Emulsifiers and solubilisers are both part of the surfactant family in that they lower the interfacial tension of two immiscible liquids, i.e. water and oil.

Emulsifiers consist of a hydrophilic head (water-loving) and a lipophilic tail (oil-loving) and are classified based on the HLB scale that ranges from 1 – 20. Surfactants with HLB numbers higher than 10 are more hydrophilic, and surfactants with HLB numbers less than 10 are more hydrophobic. For water-in-oil emulsions, emulsifiers with HLB 4 – 6 are recommended and for oil-in-water emulsions, surfactant blends with HLB 8 – 16 are recommended.

Solubilisers are also emulsifiers in that they facilitate the process of mixing oil and water, but they are in general more soluble in water (higher HLB value) than oil-in-water emulsifiers. They are mainly used to solubilise the oil (dispersed phase) to such an extent that the final result is a transparent solution.

Well-known solubilisers are polysorbate-20 and PEG-40 hydrogenated castor oil, but the Durosoft PG 10-CY from Stephensons Personal Care compare very well with these. The added benefits are that they are mild, naturally derived, PEG free, ethoxylate free, GMO free, COSMOS pending and skin friendly.

Contact our office for more information.

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