OCR Chemistry A-Level

PAG 04 - Qualitative analysis of ions

Flashcards

Describe the chemical test for halide ions

Describe the chemical test for halide ions

Add dilute nitric acid to react with carbonate ions so no Ag_2CO_3 forms (white solid).

Add silver nitrate. Precipitate forms:

- White: AgCl (soluble in dilute ammonia)
- Cream: AgBr (soluble in concentrated ammonia)
- Yellow: AgI (insoluble in ammonia)

How can SO_4^{2-} ions be identified?

How can SO_4^{2-} ions be identified?

Add aqueous barium nitrate. A white precipitate ($BaSO_4$) will form if sulfate ions are present. This precipitate is insoluble in excess dilute strong acids.

Describe the chemical test used to detect CO_3^{2-} and HCO_3^- ions

Describe the chemical test used to detect CO_3^{2-} and HCO_3^- ions

- Add aqueous acid
- If either ion is present bubbles of CO_2 will be released
- Test the gas by bubbling it through limewater via a delivery tube. If it is CO_2, the limewater will turn cloudy

What are the solubilities of the first 3 group 2 metals (Mg, Sr, Ba) in sulfate solution?

What are the solubilities of the first 3 group 2 metals (Mg, Sr, Ba) in sulfate solution?

Mg - soluble

Sr - insoluble

Ba - insoluble

What are the solubilities of the first 3 group 2 metals (Mg, Sr, Ba) in chromate solution?

What are the solubilities of the first 3 group 2 metals (Mg, Sr, Ba) in sulfate solution?

Mg - soluble

Sr - soluble

Ba - insoluble