

IS MATTER AROUND US PURE

SUBJECT-CHEMISTRY

CHAPTER-02

CHAPTER NAME-IS MATTER AROUND US PURE

CHANGING YOUR TOMORROW



PROPERTIES OF SUSPENSION

- A SUSPENSION IS A HETEROGENOUS MIXTURE.
- THE SIZE OF PARTICLES OF SOLUTION HAVE DIAMETER MORE THAN 100 nm.
- PARTICLES OF SUSPENSION CAN BE SEEN BY NAKED EYES.
- THE PARTICLES CAN BE SEPARATED BY FILTRATION.
- THE PARTICLES OF SUSPENSION SCATTER LIGHT.
- THE SOLUTION IS UNSTABLE.
- EXAMPLE-MIXTURE OF CHALK POWDER AND WATER.



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PROPERTIES OF COLLOIDS

- A COLLOID IS A HETEROGENOUS MIXTURE.
- THE SIZE OF PARTICLES OF COLLOIDS HAVING DIAMETER IN BETWEEN 1 nm and 100 nm.
- PARTICLES OF COLLOIDAL SOLUTION CAN BE SEEN BY MICROSCOPE.
- THE PARTICLES CANNOT BE SEPARATED BY FILTRATION.
- THE PARTICLES OF COLLOIDAL SOLUTION CAN SCATTER LIGHT.
- THE COLLOIDAL SOLUTION IS LESS STABLE THAN SOLUTION.
- EXAMPLE-BLOOD



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TYPES OF COLLOIDAL SOLUTION

<i>Dispersed Phase</i>	<i>Dispersing Medium</i>	<i>Type</i>	<i>Example</i>
Liquid	Gas	Aerosol	Fog, clouds, mist
Solid	Gas	Aerosol	Smoke, automobile exhaust
Gas	Liquid	Foam	Shaving cream
Liquid	Liquid	Emulsion	Milk, face cream
Solid	Liquid	Solution	Milk of magnesia, mud
Gas	Solid	Foam	Sponge, pumice
Liquid	Solid	Gel	Jelly, cheese, butter
Solid	Solid	Solid sol	Coloured gemstone, milky glass



DIFFERENCE BETWEEN SUSPENSION AND COLLOIDS

COLLOID VERSUS SUSPENSION	
Colloid particles are comparatively small (1-200 nm)	Suspension particles are comparatively large (> 200 nm)
Particles pass through filter paper	Particles don't pass through filter paper
Particles cannot be seen by the naked eye but can be seen under a light microscope	Particles can be clearly seen by naked eye
Particles do not undergo sedimentation	Particles undergo sedimentation
Phase separation is either very slow or might not happen	A distinct phase separation can be seen
Examples include milk, shampoo, cosmetics, and flour rubber	Examples include: milky water, soil in air, oil and water
Used in the paint industry, food industry and various other industrial applications	Used in the production of medication and milk of magnesia

HOME ASSIGNMENT

Exercise I Q12 to Q23

- 1) Name the type of colloid in the following. Mention the dispersed medium and dispersed phase in milk and gemstone
- 2) What are Tyndall effects? Write its two applications



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THANKING YOU

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