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IB BIO SL IA M23 - A study on the conditions that affect yeast fermentation

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ABSTRACT

This protocol is designed to aid me in the research for my International Baccalaureate Biology Internal Assignment

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GUIDELINES

None

MATERIALS TEXT

- Flask (3 mouths)
- Thermometer
- Holed plugs x2
- Glass tube
- Rubber tube
- Gas recovery flask
- Basin

- Water
- Sugar
- Yeast

SAFETY WARNINGS

None

Preparation 5m 30s

1 Check that all reagents and materials are ready. 30s

2 Assemble the instrumentation 5m

2.1 One end of the flask must be plugged with a holed stopper and a thermometer.
The other end should be plugged with a holed stopper and a glass tube.
The middle opening should be covered with plastic and secured with a rubber band.

2.2 A long and shallow recipient must be filled with water as much as possible.
The gas recovery flask should also be filled with water as much as possible.
Then, the latter should be inverted and suspended inside the former.

2.3 The tube should be connected from the glass tube to the gas recovery flask.

3 The block of compressed yeast must be cut in 4 parts

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Processing 30m

4 Several factors must be checked and accounted for: pressure, temperature and initial weight of the full gas recovery flask.

5 One quarter of the yeast block must be dissolved in sugary water (concentration undetermined, volume undetermined, temperature undetermined). This should then be placed in the flask.

30m

6 Wait for fermentation: **00:30:00**

7 Weigh the gas recovery flask. The difference from the first measurement is the gas generated. Convert it to moles of CO2+H2O for a universal measurment

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