

Class → B.Sc II year.

Subject → Inorganic Chemistry.

UNIT Name → Theory of qualitative and quantitative analysis.

① Test For Sn²⁺ :- →

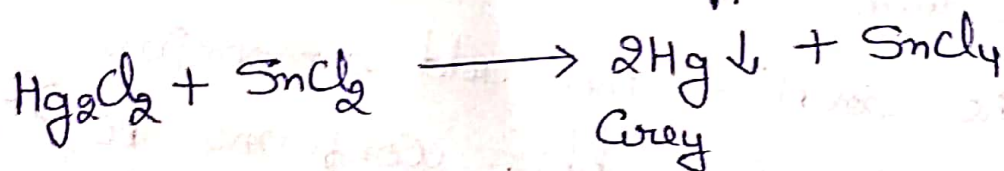
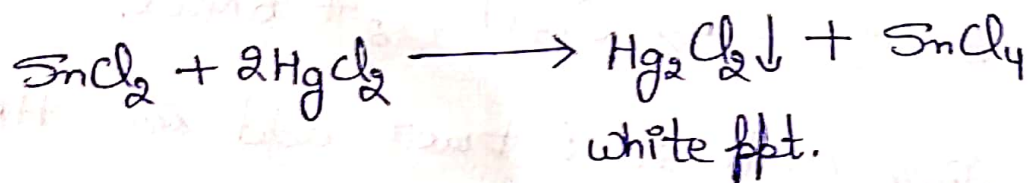
Add zinc dust to centrifugate, to reduce SnCl₄ to SnCl₂



To one part of above solution, add HgCl₂ solution.

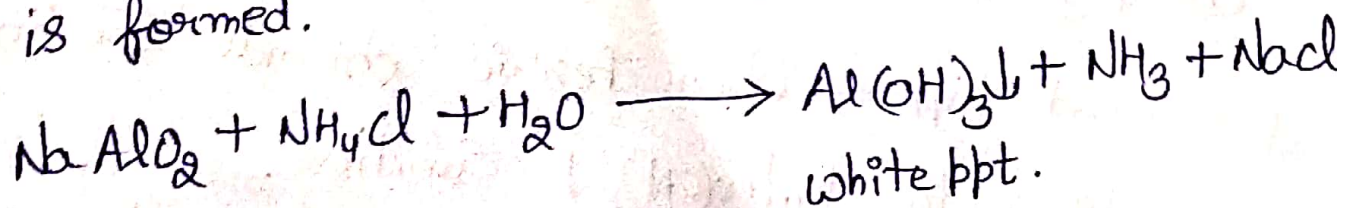
The formation of white ppt. turning grey confirms

Sn²⁺.



② Test For Al³⁺ :- →

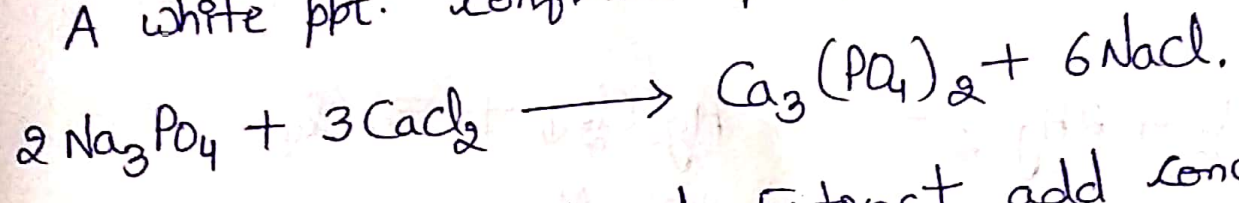
(i) To one part of centrifugate above (which get from group II) add NH₄Cl and heat. A white ppt. is formed.



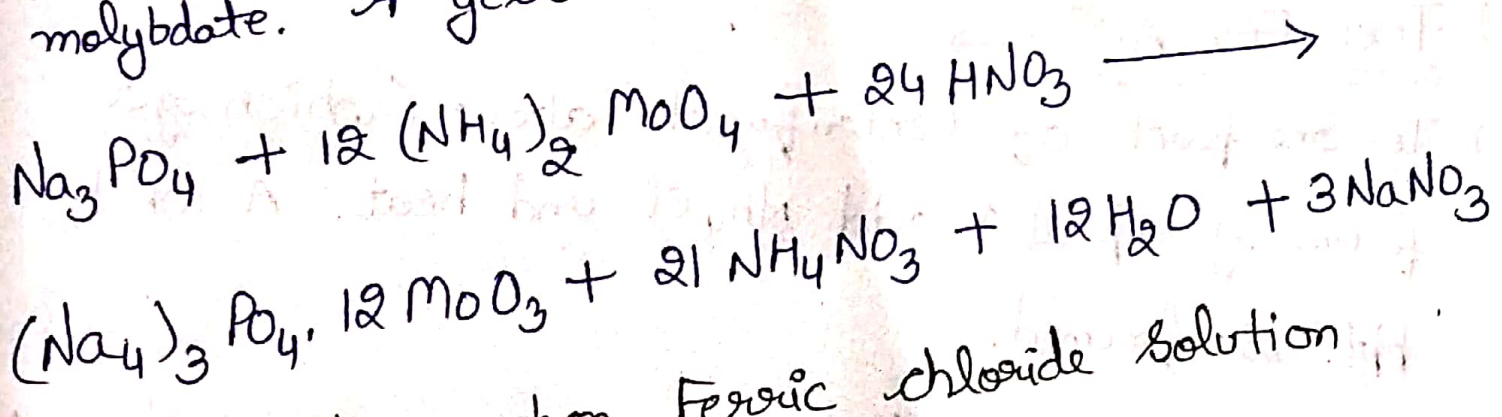
(ii) To another part of Centrifuge, add dil HCl and 1-2 drops of litmus to get red colour. Add NH_4OH dropwise. The formation of blue ppt. (due to the adsorption of litmus dye on $\text{Al}(\text{OH})_3$ ppt.) floating in colourless solution confirms Al^{3+} . This test is also known as lake test.

① Test For Phosphates (PO_4^{3-}): →

(i) Acidify a portion of S.E with CH_3COOH and boil to expel CO_2 . Add NH_4OH and CaCl_2 solution. A white ppt. confirms phosphate.

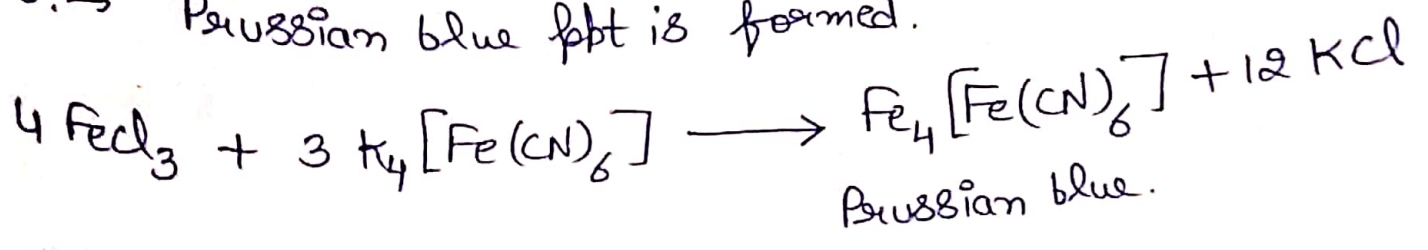


(ii) To Sodium Carbonat Extract add conc. HNO_3 . Heat the solution and add ammonium molybdate. A yellow ppt. confirms PO_4^{3-} .



Q → what happens when Ferric chloride solution reacts with $\text{K}_4[\text{Fe}(\text{CN})_6]$ solution.

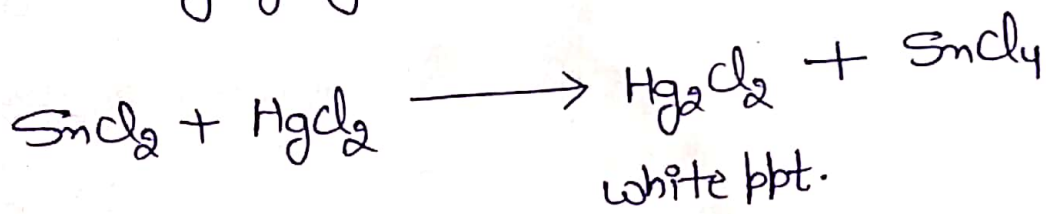
Ans: → Prussian blue ppt is formed.



Q → What happens when Tin(II) chloride is added to mercury(II) chloride.

Ans: → white ppt. of mercury(I) chloride is formed,

turning grey.



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