



Unit III

Surface and interfacial phenomenon

Detergency Phenomenon:

Surfactants in aqueous solutions are used to remove the dirt from substrates such as glass, fabric, skin etc. Effective detergents are required for the cleaning of production equipment, containers for packing and also in order to maintain hygiene in the industry. Detergency is a complex process and a number of steps are simultaneously involved. These are:

- initial wetting of the dirt from the surface
- solubilising of the dirt
- removing the insoluble dirt as deflocculation particles
- suspending the particles in the detergent solution
- removing the oil soluble materials and convert into emulsion
- converting the dirt into foam so as wash easily.

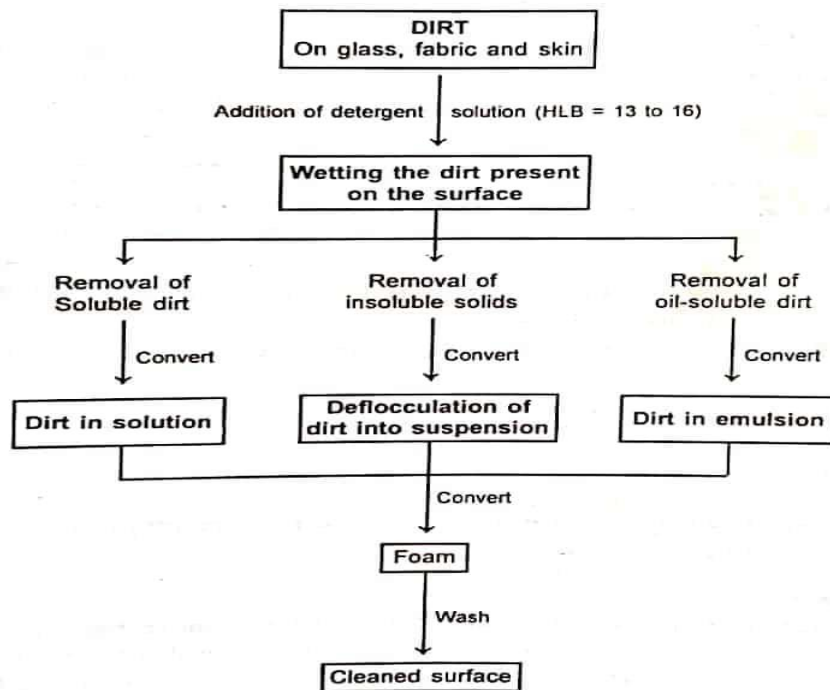


Figure: The phenomenon of detergency showing the number of processes

The HLB requirement for the detergent is about 13 to 16. Some examples of detergents of ionic type are:

- **Cationic type** : Zephiran (benzyl dimethyl cetyl ammonium chloride) & Cetrimide (cetyltrimethyl ammonium chloride)
- **Anionic Type**: Soaps, Sodium lauryl sulphate.

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