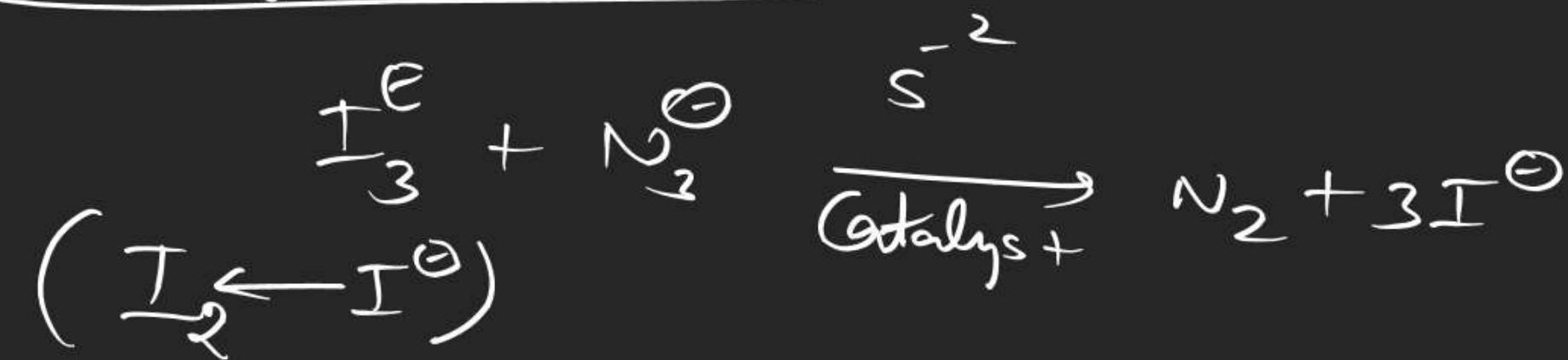


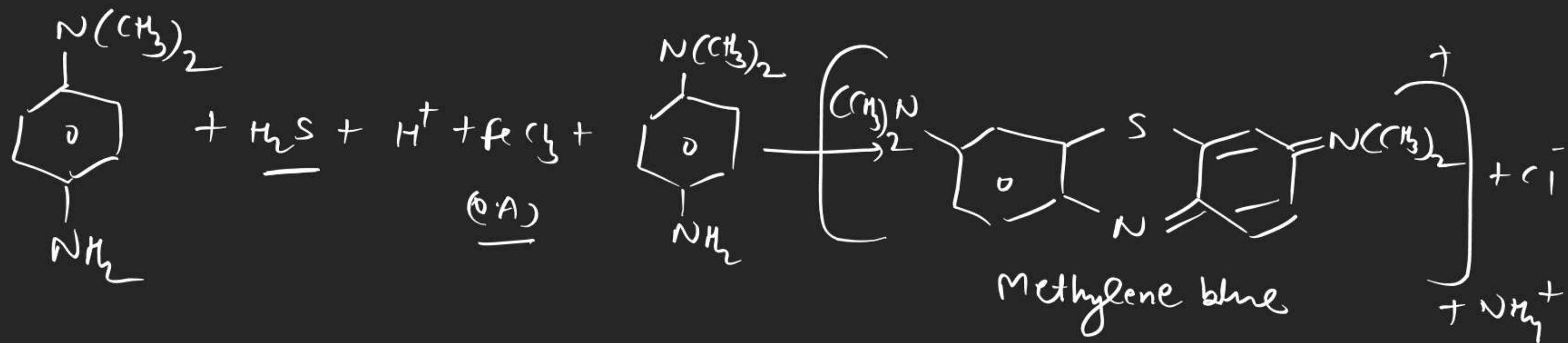
Catalytic ozone test



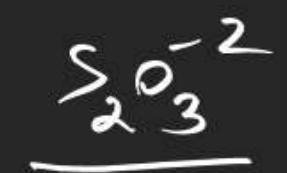
Note $\Rightarrow \text{S}_2\text{O}_3^{\text{-}2}$ can also interfere

this test

Test with Pavan
amine dimethyl aniline

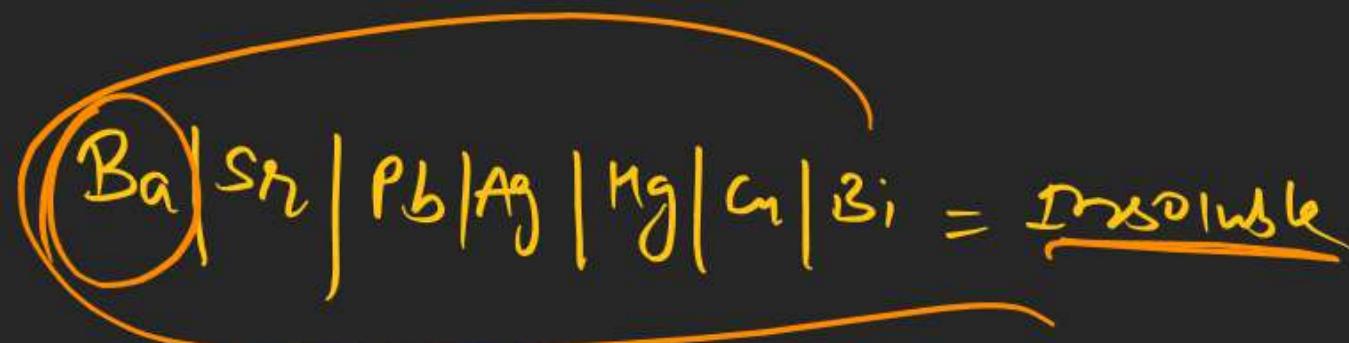


Blue colour dye stuff

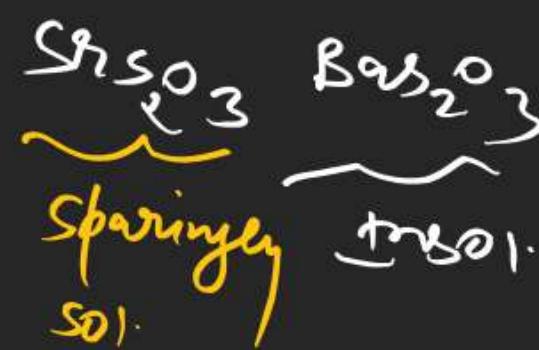
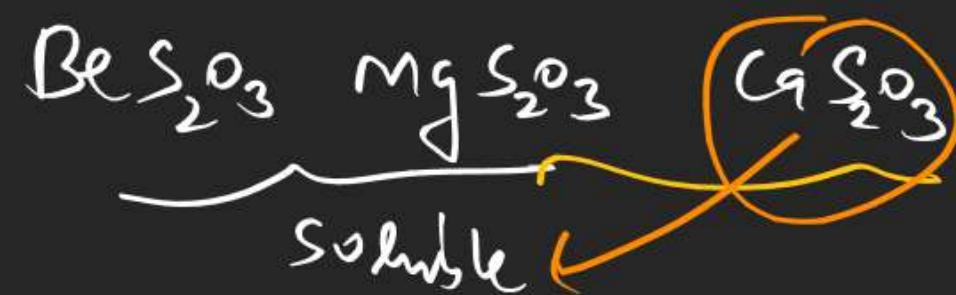


I A = Soluble

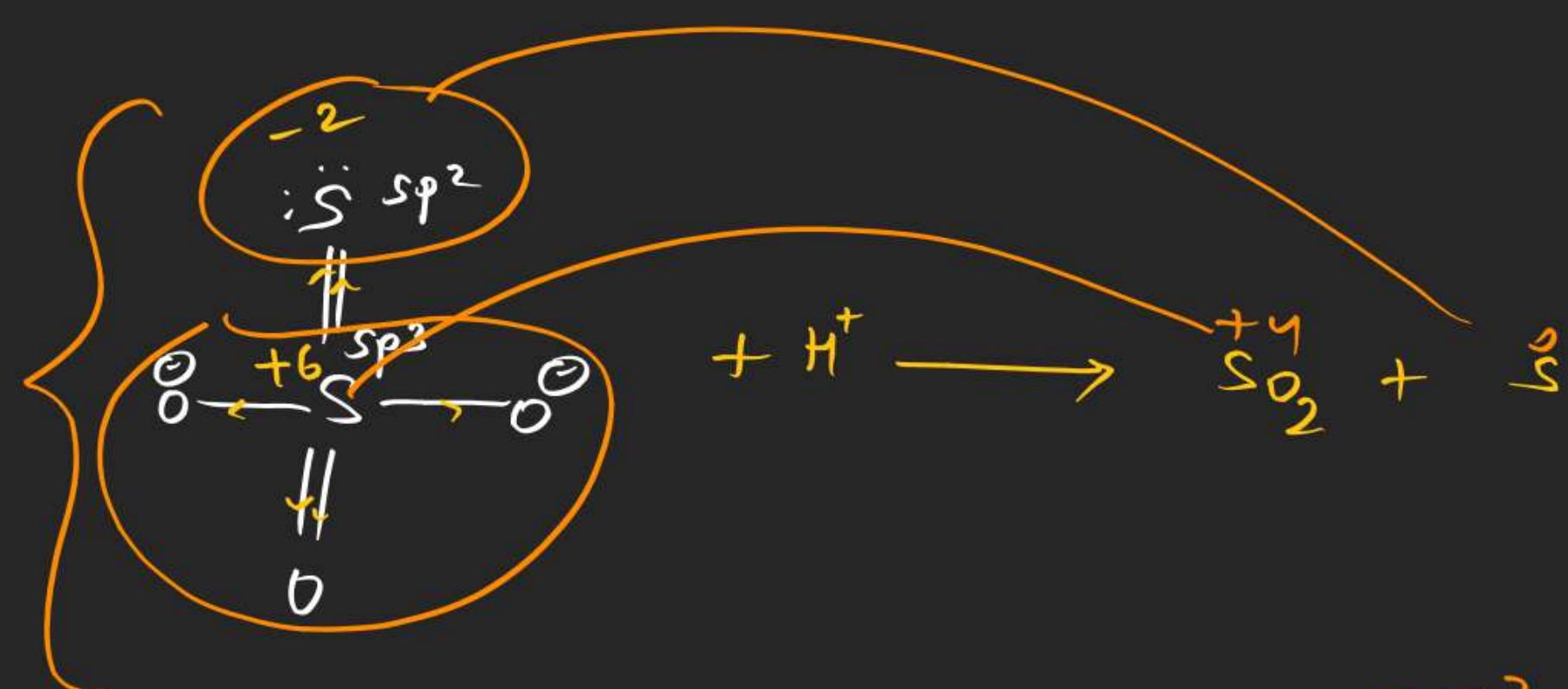
II A = Soluble sparingly and Insol.



① Test with acid

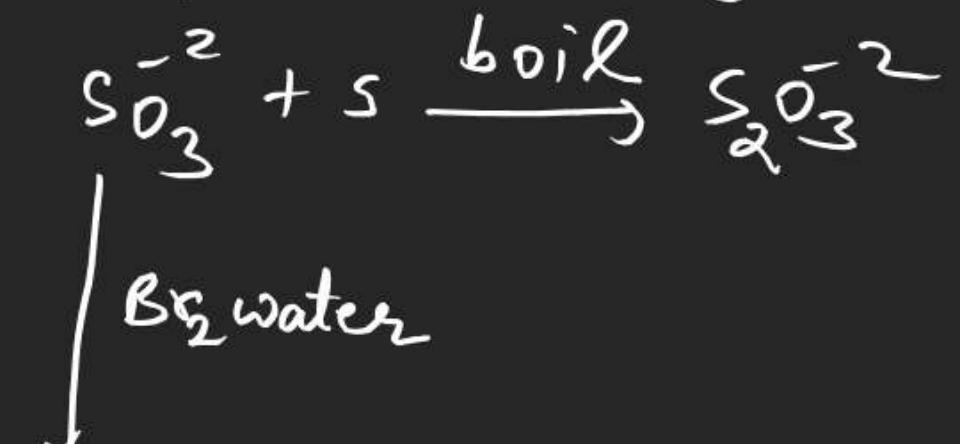


D_{n+1}g
Redox
Reaction



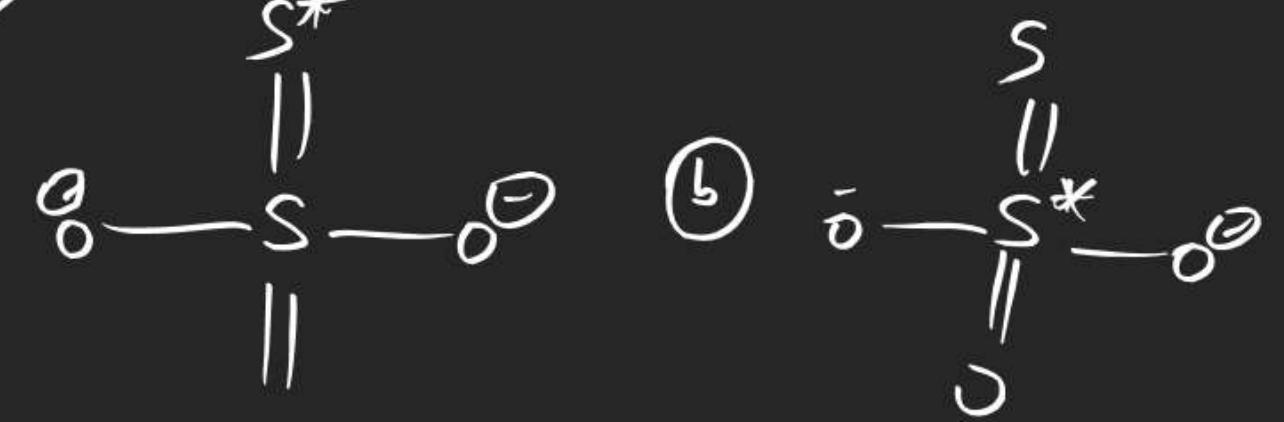
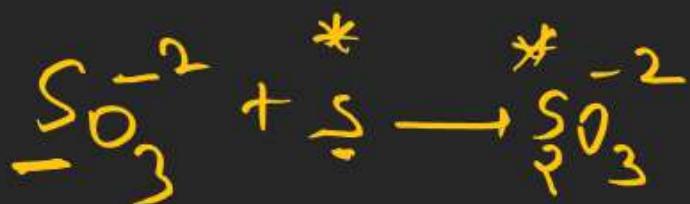
Note \Rightarrow both sulphur of $\text{S}_2\text{O}_3^{2-}$ are not identical

Conversion of Sulphur containing ions in to each other

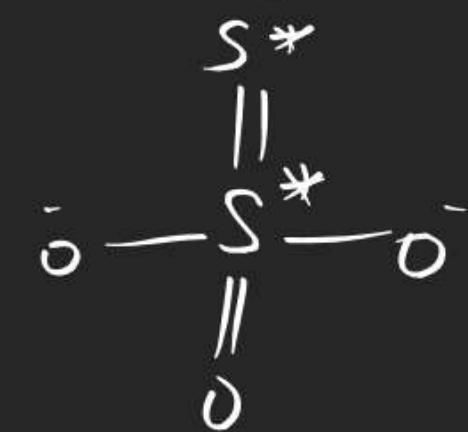


Ans = $\overset{*}{\text{s}}$

In above reaction draw the structure of $\text{Na}_2\text{S}_2\text{O}_3^*$

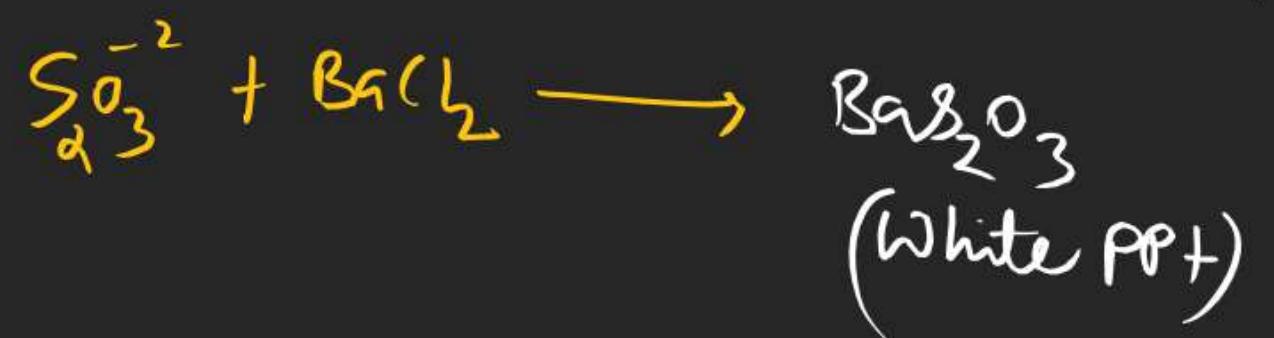
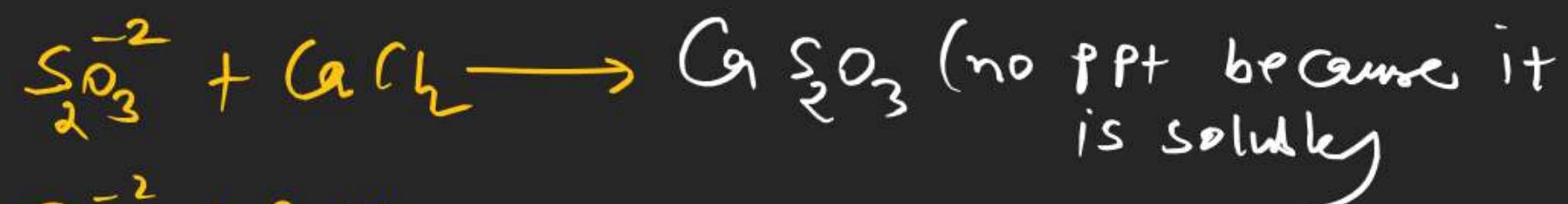


(c)

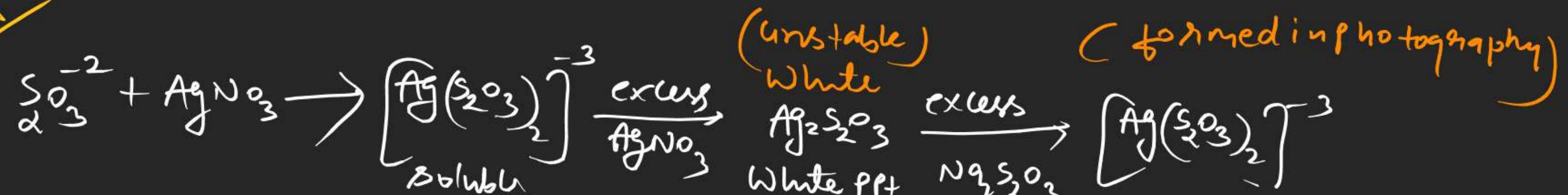


d none



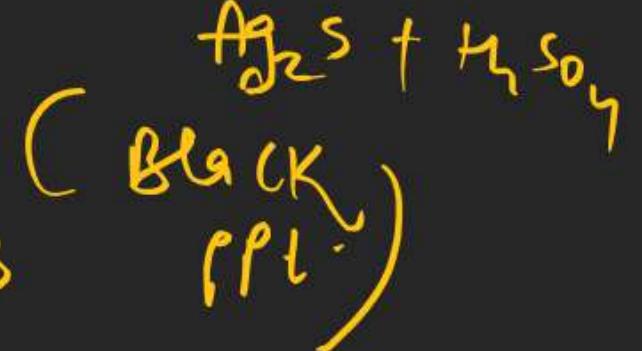
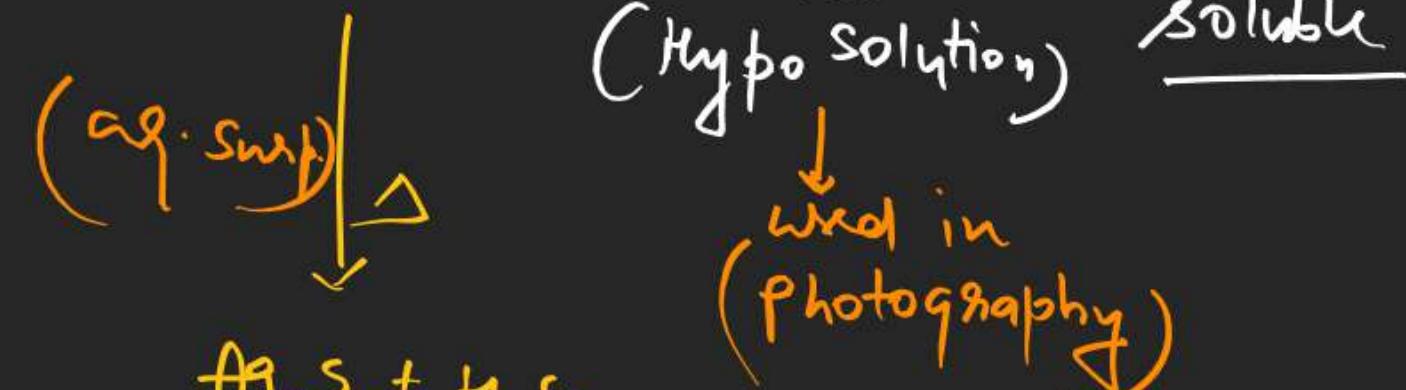
Test based on ppt.① Test with BaCl₂ / CaCl₂

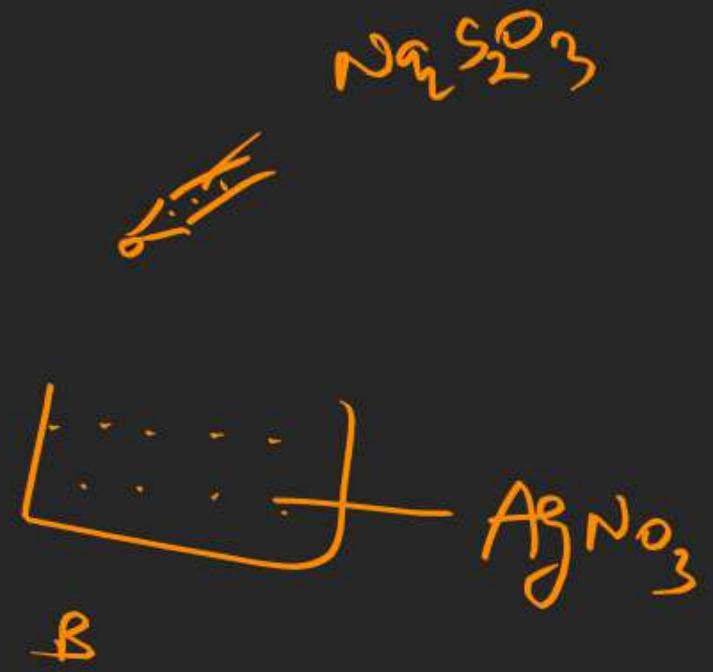
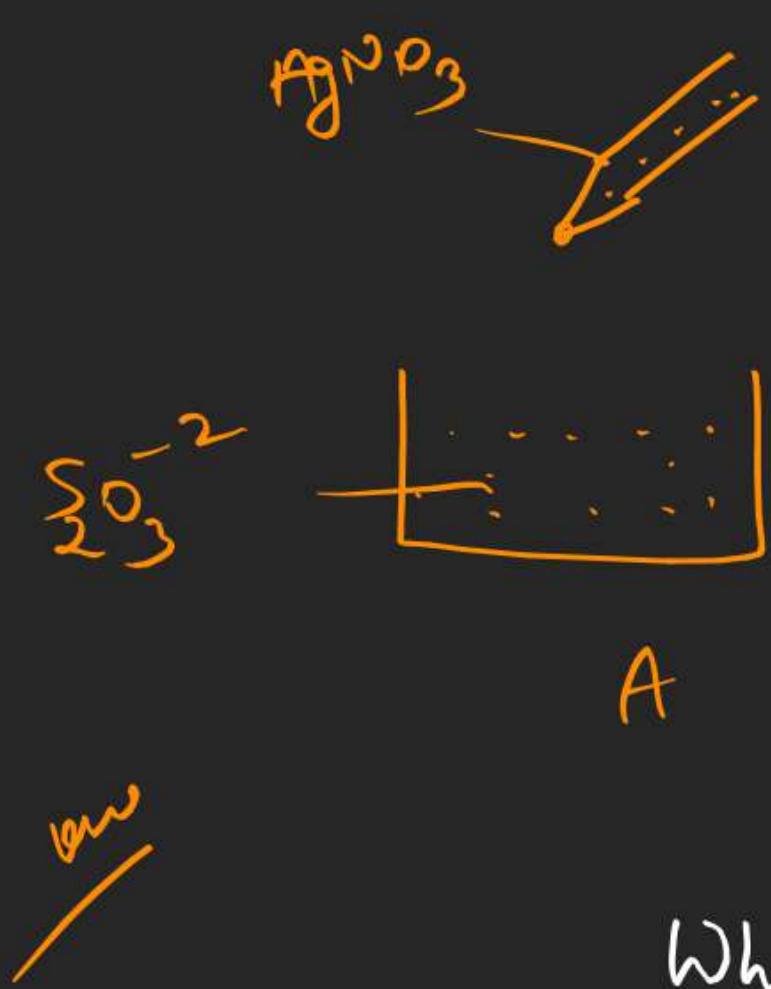
Test with AgNO_3



at first no visible action
due to formation of
soluble complex

but on addition of excess of AgNO_3
white ppt of $\text{Ag}_2\text{S}_2\text{O}_3$ is formed.

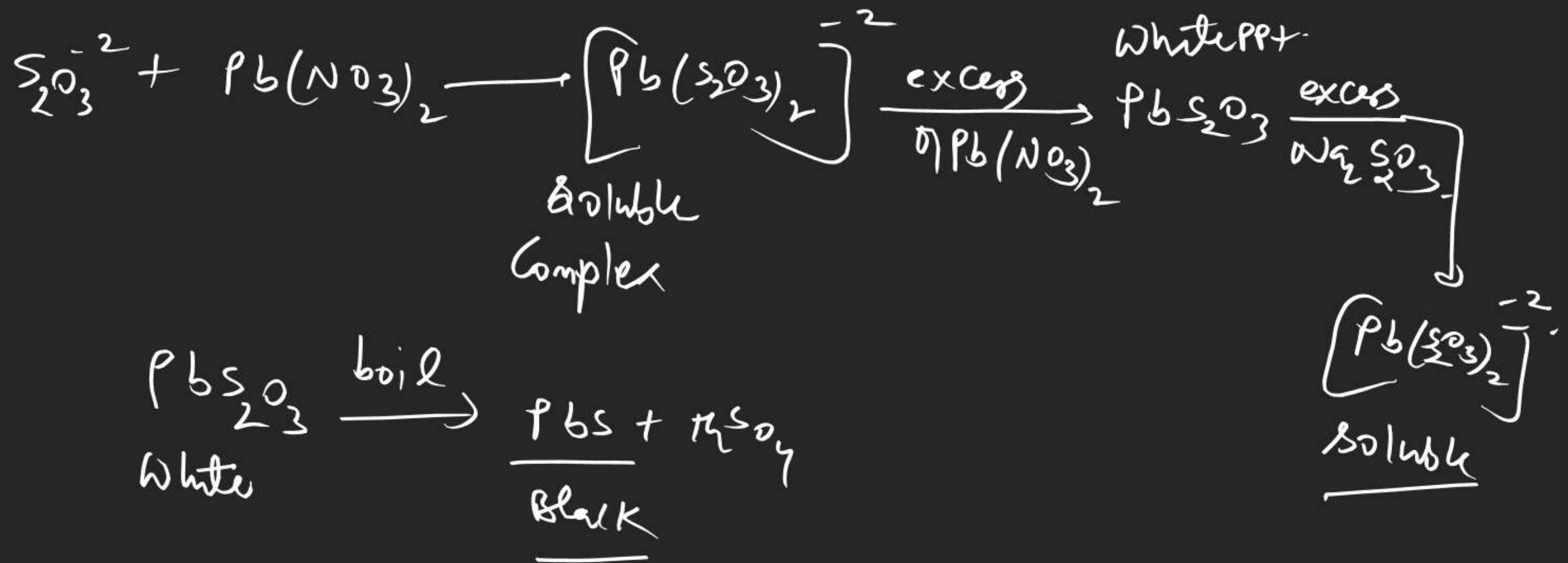




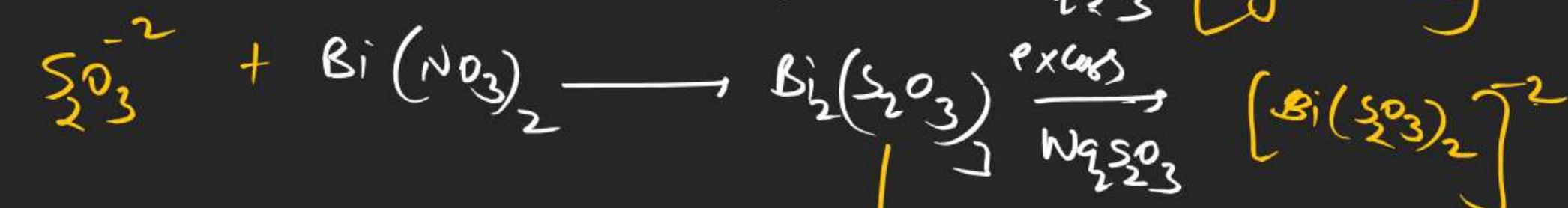
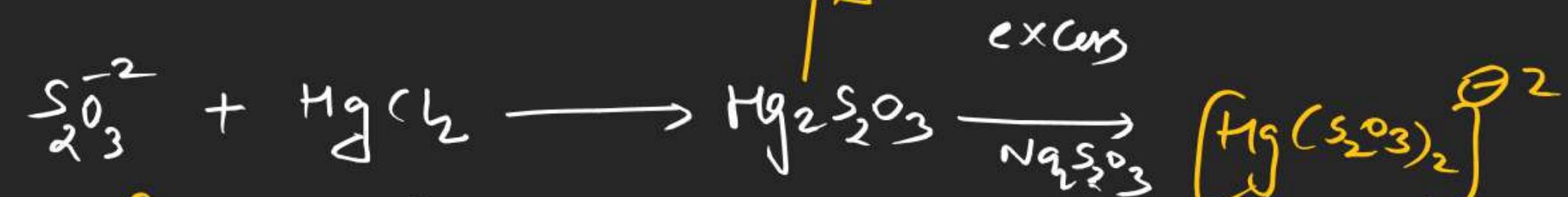
White ppt excess of AgNO_3 formed

$$\text{Ag}_2\text{SO}_3 = \underline{\text{B}}$$

Test with $\text{Pb}(\text{NO}_3)_2$

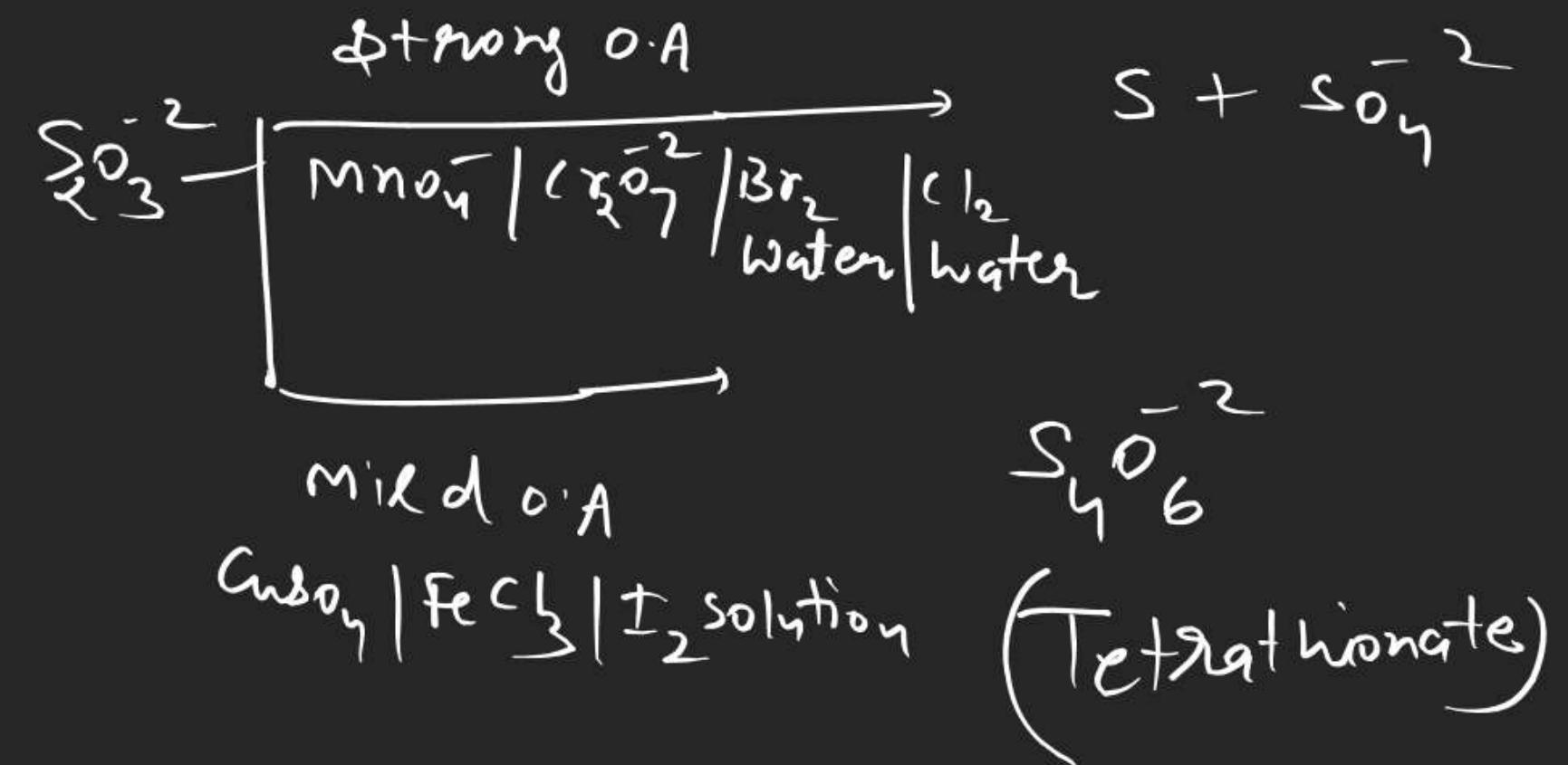


Test with $HgCl_2 | Bi(NO_3)_2$ HgS (Black)



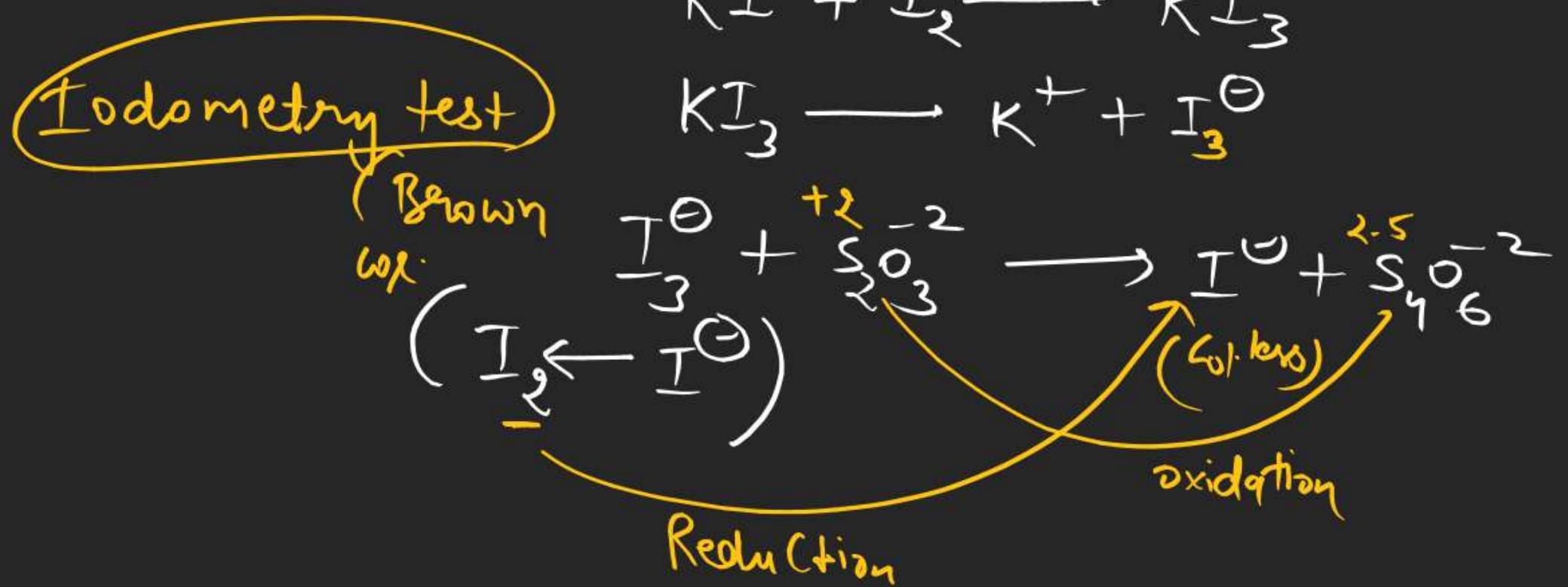
Bi_2S_3
(Brownish Black)

Redox Reaction



Test with I_2

I_2 is non polar so it don't dissolve in water



Test with CuSO_4

Note: → first Redox
followed by ppt.
reaction.

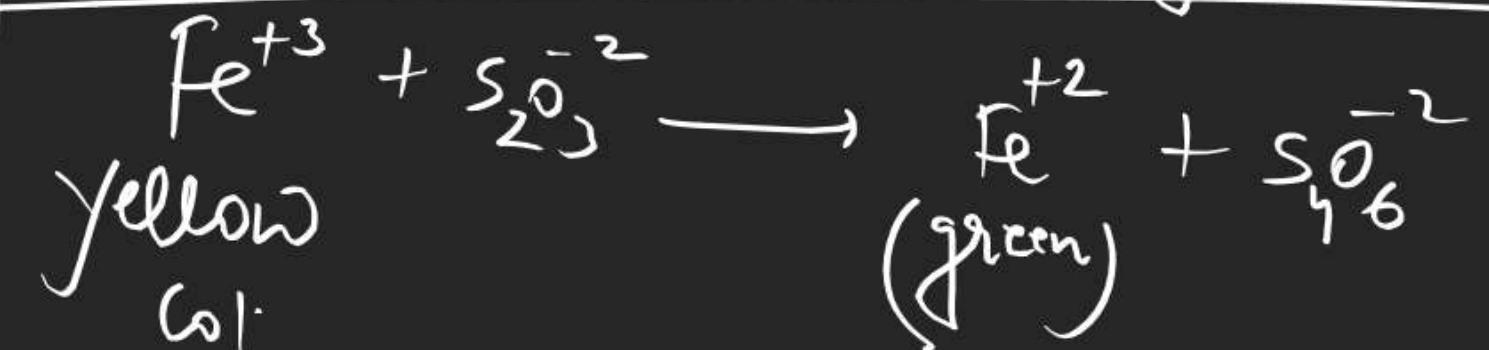
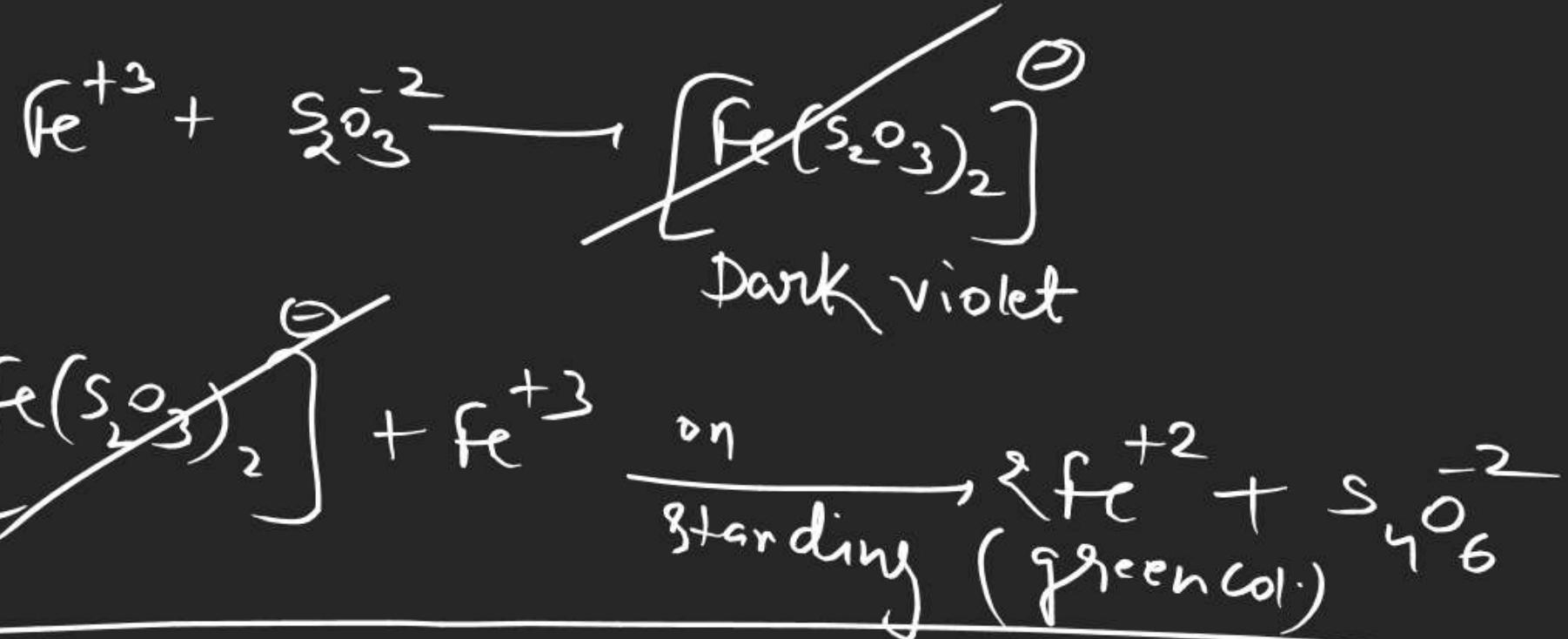


$\text{Cu}_2\text{S}_2\text{O}_3$ soluble in hypo solution due to formation
of soluble complex

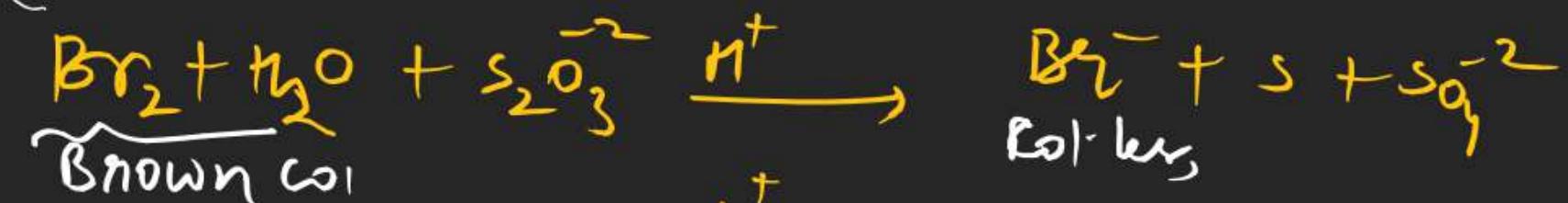
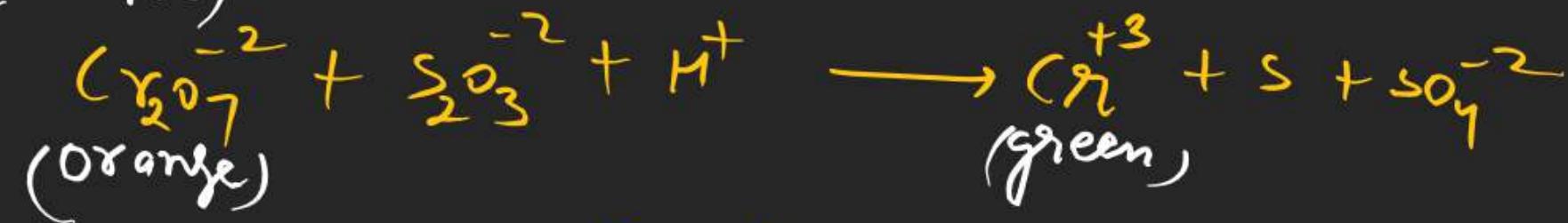


Test with FeCl_3

Note \Rightarrow first complex formation followed by Redox



Redox with strong oxidising agent



Note → In Redox Reaction for acidic medium
 we can not use HCl acid because it is
 also a R.A



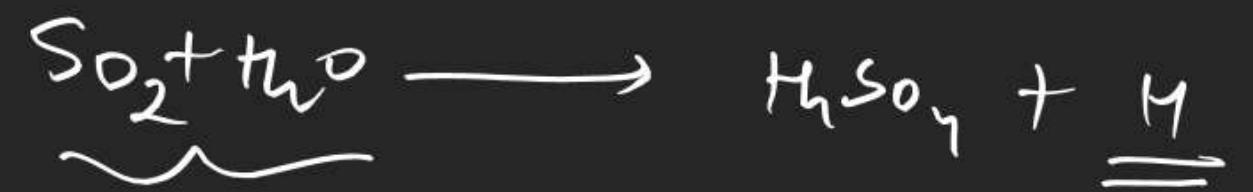
Chlorine water is a strong oxidising agent as well as strong bleaching agent and it is used to bleach Hard Cotton fabrics

excess amount of chlorine water is removed by treating it with hypo solution ($\text{Na}_2\text{S}_2\text{O}_3$)

So hypo solution also called anti-chlor.

Note \Rightarrow Chlorine water is strong bleaching agent and its bleaching action is permanent due to oxidation.

mild bleaching agent



SO_2 water is mild bleaching agent and bleaching action temporary due to reduction
it's