

YES PROGRAMME

TAPO

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INTRODUCTION

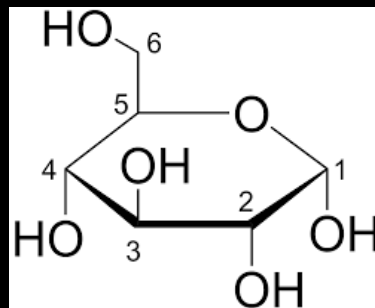
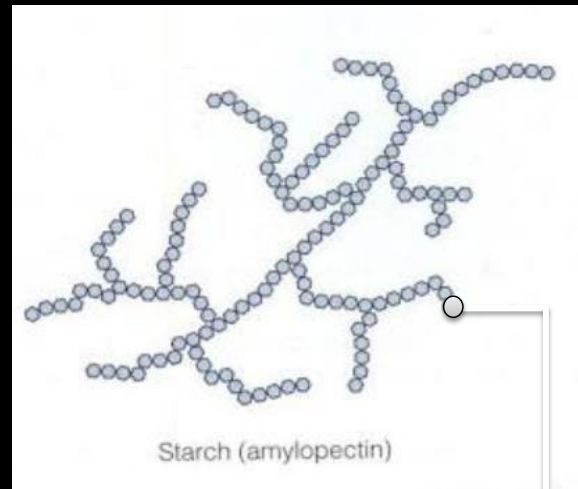
- To protect, conserve and save the environment.
- To reduce pollution caused by plastics by providing an alternative.

MATERIALS :

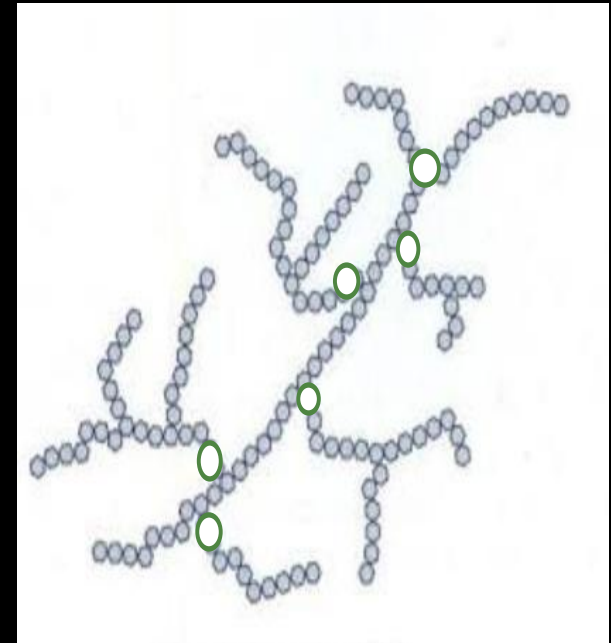
- Tapioca and potato
- Water
- Vinegar
- Vegetable Oil

PROCEDURE

- Extraction of starch from tapioca and potato.
- Add equal amounts of tapioca and potato starch with water and stir well.
- Add vinegar.
- A rigid structure of amylose is obtained.
- We apply vegetable oil on the mould to obtain a greasing effect.



GLUCOSE → MONOMER OF AMYLOPECTIN



VINEGAR BREAKING THE BRANCHES OF THE POLYMER

PROCEDURE

- Pour the paste into the mould and let it cool.
- After cooling, place it in a microwave oven for 40 seconds.
- Take it out of the oven and let it cool for 1 day.
- Remove the plastic from the mould.
- Now, our TAPO is ready.



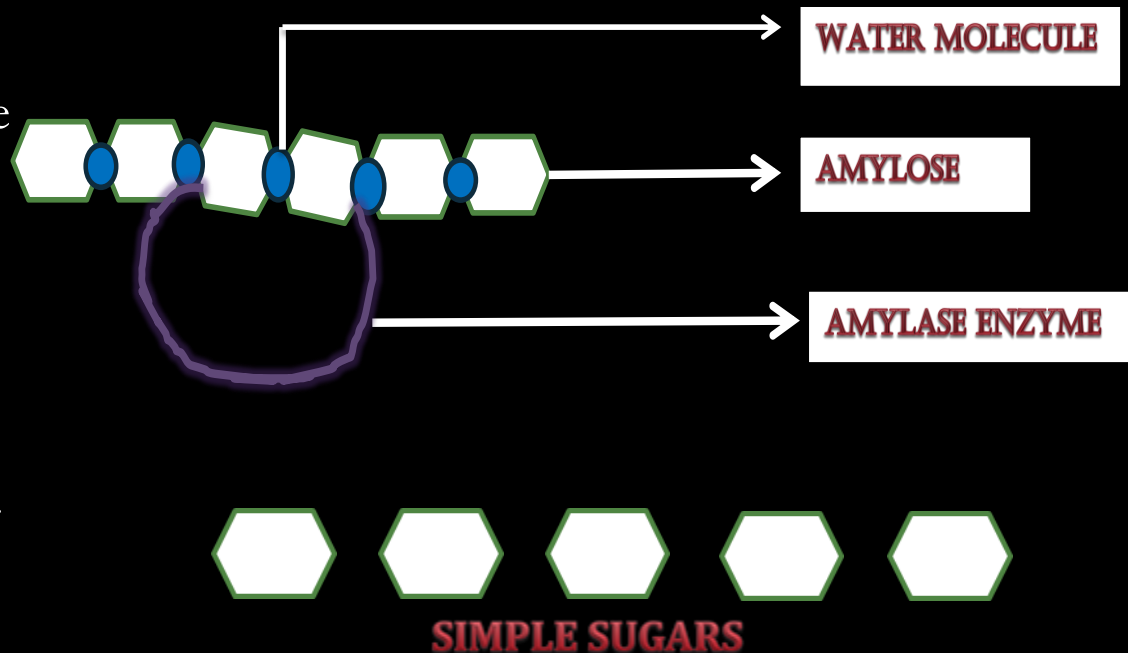
AFTER BREAKING THE BRANCHES, AMYLOSE IS OBTAINED

COMPARISON OF STARCH FROM VARIOUS VEGETABLES

- For comparison of strength and flexibility of different starch based plastics
- Extracted starch out of corn, sweet potato, tapioca and potato
- Made plastic using the similar procedure
- Comparison of the obtained plastics with TAPO plastic
- Found that TAPO was better

BIODEGRADABILITY TEST

- Mix amylase and water in a beaker.
- Place the TAPO inside the solution.
- It starts degrading and breaks down into smaller particles of sugar.
- When it is left to degrade in the soil, the particles of sugar act as manure.



THANK YOU!!!!