

Team number _____

Team Name _____

Phoenix Invitational

ANSWER SHEET:

Station I: Leavening Agents

	unknown 1	unknown 2	unknown 3	unknown 4
<i>visual observation</i>	<i>variable</i>	<i>variable</i>	<i>variable</i>	<i>variable</i>
<i>test with water</i>	<i>bubbles</i>	<i>none</i>	<i>none</i>	<i>none</i>
<i>test with acid</i>	<i>bubbles</i>	<i>none</i>	<i>none</i>	<i>bubbles a lot</i>
<i>test with iodine</i>	<i>positive</i>	<i>negative</i>	<i>negative</i>	<i>negative</i>
<i>Leavening Agent Identity</i>	<i>baking powder</i>	<i>yeast</i>	<i>cream of tartar</i>	<i>baking soda</i>
<i>reasons for your <u>identity</u> answer</i>	<i>variable</i>	<i>variable</i>	<i>variable</i>	<i>variable</i>

1. microorganism, fermentation, bread sugar converted to carbon dioxide, trapped carbon dioxide causes bread to "rise", etc.

2. water's boiling point is lower at high altitudes, this is due to low air pressure, increased cooking times are needed at high altitudes, etc.

3. variable

Station II: Viscometer

1. Viscometer _____ *initials* _____

2. Standard Curve _____ *initials* _____

3. *the resistance of a liquid to flow*

4. *variable*

5. *centipoise cP*

6.

a. UNKNOWN #1: _____milk_____

UNKNOWN #2: _____white sauce_____

b. DIFFERENCE: _____#2 is more
viscous_____

c. flour added plus heated

Station III: Food Labels

1. 8 Calories

2. 99 Calories

3. 164 Calories

4. 271 Calories

5. flour, vegetable oil, corn starch, sugar

6.
a. variable

b. unsaturated; variable description

c. HEALTHIER EXAMPLE: _____ variable _____

LESS HEALTHY EXAMPLE: _____ variable _____

7. Unknown #1: _____ orange _____

Unknown #2: _____ legumes (bean) _____

Unknown #3: _____ salami _____

Unknown #4: _____ cracker _____

Unknown #5: _____ cheese _____

Station IV: Recipes and Density

1. $D = M/V$

2.
a. Sloppy Joe Meatloaf

variable recipes

b. variable explanation

Station V: Chemical Test #1

	Reagent #1
unknown #1	flour and water negative result
unknown #2	gelatin and water negative result
unknown #3	molasses and water positive result
unknown #4	flour, molasses, and water positive result
unknown #5	water

1. Benedict reagent
2. blue to orange/green with the addition of heat
3. simple sugars are found in # 3 and #4

STATION VI: MIXTURES AND SOLUTIONS

1. _____ emulsion _____
- 2.

- a. separates _____

- b. variable _____

- 3.
 - a. to keep items in solution mixed _____

 - b. emulsifier _____
 - c. egg whites; lethicin _____
- 4.
 - a. miracle whip, mayo, milk, etc. _____
 - b. water _____
 - c. lipids _____

STATION VII: BREADS

- 1. flat versus raised bread _____

- 2. leavening agent _____
- 3.
 - a. sample **A** ingredient: (pita bread) water _____
EXPLAIN: variable _____

b. sample **B** ingredient: white bread (yeast)_____

EXPLAIN: _variable_____

STATION VIII: CHEMICAL REACTIONS

1. one is browning and one looks fresh
2. enzymatic browning
3. oxidation
4. polyphenol oxidase
5. an acid (lemon juice) was added
6. vitamin C
7. antioxidant

Station IX: Chemical Test #2

	Reagent #2
unknown #1	flour and water negative
unknown #2	gelatin and water positive
unknown #3	molasses and water negative
unknown #4	flour, molasses, and water negative
unknown #5	water negative

1. biuret
2. blue to violet is a positive test
3. only #2 has a protein source

Station X: Chemical Test #3

	Reagent #3
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unknown #1	flour and water positive
unknown #2	gelatin and water negative
unknown #3	molasses and water negative
unknown #4	flour, molasses, and water positive
unknown #5	water negative

1. iodine

2. brown to purple/black

3. #1 and #4 have starch