SINCE 1743

PHYTOSTEROLS STABLE IN FUNCTIONAL FOODS

The stability of plant sterols in functional foods for cholesterol reduction is high, says a new study from Spain which adds to the safety data surrounding phytosterols.

Tests with eight commercially available plant sterol-containing ingredients showed that, under oxidizing conditions, only a very small quantity of oxidation products were produced, report researchers.

"From the results obtained (low rate of oxidation) in the ingredients tested, we can conclude that the plant sterols remain stable in these ingredients", wrote the researchers.

Numerous clinical trials in controlled settings have reported that daily consumption of 1.5 to 3 grams of phytosterols from foods can reduce total cholesterol levels by 8 to 17 per cent, representing a significant reduction in the risk of cardiovascular disease.

Phytosterols are the most heart health targeted and benefited from approved health claims in many markets (as well as recently approval from the European Food Safety Authority).

In order to test the stability towards oxidation, the researchers employed gas chromatographic (GC) technique with mass-spectrometric detection to identify the specific types of plant sterols present in certain sterol-containing ingredients, and then GC with a flame ionization detector (GC-FID) to quantify the phytosterols.

Eight commercially available phytosterol-containing ingredients were tested, with the sterols present in esterified or free form, and derived from pine, soybean, rapeseed, soybean, corn, and sunflower oils in one of three physical forms: Powder, oil paste, or liquid emulsion. Sterols were tested in their original state and then after thermo-oxidation.

"In view of this low rate of oxidation in the ingredients tested, it can be concluded that the plant sterols remain stable in these ingredients," wrote the researchers.

Source: www.nutraingredients.com