CIRCE Health Science

CareSTEROL™

Caresterol™ is a patented combination of a natural phytosterols blend derived from pine tree extract and propionic acid, designed to increase water solubility by 7-fold and maximize its natural health benefits.

PHYTOSTEROLS HEALTH CLAIMS

Next generation of Phytosterols

- Phytosterols are highly safe, with health claims approved by EFSA (contribute to the manteinance of normal blood colesterol levels) and FDA (may reduce the risk of heart disease)
- Both EFSA and FDA require a minimum of 0.8 g of plant sterols per day to use the authorized health claim (FDA specifies 0.4 g twice daily). Each 0.85 g serving of CareSterol® provides more than 0.8 g, meeting this requirement.[1] [2]
- Clinical trials show phytosterols doses of 0.6–1.1 g/day reduce cholesterol by >5%, while 3.3 g/day achieves reductions >12%.[3] Caresterol has demostrated improved activity *in vivo*.

PHYTOSTEROL MECHANISMS

These compounds, structurally analogous to cholesterol, compete for absorption in the intestinal lumen by displacing cholesterol from micelles, thereby reducing dietary cholesterol uptake, and contributing to the upregulation of LDL receptors in the liver, thus reducing its blood levels. The result is a decrease in LDL-cholesterol levels, a recognized risk factor for coronary heart disease and atherosclerosis.[4]

CARESTEROL™ AN ENHANCED PHYTOSTEROL

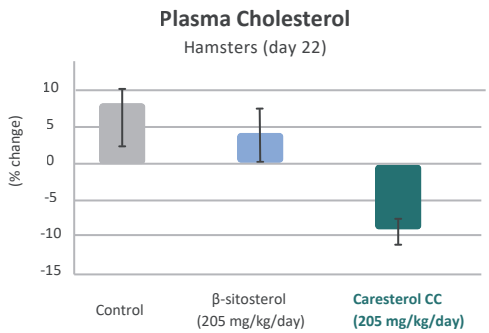
Compared to conventional phytosterols, which are limited by their poor solubility in both water and fat, Caresterol™ provides a more efficient alternative, avoiding the need for esterified forms that are prone to rancidity, instability, and unpleasant odor.

Our synergistic combination has demonstrated that it reduces cholesterol intake from food to a higher level than generic phytosterols (even to the point of lowering cholesterol in diets were phytosterols can only reduce the cholesterol increase), that it lowers fatty acids content in liver and plasma and that it reduces weight gain in high fat diets.

Caresterol™ vs. Red Yeast Rice vs. Phytosterols

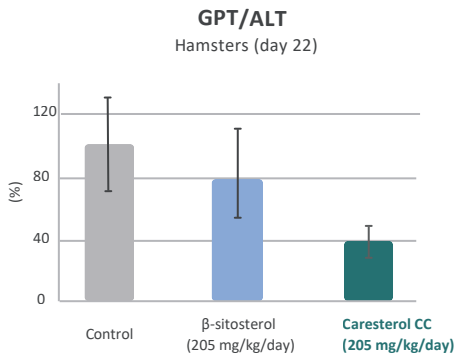
	Caresterol™	Red Yeast Rice	Phytosterols
Mode of action	Blocks cholesterol absorption through competition with phytosterols [4]	Contains monacolins (statin-like compounds) inhibiting cholesterol synthesis with demonstrated effects at 10 Mg per day. [4]	Blocks cholesterol absorption through competition with phytosterols [4]
Safety profile	Plant-based, well tolerated even at high dosis, EFSA/FDA-approved claims	May cause statin-like side effects (e.g., muscle pain, liver toxicity). EFSA limits intake to 3 mg/day (≈1/3 effective dose). Strictly regulated in the EU, with potential further restrictions.[5]	Plant-based, well tolerated even at high dosis, EFSA/FDA-approved claims
Potential benefits	Reduction of LDL cholesterol levels.[4] Liver fat reduction (MASLD), weight management	Primarily cholesterol-lowering [4]	Primarily cholesterol-lowering [4]

CIRCE Health Science has already tested Caresterol™ efficacy in vivo with astounding results:



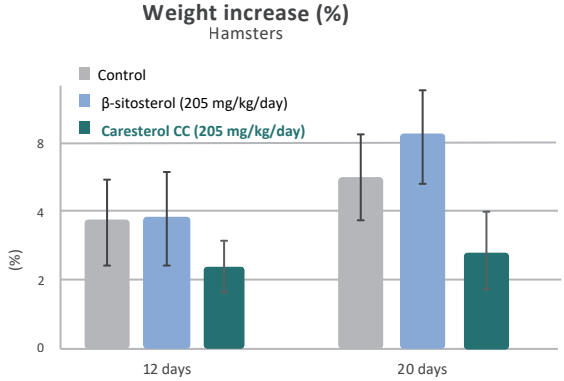
In cases where standard β-sitosterol fails to prevent cholesterol elevation, Caresterol™ continues to exhibit a substantial cholesterol-lowering effect.

Caresterol™ hypolipidemic activity *vs.* β-sitosterol. *In vivo* study (22 days analysis in hamsters with obesogenic diet, giving an equivalent to human dose of free β-sitosterol).



Caresterol demonstrates significant ability to reduce fatty liver disease (NAFLD) biomarkers in an obesogenic diet.

Caresterol™ has shown other effects that could be of interest for new developments or claims: the cocrystals seem to decrease levels of hepatosteatosis markers at a standard human dose, as the animals (hamsters) treated with Caresterol™ had lower GPT levels.



In contrast to standard sitosterol, which does not prevent weight gain in an obesogenic diet, Caresterol exhibits a substantial effect on reducing weight gain.

Caresterol™ showed an **improved effect on obesity:** after 20 days of treatment, the increase in body weight was lower in animals treated with the Caresterol™ and showed a higher proportion of small adipocytes.

About Caresterol™

REGULATORY APPROVED:

FDA & EFSA accept the safety and efficacy of phytosterols.

SAFE PRODUCT AND CERTIFICATIONS:

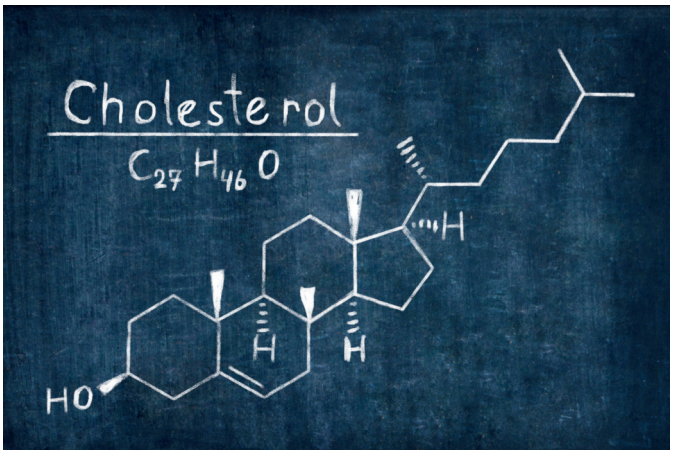
- Gluten Free
- Allergens free
- Banned substances-free
- Aflatoxin free
- Pesticide Free
- Melamine Free
- PCB Free
- Nanomaterial tech free
- N o n-G MO

HIGH QUALITY PRODUCT:

- Produced under cGMP
- Manufactured and tested in Europe

Industrial scale batches of **Caresterol™** have already been produced under GMP in Spain from a natural plant phytosterol.

Samples and technical information are already available.



OTHER PHYTOSTEROLS HEALTH BENEFITS:

Phytosterols are also commonly used in the long-term **treatment of BPH (Benign Prostatic Hyperplasia) and in Hair Loss Prevention** at much lower doses (between 60 mg to 300 mg per day), but FDA or EFSA has not granted specific health claims for these uses yet.

References:

1.EFSA NDA Panel. Scientific Opinion on the substantiation of health claims related to plant sterols and plant stanols and maintenance of normal blood cholesterol concentrations. EFSA Journal. 2010;8(10):1813.

2.FDA. 21 CFR 101.83 — Health claims: plant sterol/stanol esters and risk of coronary heart disease (CHD).

3.Ras RT, Geleijnse JM, Trautwein EA. LDL-cholesterol-lowering effect of plant sterols and stanols across different dose ranges: a meta-analysis of randomised controlled studies. British Journal of Nutrition. 2014;112(2):214-219. doi:10.1017/S0007114514000750

4.De Smet E, Mensink RP, Plat J. Effects of plant sterols and stanols on intestinal cholesterol metabolism: Suggested mechanisms from past to present. Molecular Nutrition & Food Research. 2012;56(7):1058–1072.

5.EFSA Panel on Nutrition, Novel Foods and Food Allergens (NDA). (2025). Scientific opinion on additional scientific data related to the safety of monacolins from red yeast rice submitted pursuant to Article 8(4) of Regulation (EC) No 1925/2006. EFSA Journal, 23(2).

Ready to find out more about how you can use **Caresterol™** in your formulations?

Let's work together to explore new possibilities.

Contact our sales team.

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Designed & Manufactured by:

CIRCE Health Science