



Inorganic Revision Sheet

Ion Tests for OCR (A)

Correct sequence for analysing a sample: test for carbonate, then sulfate and then halide

Ammonium, NH_4^+

Test: Add sodium hydroxide and warm

Result: Ammonia formed (turn damp red litmus paper blue)



Turns damp red litmus paper blue

Halide Ions, Cl^- , Br^- and I^-

Test: Add dilute nitric acid followed by silver nitrate

Result: Solid precipitate forms

Precipitates have different solubilities in ammonia (NH_3)



WHITE precipitate dissolves in dilute ammonia (NH_3)



CREAM precipitate dissolves in concentrated ammonia (NH_3)



YELLOW precipitate unable to dissolve in concentrated ammonia (NH_3)

Carbonate Ion, CO_3^{2-}

Test: Add weak acid (aq)

Result: Effervescence (gas produced), gas turns limewater from colourless to cloudy



Turns limewater cloudy
(from colourless)

Sulfate Ion, SO_4^{2-}

Test: Add acidified Barium Chloride, $\text{BaCl}_2(\text{aq})$

Result: White precipitate forms



WHITE precipitate