

GCSE Biology A (Gateway)

J247/03 B1-B3 and B7 Higher (Higher Tier)

Question Set 15

1 Yeast cells can respire anaerobically.

(a) Complete the word equation for **anaerobic** respiration in yeast.

glucose \longrightarrow +

[1]

(b) Write down **two** ways in which anaerobic respiration in yeast cells is different from anaerobic respiration in human muscle cells.

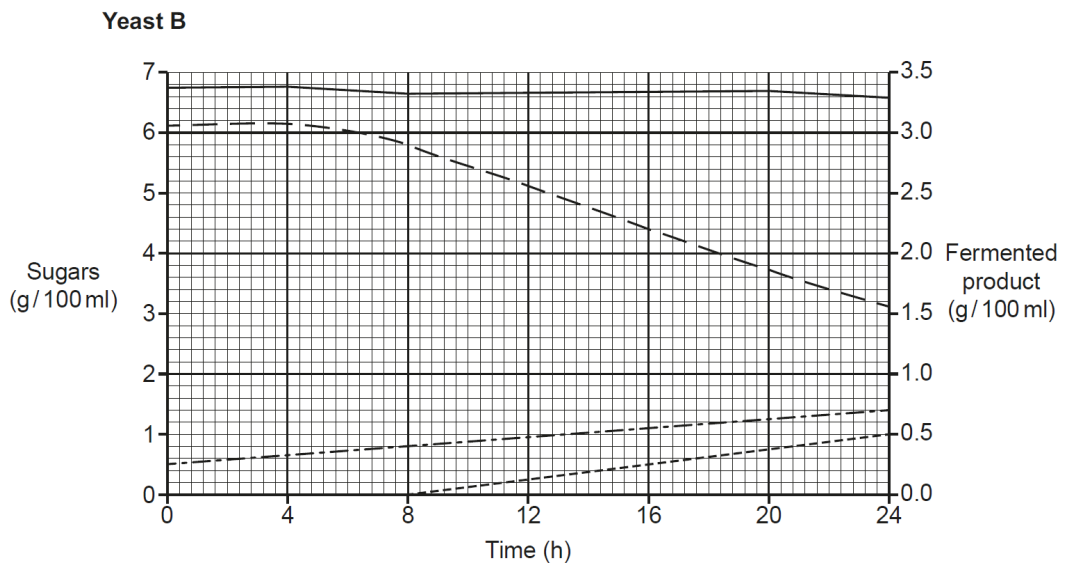
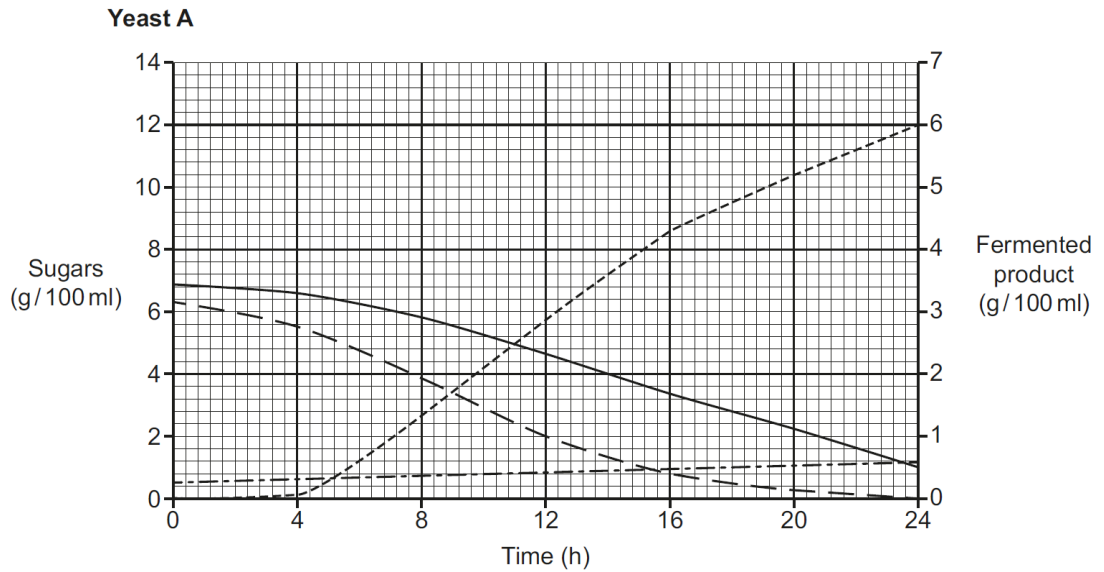
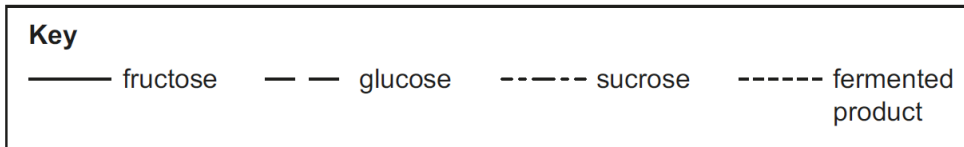
[2]

(c) Date fruits contain three different sugars, fructose, glucose and sucrose.

Different strains of yeast can ferment different sugars to produce a fermented product.

Scientists investigate how two different strains of yeast, **A** and **B**, ferment sugars inside datefruits.

Look at their results.



(i) Which sugar is **not** fermented by either strain of yeast?

Tick (✓) **one** box.

- Fructose
- Glucose
- Sucrose

(ii) After 24 hours, how many times higher is the fermented product yield of yeast **A** compared to yeast **B**?

[2]

(iii) Which sugar would increase fermentation the **most** if added to either yeast **A** or yeast **B**?

Tick (✓) **one** box.

Fructose	<input type="checkbox"/>
Glucose	<input type="checkbox"/>
Sucrose	<input type="checkbox"/>

[1]

(iv) Fermented dates are used to supply both fructose and fermented product.

Explain why it would be best to use yeast **B** to ferment dates to supply both fructose and fermented product.

[2]

Total Marks for Question Set 15: 9

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