



trusted petfood  
ingredients

# Natural astaxanthin: how the 'king of carotenoids' can upgrade pet food

*By Geert van der Velden, Innovation Manager at IQI Trusted Petfood Ingredients*

Famous for its potent antioxidant and anti-inflammatory properties, natural astaxanthin has become a highly targeted ingredient – not only for human consumption but also for pet food. Research shows that it contributes to a better immune defense and improved immune response in pets in general, and that it stimulates muscle function and recovery specifically for dogs. Senior pets in particular can benefit from astaxanthin as a highly bioactive ingredient.

## ALL NATURAL

Astaxanthin is a natural reddish pigment from the xanthophyll carotenoids family responsible for the red-orange color of a number of marine animals and microorganisms like salmon, crabs, krill, lobsters, and even flamingos. It is also found abundantly in various plants, bacteria, plankton and microalgae. Perhaps the most commonly known member of the carotenoids group is carotene, which is often associated with carrots – and, by that token, vitamin A.

## 'KING OF CAROTENOIDS'

Because of its reputation as one of the most powerful antioxidants found in nature, astaxanthin is often referred to as 'the king of carotenoids'. A growing number of studies is backing this reputation up. For instance, it has been shown that natural astaxanthin is almost 5 times stronger than beta-carotene, 110 times stronger than vitamin E and 6000 times stronger than vitamin C in quenching free radicals, thereby protecting the cells from oxidative stress. The latter is especially beneficial for older pets, because just like in humans, oxidative stress increases as pets age – meaning that their bodies face a higher number of free radicals to keep in check. Carotenoids are known for their ability to neutralize reactive oxygen species on the inner layer of the cell membranes. As a superior property of its unique chemical structure, astaxanthin does this on both inner and also the outer layers. Thus, by slowing down the oxidative injury to cells in the brain and other organs, astaxanthin can contribute to better health and improved quality of life.

## NATURAL ASTAXANTHIN IS:

**2.6 X** stronger than lutein



**4.9 X** stronger than beta-carotene



**110 X** stronger than vitamin E



**800 X** stronger than COQ10



**6000 X** stronger than vitamin C

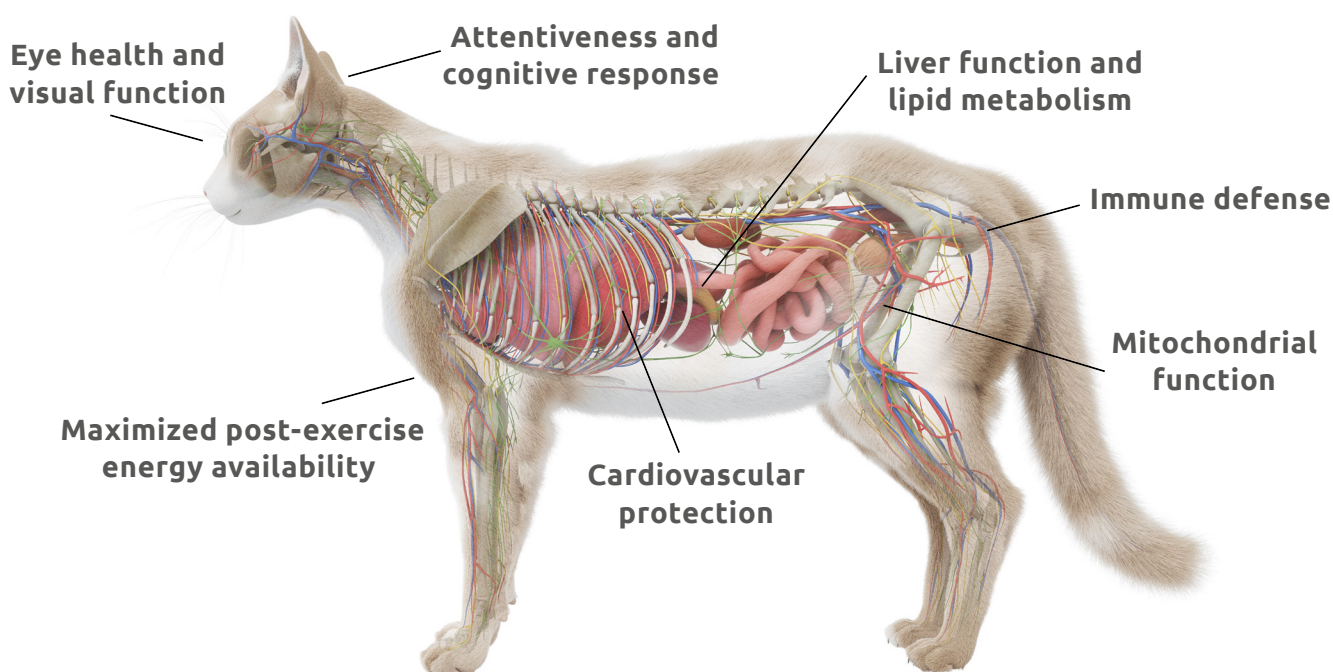


## HUMAN CONSUMPTION

Not only pets, but their parents as well can benefit from the antioxidant and anti-inflammatory properties of astaxanthin. Studies indicate that the carotenoid can have a series of positive effects on the human body, including, but not limited to, supporting memory and cognitive function, eye and vision, muscle endurance and performance, skin health and immune responses. Other advantages of natural astaxanthin are that it is allergen-free and non-GMO, and it does not contain any gluten or soy. It also perfectly fits in a vegan and vegetarian lifestyle when derived from plant-based sources such as algae. Salmon and some other seafood are alternative sources of astaxanthin, although it is not feasible to obtain the effective daily dose of astaxanthin merely through food. For this reason, supplementation is recommended.

## ASTAXANTHIN FOR PETS

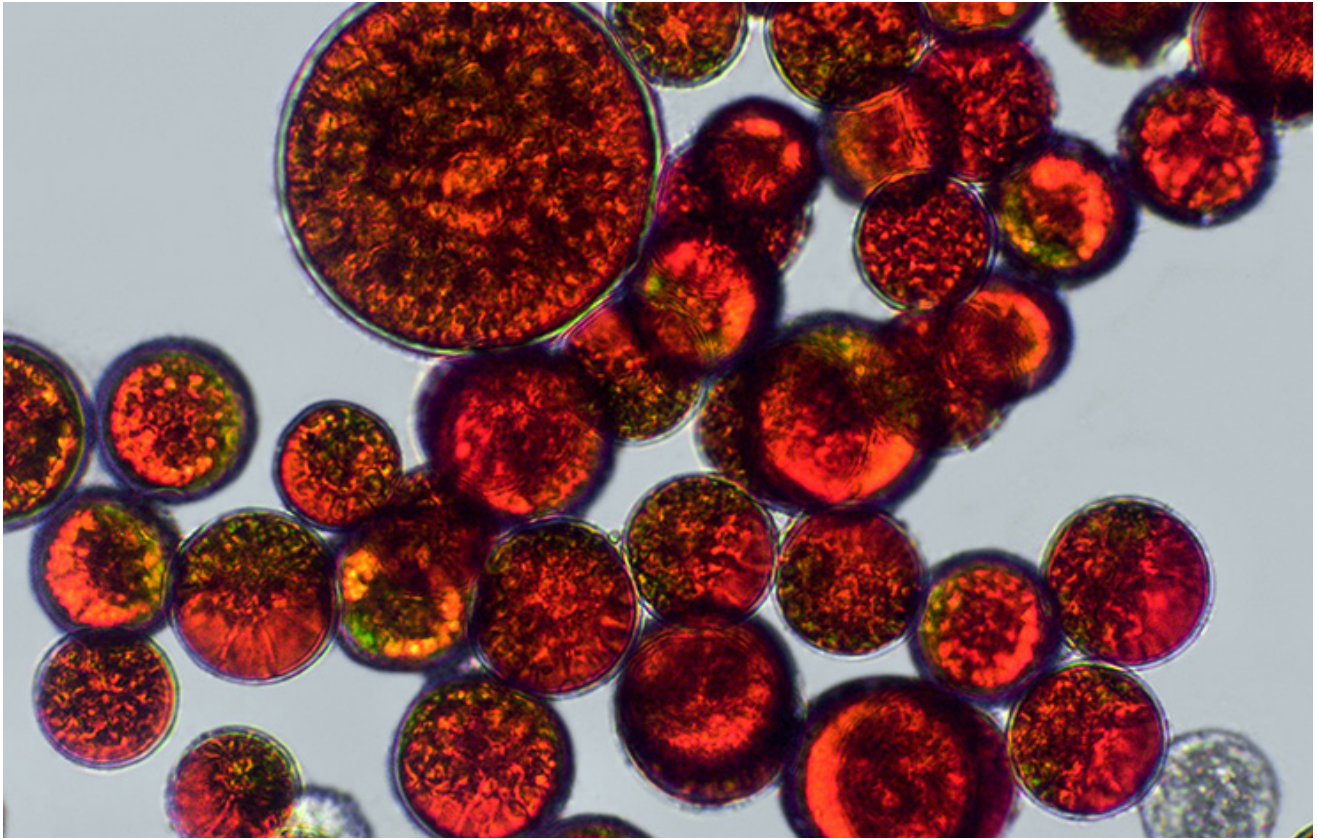
As pet parents are becoming more aware of the importance of healthy nutrition, not just for themselves but also for their four-legged companions, many countries nowadays have an ever-growing aging pet population. Given the physical, physiological and metabolic changes that inevitably come along with aging, these older pets will, to a varying extent, develop symptoms like progressive deterioration of their skin, coat, and teeth, as well as joint health and functionality. Finding the right ingredients to mitigate these symptoms is extra critical for senior pets because their appetite and the ability to digest and absorb nutrients typically decline as they age. This is where astaxanthin comes into play. Due to its high bioactivity, the carotenoid's antioxidant and anti-inflammatory properties effectively support senior animals' wellbeing, fitness, and general health, with proven benefits for muscles, eyes, brain, immune system and more – answering to pet parents' ongoing pursuit of health-promoting and highly efficacious pet food products with high quality ingredients. Research indicates that natural astaxanthin contributes to different aspects of pet's health. including:





## **IQI ASTAXANTHIN-RICH MICROALGAE**

As of October 2022, IQI is working together with AstaReal in Sweden to bring their innovative and science-based version of astaxanthin, Novasta® EB15, to the European pet food market. The company cultivates the most abundant source of natural astaxanthin, freshwater microalgae *Haematococcus pluvialis* in-house in closed photobioreactors under sterile conditions, making it



a clean, green and sustainable source. The product is supplied as a red powder, composed of 32% algae biomass in 66% fully hydrogenated rapeseed oil (encapsulated). It contains at least 1.5% astaxanthin. Encapsulation boosts astaxanthin's resilience against food processing effects. This additional processing flexibility provides further opportunities for incorporation of natural astaxanthin into rather 'open' formulations (such as pellets, meal mixes and soft chew treats) that are exposed to air at ambient temperatures, with less concern about the product stability and quality. Novasta® EB15 can be added to a wide variety of extruded or wet pet food and is considered as a great addition to the diet of cats and dogs.

### **Novasta® EB15 at a glance:**

- Unique thermostable formulation
- The safest and most studied brand of astaxanthin
- Natural source, originated from the microalgae *Haematococcus pluvialis* (produced in Sweden)
- Backed by over 70 clinical studies on humans and pets
- Suitable for targeting multiple health areas
- Vegan friendly and sustainable

## SUSTAINABLE SOURCE

Given IQI's own efforts to contribute to a sustainable pet food industry, we highly value AstaReal's sustainability ambitions. The company aims to be climate-neutral by 2026 and proactively tries to contribute to the health and well-being of humans and animals. It already has a lot of positive things in place, such as 100% climate-neutral electricity, sustainability demands in suppliers assessment, good systems for waste sorting, sustainable business activities and several health-promoting internal activities.

For more information on the finest ingredients for the pet food industry, including astaxanthin, please visit our [website](#) or contact us directly.



### Want to know more?

[Benefits of AstaReal® astaxanthin - AstaReal](#)

[Science-based formulations with premium natural astaxanthin for pets and their parents - YouTube](#)

<https://astareal.turtl.co/story/animal-nutrition/>

<https://www.astareal.se/astaxanthin-for-pets/>

[US9820497B2 - Astaxanthin-containing pet foods - Google Patents](#)

## ABOUT IQI TRUSTED PETFOOD INGREDIENTS

IQI Trusted Petfood Ingredients is a global provider of premium-claim ingredients to the top brands in the pet food industry. Founded in 1994 as a trading company in raw pet food materials, today IQI offers an extensive variety of services to aid and assist our customers and suppliers worldwide. IQI Trusted Petfood Ingredients employs highly skilled personnel, owns and operates a global network of logistical hubs, and relies on a global supply network to obtain the purest natural resources available.

For IQI, quality is key. IQI Trusted Petfood Ingredients goes to great lengths to ensure the quality of its products and develop innovative new products. IQI also invests a great deal in maximizing the quality of its partnerships. Since this business is all about trust, IQI needs to bond with its partners to succeed. By working closely with both its customers and suppliers, IQI creates full transparency in the supply chain. IQI oversees and controls every step in the process from source to shelf and supplies products that are pure and traceable to their source.



## ABOUT GEERT VAN DER VELDEN

Geert van der Velden is IQI Trusted Petfood Ingredients' Innovation Manager responsible for Business Development, generating new products and concepts that meet the needs of existing and new customers. Geert has more than 25 years' experience in the international pet food industry and has gained knowledge and experience in many sections of IQI's business.

## CONTACT INFORMATION:

IQI Trusted Petfood Ingredients

Geert van der Velden

Email: [geert.vandervelden@iqi-petfood.com](mailto:geert.vandervelden@iqi-petfood.com)

Mobile: +31651063301

[www.iqi-petfood.com](http://www.iqi-petfood.com)



trusted petfood  
ingredients

### Disclaimer

The content of this white paper has been prepared with the utmost care. This white paper contains general information and that may not be applicable to all products of all companies in all situations. In addition, certain of the information included in the white paper may be derived from information received from third parties. IQI makes no warranties, guarantees or representations with regard to the accuracy, completeness or suitability of the information presented in the white paper, including any information derived from information received from third parties. Although IQI believes that the information contained in this white paper is correct at the time of publication, IQI accepts no liability for any inaccuracies in this white paper. IQI hereby disclaims any liability to any party for any loss, damage, or disruption, in whatever form or of whatever nature, suffered by or resulting from the use of or the information presented in this white paper, whether or not caused by IQI's errors, omissions or inaccuracies in the white paper, and whether or not such errors, omissions or inaccuracies result from tort, negligence, lack of care, incorrect actions, accident or any other cause. IQI is not responsible for the content in any document or any website or any other information from third parties referred to in this white paper. You should not use this white paper or rely on it if you do not agree to the above exclusion of liability and any use of or reliance on this white paper is in one's own name and at one's own risk.

IQI reserves all copyrights and other intellectual property rights on the content of this white paper. Unauthorized or improper use of this white paper and/or its content violates the intellectual property rights of IQI. Permission to use any content of this white paper or part thereof must be requested in writing to IQI. If you have any questions about the content of this white paper, please contact IQI. Email: [info@iqi-petfood.com](mailto:info@iqi-petfood.com) Website: [iqi-petfood.com](http://iqi-petfood.com)