

1.3.2: Practice Classifying Matter

Exercise 1.3.2.1

Classify each of the following as an element, a compound, a homogeneous mixture, or a heterogeneous mixture.

- a) liquid hand soap (transparent, not creamy)
- b) carbonated water (fizzing, not flat)
- c) ascorbic acid (also known as vitamin C, $C_6H_8O_6$)

Answer a

homogeneous mixture (has water, various soap molecules, possibly antimicrobial agents)

Answer b

heterogeneous mixture (CO_2 gas bubbles are distinct phase, not uniformly mixed)

Answer c

compound (has chemical formula)

Classify each of the following as an element, a compound, a homogeneous mixture, or a heterogeneous mixture.

- d) isopropanol (C_3H_8O)
- e) a bottle of 70% isopropanol
- f) sulfur

Answer d

compound

Answer e

homogeneous mixture (has 70% isopropanol, 30% water)

Answer f

element

Classify each of the following as an element, a compound, a homogeneous mixture, or a heterogeneous mixture.

- g) bronze (metal alloy of copper and tin)
- h) silver
- i) oxygen gas (O_2)

Answer g

homogeneous mixture

Answer h

element

Answer i

element (some elements exist in nature as diatomic molecules)

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