SalSphere™ Light is a delivery system of alpha arbutin and resveratrol designed to treat dark spots, melasma, and post-inflammatory hyper-pigmentation on skin.

**Alpha Arbutin & Melanin Synthesis**

Arbutin is a plant-derived glycosylated hydroquinone that inhibits melanin synthesis, the primary pigment responsible for skin color. It inhibits tyrosinase, the rate-limiting enzyme for melanogenesis. The major drawback of arbutin is that it is water-soluble, which results in poor skin penetration that can reduce efficacy.

Resveratrol is an antioxidant that stimulates beta adrenergic receptors, causing the melanin aggregation that leads to lightening of the skin. Unfortunately, resveratrol oxidizes rapidly and has low solubility in water (0.03 g/L).

**How the Technology Helps You**

SalSphere™ Light consists of sub-micron spheres ranging in a diameter of 0.1 to 0.3 microns (Figure 1). The technology is made up of a hydrophilic shell, which aids in its suspension in aqueous mediums. The alpha arbutin is infused within the hydrophobic core, which is made up of lipids. The lipid make up of the core is compatible with the skin membranes and this enables it to partition into the skin. The core slowly releases the alpha arbutin in small dosages for safe and effective skin brightening.

**Clinical Efficacy**

After one month of topical application (n=80), arbutin at 1% loading in a lotion resulted in 340% higher lightening effect as compared to 240% for kojic acid and 100% for FDA-approved hydroquinone (Figure 2).

**References:**