

## 2.4

## CHEMICAL REACTIONS

## Section Review

## Objectives

- Describe what happens during a chemical change
- Identify four possible clues that a chemical change has taken place
- Apply the law of conservation of mass to chemical reactions

## Vocabulary

- chemical property
- chemical reaction
- reactant
- product
- precipitate
- law of conservation of mass

## Part A Completion

Use this completion exercise to check your understanding of the concepts and terms that are introduced in this section. Each blank can be completed with a term, short phrase, or number.

Substances change into new substances during a(n) 1 **1.** \_\_\_\_\_  
 reaction. A change in which the properties of a substance change, **2.** \_\_\_\_\_  
 but not its composition, is a 2 change. If the composition **3.** \_\_\_\_\_  
 changes, then a 3 change has occurred. The only way to be **4.** \_\_\_\_\_  
 sure a 4 change has occurred is to test the 5 **5.** \_\_\_\_\_  
 composition of a sample before and after a change. The law of **6.** \_\_\_\_\_  
6 states that mass is conserved in any physical change **7.** \_\_\_\_\_  
 or chemical reaction. In other words, 7 is neither created  
 nor destroyed.

## Part B True-False

Classify each of these statements as always true, AT; sometimes true, ST; or never true, NT.

- \_\_\_\_\_ **9.** A physical change is reversible.
- \_\_\_\_\_ **10.** In a chemical reaction, reactants are changed into products.
- \_\_\_\_\_ **11.** The amount of matter present appears to change during a chemical reaction.

\_\_\_\_\_ 12. Matter can be created during a chemical reaction.

\_\_\_\_\_ 13. The substances formed in a chemical reaction are called reactants.

## Part C Matching

Match each description in Column B to the correct term in Column A.

### Column A

\_\_\_\_\_ 14. chemical reaction

\_\_\_\_\_ 15. reactants

\_\_\_\_\_ 16. product

\_\_\_\_\_ 17. chemical property

\_\_\_\_\_ 18. precipitate

### Column B

a. solid that forms and settles out of a liquid mixture

b. starting substances in a chemical reaction

c. ability of a substance to undergo a specific chemical change

d. substance formed in a chemical reaction

e. process in which one or more substances change into one or more new substances

## Part D Questions and Problems

Answer the following questions in the space provided.

19. When 400 grams of wood are burned, 30 grams of ash remain. What happened to the missing 370 grams of matter?

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20. Some car batteries give off a potentially explosive mixture of gases. What kind of change is taking place in the battery?

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21. When 16 grams of methane gas combine with 64 grams of oxygen, 44 grams of carbon dioxide form, plus water. What mass of water is produced?

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