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Class ⇒ B.Sc. (Hons.) Part II
Subject ⇒ Chemistry
Paper ⇒ III A
Chapter ⇒ Colloids (Group-A)
Topic ⇒ Brownian Movement

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Properties of Colloids

Brownian Movement

The continuous rapid zig-zag movement executed by a colloidal particle in the dispersion medium is called Brownian movement or motion.

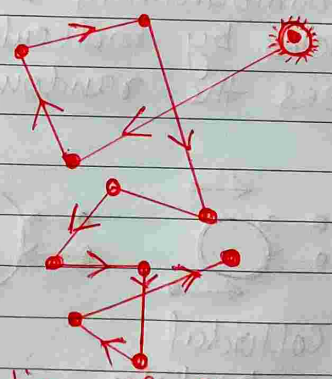


Fig:- An illustration of Brownian Movement

*⇒ Brownian Movement is a kinetic properties of colloids.

When a colloidal solution is examined with an ultramicroscope, the suspended particles are seen

in a constant rapid zig-zag motion. It moves in a series of short straight-line paths in the medium changing directions ~~rap~~ abruptly.

Explanation of Brownian Movement ⇒

The explanation of Brownian movement was advanced by Einstein based on kinetic molecular theory.

The motion is due to unequal bombardment by the molecules of dispersion medium. With increase in size of particles, the probability of unequal bombardment diminishes ~~in size of~~ and so Brownian movement decreases with increase of particle size.

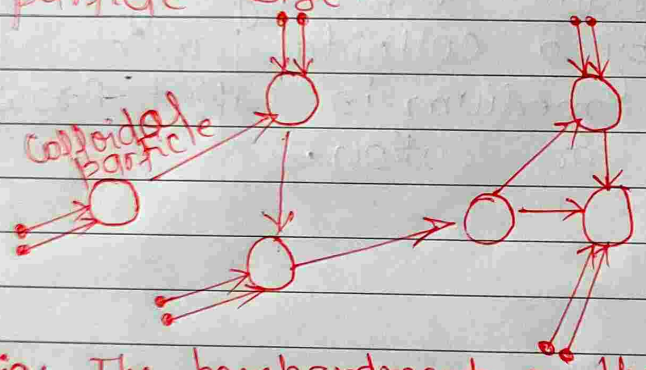
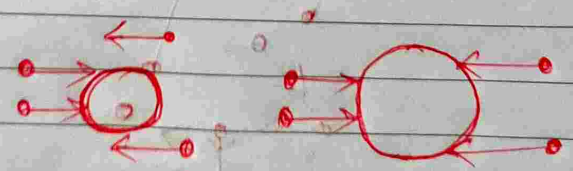


Fig:- The bombardment on the sides of the colloidal particles by molecules of dispersion medium causes the random movement of the particles.



Colloidal particles — Coarse suspension particle

Fig:- How Brownian Movement vanishes in Coarse suspensions.