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EXPERIMENT NO. 7

NAME OF EXPERIMENT: TO IDENTIFY ACID RADICAL FROM THE GIVEN SAMPLE OF SALT BY DRY AND WET METHOD (SL).

APPARATUS REQUIRED

1. Test tube
2. Test tube holder
3. Burner

CHEMICALS REQUIRED

1. Salt sample
2. Dil. HCl
3. Conc. H_2SO_4
4. $AgNO_3$
5. $BaCl_2$
6. $FeSO_4$

THEORY

A radical may be defined as a group of atom having positive or negative charge and behave as a single unit in chemical changes. The electronegative radical which comes from an acid is called acid radical. In ether the radical of the acid other than H^+ ion is called acid radical. Eg:- Cl^- , Br^- , I^- , etc.

The chemical substance which is formed by the partial or complete displacement of hydrogen with metal is called salt. For eg:- $NaCl$, KCl , etc.

OBSERVATION TABLE

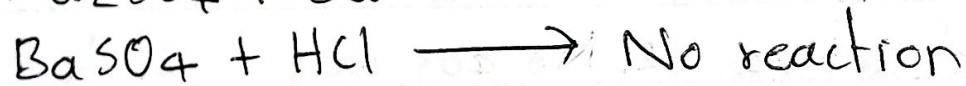
(i) Dry Test

Experiment	Observation	Inference
1. A pinch of salt was taken in clean and dry test tube and HCl was added and warmed.	1. No gas was seen.	1. Absence of NO_3^- , CO_3^{--} , SO_3^{--}
2. A pinch of salt was taken in clean and dry test tube and conc. H_2SO_4 was added.	2. No gas was evolved.	2. Absence of halogen.
3. Copper turning was added to exp. (2) and warmed.	3. No brown fume was evolved.	3. Absence of NO_3^{--}

(ii) Wet Test

Experiment	Observation	Inference
1. Salt solution was taken in clean test tube and BaCl_2 was added. (if ppt appeared excess HCl was added)	1. White ppt was formed which was insoluble in excess dil. HCl	1. Presence of SO_4^{--}
2. Salt solution was	2. No brown ring	2. Absence of

TEST REACTION



The ppt. doesn't dissolve even in conc. HCl

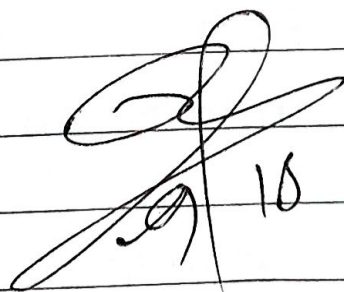
taken and FeSO_4 and conc H_2SO_4 was added.	was seen.	NO_3^-
3. Salt solution was taken in clean test tube and few drops of dil. HNO_3 was added. Sol ⁿ was warmed and cooled and AgNO_3 was added	3. No ppt was formed	3. Absence of halogen.

RESULT

Hence, we identify the presence of SO_4^{2-} in the given salt sample (S_1).

PRECAUTIONS

1. All the apparatus should be handled carefully.
2. The process of drying test tube should be done carefully.
3. The chemicals used in it should be handled carefully.



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