

## Chemistry Bag of Change

### Materials:

Chemical A  
Chemical B  
Chemical C  
Ziploc Baggie  
10 ml Graduated cylinder

### Procedure

#### **Step 1**

Put on Personal Protective Equipment (PPE) = Gloves, Goggles and Lab Coats

#### **Step 2**

Grab 1 Ziploc and weigh it, don't forget to zero (tare) the scale.

Ziploc Weight: \_\_\_\_\_ grams

#### **Step 3**

Place a scoop of Chem A in one corner of the baggie. Note here what it looks like, please describe color and texture (lumpy, smooth, fine, powder etc.)

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#### **Step 4**

Place a scoop of Chem B in the opposite corner of the baggie. Again note the color and texture:

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#### **Step 5**

Weigh the two chemicals, trying to keep them separate. Again don't forget to zero (tare) the scale. Weight \_\_\_\_\_ grams

#### **Step 6**

Seal bag and mix two chemicals together. Is there a reaction, circle: YES NO

If yes, describe-be detailed:

#### **Step 7**

Weigh your empty graduated cylinder- again, don't forget to zero (tare) the scale: \_\_\_\_\_ grams

#### **Step 8**

Measure 10 ml of Chemical C using a graduated cylinder and weigh it- again don't forget to zero (tare) the scale: \_\_\_\_\_ grams

#### **Step 9**

Pour it into your baggie and mix with the Chem A & B already in your baggie.

Is there a reaction? YES NO

If yes, describe-be detailed (use your senses of touch, sight and sound):

### Step 10

Continue to mix with hands if any lumps in bag still.

After 2 minutes, note any changes:

After 3 minutes, note any changes:

If reaction has stopped move to next step otherwise, continue to note changes and hand mix baggie.

### Step 11:

Weigh your baggie.

### Step 12:

Clean up your equipment **RINSE** well your baggie all chemicals can go down drain. Make sure it is well rinsed and toss baggie in the trash. *Make sure not to leave a mess in the sink.* **Do not remove PPE**, until *everyone* is done the lab.

### Step 13- Calculations:

Take your grams in step 5 and subtract the weight of the baggie

1. Step 5 \_\_\_\_\_ grams - Step 1 \_\_\_\_\_ grams = \_\_\_\_\_ grams of Chemicals A & B

Take your grams in step 8 and subtract the weight of the graduated cylinder

2. Step 8 \_\_\_\_\_ grams - Step 7 \_\_\_\_\_ grams = \_\_\_\_\_ grams of Chemical C

Take your grams of Chemicals A&B (**from #1 above**) and grams of Chemical C (**#2 above**) and add them together to get your reactant weight prior to combining chemicals.

3. Chemical A&B \_\_\_\_\_ grams + Chemical C \_\_\_\_\_ grams = \_\_\_\_\_ grams of reactants A, B & C

Take your grams of A, B & C after the reaction is finished and subtract the weight of the baggie.

4. Step 11 \_\_\_\_\_ grams - Step 1 \_\_\_\_\_ grams = \_\_\_\_\_ grams of Chemicals after reaction A, B & C

Take the weight you recorded in **calculation #4 above** and subtract it from what you answered in **calculation #3 above**.

5. Grams of reactants A, B & C \_\_\_\_\_ grams - Grams after reaction \_\_\_\_\_ grams = \_\_\_\_\_ grams

### Questions:

1. Was there a difference in the weight of the reactants at the beginning of the lab versus the end of the lab? Why\What do you think this happened?