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What is a PURE SUBSTANCE?

A "pure substance" is a material composed of only one type of particle, meaning it has a consistent composition throughout and fixed properties, and can be either a single element or a single compound. It is a substance that cannot be separated into simpler components by physical means, unlike a mixture which contains multiple substances combined together.

Key points about pure substances:

Composition:

A pure substance contains only one type of atom or molecule, making its composition uniform throughout the sample.

Examples:

Water (H₂O), pure gold, table salt (NaCl), oxygen (O₂) are all considered pure substances.

Classification:

Pure substances can be further categorized as either elements (made of only one type of atom) or compounds (formed by chemically combining two or more elements in a fixed ratio).

Important aspects to remember:

Separation from mixtures:

Unlike mixtures, a pure substance cannot be separated into its components by physical methods like sifting, filtering, or evaporation.