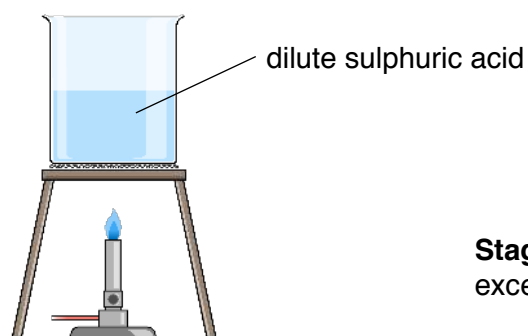
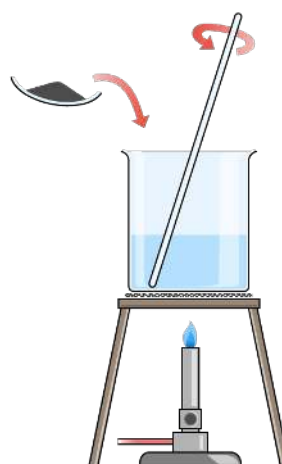


0 1

The diagram shows how hydrated copper(II) sulphate crystals can be made by reacting copper(II) oxide with dilute sulfuric acid.

**Stage 1**

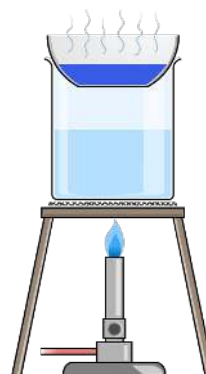
**Stage 2** - add copper(II) oxide until in excess and stir



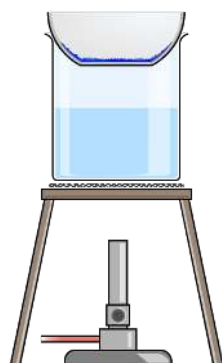
**Stage 3** - filter the mixture from stage 2



**Stage 4** - heat the solution from stage 3 until a hot, saturated solution forms



**Stage 5** - allow the solution to cool so that hydrated copper(II) sulfate crystals form



0	1
---	---

 . 

1
---

Why is the sulfuric acid heated in stage 1?

**[1 mark]**

.....

.....

0	1
---	---

 . 

2
---

How would you know when the copper(II) oxide is in excess in stage 2? **[1 mark]**

.....

.....

0	1
---	---

 . 

3
---

Why is the mixture filtered in stage 3

**[1 mark]**

.....

.....

0	1
---	---

 . 

4
---

Why do crystals form when the hot saturated solution is cooled in stage 5?

**[1 mark]**

.....

.....

0	1
---	---

 . 

5
---

State the colour of the crystals formed in stage 5.

**[1 mark]**

.....

.....

0	1
---	---

 . 

6
---

The crystals are removed by filtration and then dried.  
Suggest a suitable method of drying the crystals.**[1 mark]**

.....

.....

**(Total 6 marks)****End**