

Cambridge IGCSE Chemistry

Topic 8: Acids, bases and salts

Preparation of salts

Notes





Demonstrate knowledge and understanding of preparation, separation and purification of salts

salts from insoluble bases:

- add excess base to the acid
- filter to remove any unreacted base that's been added
- heat solution or leave in warm place to evaporate the water, allowing crystals of the salt to form

salts from soluble bases:

- use an acid-base titration to find the exact volume of the soluble base that reacts with the acid
- mix these correct proportions, which will produce a solution of the salt and water only (as all the acid and base has reacted)
- warm solution to evaporate the water to leave crystals of the salt

(Extended only) Demonstrating knowledge and understanding of the preparation of insoluble salts by precipitation

- An insoluble salt is formed as a precipitate, which means it is a solid in the water/solution.
- making insoluble salts:
 - mix the two solutions that will form the salt
 - filter to remove the solid insoluble salt
 - wash salt with distilled water
 - leave salt to dry on filter paper (or dry more quickly in an oven)

(Extended only) Suggest a method of making a given salt from a suitable starting material, given appropriate information

- If reactants are soluble = titration
- If base is insoluble = add an excess of it to acid to ensure neutralisation and then remove the excess
- if you are given the name of a salt and need to identify suitable starting materials:
 - first part of name e.g. sodium → use a base containing sodium e.g. sodium hydroxide
 - second part of name → acid:
 - sulfate → sulfuric acid
 - nitrate → nitric acid
 - chloride → hydrochloric acid

