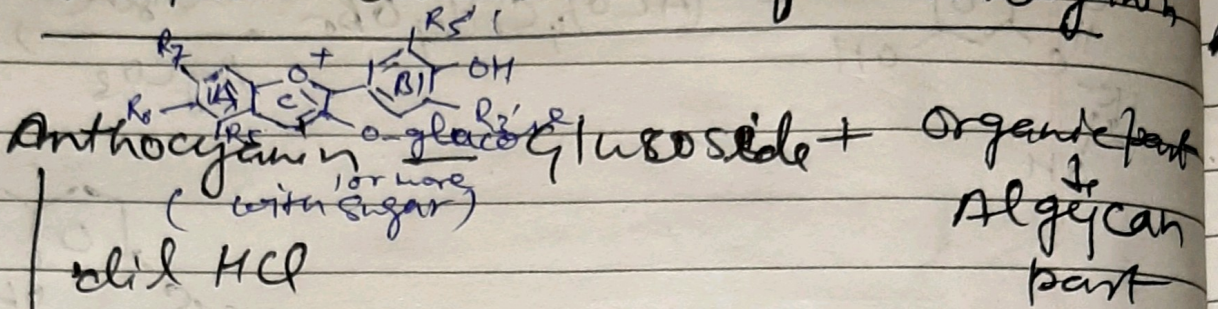


R = OH gp

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# Structure elucidation of Anthocyanin

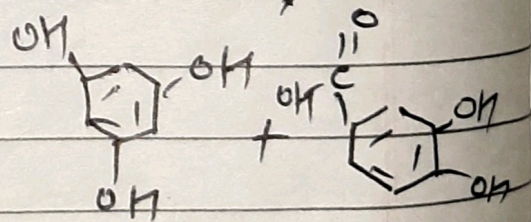
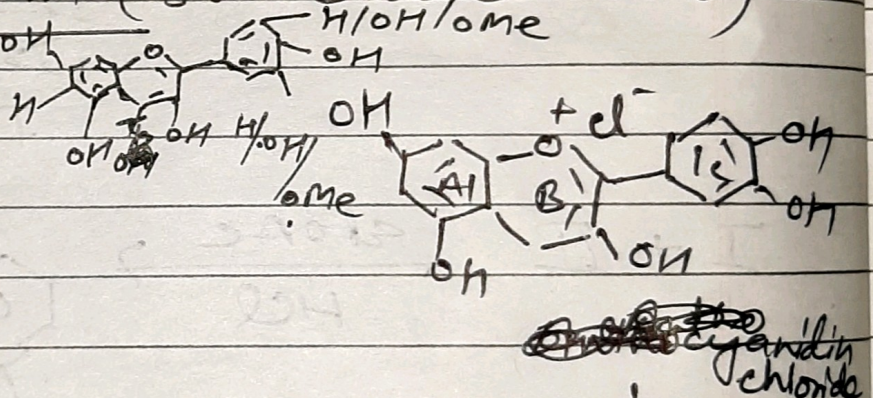


add HCl

Anthocyanidin + Glucose (sugar)  
(sugar free)

Anthocyanidin (str. elucidation)  
at C-3 position aglycone

1. Cl<sup>-</sup> F
2. -OH gp
3. -OCH<sub>3</sub>
4. fusion with KOH



Phloroglucinol      Dihydroxy  
 or                      benzene  
 trihydroxy          acid  
 benzene.            (C ring)

① present -OH gp

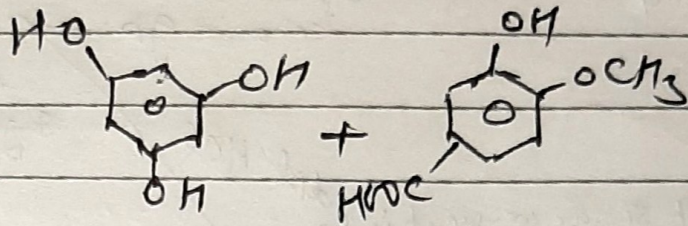


② Present of  $OCH_3$  gp

10%  $BaSO_4$  /  $NaOH$  / atm.  $H_2$

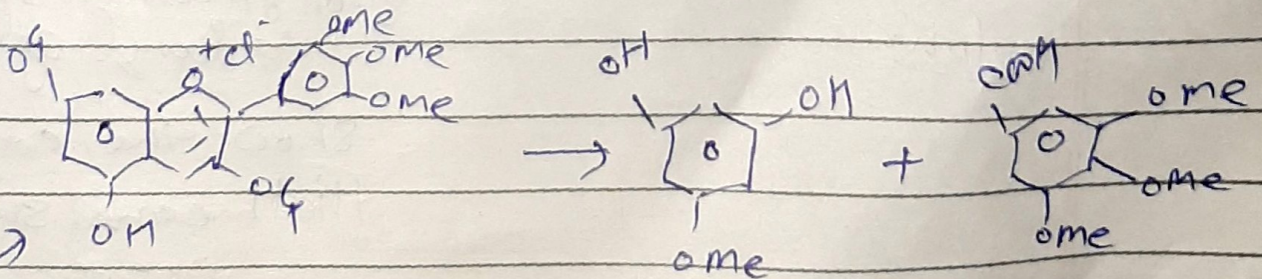
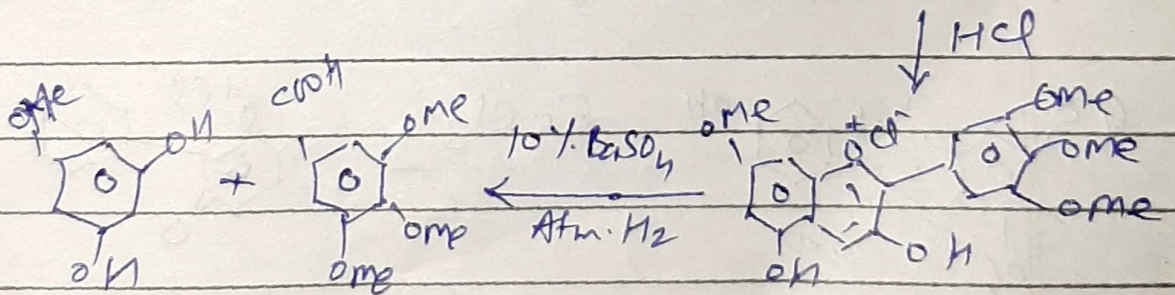
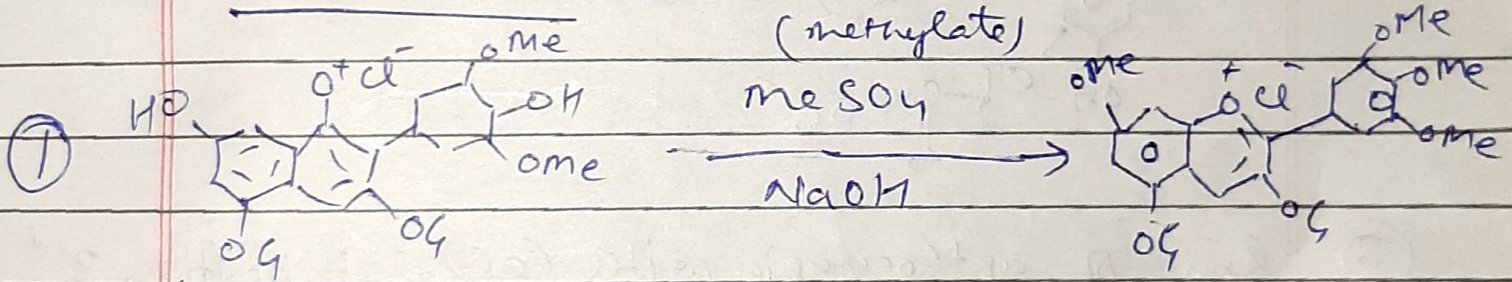
Cyanidin chloride

(Kesseleretal in 1927)  
in absence of  $ROH$



③ position of sugar in Anthocyanin (3 method)

Kesseleretal method

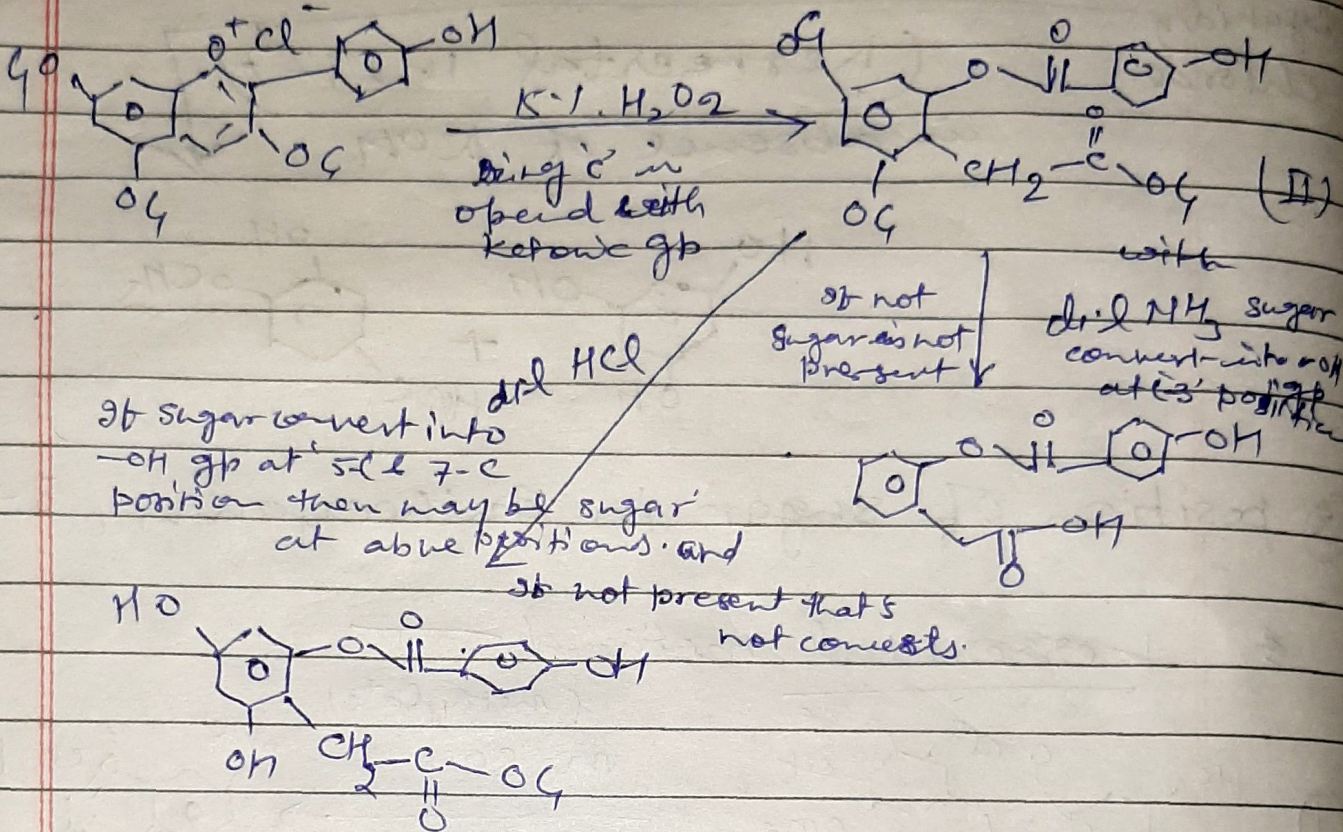


if sugar present at position 7 then

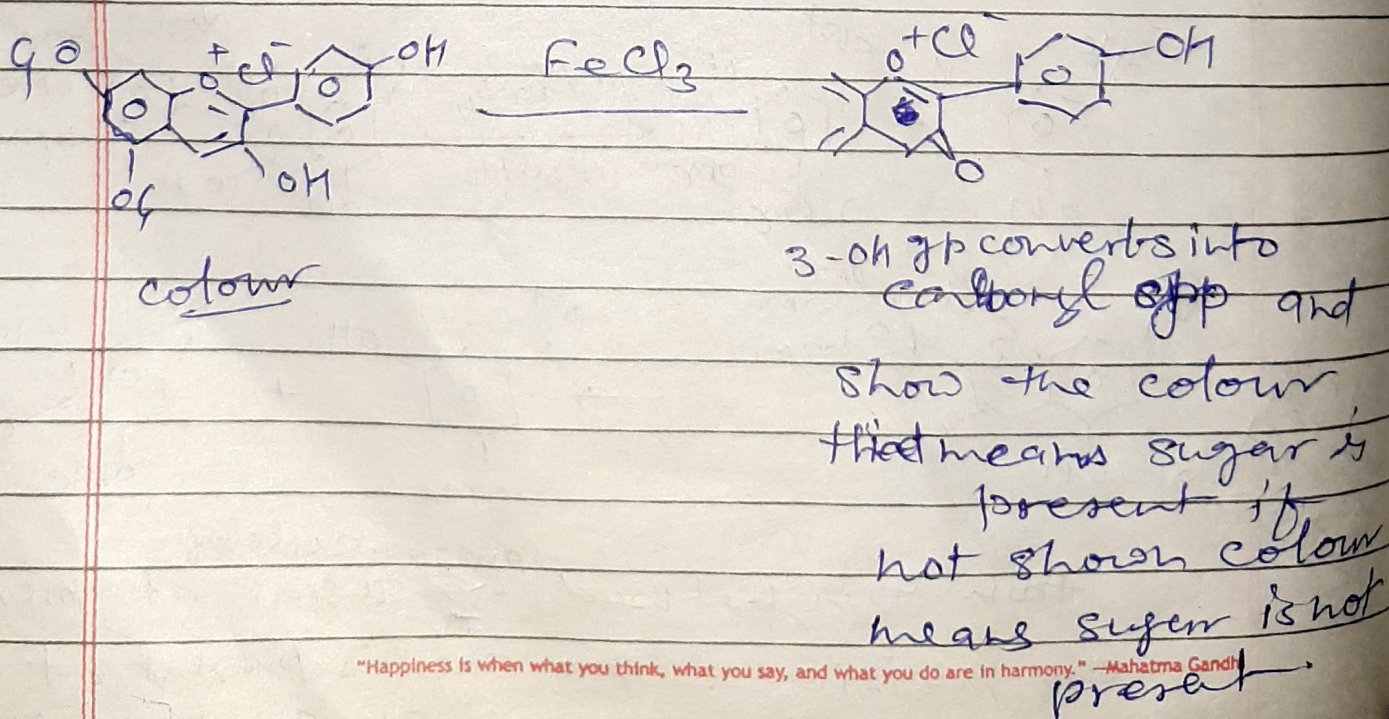
from this method ~~one molecule of~~ sugar at present  
at 5-C position. ~~one~~ one is present at 5-C or 7-C position



② Reaction of Anthocyanin with 15%  $H_2O_2$

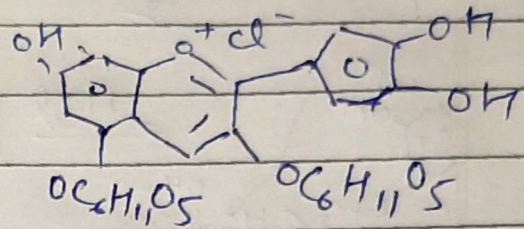
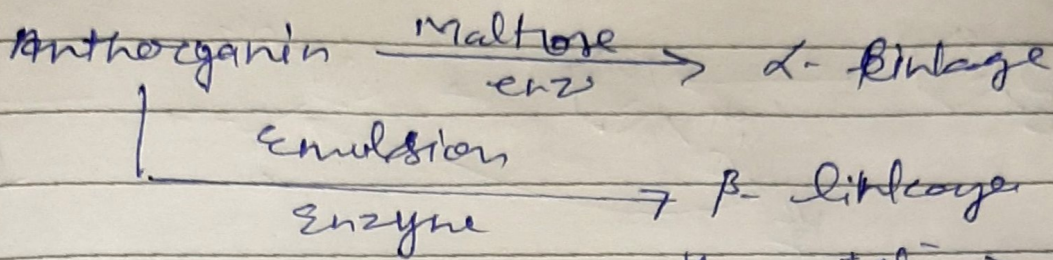


③ Reaction of anthocyanin with  $FeCl_3$  at position 3<sup>rd</sup>





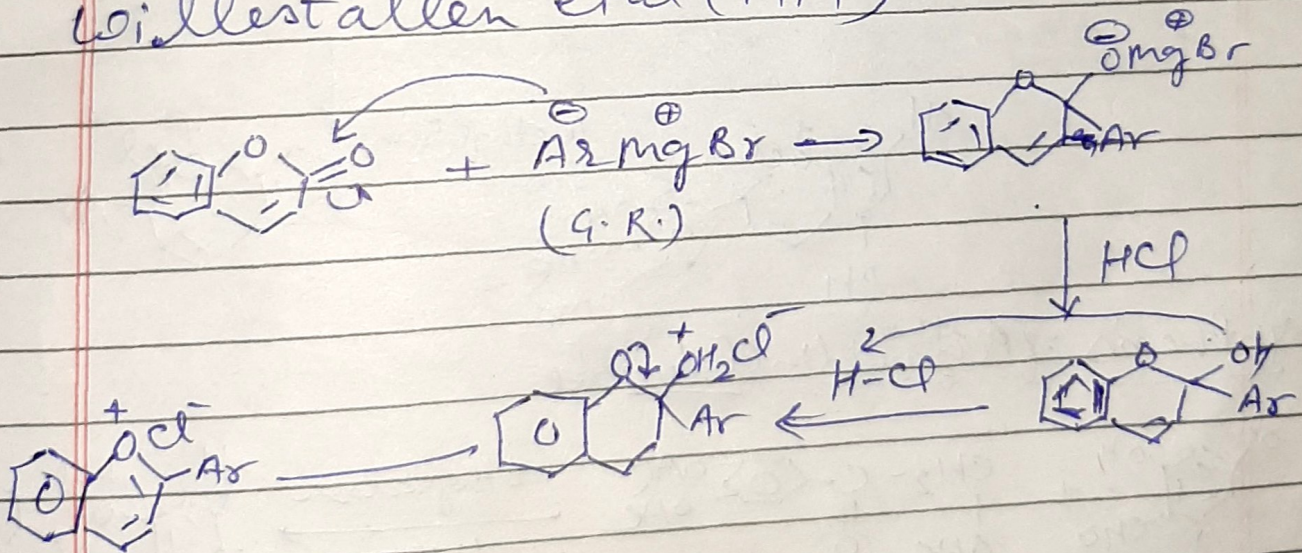
Classification of linkage of sugar by Enzyme hydrolysis



derivative of anthocyanine  
(cyanine chloride)

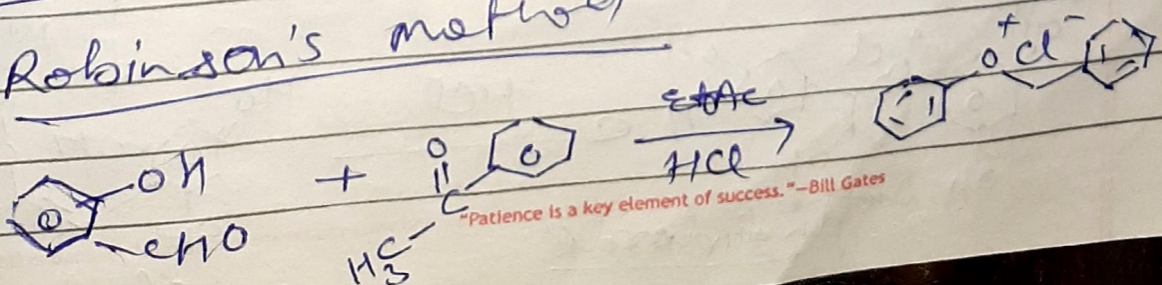
General method of Anthocyanidin

① Willestallen et al (1914)



Anthocyanidin  
82r.

② Robinson's method

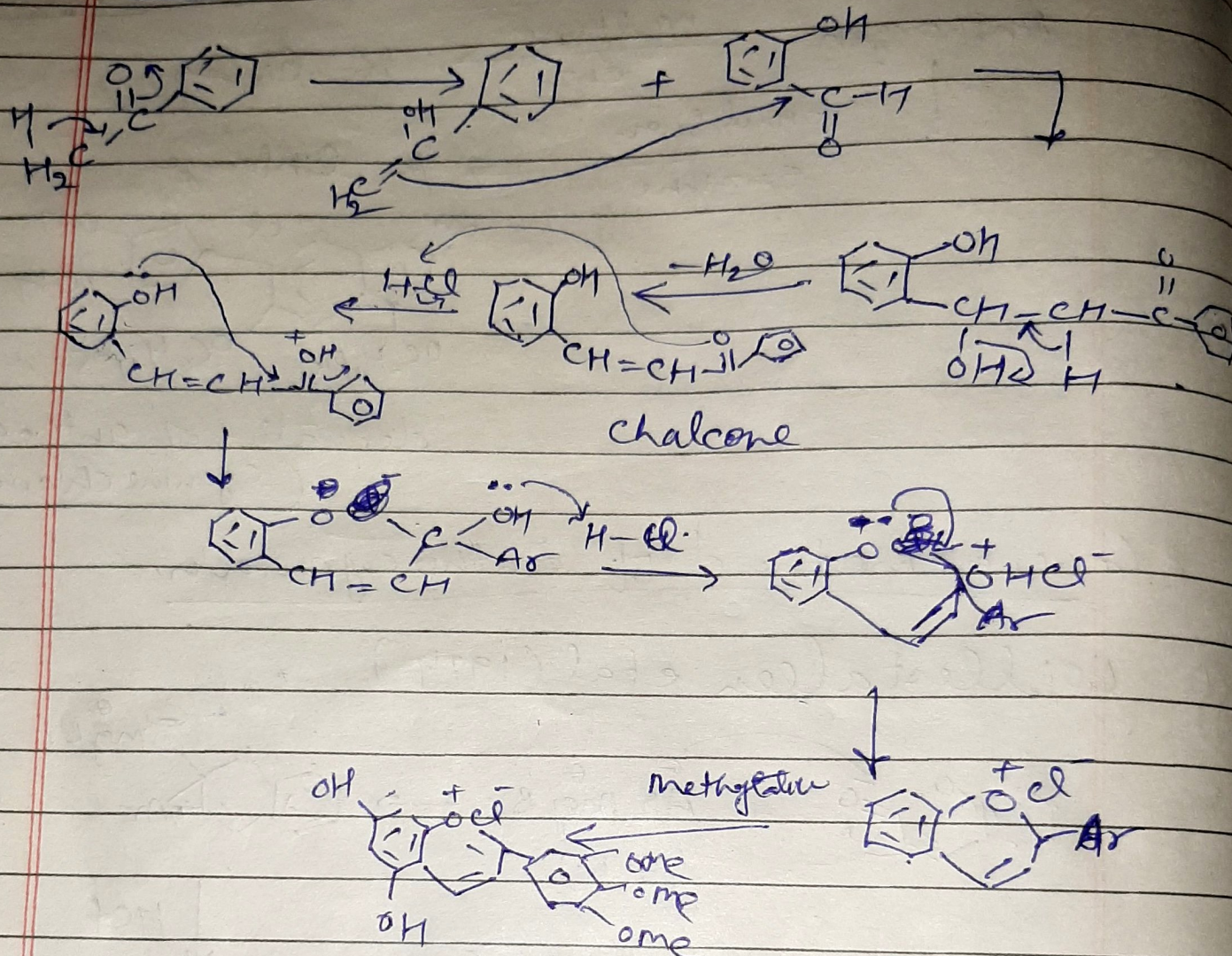


"Patience is a key element of success." - Bill Gates

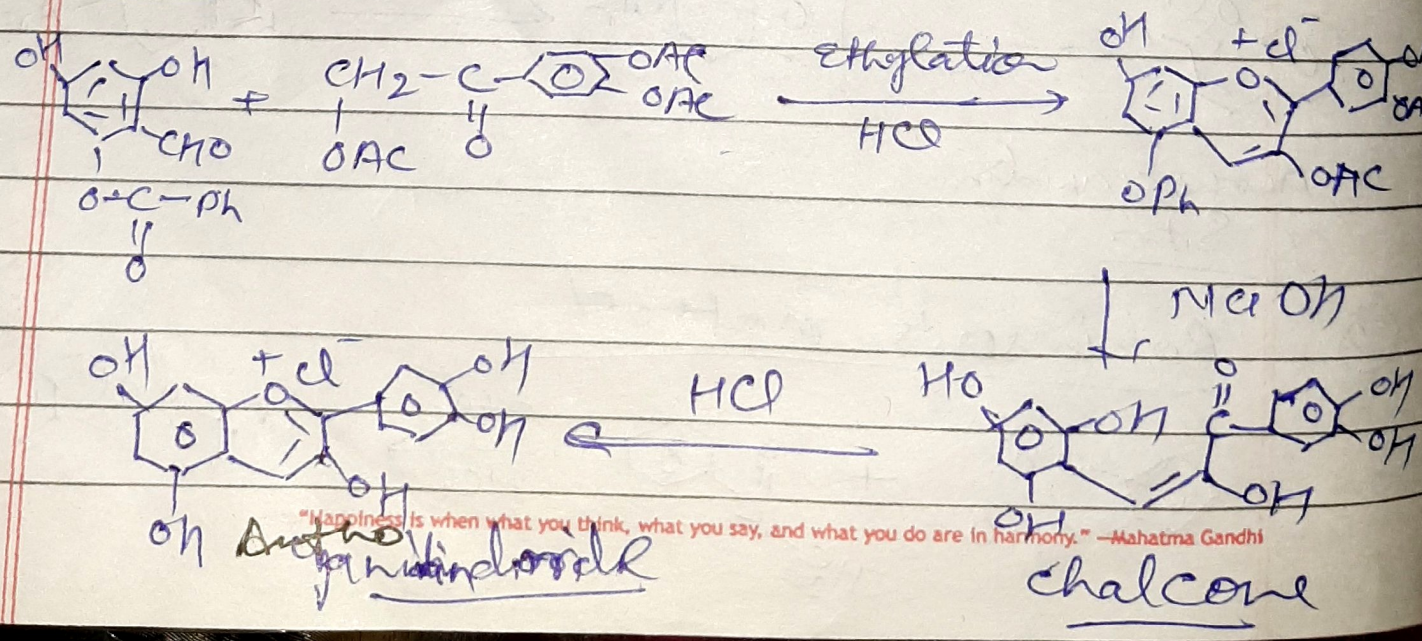


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mech<sup>m</sup> -



Synthesis of Anthocyanidin Chloride



"Happiness is when what you think, what you say, and what you do are in harmony." - Mahatma Gandhi