



“DESCRIBE” 6 MARK QUESTIONS

C5 Chemical Changes

Developing a technique to answer a **describe** question (describe – to recall processes of events)

- Step 1 – **read** the information supplied
- Soluble salts are formed by reacting metal oxides with acids.
- Describe a method to make pure, dry crystals of magnesium sulfate from a metal oxide and a dilute acid. **(6 marks)**

- Step 2 – **plan** your answer
 - Plan your answer by writing logically ordered bullet points for each step in the method
 - **Remember to mention which chemicals you need to react together to make the magnesium sulfate**

Developing a technique to answer a **describe** question (describe – to recall processes of events)

- Step 3 – **answer** the question
- Proof read your answer
- Check that your points flow logically e.g. have you filtered before heating or the other way around

Example answer:

- ADD MAGNESIUM OXIDE TO WARM SULFURIC ACID IN A BEAKER. STIR THE CONTENTS AND KEEP ADDING MAGNESIUM OXIDE UNTIL NO FURTHER REACTION IS OBSERVED. FILTER THE EXCESS UNREACTED MAGNESIUM OXIDE USING FILTER PAPER AND A FUNNEL. HEAT THE REMAINING SOLUTION IN AN EVAPORATING DISH TO REDUCE THE VOLUME BY HALF. PUT THE SATURATED SOLUTION INTO A PETRI DISH AND LEAVE TO CRYSTALLISE. PAT DRY WITH FILTER PAPER IF NEEDED.

Answer Mark Scheme

- **Level 3:** The method would lead to the production of a valid outcome. All key steps are identified and logically sequenced.
- **5–6**
- **Level 2:** The method would not necessarily lead to a valid outcome. Most steps are identified, but the method is not fully logically sequenced.
- **3–4**
- **Level 1:** The method would not lead to a valid outcome. Some relevant steps are identified, but links are not made clear.
- **1–2**

Indicative content

- use magnesium oxide and sulfuric acid
- add sulfuric acid to a beaker
- warm sulfuric acid
- add magnesium oxide
- stir
- continue adding until magnesium oxide is in excess
- filter
- using a filter paper and funnel to remove excess magnesium oxide
- heat solution in an evaporating basin to crystallisation point
- leave to crystallise
- pat dry with filter paper

credit may be given for diagrams