Kitchen # \_\_\_\_\_\_ Names: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Culinary Arts

**Yeast Experiment**

Your group will be assigned ONE of the following combinations to prepare for the class.

1. Place ½ cup water in a large custardcup and any additional ingredients listed for your portion of the experiment.
2. Sprinkle 1 teaspoon yeast over the liquid mixture, let it set for 3-4 minutes. After yeast has softened, stir mixture until yeast is completely dissolved.
3. Place your prepared mixture on the labeled tray placed on the demonstration supply table.

What is Yeast?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What is Baker’s yeast used for?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What is the Purpose of this experiment?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |
| --- | --- | --- |
| **Kitchen #** | **Combination** | **Reaction?** |
| 1 | Yeast & *Ice* Water | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 2 | Yeast & *Boiling* Water | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 3 | Yeast & Warm Water (110 degrees)  | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 4 | Yeast & ½ t. Sugar, Warm Water (110 degrees) | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 5 | Yeast, ½ t. Salt, Warm Water (110 degrees) | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 6 | Yeast, ½ t. Salt, ½ t. Sugar, Warm Water (110 degrees) | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |



What combination is best and why? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Yeast Experiment**

Your group will be assigned ONE of the following combinations to prepare for the class.

1. Place ½ cup water in a large custardcup and any additional ingredients listed for your portion of the experiment.
2. Sprinkle 1 teaspoon yeast over the liquid mixture, let it set for 3-4 minutes. After yeast has softened, stir mixture until yeast is completely dissolved.
3. Place your prepared mixture on the labeled tray placed on the demonstration supply table.

What is Yeast?

**A microscopic, one-celled organism belonging to the group of organisms called fungi.**

What is Baker’s yeast used for? **a** [**leavening agent**](http://en.wikipedia.org/wiki/Leavening_agent)**, where it converts the** [**food**](http://en.wikipedia.org/wiki/Fermentation_%28food%29)**/fermentable sugars present in** [**dough**](http://en.wikipedia.org/wiki/Dough) **into the gas** [**carbon dioxide**](http://en.wikipedia.org/wiki/Carbon_dioxide)**. This causes the dough to expand or rise as gas forms pockets or bubbles. When the dough is baked, the yeast dies and the air pockets "set", giving the baked product a soft and spongy texture.**

|  |  |  |
| --- | --- | --- |
| **Kitchen #** | **Combination** | **Reaction?** |
| 1 | Yeast & Ice Water | **Nothing, yeast not activated** |
| 2 | Yeast & Boiling Water | **Yellow color, yeast dead** |
| 3 | Yeast & Warm Water | **Creamy color** |
| 4 | Yeast & ½ t. Sugar, Warm Water | **Lots of bubbles & foam** |
| 5 | Yeast, ½ t. Salt, Warm Water | **Some bubbles/foam** |
| 6 | Yeast, ½ t. Salt, ½ t. Sugar, Warm Water | **Optimal bubbles/foam** |

What is the Purpose of this experiment?

**Too see how yeast reacts to different conditions.**



What combination is best and why? **#6,**

**Salt moderates yeast fermentation,**

**Sugar feeds fermentation,**

**Warm liquid activates yeast.**