

Experiment - 1

Objective Analysis of given inorganic mixture for the acidic radicals identification.

Requirement Inorganic mixture, concentrated H_2SO_4 , diluted H_2SO_4 and other reagent.

Apparatus Test tube, test tube holder, burner, graduated pipette, measuring flask, test tube stand etc.

Procedure

Group - 1: Test with dilute H_2SO_4
Preliminary Test:

Experiment	Observation	Inference
1) Place a small amount of mixture in a dry test tube and add about 2 ml of dil H_2SO_4 .	Bubbles efferves with the solution of colourless gas (CO_2)	CO_3^{2-} carbonate may be present

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Confirmatory Test

1. Pass the evolved gas into lime water $[\text{Ca}(\text{OH})_2]$ lime turns milky

CO_3^{2-} confirmed

Group II: Test with concentrated H_2SO_4

Experiment	Observation	Inference
<u>Preliminary Test</u>		chloride
① Place a mixture in a dry test tube and add concentrated H_2SO_4 (add 12 ml)	colourless gas evolved with pungent smell	$[\text{Cl}^-]$ may be present
<u>Confirmatory test</u>		Cl^- confirmed
① Bring the glass rod dipped into NH_4OH solution to the mouth of the test tube		
2) chromyl chloride test To the mixture add 3		

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times of its weight of $K_2Cr_2O_7$ then add concentrated H_2SO_4 and heat. Orange yellow vapours are evolved into $NaOH$ sol. Yellow solution is obtained. Acidity is

Chloride (Cl^-) confirmed

Result

The given inorganic mixture contains CO_3^{2-} and Cl^- radicals.

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