

Evolution of Yeast Worksheet

Data Table. Carbon Dioxide Production by Yeast Strains

Baker's Yeast Strain

Time (min)	Temperature (°C)	CO ₂ Volume (mL)	Glucose (mmol/L)	Notes and Observations
0				Δ Glucose (mmol/L): _____ Δ CO ₂ (mL/min): _____
5				
10				
15				
20				
25				
30				

Brewer's or Wine Yeast Strain (Circle one)

Time (min)	Temperature (°C)	CO ₂ Volume (mL)	Glucose (mmol/L)	Notes and Observations
0				Δ Glucose (mmol/L): _____ Δ CO ₂ (mL/min): _____
5				
10				
15				
20				
25				
30				

Post-Lab Analysis for Introductory Activity

1. Hold a "reader card" (also see in Figure 2) next to your fermentation tubes and line up the markings. Compare the marks on the tubes to determine the volume of CO₂ produced at each time interval and record in the data table above.

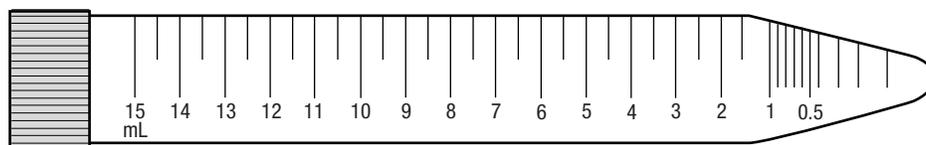
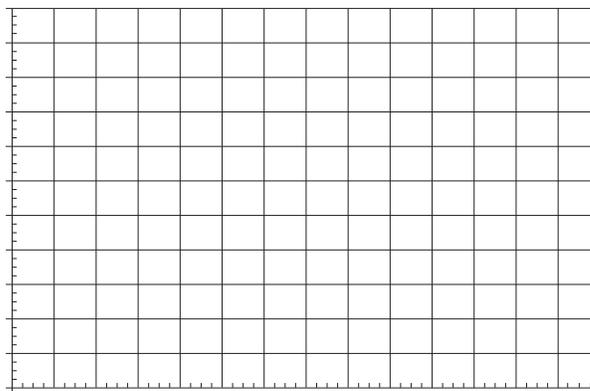
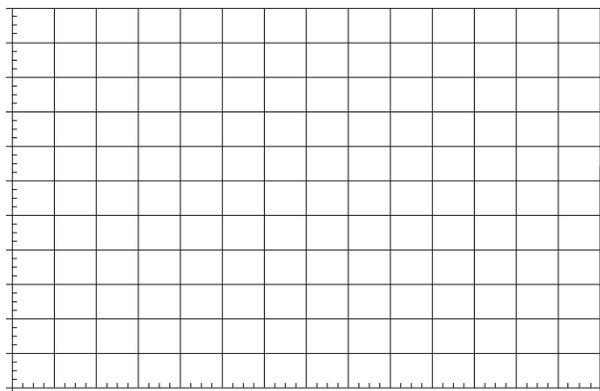


Figure 2.

2. Create a graph showing the relationship between time and CO₂ gas volume for each yeast type.



3. Determine the average change in CO₂ per minute using the data collected from 10 minutes to 30 minutes for each yeast type. Record under Notes and Observations in the data table.

4. Obtain data from two groups that investigated the type of yeast you did not and data from one group that investigated the same type of yeast that you did. Record the changes in glucose and CO₂ of their second trials below.

Yeast Strain	Glucose (mmol/L)	CO ₂ (mL/min)

5. Describe any differences in the respiration rates (volume of carbon dioxide produced per minute) of the different types of yeast.

6. In the Notes and Observations section of the data table, record any interesting observations as well as any actions that were done that were not in the written procedure.

7. Explain why there may be differences between your data and another group's data for the same yeast type using these observations.

8. List factors that could possibly affect the evolution of different strains of yeast.