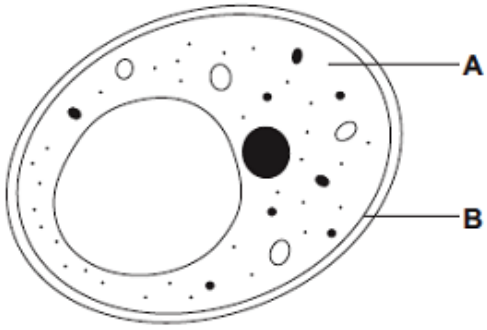
Respiration Yeast HW Q

7 minutes

7 marks

Q1. **Diagram 1** shows a yeast cell.

Diagram 1



(a) Name structures **A** and **B**.

A .....

B .....

(2)

(b) Yeast cells can respire anaerobically.

The equation for anaerobic respiration in yeast is:

glucose ⟶ alcohol + carbon dioxide (+ energy)

Give **one** way in which anaerobic respiration in yeast cells is different from anaerobic respiration in human muscle cells.

.....

.....

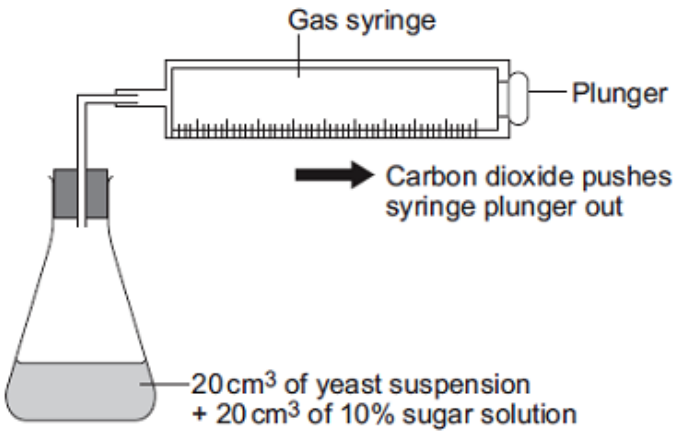
(1)

(c) Yeast can use other types of sugar instead of glucose.
Some scientists investigated the effect of three different types of sugar on the rate of anaerobic respiration in yeast.

The scientists:

- used the apparatus shown in **Diagram 2** with glucose sugar
- kept the apparatus at 20 °C
- repeated the investigation with fructose sugar and then with mannose sugar
- repeated the investigation with water instead of the sugar solution.

Diagram 2



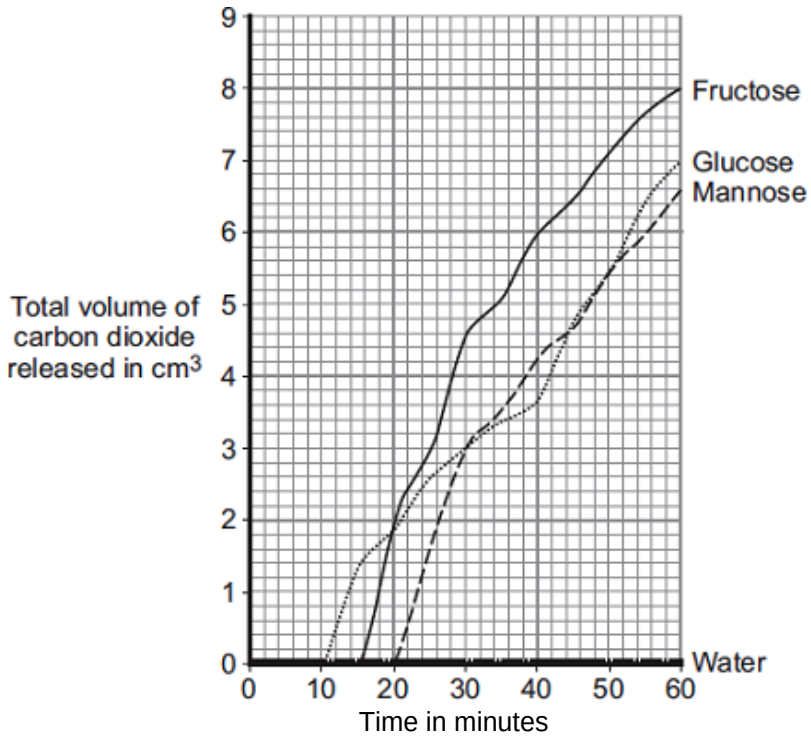
(i) Give **two** control variables the scientists used in this investigation.

.....

.....

(2)

(ii) The graph shows the scientists' results.



From this information, a company decided to use fructose to produce alcohol and **not** mannose or glucose.

Explain the reason for the company's choice.

.....

.....

.....

.....

(2)
(Total 7 marks)