



Botanical Ingredients



High blood cholesterol level:

the first risk factor for coronary heart diseases



Studies have shown that a 10% decrease in blood cholesterol level can reduce the risk of cardiovascular disease by 19% to 54% depending on a person's age.

Consumption of **1.5g to 2.4g** of plant sterols per day can lower **LDL-Cholesterol** by 7-10%



1.5g to 2.4g can lower **7-10%**



healthcare savings of **€5.3** billion per year and prevent more than **170,000** hospitalisations

Phytosterols could save Europe **€26 billion** in heart disease health costs

By daily consumption of 1.7g of phytosterols by the millions of adults aged 55 and over in the EU with severe hypercholesterolemia



adults aged 55 and over

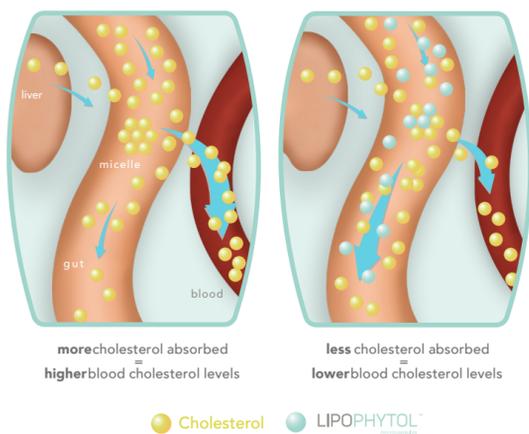


Phytosterols Market size generated over **USD 500 million** revenue in 2015 and to reach **USD 1.09 billion** by 2024



CAGR: 8.5%

Plant sterols mechanism



Problems with formulation

- Plant sterols are insoluble in water and lipids
- Challenging incorporation
- Lower cholesterol reduction efficacy
- Inefficient dispersion in food and gut
- Low concentration of sources in the market

The solution

LIPOPHYTOL™

microcapsules

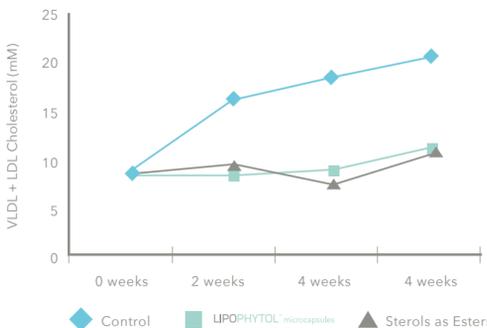
Water dispersible plant sterols for cholesterol reduction

Efficacy

- Efficient cholesterol reduction
- High phytosterols concentration
- Readily dispersible
- Fat-free ingredient

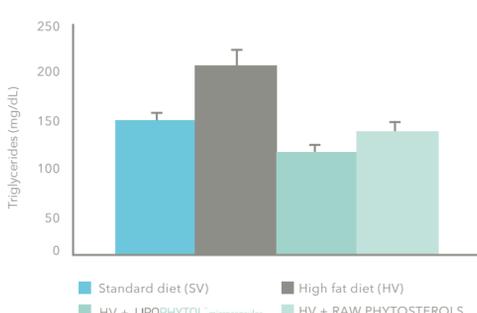
Benefits

1. Cholesterol reduction



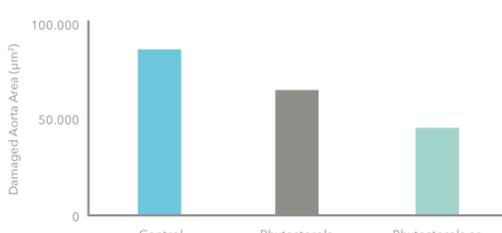
LIPOPHYTOL™ microcapsules significantly reduced the concentration of VLDL+LDL cholesterol in serum to the control

2. Tryglicerides reduction in hamsters



Results indicate that LIPOPHYTOL™ microcapsules might enhance the activity of phytosterols against hypertriglyceridemia

3. Protective effect against aortic lesions



LIPOPHYTOL™ microcapsules resulted in reduced damaged aorta, an indication of ability to protect arteries

Atherosclerosis damage test indicated that LIPOPHYTOL™ microcapsules was the most effective in protecting mice arteries from the harmful effects of the high fat diet.

Applications



Dairy products, yogurts, soya drinks, rye bread, cheese type products, dietary supplements, etc.

