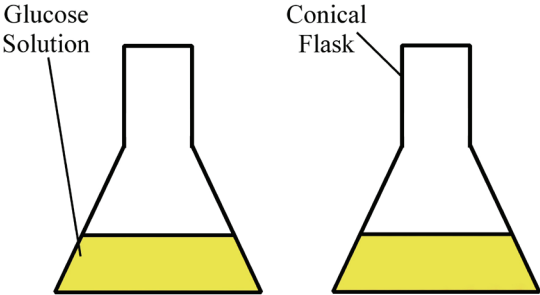


4.8 To prepare and show the production of alcohol by yeast

1

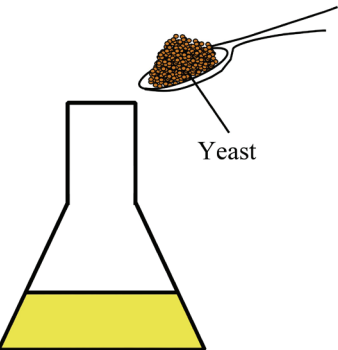


Glucose Solution

Conical Flask

Add 200 ml glucose solution to each of two conical flasks.

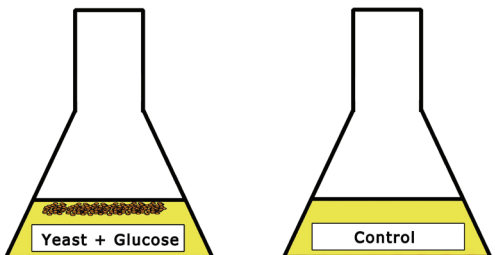
2



Yeast

Add 5 g of yeast to one flask. The second flask contains no yeast – this acts as a control.

3

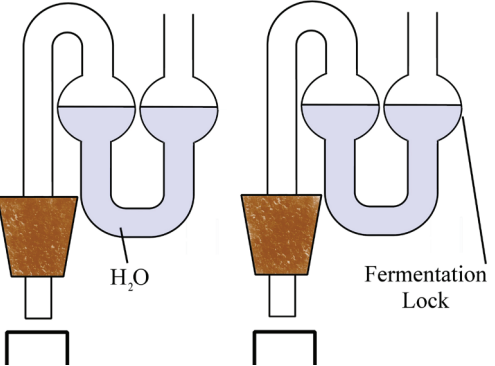


Yeast + Glucose

Control

Label the flasks: 'Yeast + Glucose' and 'Control'

4

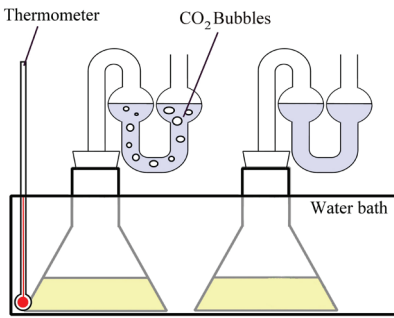


H₂O

Fermentation Lock

Half fill the fermentation locks with water and put one on each flask.

5



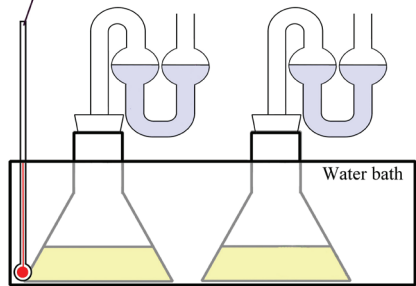
Thermometer

CO₂ Bubbles

Water bath

Stand the flasks in a water bath at 30°C for 24 hours.

6



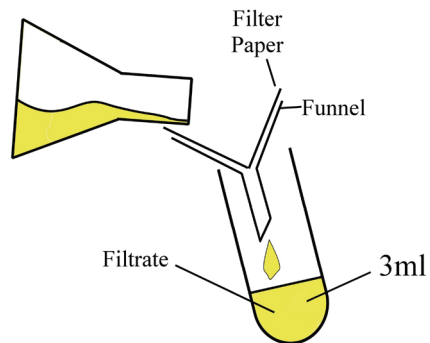
Thermometer

Water bath

Result: Fermentation is complete when the bubbles stop.

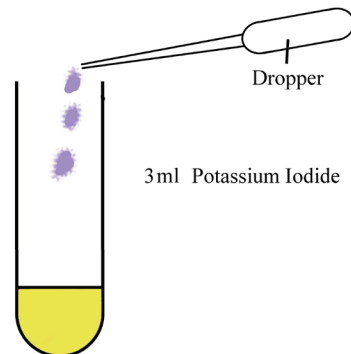
Always remember – Leave time to tidy up *This page can be printed in colour from the accompanying DVD*

7



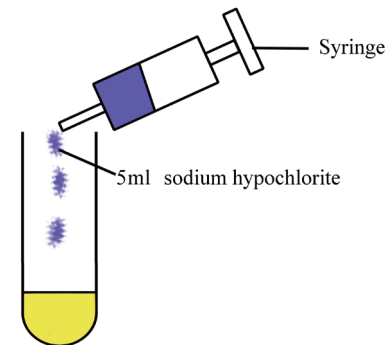
Filter the contents of each flask into separate boiling tubes.

8



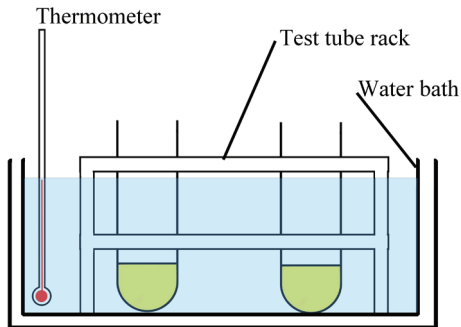
Add 3 ml potassium iodide to each boiling tube.

9



Add 5 ml sodium hypochlorite to each boiling tube.

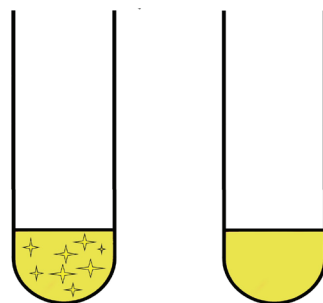
10



Place boiling tubes in a water bath at 60°C for 4-5 minutes.

11

Yeast + Glucose Control



Expected result

Always remember – Leave time to tidy up

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Results

Flask	Original colour of filtrate	Final colour of filtrate	Other changes
Yeast + Glucose solution			
Control (no yeast)			

Always remember – Leave time to tidy up

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