

PhytoSolve® Astaxanthin

Natural Phospholipids

Boosting the Performance
of Natural Supplements



We Invest in Quality.

Nature's Powerful Antioxidant

Astaxanthin is a powerful antioxidant that is naturally produced by aquatic organisms like algae. In comparison to other antioxidant nutrients, it exhibits a higher capacity to scavenge reactive oxygen species (ROS)^[1]. ROS play a vital role in several physiological processes. However, increased ROS production results in oxidative stress and adverse effects on endogenous structures.

Astaxanthin effectively mitigates oxidative stress and prevents adverse effects associated with excess ROS. As a result, several beneficial effects are attributed to astaxanthin, e.g., on cardiovascular and eye health, the immune system, and cognitive function^[2].

During vigorous physical exercise, increased ROS production leads to soreness, fatigue, and muscle damage^[3]. Intake of astaxanthin alleviates these effects and contributes to higher endurance, reduced muscle soreness, and faster recovery^[4], making it an ideal supplement for sports nutrition.

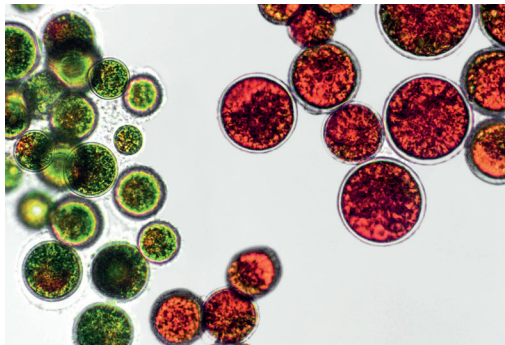


Fig. 1: The most important natural source of the strong antioxidant astaxanthin is the alga *Haematococcus pluvialis*.

PhytoSolve® Technology

Lipophilic nutrients like astaxanthin require solubilization to be absorbed in the human body and exert their beneficial effects.

PhytoSolve® is Lipoid's natural technology to effectively solubilize lipophilic nutrients using a phospholipid-based carrier.

Phospholipids are amphiphilic endogenous molecules that are involved, among others, in the digestion and absorption of nutrients. In PhytoSolve®, highly purified phospholipids enclose small oil droplets, forming an emulsion. This vehicle effectively enhances the uptake of lipophilic nutrients in a natural way^[5].

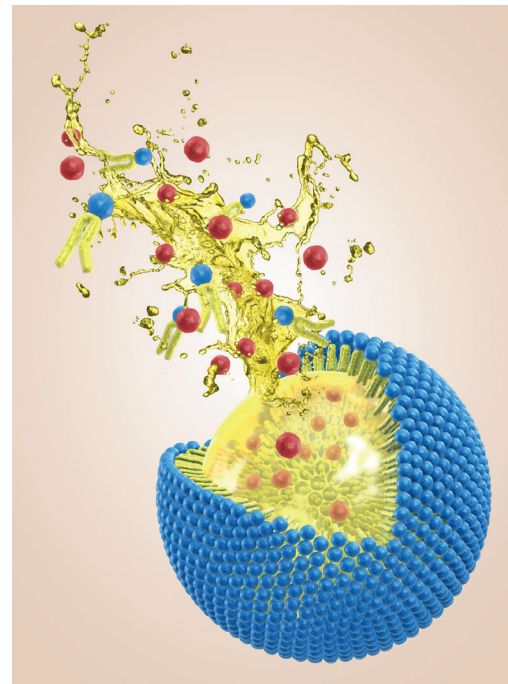


Fig. 2: Schematic depiction of the emulsion ingredients and the formed emulsion droplet (phospholipid monolayer, encapsulation of lipophilic active).

PhytoSolve® Astaxanthin

PRODUCT	NUTRIENTS	FURTHER INGREDIENTS
PhytoSolve® Astaxanthin	4 mg/mL astaxanthin from <i>Haematococcus pluvialis</i>	Glycerol, medium-chain triglycerides, non-GMO soybean phospholipids

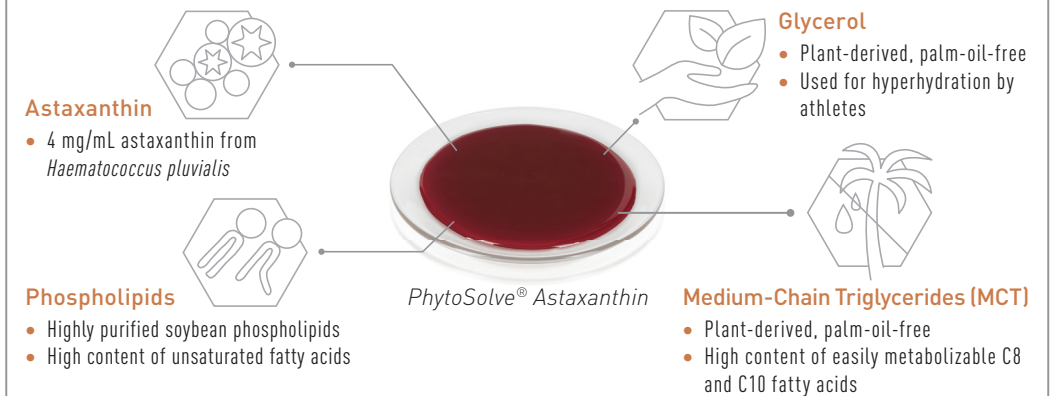
PhytoSolve® Astaxanthin contains glycerol and medium-chain triglycerides (MCT). Both ingredients offer additional benefits for sports nutrition. Glycerol is used for pre-exercise hyperhydration to minimize the risk of dehydration^[6]. MCT can be used as energy source due to their rapid metabolism. In contrast to long-chain triglycerides, they can be directly absorbed without being bound to proteins^[7].

The self-preserving formulation is water-soluble, can be mixed with any kind of beverage, and has a very pleasant taste and smooth mouthfeel.

Further applications

PhytoSolve® Astaxanthin is also suitable for cosmetic applications. If you need additional information, please contact us.

PhytoSolve® Astaxanthin – The main ingredients in detail



Astaxanthin supports in:

IMPROVING COGNITIVE FUNCTION

INCREASING ENDURANCE

CARDIOVASCULAR HEALTH

PhytoSolve® Astaxanthin is the smart way to formulate astaxanthin.

Regulatory *[Further regulatory data upon request]*

Safety	The product does not contain chemical additives.
Vegan	The product can be declared as vegan.
Non-GMO	The product meets the non-GMO standards set by Regulation (EC) No. 1829/2003.
Palm-Oil-Free	The product does not contain palm oil.
Novel Food	Astaxanthin-rich oleoresin from <i>Haematococcus pluvialis</i> algae is an authorized novel food according to regulation (EU) 2021/1377.
Manufacturing	The product is manufactured in Germany.



NO CHEMICAL
ADDITIVES



VEGAN



NON-GMO



PALM-OIL-
FREE



MADE IN
GERMANY

References *[Additional references upon request]*

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- [4] Capelli, B., Jenkins, U., *et al.*, Role of astaxanthin in sports nutrition. *Nutrition & enhanced sports performance*, 465–471 (2013).
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- [6] Wingo, J. E., Casa, D. J., *et al.*, Influence of a pre-exercise glycerol hydration beverage on performance and physiological function during mountain-bike races in the heat. *Journal of Athletic Training*, 39(2), 169 – 175 (2004).
- [7] Marten, B., Pfeuffer, M., *et al.*, Medium-chain triglycerides. *International Dairy Journal*. 16(11), 1374 – 1382 (2006).

Video

Dispersing PhytoSolve® Astaxanthin in orange juice.



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NATURAL &
SUSTAINABLE



REUSAGE
OF WASTE

Representatives in many other countries.

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