* Colloidal Solution

The substances their aqueous solutions do not diffuse or diffuse a very slow rate through the animal or vegitable membrane. Starch, gelatin, gum, glue, protein, albumin etc. But Colloid is not the property of a compound. Colloidal is a state in which every substance can be brought by suitable methods. Thus, Colloidal is a state which depends upon the size of the particle. When the size of the particle lies between 10^{-9} to 10^{-6} m (1 nm to 1000 nm) it behaves like colloid.

True solution	Colloidal Solution	Suspension
less than 10^{-9} m (1 nm)	Between 10^{-9} m to 10^{-6} m (1 nm to 1000 nm)	more than 10^{-6} m (1000 nm)

Thus, the Colloidal state is the intermediate state between the suspension and true solution.

[Note- Colloidal solutions pass through the filter paper but not through the animal membrane.]

Colloidal solutions is a heterogeneous system. It consists of at least two phases:

→ Dispersed phase.

→ Dispersion medium.

* Dispersed Phase :-

The size of the solute particles having the range 1 nm to 1000 nm.

* Dispersion medium :-

The solvent in which colloidal particles are distributed is called dispersion medium.

Thus.

Colloidal Solution = dispersed ~~medi~~ phase + dispersion medium.

Colloidal particles (dispersed phase) are generally positively charged, the medium carries negative charge. Thus, the colloidal solution is electrically neutral. The total surface area of the colloidal particle is very large. Therefore, colloidal particles are excellent adsorbents and active catalyst.

Thus, finally we can say, the colloidal solution is a ~~Hetero~~ Heterogeneous system in which particles of 1nm - 1000nm size as dispersed phase are distributed in the dispersion medium.

From,
Dr. A. K. Gupta.
Chemistry (L.S. College)