

The Culinary Exploitation of Microbial Ecosystems: A Course on the Biochemistry of Fermented Foods



Worksheet for Experimental Design

We are conducting an experiment to measure the amount of CO₂ produced during ethanol fermentation in yeast. What types of parameters can you test? Think about an experimental design to understand factors impacting yeast fermentation of sugars.

Available Materials

Foodstuffs	Sugar Solutions	Consumables	Equipment
Baker's Yeast Packets (7% w/v in water)	20% w/v: Dextrose (glucose) Galactose Lactose Maltose Sucrose	15mL Conical Tubes Markers Pipette Tips	Water Bath or Hot Plate Beakers Timers Micropipettes

** Consider "normal" conditions to be 2% glucose at 37C**

***do you have in terms of how something might affect the
anol fermentation in yeast?***

There are many avenues to explore, including a comparison of carbon sources, concentration gradients, temperatures, etc. affect sugar utilization. Write down your experimental question here:

Think about how you can design an experiment to test this question, keeping in mind the inclusion of an appropriate control. Remember, a simple design makes for elegant results.