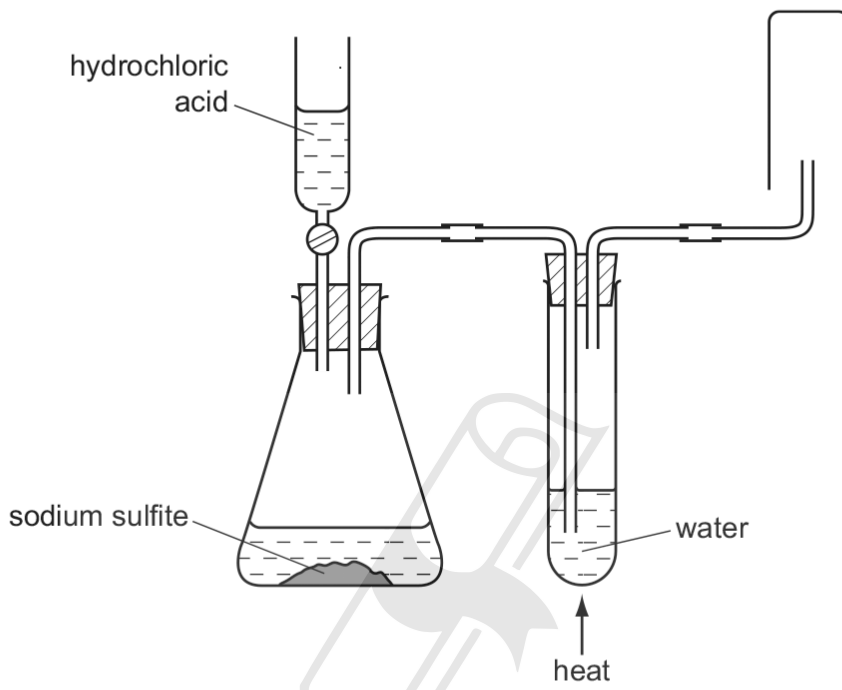


### 11.1 Sulfur

01. 0620\_w13\_qp\_63 Q: 2

Sulfur dioxide is a poisonous gas which is denser than air and soluble in water. Sulfur dioxide can be prepared by adding dilute hydrochloric acid to sodium sulfite and warming the mixture. Study the diagram of the apparatus used.



(a) Identify and explain **three** mistakes in the diagram.

- 1 mistake .....  
 reason ..... [2]
- 2 mistake .....  
 reason ..... [2]
- 3 mistake .....  
 reason ..... [2]

(b) State **one** precaution that should be taken when carrying out this experiment.

..... [1]

[Total: 7]

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01. 0620\_w13\_ms\_63 Q: 2

- |   |   |     |
|---|---|-----|
| <b>(a)</b> three mistakes (3)   | explanations (3)                        |     |
| heat in wrong place / water should not be heated (1)  | needs to be under flask / reactants (1) |     |
| should not pass through water (1)   | gas is soluble (1)                      |     |
| collection wrong way / gas jar is the wrong way up / gas should be collected downwards / gas should be collected in syringe (1) | gas denser than air (1)                 | [6] |
| <b>(b)</b> in fume cupboard / well-ventilated area (1)  |   | [1] |
| <b>ignore:</b> goggles / masks etc.   |   |     |
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