

# Spotlight on ...

Astaxanthin

**RAHN**

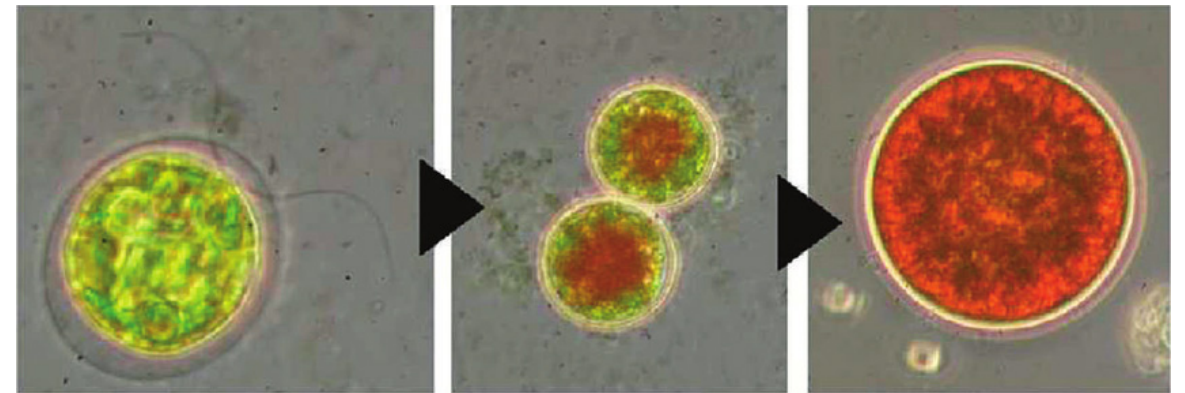
# Meet Astaxanthin ...

## What is it?

Astaxanthin is a **naturally** occurring pigment that gives the **reddish color** to marine organisms such as crabs, shrimps and salmons.

In natural surroundings, it can be found in **photosynthetic organisms** like bacteria, algae and yeasts. The highest concentrations of **natural astaxanthin** can be accumulated from the sweet water microalgae *Haematococcus pluvialis*.

When the algae is **stressed** by lack of nutrients, increased salinity, or excessive sunshine, it **creates** astaxanthin.



Microscopic images of *Haematococcus pluvialis* showing its growth stages

Source: Kristoffersen, Arne & Svensen, Øyvind & Ssebiyonga, Nicolausi & Erga, Svein & Stamnes, Jakob & Frette, Øyvind. (2012). Chlorophyll a and NADPH Fluorescence Lifetimes in the Microalgae *Haematococcus pluvialis* (Chlorophyceae) under Normal and Astaxanthin-Accumulating Conditions. *Applied spectroscopy*. 66. 1216-25. 10.1366/12-06634.



# What does it do? And should I use it?

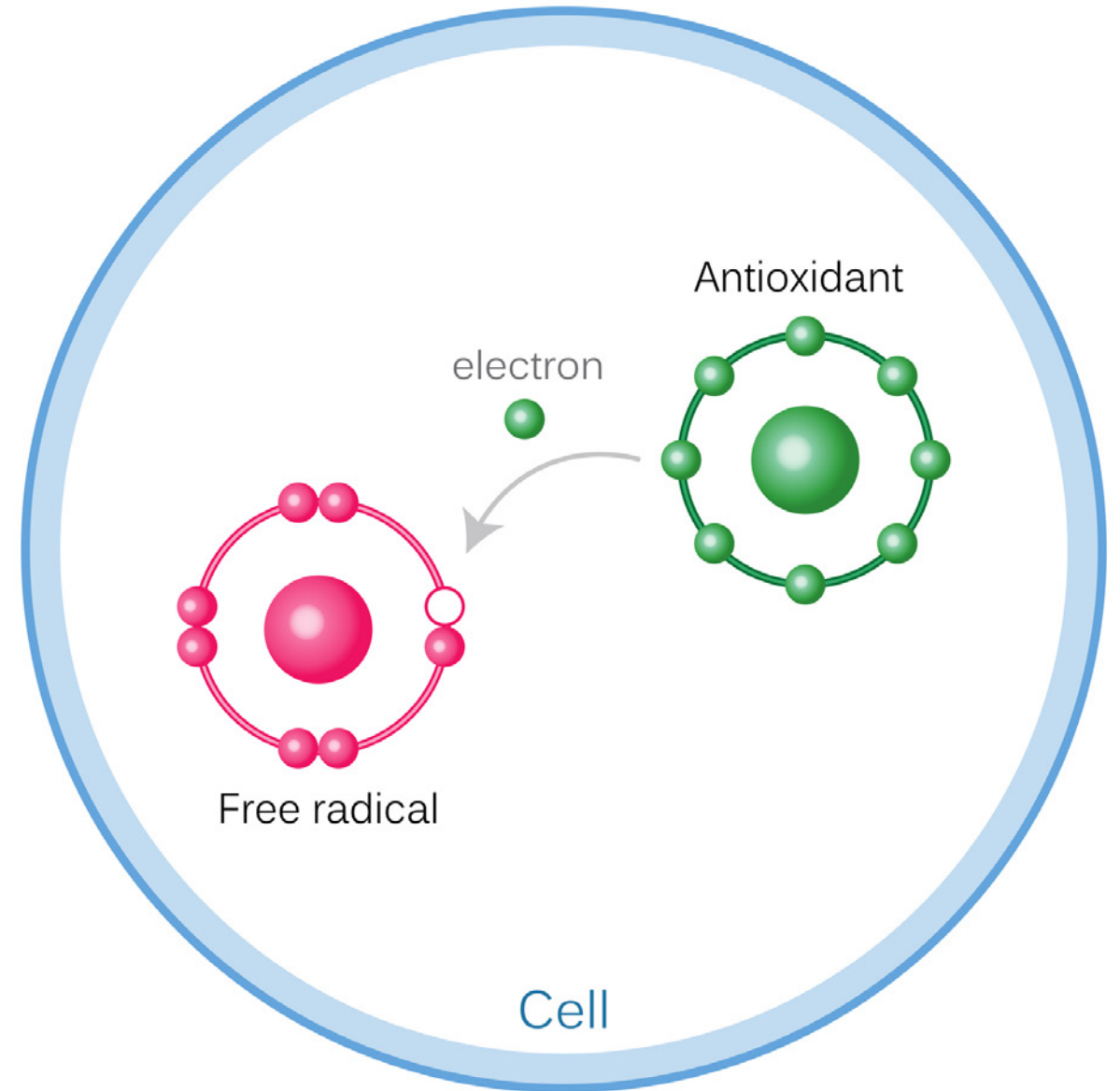
1. Astaxanthin is an antioxidant and **protect** cells from **damage**.
2. Unlike other **antioxidants**, Astaxanthin does not become pro-oxidant. It is exceptionally **stable**.
3. It shows significantly **higher antioxidant activity** than other superfood heroes:
  - 54 times stronger than **beta-carotene**
  - 75 times more powerful than **alpha lipoic acid**
  - 550 times more powerful than **green tea catechins**
  - 800 times stronger than **Q10**
  - 6,000 times greater than **vitamin C**



# What does it do? And should I use it?

Our skin is constantly **exposed** to free radicals such as the sun, smoke, toxins, and pollutants, all of which can **accelerate** the **aging process** and can cause **oxidative stress**, which in turn leads to issues like age spots, dullness, fine lines, and more.

With astaxanthin being **more powerful** than vitamin C, it's **more effective** at neutralizing those skin-damaging free radicals and preventing oxidation.





# What does it do? And should I use it?

- It is possible for an astaxanthin molecule to transcend the **cell membrane** because of its length and shape; one end is **lipid**-soluble, while the other is **water**-soluble. As a result, astaxanthin is unique in its ability to **protect** the **entire** cell.
- Astaxanthin helps to **rejuvenate** skin, **reduce** cell damage and inflammation as well as **protecting** against UV induced pigmentation.
- It may also help to **inhibit** collagenases, which are the enzymes that can encourage collagen **breakdown**.
- As an **anti-inflammatory** agent it reduces skin redness and **calms down** skin rashes and irritation.

