Chapter 2: Is Matter Around Us Pure? Quiz

Is Matter Around Us Pure?

1. What does 'pure' mean to a scientist?

○ All constituent particles are the same chemically
○ No adulteration
○ Clear liquid
○ Expensive

Answer: All constituent particles are the same chemically

2. Milk is a?

○ Mixture
○ Pure substance
○ Element
○ Compound

Answer: Mixture

3. A pure substance consists of?

○ Single type of particle
○ Two types of particles
○ Variable particles
○ Any particle

Answer: Single type of particle

4. Most matter around us exists as?

○ Mixtures
○ Pure elements
○ Pure compounds
○ Atoms

Answer: Mixtures

5. Which of these is NOT a pure substance?

○ Soil
○ Iron
○ Gold
○ Oxygen

Answer: Soil

What is a Mixture?

1. Mixtures are constituted by?

○ More than one kind of pure form of matter
○ Single element
○ Single compound
○ Only atoms

Answer: More than one kind of pure form of matter

2. Can sodium chloride be separated from water by physical process?

○ Yes, by evaporation
○ No
○ Only by chemical reaction
○ Only by filtration

Answer: Yes, by evaporation

3. Is sodium chloride a pure substance?

○ Yes
○ No
○ Sometimes
○ It is a mixture

Answer: Yes

4. Soft drink is a?

○ Mixture
○ Pure substance
○ Element
○ Compound

Answer: Mixture

5. A mixture contains?

○ More than one pure substance
○ Only one pure substance
○ Only elements
○ Only compounds

Answer: More than one pure substance

Types of Mixtures

1. Mixtures with uniform composition are called?

○ Homogeneous
○ Heterogeneous
○ Suspensions
○ Colloids

Answer: Homogeneous

2. Mixtures with non-uniform composition are called?

○ Heterogeneous
○ Homogeneous
○ Solutions
○ Alloys

Answer: Heterogeneous

3. Salt dissolved in water is an example of?

○ Homogeneous mixture
○ Heterogeneous mixture
○ Compound
○ Element

Answer: Homogeneous mixture

4. Oil and water is an example of?

○ Heterogeneous mixture
○ Homogeneous mixture
○ Solution
○ Alloy

Answer: Heterogeneous mixture

5. Can a homogeneous mixture have variable composition?

○ Yes
○ No
○ Only if heated
○ Never

Answer: Yes

What is a Solution?

1. A solution is a?

○ Homogeneous mixture
○ Heterogeneous mixture
○ Compound
○ Element

Answer: Homogeneous mixture

2. The component present in larger amount in a solution is?

○ Solvent
○ Solute
○ Particle
○ Gas

Answer: Solvent

3. The component dissolved in the solvent is?

○ Solute
○ Solvent
○ Mixture
○ Solution

Answer: Solute

4. Air is a mixture of?

○ Gas in gas
○ Solid in gas
○ Liquid in gas
○ Solid in liquid

Answer: Gas in gas

5. Tincture of iodine contains?

○ Iodine in alcohol
○ Iodine in water
○ Alcohol in iodine
○ Sugar in water

Answer: Iodine in alcohol

Properties of a Solution

1. Can solution particles be seen by naked eyes?

○ No
○ Yes
○ Sometimes
○ Only in sunlight

Answer: No

2. Do solution particles scatter a beam of light?

○ No
○ Yes
○ Only when hot
○ Only when concentrated

Answer: No

3. Is the path of light visible in a solution?

○ No
○ Yes
○ Maybe
○ Only for coloured solutions

Answer: No

4. Is a solution stable?

○ Yes
○ No
○ Only temporarily
○ Depends on container

Answer: Yes

5. Can solute particles be separated by filtration?

○ No
○ Yes
○ Sometimes
○ Only large particles

Answer: No

Concentration of a Solution

1. A solution that has dissolved as much solute as it can is called?

○ Saturated
○ Unsaturated
○ Dilute
○ Concentrated

Answer: Saturated

2. The amount of solute present in a saturated solution is its?

○ Solubility
○ Concentration
○ Volume
○ Mass

Answer: Solubility

3. If amount of solute is less than saturation level, it is?

○ Unsaturated
○ Saturated
○ Supersaturated
○ Suspension

Answer: Unsaturated

4. Concentration is the amount of solute in?

○ Given amount of solution
○ Given amount of solvent
○ Total mass
○ Total volume

Answer: Given amount of solution

5. Solubility changes with?

○ Temperature
○ Pressure
○ Time
○ Container

Answer: Temperature

What is a Suspension?

1. A suspension is a?

○ Heterogeneous mixture
○ Homogeneous mixture
○ Solution
○ Colloid

Answer: Heterogeneous mixture

2. Are particles of suspension visible to naked eye?

○ Yes
○ No
○ Only with microscope
○ Only in dark

Answer: Yes

3. In suspension, solute particles?

○ Remain suspended
○ Dissolve
○ Evaporate
○ Disappear

Answer: Remain suspended

4. Chalk powder in water is an example of?

○ Suspension
○ Solution
○ Colloid
○ Solvent

Answer: Suspension

5. Solids dispersed in liquids form?

○ Suspensions
○ Solutions
○ Gases
○ Pure substances

Answer: Suspensions

Properties of a Suspension

1. Do suspension particles scatter light?

○ Yes
○ No
○ Only when settled
○ Only when filtered

Answer: Yes

2. Is the path of light visible in a suspension?

○ Yes
○ No
○ Sometimes
○ Never

Answer: Yes

3. Is a suspension stable?

○ No, particles settle down
○ Yes, always
○ Yes, if stirred
○ Yes, if heated

Answer: No, particles settle down

4. Can suspension particles be separated by filtration?

○ Yes
○ No
○ Only by evaporation
○ Only by boiling

Answer: Yes

5. When particles settle, does suspension scatter light?

○ No
○ Yes
○ More than before
○ Same as before

Answer: No

What is a Colloidal Solution?

1. A colloid appears homogeneous but is actually?

○ Heterogeneous
○ Homogeneous
○ Pure
○ Element

Answer: Heterogeneous

2. Milk is an example of?

○ Colloid
○ Suspension
○ True solution
○ Pure substance

Answer: Colloid

3. Scattering of light by colloidal particles is called?

○ Tyndall effect
○ Reflection
○ Refraction
○ Dispersion

Answer: Tyndall effect

4. Are colloidal particles visible to naked eye?

○ No
○ Yes
○ Sometimes
○ Only in light

Answer: No

5. Tyndall effect is due to?

○ Scattering of light
○ Absorption of light
○ Transmission of light
○ Reflection of light

Answer: Scattering of light

Properties of a Colloid

1. Is a colloid stable?

○ Yes, quite stable
○ No, unstable
○ Settles quickly
○ Separates on standing

Answer: Yes, quite stable

2. Can colloids be separated by filtration?

○ No
○ Yes
○ Easily
○ Sometimes

Answer: No

3. Technique used to separate colloidal particles is?

○ Centrifugation
○ Filtration
○ Evaporation
○ Distillation

Answer: Centrifugation

4. The solute-like component in colloid is?

○ Dispersed phase
○ Dispersing medium
○ Solvent
○ Solution

Answer: Dispersed phase

5. Fog is an example of?

○ Liquid in gas (Aerosol)
○ Solid in gas
○ Gas in liquid
○ Solid in liquid

Answer: Liquid in gas (Aerosol)

Physical and Chemical Changes

1. Melting of ice is a?

○ Physical change
○ Chemical change
○ Both
○ Neither

Answer: Physical change

2. Burning of paper is a?

○ Chemical change
○ Physical change
○ Reversible change
○ State change

Answer: Chemical change

3. Physical properties include?

○ Colour, hardness, density
○ Flammability
○ Reactivity
○ Acidity

Answer: Colour, hardness, density

4. During a chemical change, we get?

○ New substances
○ Same substance in new state
○ No change
○ Mixture

Answer: New substances

5. Rusting of iron is?

○ Chemical change
○ Physical change
○ No change
○ Fast change

Answer: Chemical change

What are the Types of Pure Substances?

1. Who defined 'element'?

○ Lavoisier
○ Boyle
○ Dalton
○ Newton

Answer: Lavoisier

2. An element is?

○ Basic form of matter
○ Mixture
○ Compound
○ Solution

Answer: Basic form of matter

3. Which of these is a property of metals?

○ Lustrous and ductile
○ Brittle
○ Poor conductor
○ Non-sonorous

Answer: Lustrous and ductile

4. Mercury is a metal that is?

○ Liquid at room temperature
○ Gas at room temperature
○ Solid at room temperature
○ Plasma

Answer: Liquid at room temperature

5. Elements intermediate between metals and non-metals are?

○ Metalloids
○ Alloys
○ Compounds
○ Mixtures

Answer: Metalloids

Compounds

1. A compound is composed of?

○ Two or more elements chemically combined
○ Mixture of elements
○ Single element
○ Solutions

Answer: Two or more elements chemically combined

2. The composition of a compound is?

○ Fixed
○ Variable
○ Random
○ Changing

Answer: Fixed

3. Properties of a compound are?

○ Different from constituent elements
○ Same as constituent elements
○ Average of elements
○ None of the above

Answer: Different from constituent elements

4. Water is a?

○ Compound
○ Element
○ Mixture
○ Solution

Answer: Compound

5. Constituents of a compound can be separated by?

○ Chemical reactions
○ Physical methods
○ Filtration
○ Evaporation

Answer: Chemical reactions

Mixtures vs. Compounds

1. In a mixture, elements?

○ Just mix together
○ React to form new substance
○ Change properties
○ Bond chemically

Answer: Just mix together

2. A compound has?

○ Fixed composition
○ Variable composition
○ Any composition
○ No composition

Answer: Fixed composition

3. Constituents of a mixture can be separated by?

○ Physical methods
○ Chemical reactions
○ Electrochemical reactions
○ Nuclear reactions

Answer: Physical methods

4. Which has variable composition?

○ Mixture
○ Compound
○ Element
○ Pure substance

Answer: Mixture

5. Air is a?

○ Mixture
○ Compound
○ Element
○ Pure substance

Answer: Mixture