**Reminder: All post labs need to be 1- typed (not handwritten) , 2- original (not copied from a classmate), 3- answered using complete statements and 4- turned in at the beginning of the lab.**

**Post-lab questions for Topic 10 – Cell Respiration and Fermentation**

**Name: Moreno, Melissa Date: 2-29-14 Group: T W R**

**10.1.A Carbon Dioxide Production**

**Make a prediction about carbon dioxide production in each of the three bottles**

|  |  |
| --- | --- |
| **Germinating- unboiled** |  |
| **Germinating – boiled** |  |
| **Ungerminated (dry)** |  |

**What is being detected at the end of the experiment?**

**What is the role of the phenol red in the collection tubes?**

**Record your results in the table below:**

|  |  |  |
| --- | --- | --- |
| **Pea Seeds** | **Indicator Color** | **Conclusion (CO2 present or absent)** |
| **Germinating- unboiled** |  |  |
| **Germinating – boiled** |  |  |
| **Ungerminated (dry)** |  |  |

**Why would the indicator in the collection tube change color?**

**Why would the color of the indicator remain unchanged ?**

**What happened during boiling that caused the results your found? (Hint: think “enzymes)**

**Write your conclusions from this experiment.**

**10.2 Fermentation**

**Write the chemical equations for the process taking place in the fermentation tube that has the 10% glucose.**

**C6H12O6-🡪 2CH3CH2OH + CO2 + 2ATP**

**Write the chemical equations for the process taking place in the fermentation tube that has the 1% starch + amylase**

**(C6H12O6)n--🡪 C6H12O6 + C6H12O6 + C6H12O6 ……**

**Make a prediction about gas production in each of the fermentation tubes**

|  |  |
| --- | --- |
| **10% glucose + yeast** | **The yeast will break down the glucose (monosaccharide) in a very quick rate, which will cause a lot of CO2 to be produced.** |
| **1% starch + yeast** | **I don’t believe the starch +yeast is going to produce any gas because the yeast will not break down the polysaccharides in the starch.** |
| **1% starch + amylase + yeast** | **The amylase will be able to break down the starch and produce CO2 which will produce gas in the fermentation tube.** |

**Record your results in the table below:**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | **Distance from tip of tube to fluid level in mm.** |  |
| **Solution** | **20 min** | **40 min** | **60 min** |
| **10% glucose +**  **Yeast** | **36** | **40** | **58** |
| **1% starch + yeast** | **0** | **0** | **0** |
| **1% starch + amylase + yeast** | **9** | **18** | **23** |

**Did your results conform to your predictions? If not, indicate the possible reasons that prompted different results.**

**Yes my predictions were correct because the 10% glucose+ yeast had the most gas build up, while the 1% starch + yeast had no CO2 gas production.**