Practical No.1

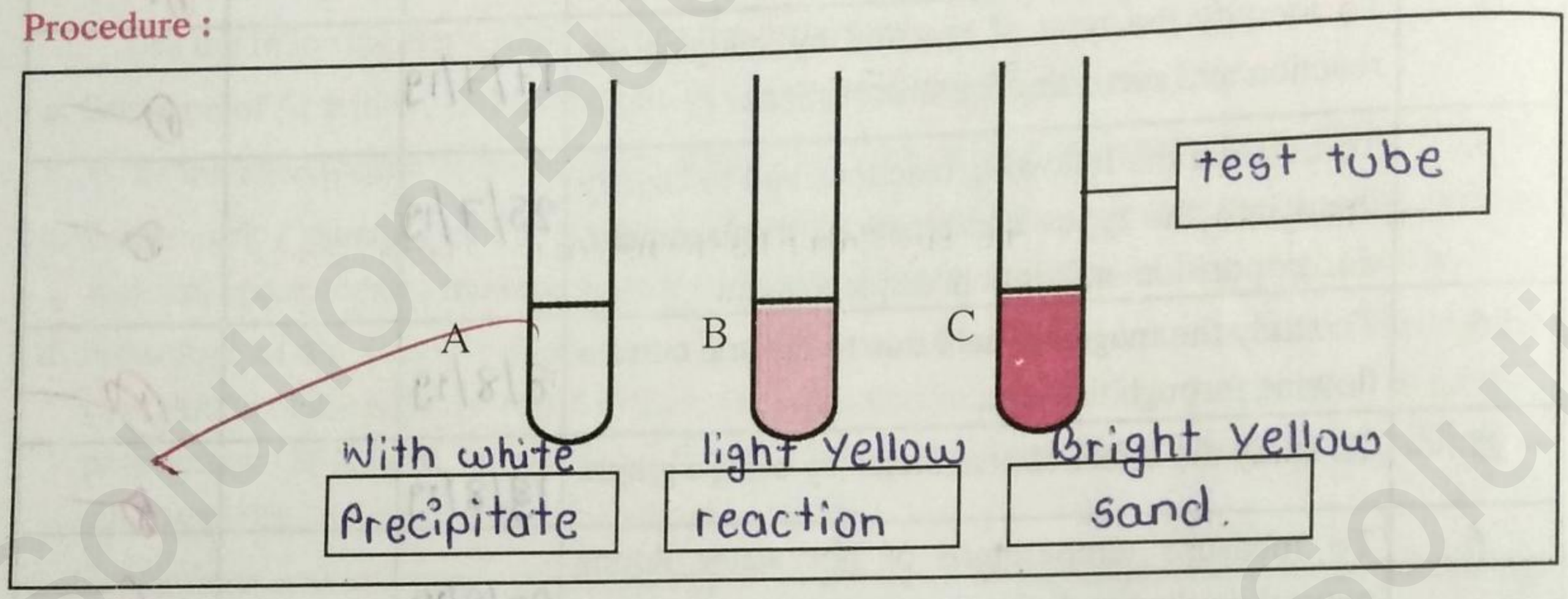
Aim : To identify the chloride, bromide and iodide ions from the given salts.

Apparatus : Test Tubes, Stand etc.

Chemicals : Silver nitrate, solutions of potassium chloride, potassium bromide and potassium iodide.

Figure : (Label the following diagram.)

Procedure :



1. Take three test tubes and label them as A, B and C.
2. Take about 5ml of solutions of potassium chloride in C, potassium bromide in B and potassium iodide in C.
3. Add about 5ml silver nitrate solution and stir it.
4. Keep test tubes on the stand and observe.

Observations :

Test Tube	Chemical Reaction	Colour of precipitate	ion
A	$KCl + AgNO_3 \longrightarrow KNO_3 + AgCl \downarrow$	White	chloride (Cl^-)
B	$K_2CrO_3 + BaSO_4 \rightarrow BaCrO_4 + K_2SO_4$ $KBr + AgNO_3 \rightarrow KNO_3 + AgBr \downarrow$	light yellow	Bromide....
C	$2HCl + Mg \rightarrow MgCl_2 + H_2$ $KI + AgNO_3 \rightarrow KNO_3 + AgI \downarrow$	bright yellow	Hydrogen...

Inference / Conclusion :

1. Ions are precipitated in all the three reaction in the experiment.
2. Elements in the halogen family belonging to 17th group in the periodic table show similarity in their properties.

In it the double displacement reaction will be happened.

Multiple Choice Questions

1. Valency of the elements in the halogen group is ....One.....
   a. one b. two c. three d. four
2. The most reactive element in the halogen group is ....Fluorine.....
   a. Astetine b. Iodine c. Chlorine d. Fluorine
3. The halogen which is liquid at room temperature is ..Bromine.....
   a. Fluorine b. Astetine c. Bromine d. Iodine
4. The metallic character of elements ..Increases... in a group from top to bottom.
   a. increases b. decreases c. remains constant d. shows indefinite behaviour.
5. Valency of elements ..... in a period from left to right.
   a. Increases b. decreases
   c. remains constant d. increases in the beginning and then decreases.

: Exercise :

1. Observe the Modern Periodic Table and explain the gradation in reactivity of Halogen family.

In the modern periodic table the vertical colomns are called as groups.
In that groups-17 is a hologen family. These elements of hologen are non-metallic in there character. The valuency of halogen families atom is one. Because the outermost element in that group are 7. So they need one electrone to complete their octet. example - Cl_2, Fl_2

2. What are the similarities in properties of elements in Halogen family?

Halogen is the 17 group in Modern periodic table. The all elements in Halogen family have same valency. That is outermost eten shell have 7 electron in this Halogen group

3. Why does Inert gases placed in Zero group?

When mendeleev put periodic table that time noble gas are not discovered. But, At the time of end ninteen-th century they were discoverd.
The property of inert gases is that, their outermost shells is complete, means octat is complete. So, this group is known as 'zero group'

Remark and Signature .....

PMPXYM