DESCRIPTION

Due to their insolubility in water and lipids, phytosterols incorporation into foods and beverages formulations has been very challenging. **LIPOPHYTOL®-P** is a dispersible form of pine tree sterols which has been microencapsulated to facilitate their incorporation in food matrices. This unique delivery system increases pine tree phytosterols dispersibility in foods and beverages, thus providing a convenient way of introducing phytosterols into the human diet.

COMPOSITION

Pine tree phytosterols, maltodextrin and sucrose ester.

A NUTRITIONAL VIEW

High blood cholesterol level is the first risk factor for coronary heart disease. 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.

The cholesterol lowering effect of plant sterols is well documented in the literature. Consumption of 1.5 to 3 grams of plant sterols per day can lower LDL-Cholesterol by 8% to 15%.

The European Food Safety Authority (EFSA), has approved claims for plant sterols namely: i) “plant sterols have been shown to lower/reduce blood cholesterol” and ii) “plant sterols/stanols contribute to the maintenance of normal blood cholesterol levels”.

The U.S. Food and Drug Administration (FDA) approved the following claim for phytosterols: “foods containing at least 0.4 grams per serving of plant sterols, eaten twice a day with meals for a daily total intake of at least 0.8 grams, as part of a diet low in saturated fat and cholesterol, may reduce the risk of heart disease”.

APPLICATIONS

EU has approved the use of phytosterols in yellow fat spreads, milk type products, yoghurt type products, soya drinks, rye bread, cheese type products and food supplements. FDA has authorized the use of phytosterols in conventional foods and nutraceuticals.

References:
IN VIVO EFFICACY

LIPOPHYTOL®-P CHOLESTEROL REDUCTION

The effect of LIPOPHYTOL®-P (LP-P) on cholesterol reduction was studied in vivo using knock out Apo E mice in a study conducted by Dr. Blanco at the Institut de Recerca de l’Hospital de la Santa Creu i San Pau in Barcelona (Spain). Three groups of mice were fed either i) a high fat diet (control), ii) a high fat diet with LP-P or iii) a high fat diet with phytosterol esters.

Concentration of VLDL+LDL cholesterol in serum expressed in mM.

LIPOPHYTOL®-P PROTECTIVE EFFECT AGAINST AORTIC LESIONS

The effect of LIPOPHYTOL®-P on aorta atherosclerotic lesions was examined on every group of mice after 8 weeks of treatment. Heart and proximal aortas were removed and atherosclerotic lesions quantified.

Atherosclerotic area measured in µm².

LIPOPHYTOL®-P RESULTED IN REDUCED DAMAGED AORTA, AN INDICATION OF ABILITY TO PROTECT ARTERIES.

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