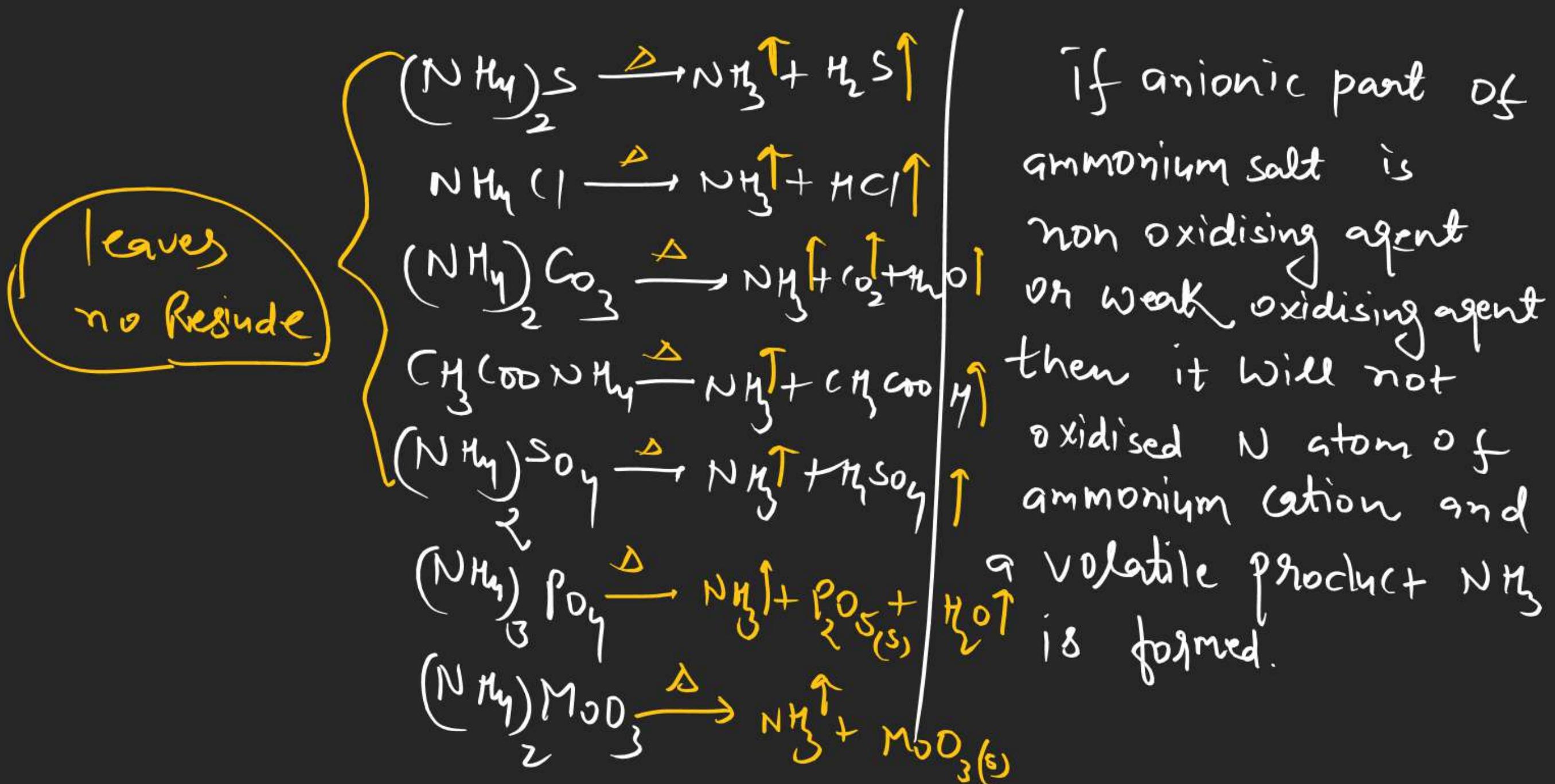


Heating effect of ammonium salt



avg. Rule \Rightarrow



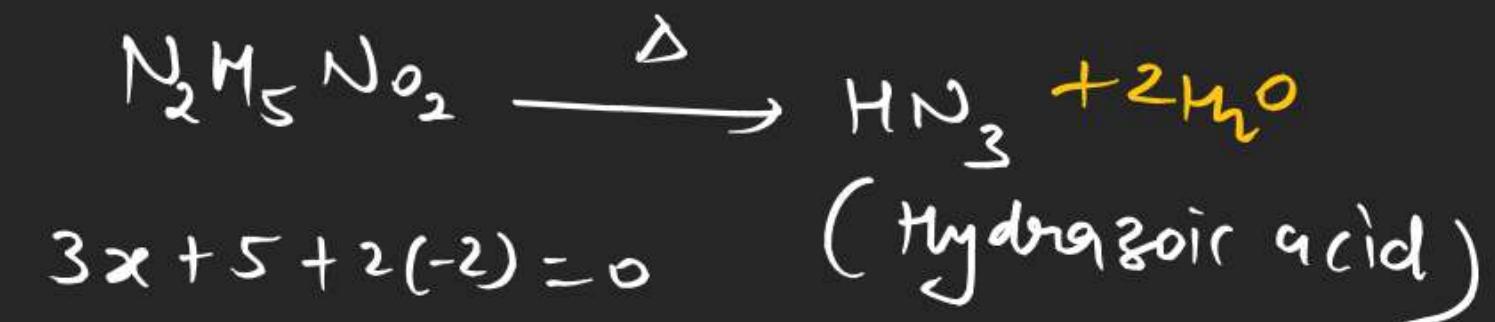
$$\begin{array}{l} \text{NH}_3^+ \quad \text{NO}_2^- \\ x+y=1 \quad x+3(-2)=-1 \\ x=-3 \quad x=+5 \end{array}$$

$$\text{avg O.S.} = \frac{-3+5}{2} = +1$$



$$\begin{array}{l} \text{NH}_3^+ \quad \text{NO}_2^- \\ x+y=1 \quad x+2(-2)=-1 \\ x=-3 \quad x=+3 \end{array}$$

$$\text{avg O.S.} = \frac{-3+3}{2} = 0$$



$$3x = -1$$

$$x = -\frac{1}{3}$$

$$\text{avg} = \frac{-2 \times 2 + 3}{3}$$



$$2x + 5 = 1 \quad x + 2(-2) = -1$$

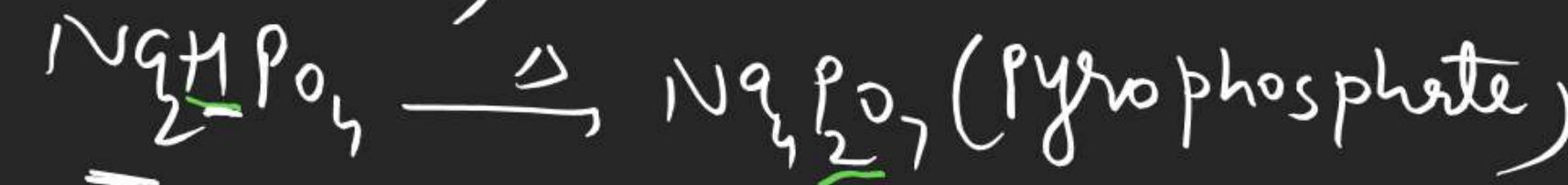
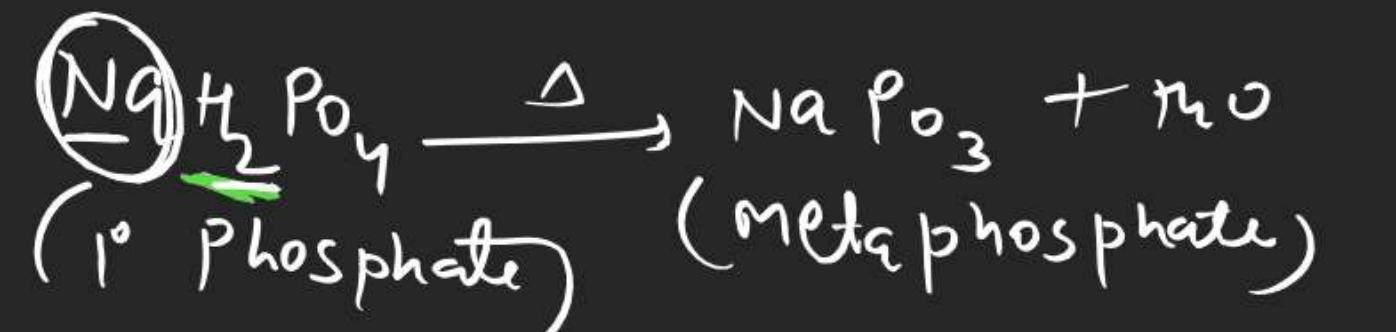
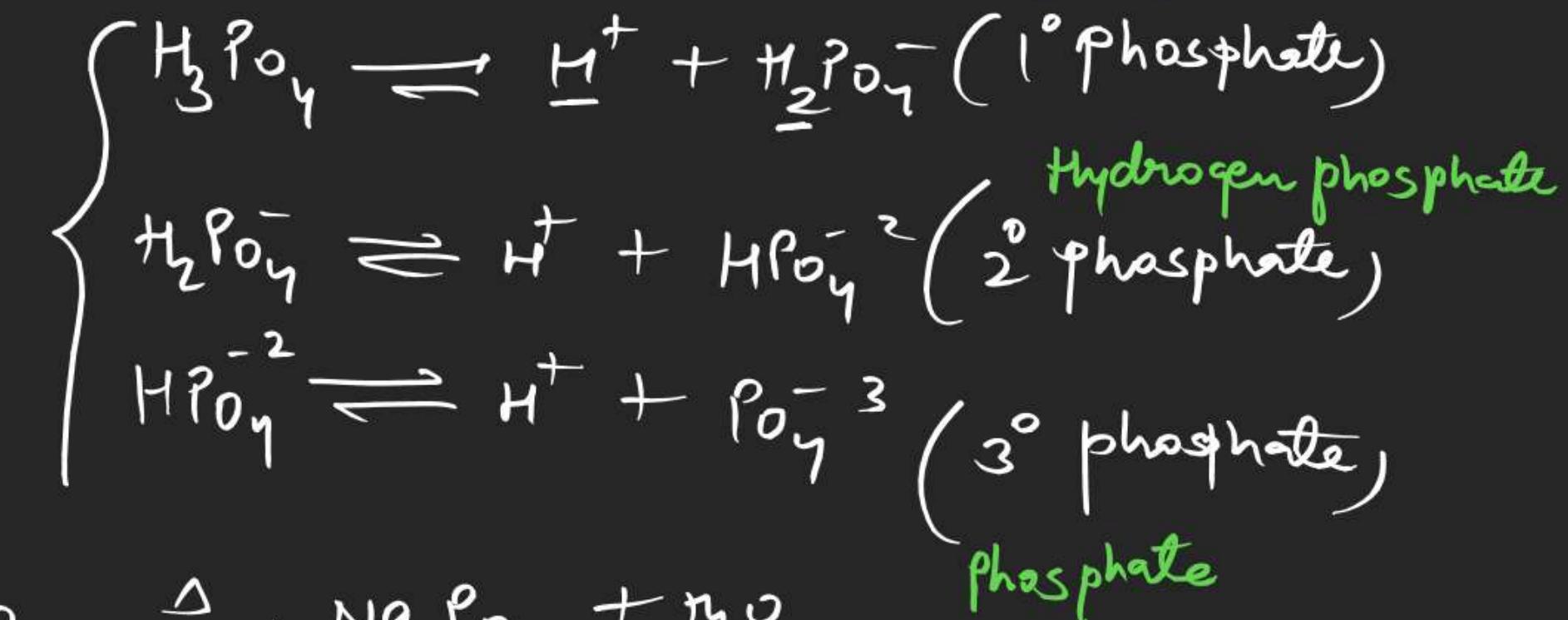
$$2x = -4 \quad x = +3$$

$$x = -\frac{4}{2} = -2$$

?

Heating effect of phosphate salt

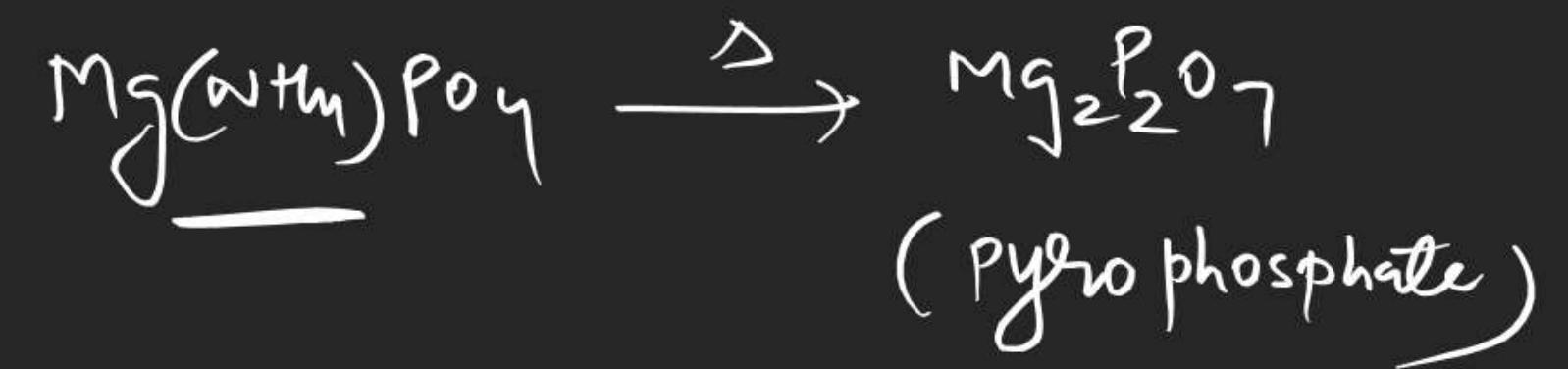
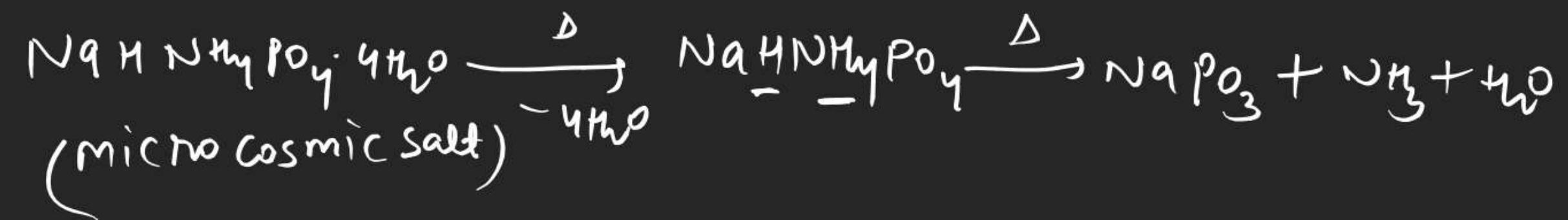
dihydrogen phosphate

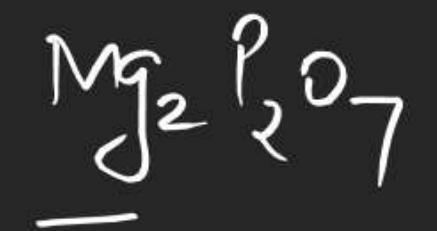


if Phosphate salt contain even number
of ionisable Hydrogen then metaphosphate
salt form.

if phosphate salt contain odd number of
ionisable Hydrogen then pyro phosphate salt
form.

Note \Rightarrow $\text{N}^{+}_{\text{H}_4}$ cation treated as a one ionisable
Hydrogen in Heating effect of phosphate salt.







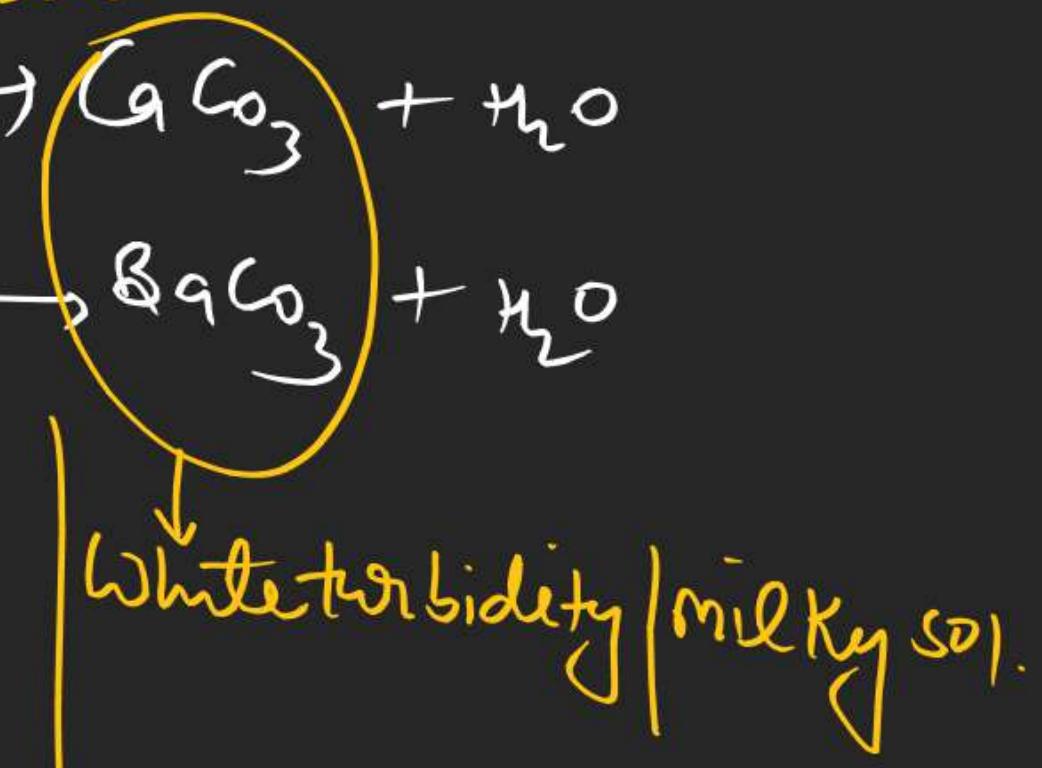
① Test with acid



CO_2 passed in lime water / Baranya water
then water turbidity appear



Excess of CO_2 passed then
disappear due to formation of
 BaCO_3 white turbidity



Test based on ppt.① Test with BaCl₂ / CaCl₂

White ppt.

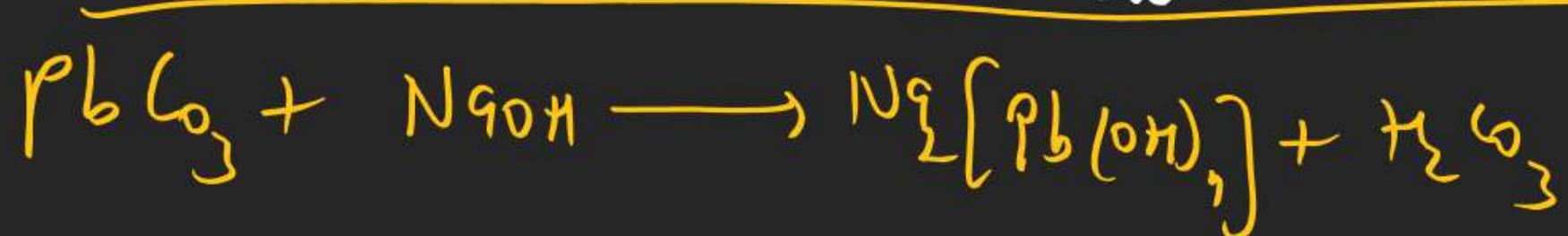
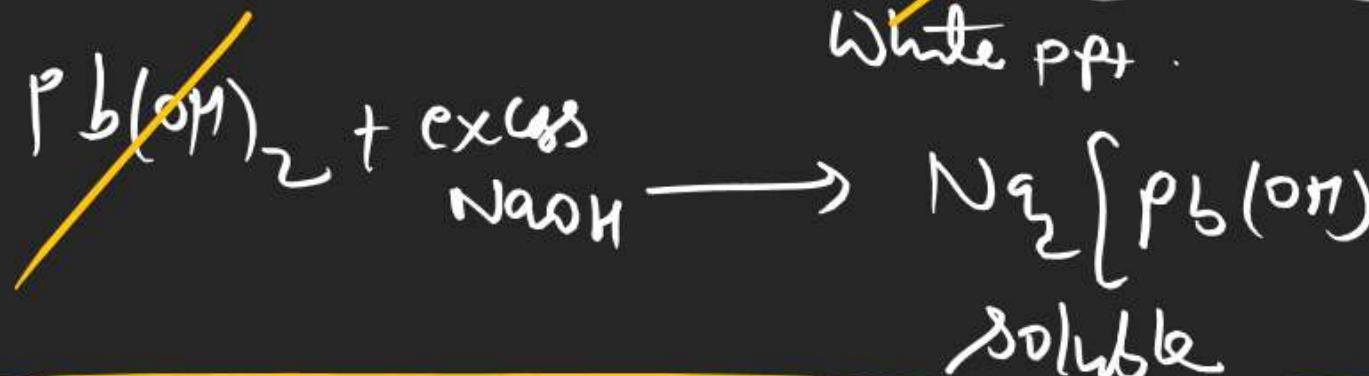
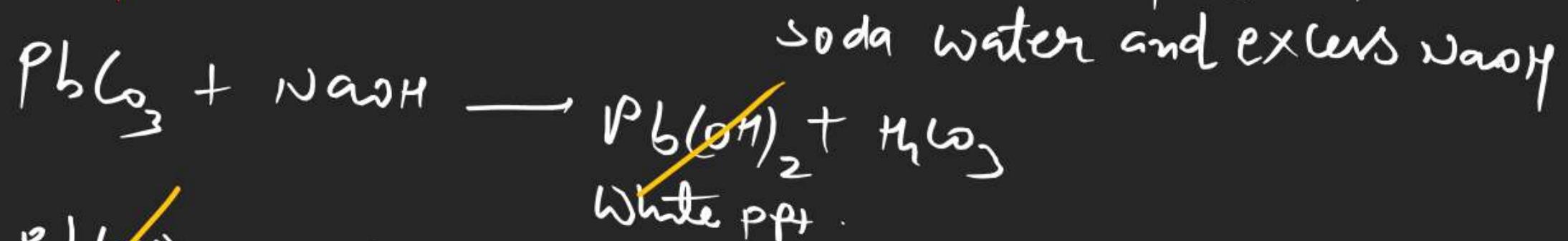
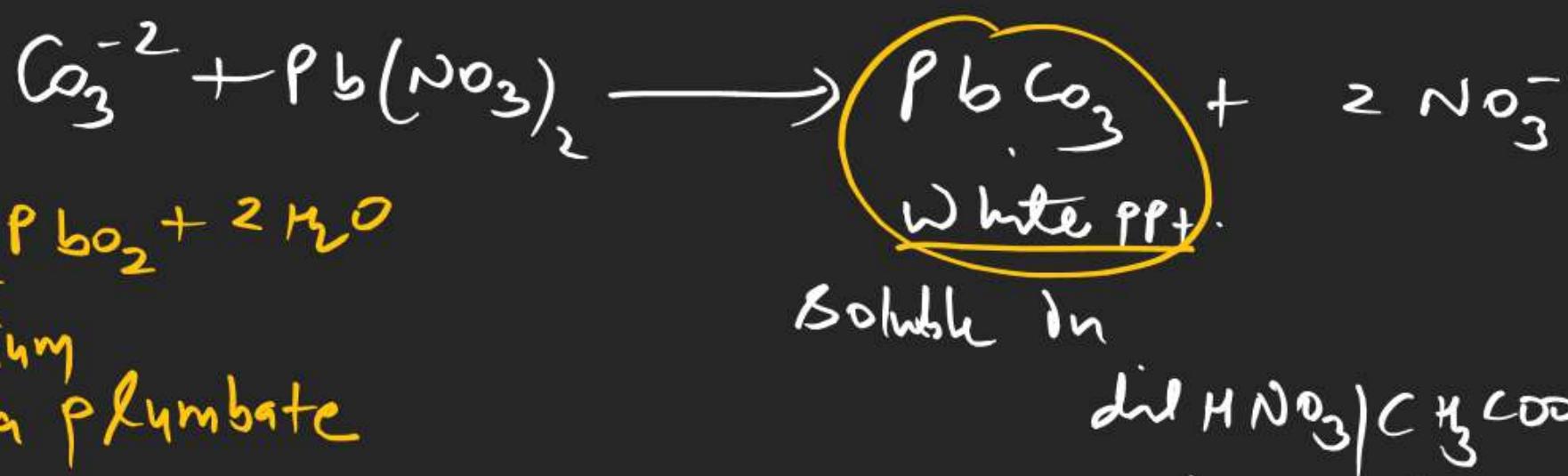
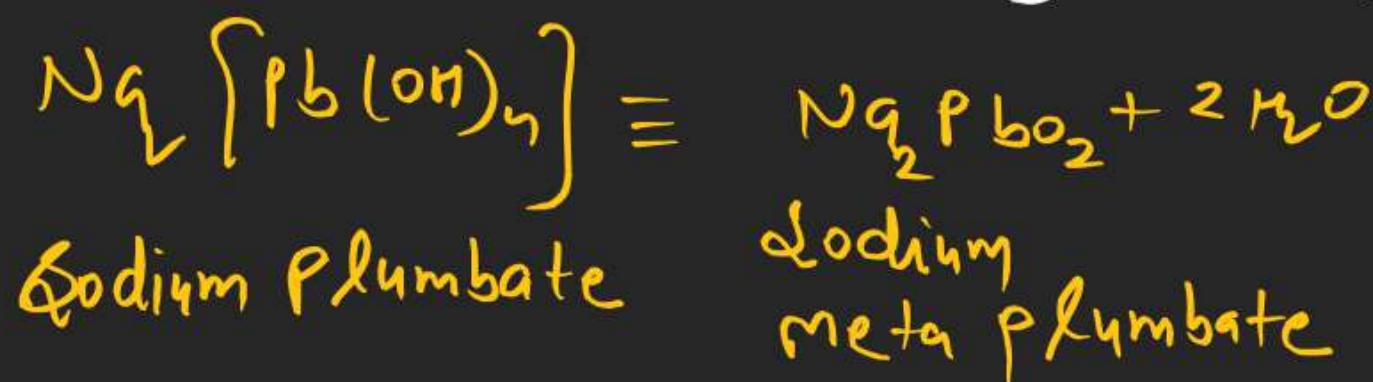
Soluble in

dil HCl | dil HNO₃ | CH₃COOH

and Soda water

(Co⁺² H₂O)

Test with $\text{Pb}(\text{NO}_3)_2$ / $\text{Pb}(\text{C}_2\text{H}_3\text{COO})_2$



Key point \Rightarrow Generally silver salts are
soluble in dil HNO_3 and NH_3 solution

except

$Ag_2S \Rightarrow$ soluble in hot and dil HNO_3
but insoluble in NH_3 solution

$AgCl | AgBr \Rightarrow$ soluble in NH_3 solution
but insoluble in dil HNO_3

$AgI =$ Insoluble in dil HNO_3 and
 NH_3 solution

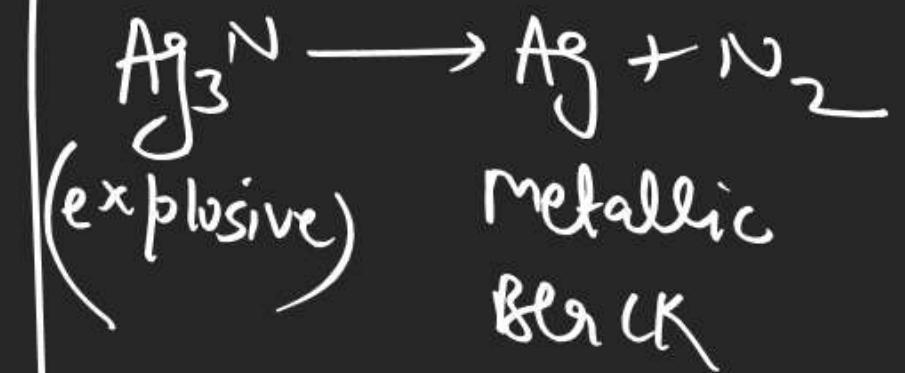
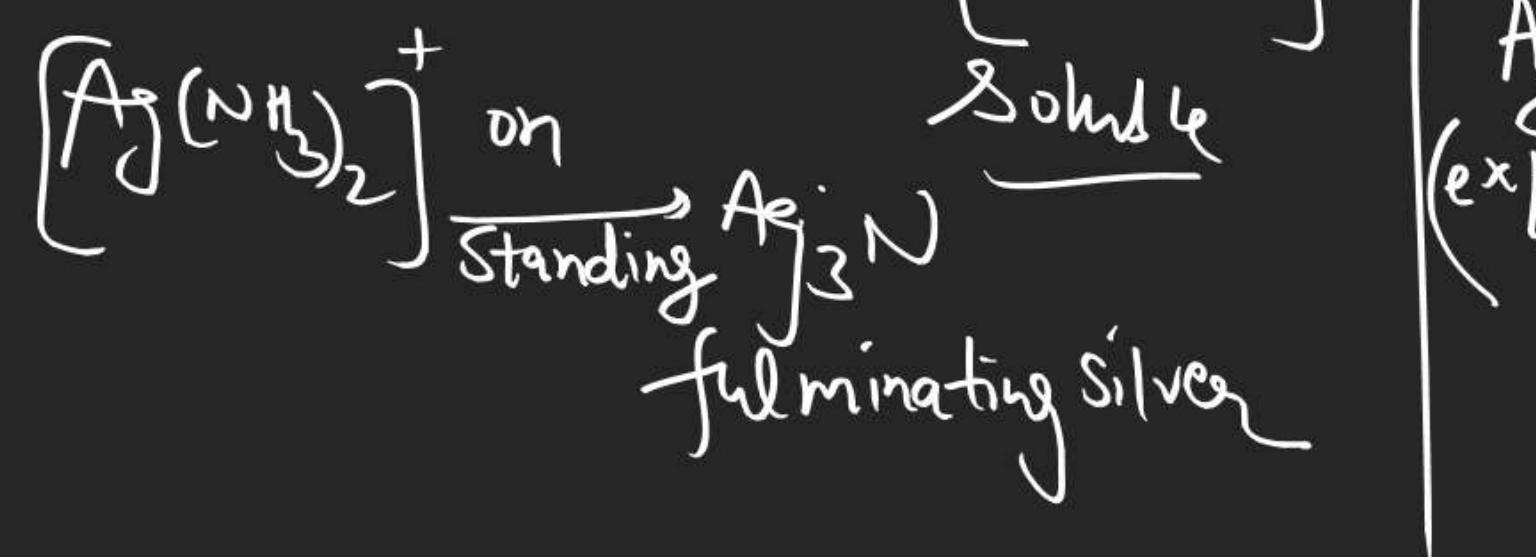
① Test with AgNO_3

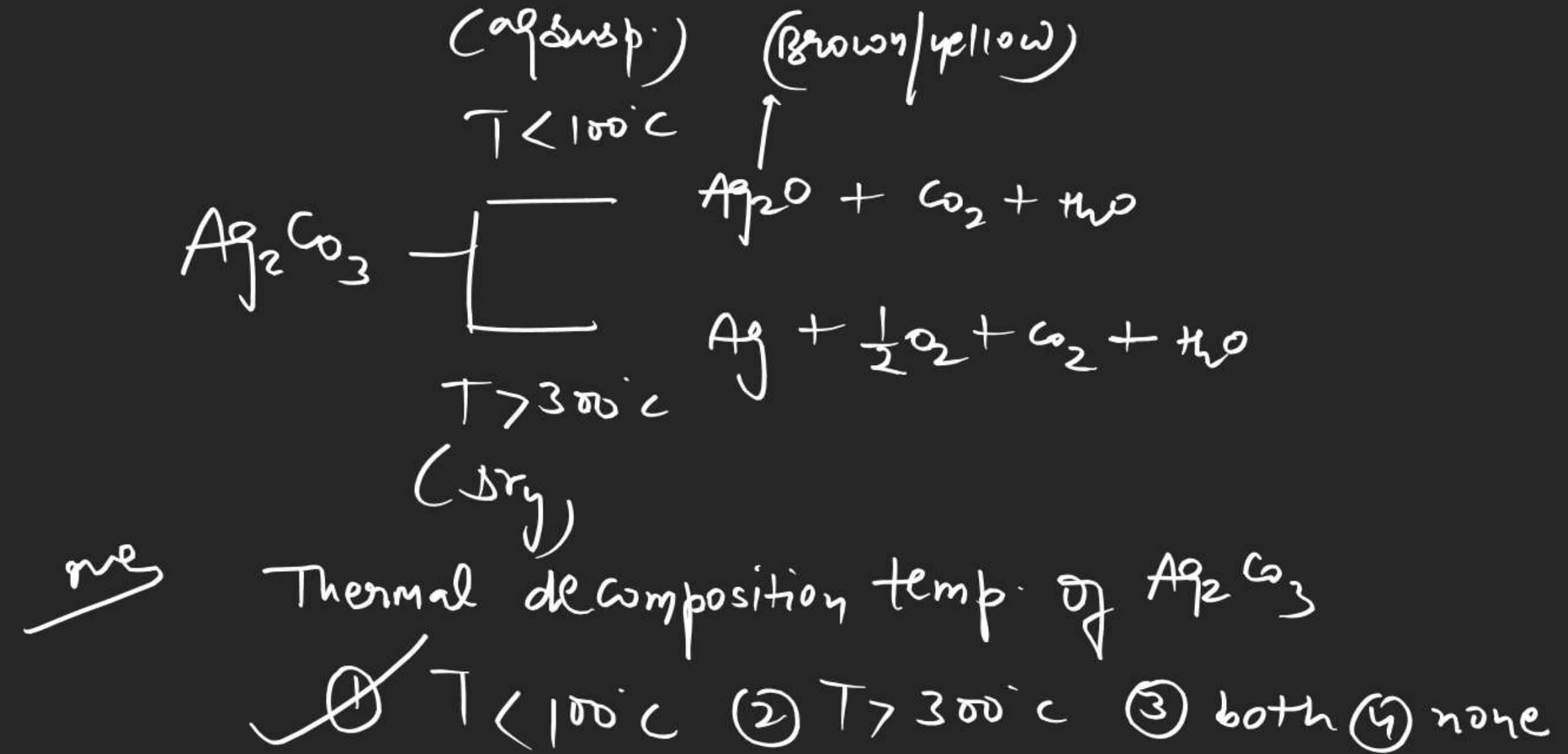


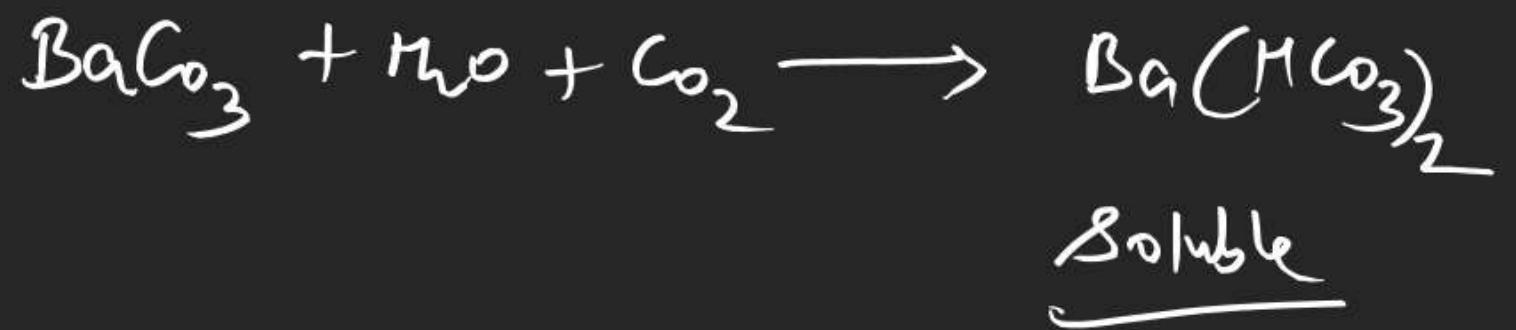
White ppt.

(yellowish
white ppt.)

Soluble in dil HNO_3



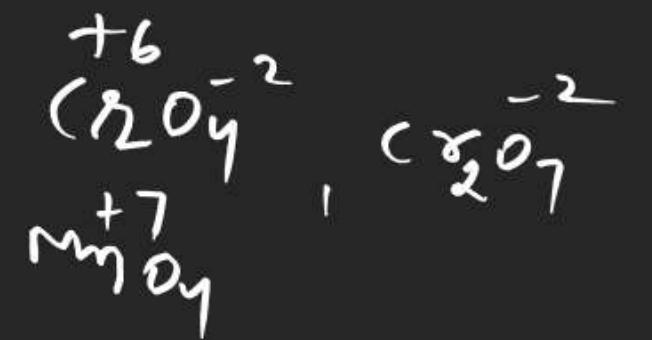




Soluble

Note \Rightarrow all HCO_3^- are water soluble except NaHCO_3

(sparingly soluble)



O.S Range = (-8) to n

$\text{n} = \text{no. of Val. e}^-$

C.I. = -1 to +7

S. = -2 to +6

P. = -3 to +5

Mn. = -1 to +7

(R. = -2 to +6)

