

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

① (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. Examples - eg - gums, gelatin, starch, Albumin etc.

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

## Distinction between lyophobic and lyophilic sols.

### Lyophobic Sols

1. They are irreversible sols.
2. They are less stable and get coagulated by electrolytes, by heating or by agitating.
3. They are prepared by indirect methods which are not so easy.
4. They are obtained from inorganic materials such as metals, metal sulphides, metal hydroxides etc.
5. These are unstable and hence require stabilizers.
6. The particles are ~~not~~ not hydrated.

### Lyophilic Sols

1. They are reversible sols.
2. They are quite stable and not easily coagulated by electrolysis.
3. They are obtained by simple solution method, eg starch solution.
4. They are obtained from organic materials such as starch, Gum, gelatin etc.
5. These are self stabilized.
6. The particles are hydrated.