

2.2

MIXTURES

Section Review

Objectives

- Classify a sample of matter as a substance or a mixture
- Distinguish between homogeneous and heterogeneous samples of matter
- Describe two ways that components of mixtures can be separated

Vocabulary

- mixture
- heterogeneous mixture
- homogeneous mixture
- solution
- phase
- filtration
- distillation

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.

A physical blend of two or more substances is a 1. **1.** _____

A mixture has a composition that varies. Mixtures may be identified **2.** _____
as 2 or 3. Homogeneous mixtures are also known **3.** _____
as 4 and have uniform properties. Any part of a sample **4.** _____
with uniform composition and properties is called a 5. **5.** _____

Many mixtures can be separated into their components by **6.** _____
6 methods. 7 is a method of separation that involves **7.** _____
boiling a liquid, which is then condensed.

Part B True-False

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

- _____ **8.** Homogeneous mixtures can be separated by distillation.
- _____ **9.** A solution has a uniform composition.
- _____ **10.** A heterogeneous mixture contains two or more phases.
- _____ **11.** Solutions are liquids.

Part C Matching

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

Column A	Column B
_____ 12. mixture	a. a mixture that has a uniform composition throughout
_____ 13. heterogeneous mixture	b. any part of a sample that has uniform composition and properties
_____ 14. homogeneous mixture	c. a mixture that is not uniform in composition
_____ 15. solution	d. separation of a liquid by boiling followed by condensation
_____ 16. phase	e. another name for a homogeneous mixture
_____ 17. distillation	f. a physical blend of two or more components
_____ 18. filtration	g. a method for separating a solid from a liquid in a heterogeneous mixture

Part D Questions and Problems

Answer each of the following questions in the space provided.

19. State whether each of the following is a homogeneous or heterogeneous mixture.
- | | |
|----------------------------------|----------|
| a. table salt dissolved in water | a. _____ |
| b. carbon mixed with sand | b. _____ |
| c. filtered apple juice | c. _____ |
| d. vegetable soup | d. _____ |
| e. fresh squeezed lemonade | e. _____ |
20. Classify each of the following as a substance or a mixture.
- | | |
|---------------------------------|----------|
| a. table sugar (sucrose) | a. _____ |
| b. hot tea | b. _____ |
| c. table salt (sodium chloride) | c. _____ |
| d. vinegar | d. _____ |