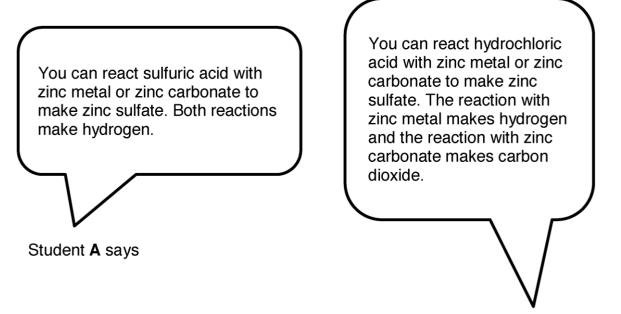


GCSE Chemistry A (Gateway Science)

J248/01 Chemistry A C1-C3 and C7 (Foundation Tier)

Question Set 8

1 Two students, **A** and **B**, want to make some solid zinc sulfate. They make some predictions.





- (a) Comment on how correct both predictions are.
- **(b) (i)** Zinc oxide, ZnO, is reacted with nitric acid, HNO₃.

The reaction makes zinc nitrate, $Zn(NO_3)_2$, and water, H_2O .

Write a **balanced symbol** equation for this reaction.

[4]

- (ii) A student suggests this method for preparing zinc nitrate.
 - 1. Measure 50 cm^3 of dilute nitric acid into a beaker.
 - 2. Add one spatula measure of zinc oxide.
 - 3. Heat the mixture until crystals of zinc nitrate are made.

Her method will **not** make a pure dry sample of zinc nitrate.

What improvements should she make to the method to make sure that:

- the reaction is complete
- the zinc nitrate can be separated from the nitric acid and the zinc oxide?

Explain your answer.

[4]

Total Marks for Question Set 8: 10



Copyright Information

OCR is committed to seeking permission to reproduce all third-party content that it uses in its assessment materials. OCR has attempted to identify and contact all copyright holders whose work is used in this paper. To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced in the OCR Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download from our public website (www.ocr.org.uk) after the live examination series.

If OCR has unwittingly failed to correctly acknowledge or clear any third-party content in this assessment material, OCR will be happy to correct its mistake at the earliest possible opportunity.

For queries or further information please contact The OCR Copyright Team, The Triangle Building, Shaftesbury Road, Cambridge CB2 8EA.

OCR is part of the Cambridge Assessment Group; Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge