

## **EMULSIONS, FOAMS AND FRAGRANCE DESIGN IN SKIN CLEANSING FORMULATIONS: REVIEW AND INNOVATIONS**

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This presentation will review oil based emulsions and micro emulsions developed for personal care applications and highlight key trends and innovations in this field. The main function of emulsions is to provide moisturization, occlusion or conditioning benefits to substrates such as skin or hair. A key challenge has been understanding and optimizing the factors effecting the stability of emulsion droplets from destabilization mechanisms such as sedimentation/creaming, flocculation, coalescence, and tolerance to temperature and freeze thaw cycles under equilibrium and kinetic conditions.

The presentation focuses on suspension stability of ester or petrolatum based emulsion droplets achieved by an acrylates copolymer, namely SurfaThix-N, in combination with vegetal amphiphilic molecules called ProLipids carefully selected to form lamellar gels that mimic the skin's natural ordered lamellar lipid bilayer. The key functionality of enhancing the benefits of cosmetic bio actives delivered to skin and providing skin barrier protection during use will be discussed.