

Exercise 1.22

A match is lit and held under a cold piece of metal. The following observations are made: (a) The match burns. (b) The metal gets warmer. (c) Water condenses on the metal. (d) Soot (carbon) is deposited on the metal. Which of these occurrences are due to physical changes, and which are due to chemical changes?

Solution

- (a) The match burns - due to a chemical change (the release of heat)
- (b) The metal gets warmer - due to a physical change (the atoms/molecules composing the metal move faster)
- (c) Water condenses on the metal - due to a physical change (humid air in contact with the cold metal)
- (d) Soot (carbon) is deposited on the metal - due to a chemical change (the burning match)