Fermentation of Glucose

Aim: To monitor mass changes during the fermentation of glucose.

Equipment:

- Approx 100ml of water
- Sodium Metabisulfite ($Na_2S_2O_5$)
- Approx 10g of sucrose
- Approx 1g of salt
- Approx 4g of yeast
- Round flask
- Gas delivery tube
- Rubber stopper
- 250ml beaker
- Bromothymol blue

Method:

1. Mixed solution of 1 teaspoon of sodium metabisulfite per one litre of water.
2. Used solution to sterilise beaker, round flask and gas delivery tube.
3. Added sucrose, salt and yeast to flask.
4. Added water to flask.
5. Placed stopper in flask.
6. Recorded mass of flask and contents.
7. Attached gas delivery tube from round flask to 250ml beaker filled with bromothymol blue.
8. Placed in autoclave overnight.
9. Re-recorded mass of flask and contents.
10. Noted changes in colour of bromothymol blue.

Results: Bromothymol blue turned yellowish overnight.

Mass of Flask and Contents at start:	213.94 g
Mass of Flask and Contents at end:	213.54 g

Calculations:

Difference is masses:	0.4 g

Conclusion: The fermentation process worked and produced approx 0.4 grams of carbon dioxide.