



# Inorganic Revision Sheet

## Ion Tests for OCR (A)

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

### Ammonium, $\text{NH}_4^+$

**Test:** Add sodium hydroxide and warm  
**Result:** Ammonia formed (turn damp red litmus paper blue)



Turns damp red litmus paper blue

### Halide Ions, $\text{Cl}^-$ , $\text{Br}^-$ and $\text{I}^-$

**Test:** Add dilute nitric acid followed by silver nitrate  
**Result:** Solid precipitate forms  
*Precipitates have different solubilities in ammonia ( $\text{NH}_3$ )*



**WHITE** precipitate dissolves in dilute ammonia ( $\text{NH}_3$ )



**CREAM** precipitate dissolves in concentrated ammonia ( $\text{NH}_3$ )



**YELLOW** precipitate unable to dissolve in concentrated ammonia ( $\text{NH}_3$ )

### Carbonate Ion, $\text{CO}_3^{2-}$

**Test:** Add weak acid (aq)  
**Result:** Effervescence (gas produced), gas turns limewater from colourless to cloudy



Turns limewater cloudy  
(from colourless)

### Sulfate Ion, $\text{SO}_4^{2-}$

**Test:** Add acidified Barium Chloride,  $\text{BaCl}_{(\text{aq})}$   
**Result:** White precipitate forms



**WHITE** precipitate