

## classification of colloids

classification of colloids based on physical state of dispersed phase and dispersion medium

| Dispersed Phase | Dispersion Medium | Common Name    | Example                                                       |
|-----------------|-------------------|----------------|---------------------------------------------------------------|
| Solid           | Solid             | Solid sol      | coloured gems and glasses, some alloys, rock salt,            |
| Solid           | Liquid            | Sol            | Arsenious sulphide sol, gold sol, starch, paint, muddy water. |
| Solid           | Gas               | Aerosol        | Smoke, dust storm                                             |
| Liquid          | Solid             | Gels           | Jellies, cheese, Iron hydroxide, shoe polish.                 |
| Liquid          | Liquid            | Emulsion       | Milk, cod-liver oil.                                          |
| Liquid          | Gas               | Liquid aerosol | Mist, Fog, cloud, insecticide sprays                          |
| Gas             | Solid             | Solid foam     | Pumice stone, rubber, occluded gases.                         |
| Gas             | Liquid            | Foam           | Soap lather, whipped cream, meringue.                         |

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classification based on the nature of interaction between dispersed phase and dispersion medium.

(i) Lyophobic sols: - Particles of dispersed phase has no affinity for dispersion medium, rather they hate dispersion medium. They are ~~not~~ easily prepared and need stabilizing agent for their preservation. They are irreversible.

eg - ~~sols~~ sols of gold, silver,  $\text{Fe}(\text{OH})_3$ ,  $\text{As}_2\text{O}_3$  etc. They are called extrinsic colloids.

(ii) Lyophilic sols: - Particles of dispersed phase have great affinity for the dispersion medium. They are self stabilised because of strong attractive forces operating between the suspended particles and the dispersion medium. They are reversible in nature. Example - e.g. - gums, gelatin, starch, Albumin etc.

They ~~are~~ are also known as intrinsic colloids.