ODM EDUCATIONAL GROUP
Changing your Tomorrow

PHYSICAL AND CHEMICAL CHANGES

SUBJECT-CHEMISTRY

CHAPTER NO- 2

Terms involved in some physical changes, conditions affecting evaporation

PERIOD-4

LEARNING OBJECTIVE

Students will be able to

- Understand the meaning of terms involved in some physical changes
- Familiarize with the different conditions affecting evaporation

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WARM UP QUESTIONS

Recapitulation of the previous topic by asking following questions

- Explain the meaning of physical change
- Give the characteristics of physical changes
- Give some examples of physical changes

TERMS INVOLVED IN SOME PHYSICAL CHANGES

DISSOLVING-

Dissolving is a process in which a substance known as solute mixes completely with another substance known as solvent to form a homogeneous mixture called as solution.

Example -sugar dissolves in water .

FREEZING-

Freezing the process in which a substance in a liquid state changes into its solid state on cooling at a particular temperature is called freezing or solidification

FREEZING POINT-

The temperature at which liquid starts changing into a solid state at a given pressure is called its freezing point. All pure substances have a definite freezing point.

Example- pure water freezes at zero degrees Celsius into ice.

MELTING –

Melting is a process in which a substance in solid state changes into liquid state at a particular temperature.

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Melting is a process in which a substance in solid state changes into liquid state at a particular temperature.

MELTING POINT –

Melting point of a solid is the temperature at which it starts melting solids have definite melting point.

Example- melting point of ice is zero degrees Celsius. Numerically the melting point and freezing point of a substance are the same.

BOILING-

The process in which a liquid on heating changes into its vapor state at a particular temperature is called boiling.

BOILING POINT-

The temperature at which a liquid start changing into its vapor on heating at a given pressure is called it boiling point all pure liquids have a definite boiling point example boiling point of water is hundred degrees Celsius.

EVAPORATION-

Process due to which a substance in liquid change state changes into its vapor state at any temperature below is boiling point is called evaporation of vaporization .Example water from rivers, lakes, Ponds etc change into vapor due to evaporation.

CONDENSATION –

The process in which a substance in vapor of gaseous state changes into liquid state is called condensation.

CONDENSATION POINT –

the temperature at which a gaseous substance start changing into liquid state is called condensation point numerically the boiling point and the condensation point of a liquid at the space.

Difference Between Evaporation and Boiling

Evaporation	Boiling
Evaporation always occurs at a fixed temperature.	Boiling can occur at any temperature.
in this process, the bubbles are formed as a result in the liquid	No bubbles are formed.
It takes place throughout the liquid.	Only takes place on the surface of the liquid.
The temperature of the liquid body decreases when evaporation takes place.	In contrast, the temperature remains constant in this process.
It is a quick process rather than Boiling.	Boiling is a slow process.
Continues as long as the air above the surface of liquid remains unsaturated.	It takes place until the internal temperature of the liquid is equal to the external temperature of the surroundings.
To initialize this process, a heat energy source is supplied to the liquid.	Sunlight or surrounding temperature is major source to initialize the boiling process.

Factors That Affect the Rate of Evaporation

Many factors influence how quickly a liquid evaporates. They include:

- **Temperature of the liquid**. A cup of hot water will evaporate more quickly than a cup of cold water.
- **Exposed surface area of the liquid**. The same amount of water will evaporate more quickly in a wide shallow bowl than in a tall narrow glass.
- **Presence or absence of other substances in the liquid**. Pure water will evaporate more quickly than salt water.
- **Air movement**. Clothes on a clothesline will dry more quickly on a windy day than on a still day.
- **Concentration of the evaporating substance in the air**. Clothes will dry more quickly when air contains little water vapor.

HOME ASSIGNMENT

Exercise-6,7

- Write a note on Melting point, boiling point, freezing point, condensation point
- Give the conditions affecting evaporation

THANKING YOU

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