



Shin-Etsu

Abstract: Enhanced Stability and Sensory 10% Anhydrous Vitamin C Serum

Vitamin C is one of the tried and true anti-aging skin benefit agents. The challenge is the instability of vitamin C in water, particularly upon **exposure to air, heat, and/or light**. Although the natural form of vitamin C, ascorbic acid, is the most effective for topical administration (11), it is the least stable in solution.

One way to minimize the degradation is to solubilize ascorbic acid in glycol instead of water. However, there are formulation challenges in sensory as well as in stabilizing a non-aqueous emulsion.

It is known that silicone gels can dramatically enhance the sensorial properties of such anhydrous emulsions, however, formulation instability remains to be challenging; syneresis and oil bleeding do occur over time.

In this poster we will demonstrate Shin-Etsu Silicones most recent innovation in glycerin modified emulsifier technology to stabilize a 10% L-ascorbic acid in a non-aqueous emulsion (polyol in oil). KF-6105, a unique silicone branched and alkyl/polyglycerin co-modified emulsifier appears to be the key to emulsion stabilization. Polyglycerin cross-linked emulsifying elastomer gel, KSG-710 further enhances the emulsion stability, and at the same time maintaining the superb light aesthetic. The aesthetics can be further optimized by selecting a non-emulsifying elastomer gel, USG-1010, to deliver the non-greasy velvety texture with fast absorption and a powdery non-tacky after-feel.