

THE EXTRACTION OF COPPER FROM COPPER CARBONATE (STEP I) - THE PREPARATION OF COPPER SULFATE FROM COPPER ORE

Apparatus

Comboplate®
Microstand® + arm
Micro-filter funnel®
Filter paper to fit funnel
Microspatula
Syringe
Propette®

Chemicals

Copper ore. Amixture of copper carbonate ☒
and sand.
Sulfuric acid (1mol dm^{-3}) ☒



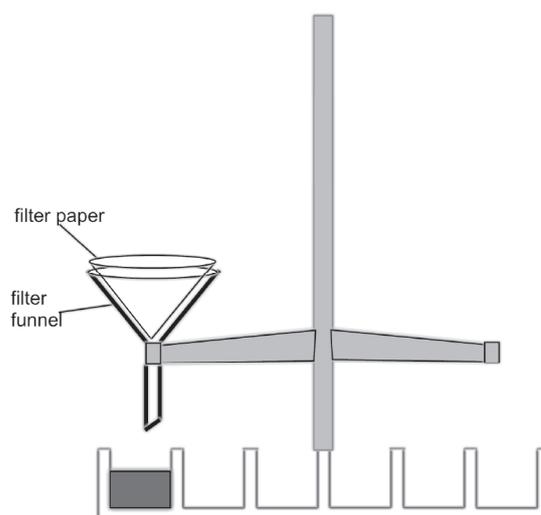
Eye
protection
must be worn
in this area

Method

STEP I – the reaction of the copper ore with the sulfuric acid

1. Using the syringe, add 2 cm³ of hot sulfuric acid to well F6 of the comboplate.
2. Using the scoop end of the microspatula, slowly add the copper ore to the acid.
3. **▲ CARE!** As the reaction takes place there will lots of acid spray and you must add the ore slowly. Wait for the fizzing to stop after each addition before you add the next scoop.
4. When there is no more fizzing stop adding the ore.

STEP II – separating the impurities



5. Set the apparatus up for filtration as shown in the diagram below, with the filter funnel over well E6.
6. Using the propette transfer as much of the liquid from F6 and filter it into well E6.
7. Keep the filtrate for the next part of the experiment.



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Results and Conclusions

Describe your observations in the experiment. _____

The equation for the reaction is:



What substance in the copper ore reacted with the sulfuric acid? _____

What caused the fizzing? _____

What is the substance left behind in the filter paper? _____

What is the name of the solution in well E6? _____
