



**Empirical  
Labs**

Nutrition Your Body Needs

# Liposomal Glutathione

## A PROFESSIONAL DIETARY SUPPLEMENT FOR OPTIMAL GLUTATHIONE ABSORPTION

Often referred to as the “master antioxidant,” glutathione (GSH) is the most important antioxidant that is produced in the body. This endogenous antioxidant is present in every cell, and research has shown that it regulates the functioning of the immune system, regenerates Vitamin C and E and is believed to slow the overall aging process. It also plays an important role in detoxifying the liver, especially assisting with heavy metal exposure (James *NeuroTox* 2005). Glutathione production decreases with age and a poor diet, so supplementation is often beneficial to ensure optimal levels of this naturally-occurring free radical scavenger. Supplementing with glutathione, however, is particularly problematic because glutathione is not easily absorbed when taken orally. Fortunately, Empirical Labs has incorporated Phosphatidylcholine liposomes as a delivery method for GSH.

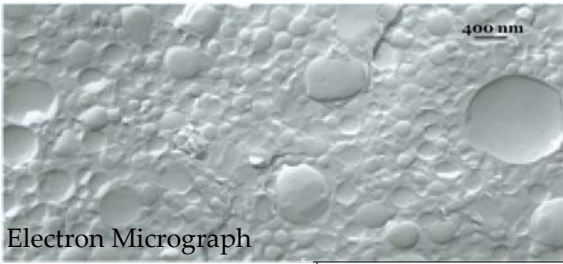
Liposomes have long been used to administer various pharmaceutical drugs and bioactive compounds that normally do not survive the GI tract. Empirical Labs’ liposomes, as a delivery method, have been studied using human clinical trials for structure and absorption. Oral administration of liposomal glutathione promotes glutathione levels and helps protect the liver while supporting its function.

### Liposomal Glutathione—A Superior Nanotechnology Delivery System

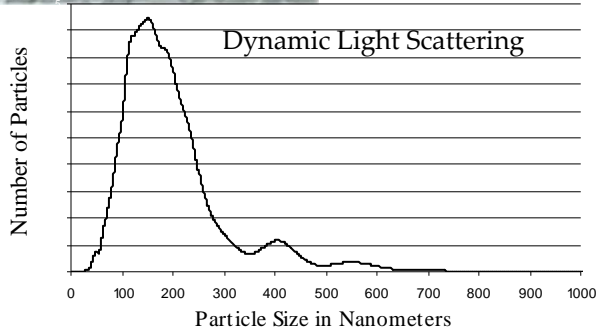
While there are several liposomal systems on the market, not all liposomes are created equal. Empirical Labs Lipo GSH uses natural, non-hydrogenated phosphatidylcholine, which has been shown to better distribute to the liver. In addition, the use of phosphatidylcholine itself has versatile nutritional benefits such as supporting liver, brain and heart health. Other advantages of our proprietary Lipo GSH include:

- Uniform liposomes tightly distributed around 150 nm particle size to ensure optimal performance
- 500 mg of glutathione per dose (vs. 420 mg provided by others)
- 400 mg per dose of natural phosphatidylcholine (vs. not disclosed by others)
- Scientifically studied structure and absorption
- 30 doses per bottle versus 24 doses, the most affordable liposomal glutathione on the market

*These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure or prevent any disease.*



Electron Micrograph



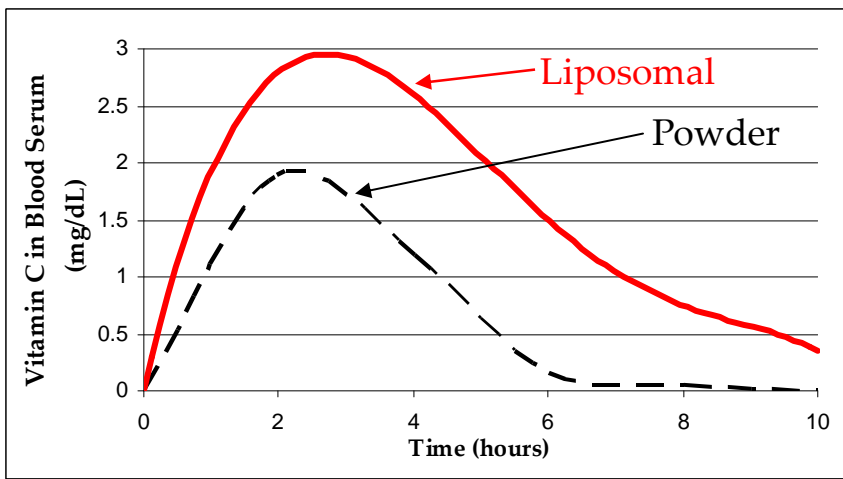
## Liposome Structure Study

The picture on the left is a scanning electron micrograph of Empirical Labs' highly structured spherical liposomes. These "bubbles" act as nano-capsules that deliver nutrition.

The dynamic light scattering study shows that 95% of the liposomes are between 50 nm and 420 nm (range of 370 nm). This tight and regular distribution shows a high level of process control that yields a quality product.

## Liposomal Delivery Study

The plot on the left represents blood serum levels of vitamin C as a function of time after the subject ingested a single 5 g dose of vitamin C. The dotted line reflects ingestion of powdered sodium ascorbate *vs.* the solid line, reflecting ingestion of Empirical Labs Liposomal Vitamin C. Note that the concentration maximum, area under the curve, and residence time in the blood are significantly greater in the liposomal form of



The information in this brochure highlights some of the scientific evidence supporting Liposomal Glutathione. This material is for educational purposes only. Ingredient levels in the formula may or may not match those used in clinical studies and therefore is not to be construed as making any claim for the product. We hope you enjoy the information presented, to increase your knowledge of these natural substances.

Supplement Facts		
Serving Size: 4 milliliters	Servings per Bottle: 30	
	Per Serv'g	%DV
Glutathione	500 mg	*
Natural (non-hydrogenated) Phosphatidylcholine	400 mg	*
* %DV (Daily Value) not established		

OTHER INGREDIENTS: Purified water, natural flavors, potassium sorbate.

*Located in the foothills of the Rocky Mountains, Empirical Labs is a leading manufacturer of dietary supplements exclusively for professional healthcare practitioners. We use professional and customer feedback to continually evaluate and improve our formulas.*

*Our formulas are designed using a multi-disciplined approach including Traditional Chinese Medicine, Ayurvedic Medicine, as well as Western medicine. By integrating these systems, we have developed stimulating yet gentle formulas which merge the benefits of traditional herbs, superfoods, extracts, vitamins, minerals, amino acids and enzymes. Our formulas are intended to support good health, are gentle enough for every day use and contain no harsh or unnecessary carriers.*