

• lyophilic Colloid :-

e.g: Starch, Gelatin

Protein in H_2O
→ hydrophilic

• lyophobic:

e.g: Clay, $FeCl_3$ in water

• less viscous than

lyophilic

• Brownian motion depends on
1 - T 2 - K.E 3 - viscosity

• Osmosis:

↳ w. high Conc (Solvent) → w. low Conc

↳ s. low con (Solute) → s. high Conc

→ egg m → Paranchem. m
→ sem: Cut. m
only solvent → ceph. m

• diffusion opposite to

osmosis. → Impermeable

c.w. Fungi and diatom
→ C.w of bacteria
→ Cellulose C.w
→ lignified C.w

→ Cutinized and
suprised, rubber
membrane

→ Cell wall: Permeable

→ B. M. c. m: selective

Tonoplast → some solute and solvent

* hypotonic soln: Endosmosis

hypertonic soln: exo osmosis

→ in equilibrium

↳ diffusion = zero

$\Delta C \parallel \Delta \mu = 0$

Flux density

→ diffu. rate

→ J_s

Fick's Law

$$\frac{C_1 - C_2}{L}$$

r or L

مسافة

مساحة

→ Proto Plasm

↳ Poly Phase Colloidal system

→ True Soln : $< 1 \text{ nm}$

Emulsion : $> 1000 \text{ nm}$

Colloidal : $1 : 1000 \text{ nm}$

→ solute $\propto$ conc of Soln

→ solute $\propto$ osmotic pressure

→ $\frac{1}{\text{solute}}$ $\propto$ Diffusion pressure (O.P)

• O.P $\xrightarrow{\text{of}}$ water (pure) = zero

• D.P $\xrightarrow{\text{of}}$ water (pure) = Maximum

• wall P (W.P) = Turgor P (T.P)

out cell
' But opposite in direction "

into cell

$$\Rightarrow \text{DPD} = \text{OP} - \text{TP}$$

$$\psi_{\text{sw}} = \psi_s + \psi_p$$

$$\Rightarrow \text{DPD} = -\psi$$