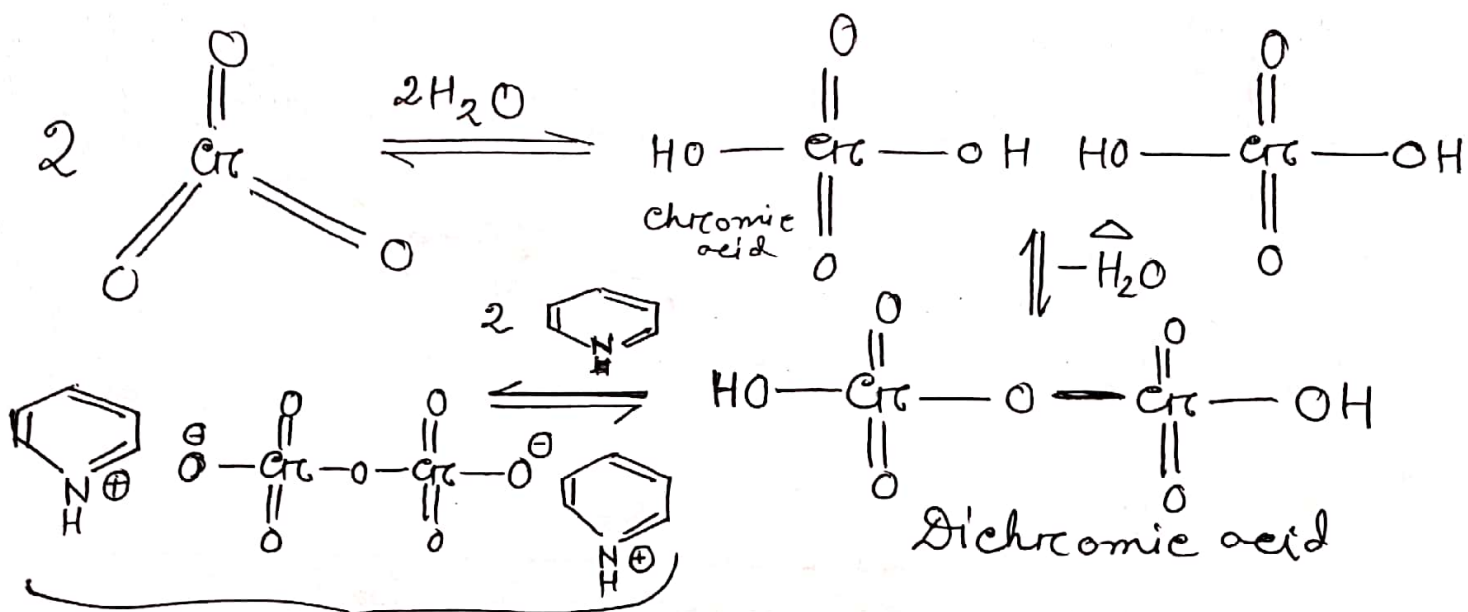
Structure:



Red Orange solid (MP 152°C).

* Note: Because of its toxic effect it is rarely used.

Preparation \div It is prepared by the rxn between two equivalent of Cr(VI) oxide and two equivalent of Pyridine.



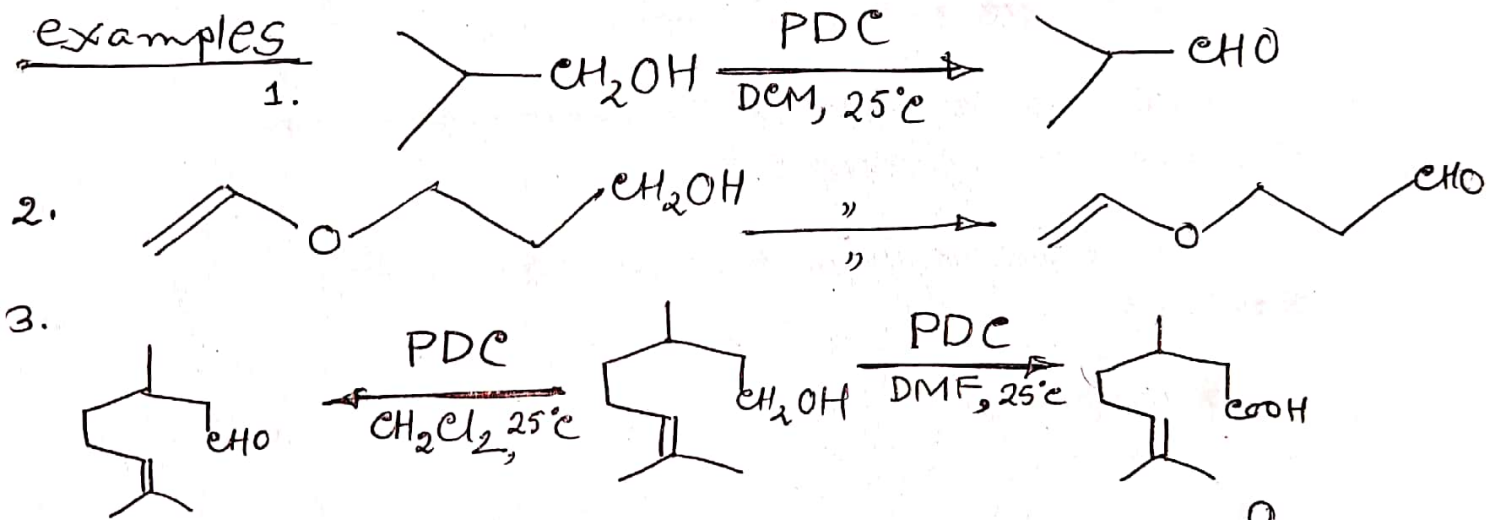
* PDC in CH_2Cl_2 or DMF is also called Corey-Schmidt reagent.

Uses: It is used for the selective oxidation of allylic alcohols in presence of other alcoholic groups.

The oxidation product also depends on the solvent used.

In CH_2Cl_2 it conventionally oxidises 1° alcohol to aldehyde at room temperature. but in DMF it oxidises non conjugated alcohols to carboxylic acid.

examples



Mechanism:

