DNS Glucose Assay

Introduction

The procedure determine the glucose concentration of a sample using 3,5-dinitroalicylic acid (DNS).
Adapted by Philip Sørensen and Jacob Mejlsted from D. Navarro et al. and Worthington biochem.

Materials

- Materials
  - Plate reader
- DNS reagent
  - 1 grams of 3,5-dinitrosalicylic acid
  - Milli-Q water
  - 30.0 grams sodium potassium tartrate tetrahydrate
  - 20 mL 2 M NaOH
- Consumables
  - Microtiter plate

Procedure

Preparation of DNS reagent

1. Dissolve 1 g of 3,5-dinitrosalicylic acid in 50 mL Milli-Q water
2. Add slowly 30.0 grams of sodium potassium tartrate tetrahydrate
3. Add 20 ml of 2 M NaOH
4. Dilute to a final volume of 100 ml with reagent grade water. Protect from carbon dioxide and store no longer than 2 weeks.

Running the assay

5. 100 µl media/sample is added to the microtiter plate
6. 100 µl DNS regeant is added to each sample
7. Plate is heated to 98 C for 10 min
8. Absorbance at 540 nm is measured
9. **Remember to include a standard to determine actual concentrations**