

## **Application of Phytosome Technology on Herbal Extracts**

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### **Abstract:**

Nutraceuticals are food or part of a food possessing nutritional and medicinal properties which provide health benefits. Phytomedicines and conventional herbal extracts are nutraceuticals that help improve health and aid in disease prevention and treatment. However, many phytomedicines are limited in effectiveness due to the presence of water-soluble phytoconstituents (e.g. flavonoids, terpenoids, glycosides). These water-soluble bioactive components have poor lipid solubility and large molecular sizes, resulting in poor absorption and bioavailability. Phytosomes are advanced forms of herbal products that possess better absorption, bioavailability and therapeutic effects than standardised herbal extracts. Phytosomes are like little cell-like structures. They contain standardised herbal extracts or phytoconstituents that are surrounded and bounded by phospholipids. To produce phytosomes, a stoichiometric amount of phospholipids (phosphatidylcholine) reacts with a standardised extract (flavonoids) in a non-polar solvent. Over the years, phytosome technology has been effectively utilised to improve the bioavailability of many conventional herbal extracts (e.g. Green tea, Grapeseed, Ginseng, etc.).