

Surfactant Surfactants are amphiphilic molecules that lower the surface tension at interfaces. They are used to produce aerosols, corrosion inhibition, and in ore refining. Surfactants are prepared industrially as they have various functions as detergents, emulsifiers, flocculating agent, foaming agents, adhesives, or wetting agents [1]. Thus, surfactants help in spreading the dye evenly and hence used in textile industry. They have hydrophobic tail made up of hydrocarbons, which surrounds the dirt or soil by orienting at the surface, and a hydrophilic head surrounding water orienting toward the solution. If surfactant is hydrophilic and at the same time lipophilic (soluble in oils), then it acts as an emulsifying or foaming agent. Surfactants are of four types, which are non-ionic, cationic, anionic, or amphoteric based on their composition and polarity [2]. On addition of surfactant, the surface tension decreases; hence, the spreading and wetting properties increase. Surfactants contain both hydrophilic (water loving) and hydrophobic (water hating) portion. They replace bulk molecules at interface, and hence, the free energy of the system decreases.