

Physical and Chemical Properties

What are *physical properties*?

What is the difference between *extensive physical properties* and *intensive physical properties*?

What are *chemical properties*?

Why can physical and chemical properties be used to identify unknown substances?

Identify the following statements as physical (PP) or chemical (CP) properties. If it is a physical property, identify it as extensive (E) or intensive (I).

1. Vinegar has a pungent odor.
2. Carbon cannot be decomposed.
3. Sodium chloride is a crystalline solid.
4. Water does not burn.
5. The block of wood measured 2.5 cm x 2.5 cm x 2.5 cm.
6. Mercury is a liquid at 25°C.
7. Oxygen is not combustible.
8. Aluminum will combine with oxygen to form a protective oxide coating.
9. Fluorine gas has a greenish-yellow tint.
10. The density of water at 4°C is 1.000 g/mL.
11. Hydrogen gas is very flammable.
12. The sample of aluminum has a mass of 25 g at 25°C.
13. Water is colorless and odorless.
14. Lemon juice tastes sour.
15. Gold does not tarnish.
16. Copper cannot be decomposed.