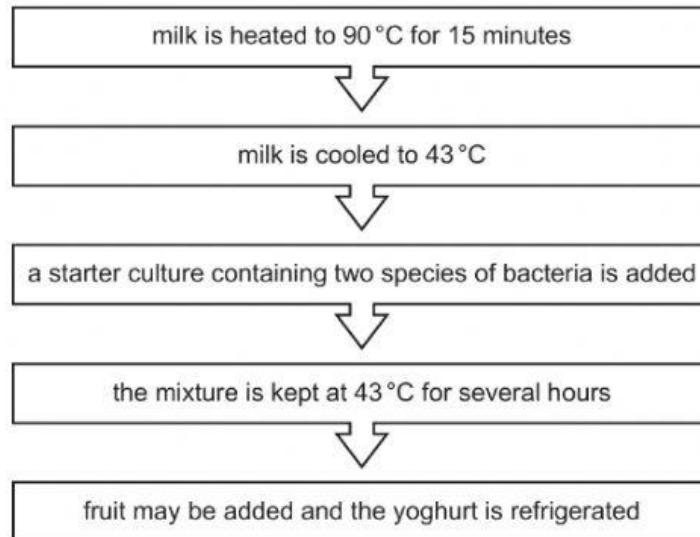


**TOPIC: MICROORGANISMS IN THE FOOD INDUSTRY**



(a) Heating the milk to 90°C for 15 minutes sterilizes the milk. Suggest the importance of sterilizing the milk

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

[2]

(b) Explain why the milk must be cooled to 43°C before the starter culture of bacteria is added

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

3. \_\_\_\_\_

\_\_\_\_\_

[3]

(c) The two species of bacteria added to the milk are **not** mobile and are **not** pathogens.

(i) State the external structure used for movement by some species of bacteria

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[1]

(ii) Explain why it is important that the bacteria added to the milk are not pathogens

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[1]

(d) Describe, with reference to named chemicals, the role of the bacteria during the time for which the mixture is kept at 43°C.

1. \_\_\_\_\_

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2. \_\_\_\_\_

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3. \_\_\_\_\_

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4. \_\_\_\_\_

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[4]

(d) Suggest and explain one benefit to human health of eating yoghurt to which fruit has been added rather than eating yoghurt to which no fruit has been added

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

[2]