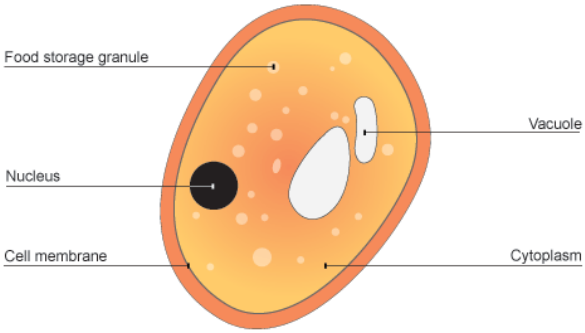
ST NINIAN'S HIGH SCHOOL
NATIONAL 4 BIOLOGY
LEARNING OBJECTIVES

UNIT 1: LIVING CELLS SECTION 4 (D)USES OF YEAST

YEAST



☐ 1. State that yeast is SINGLE-CELLED organism that can be used in bread making industry.

☐ 2. Explain that in bread making the yeast cells produce CO_2 which makes the dough RISE.

☐ 3. State that if yeast cells are given suitable temperature and a food source they can undergo the process FERMENTATION to produce alcohol.

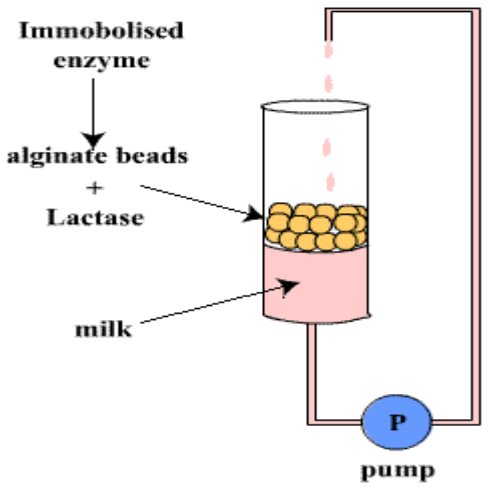
☐ 4. State that yeast cells in industry can be grown on a large scale inside FERMENTERS.

☐ 5. State that to produce different alcoholic drinks the LENGTH OF TIME for fermentation, the TYPE OF YEAST and the TEMPERATURE can all be altered.

☐ 6. Explain that IMMOBILISATION is a technique used in the production of creamy alcoholic milk drinks e.g KEFIR.

☐ 7. Explain that in making KEFIR, enzymes are trapped in a gel bead allowing them to RE-USED saving industries MONEY.

☐ 8. State that the fermentation of SUGAR CANE by yeast produces alcohol which is mixed with petrol to become GASOHOL.



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UNIT 1: LIVING CELLS SECTION 4(E) USES OF BACTERIA

BACTERIA

1. State that bacteria can be used in the production of YOGHURT.
2. State that a starter culture of BACTERIA is first added to the milk.
3. Explain that bacteria feed on the sugar LACTOSE in milk and produce LACTIC ACID. This chemical makes the PROTEIN in milk clot, making the milk THICKEN and lowering the pH of milk.
4. State that when waste from industries is disposed of in local rivers there can be a NEGATIVE effect on the local environment.
5. Explain that BACTERIA use waste as a food source so the bacteria INCREASE in number, DECREASE the river's oxygen supply and this results in the death of fish and other organism's.
6. State that when bacteria feed on SEWAGE waste they produce METHANE known as BIOGAS.
7. State that BIOREMEDIATION is the removal of pollutants from the environment using bacteria.