

# 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?

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**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

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**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?

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**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**

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**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?

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**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?**

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**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-sonorously

**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

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**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**