

Puspa Shrestha

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Puspa Shrestha

EXPERIMENT NO. 10

NAME OF EXPERIMENT: TO IDENTIFY BASIC RADICAL PRESENT IN THE GIVEN SALT SAMPLE

APPARATUS REQUIRED

1. Test tube
2. Test tube holder

CHEMICALS REQUIRED

1. dil. HCl
2. conc. HCl
3. NH_4OH
4. NH_4Cl

THEORY

The electropositive radical which comes from a base is called basic radical. In other words, the radical of the base other than the OH^- ion is called basic radical. For eg: Na^+ is a basic radical because it is the radical in NaOH other than OH^- ion.

OBSERVATION

Dry test

Experiment	Observation	Inference
In dry test tube, a pinch of salt was taken and heated.	Salt was turned into solid form.	May be presence of Al^+

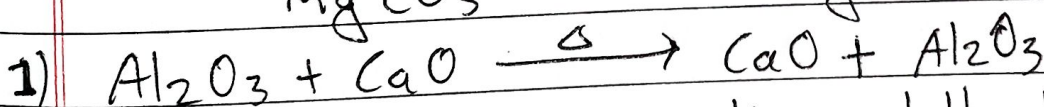
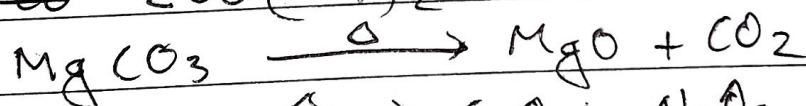
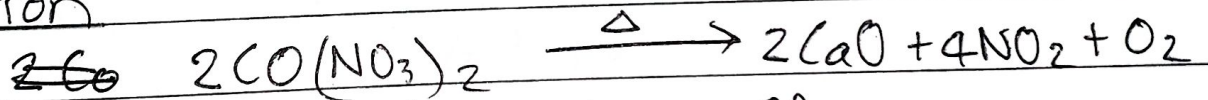
Filter Ash Test

When charcoal reduction test is not performed, then this test can be done. This test is also based on the fact that on heating cobalt nitrate is converted to cobalt oxide.

Salt solution was taken and a few drops of cobalt nitrate solution was added. The solution was shaken. Piece of filter paper was dipped in this solution and the paper was ignited completely.

Experiment	Observation	Inference
Filter ash test was performed.	Colour of ash was blue.	Presence of Al salt.

Reaction



blue cobalt aluminate

Wet Test

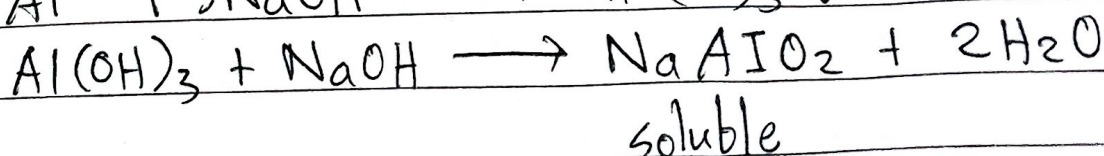
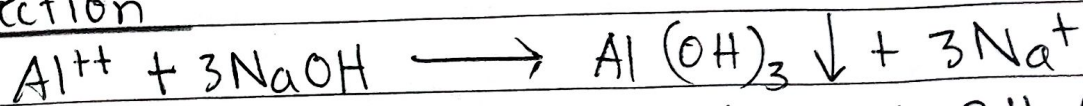
Experiment	Observation	Inference
1. 1ml of salt solution was taken in test tube and dil. HCl was added.	1. No ppt was seen.	1. Absence of Group-I
2. Exp. (1) was warmed	2. No ppt was	2. Absence of

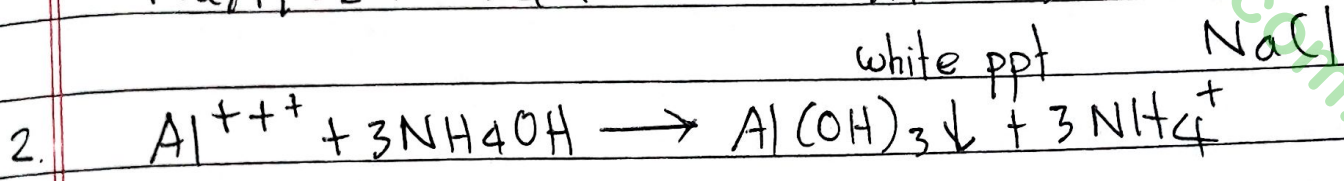
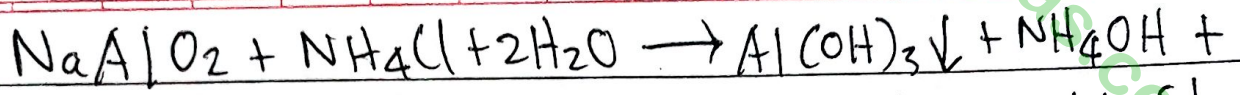
Experiment	Observation	Inference
and H_2S gas was passed for 20 sec.	seen.	Group II
3. Salt solution was taken in test tube and few drops of NH_4OH and NH_4Cl was added.	3. ppt was formed.	3. Presence of Group IIIA

Confirm Test

Experiment	Observation	Inference
1. 1 ml of salt solution was taken and $NaOH$ was added.	1. White ppt was seen which was soluble in excess of $NaOH$ sol ⁿ . i.e. precipitated by NH_4Cl	1. Presence of Al^{++}
2. 1 ml of salt sol ⁿ was taken and NH_4OH sol ⁿ was added.	2. White ppt was seen.	2. Presence of Al^{++}

Reaction





RESULT

Hence the basic radical in the given salt sample was presence of Al^{++}

PRECAUTION

1. All the glasswares should be handled carefully.
2. The process of drying test tube should be done properly.

[Signature]
19/12/18