

ZIET BHUBANESWAR

Interactive Worksheet

Subject: Chemistry

TOPIC: Chemical Stoichiometry

Reactants, Products, and Leftovers

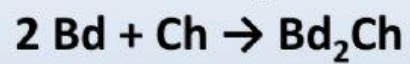
A.K.Gupta, TA (Chemistry)

Learning Goals:

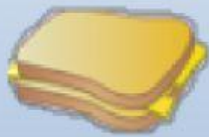
Students will be able to:

- Relate the real-world example of making sandwiches to chemical reactions
- Describe what “limiting reactant” means using examples of sandwiches and chemicals at a particle level.
- Identify the limiting reactant in a chemical reaction
- Use your own words to explain the Law of Conservation of Particles means using examples of sandwiches and chemical reaction

1. Making a cheese sandwich can be represented by the chemical equation:



What would you expect a sandwich to look like?



A



B

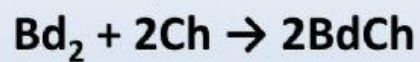


C



D

2. Making a cheese sandwich can be represented by the chemical equation:



What would you expect a sandwich to look like?



A



B

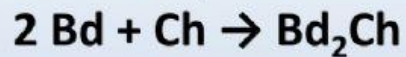


C



D

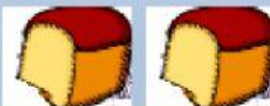
3. Making a cheese sandwich can be represented by the chemical equation:



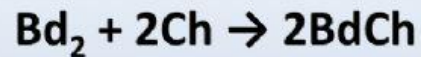
What does the "2" on the *left* side of the chemical equation represent?

A. 2 pieces of bread stuck together 

B. 2 separate pieces of bread 

C. 2 loaves of bread 

4. Making a cheese sandwich can be represented by the chemical equation:



What does the “2” on the *left* side of the chemical equation represent?

A. 2 pieces of bread stuck together



B. 2 separate pieces of bread



C. 2 loaves of bread



5. A menu at the Chemistry Café shows a sandwich: BdM_2Ch

What would you expect a sandwich to have?

- A. 2 pieces of bread, 2 pieces of meat, 1 piece of cheese
- B. 1 piece of bread, 2 pieces of meat, 1 piece of cheese
- C. 2 loaves of bread

6. A menu at the Chemistry Café describes a sandwich as 3 pieces of bread, one meat and 2 cheeses.

What would you expect a sandwich name to be?

A. Bd_2MCh_2

B. $\text{Bd}_3\text{M}_2\text{Ch}$

C. Bd_3MCh_2

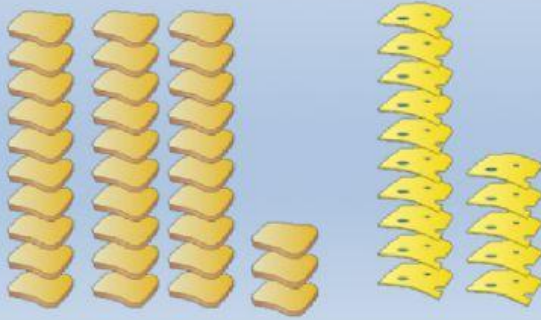
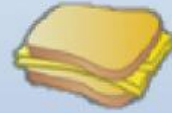
7. The Chemistry Café owner was out of bread. She went to the bakery next door and bought a loaf which had 33 slices. Then she sells 12 sandwiches, which need 2 pieces of bread each. How much bread did she have left?

A. 21

B. 9

C. None, she gave the leftovers to the birds

8. The Chemistry Café cook has a loaf which had 33 slices and a package of cheese that has 15 slices. He is making sandwiches that have 2 pieces of both bread and cheese. How many sandwiches can he make?



A.16

B.15

C.7