Fermentation in a Bag by GLBRC. Modified by C Kohn

  Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_ Block: \_\_\_\_\_\_ Assignment #:\_\_\_\_\_\_**Fermentation in a bag Procedure:**

1. In a snack-size resealable zipper bag, combine 1 tsp. of sugar, corn meal, or whole wheat flour and 1 tsp. of yeast. You should have three bags, each with a different feedstock (sugar, corn, or wheat)
2. Add 50mL (1/4 cup) of warm tap water and zip the bag closed, removing as much air as possible. Mix gently. Lay bag on a flat surface and watch for results – fastest results should be achieved in 15 minutes.
3. Warning: As the yeast produce carbon dioxide, the bag will expand – it may even pop (and create a mess)! Be sure to monitor the bag and release the gas (burp the bag) if it becomes too inflated.
4. What was your start time? What was your end time?

**Questions**

1. Write your observations for each bag below. Observations should include ALL of the following: **A)** what visual changes did you observe after combining all the ingredients; **B)** What differences did you notice between each of the three bags; **C)** How did these changes occur over time? Did they happen immediately? Did these differences change as time went on?  
   1. Bag w/ Sugar

A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

B

C

* 1. Bag w/ Corn

A \_\_\_\_\_\_\_\_\_\_  
  
B   
  
C

* 1. Bag w/ Whole Wheat

A   
  
B   
  
C

1. What do you think made the bags inflate?
2. Why would this make sense?
3. Why do cells need to through fermentation?
4. Draw a diagram showing what is happening in each of the bags below. Be sure to label all components of your diagram. Your diagram should A) show why the bags inflated, and B) show why there was a difference between the two bags.