

## Analytical proposal to detect Astaxanthin in Supplements.

Astaxanthin is a substance naturally present in some algae and which gives the typical pink color to fish such as salmon and crustaceans such as lobster and shrimps.

Chemically it is a xanthophyll (a class of carotenoids), therefore a provitamin A.

Astaxanthin has antioxidant power: it is therefore attributed the ability to protect cells from damage associated with oxidation.

Considering this property, it has recently acquired great importance in the prevention and management of different disease states. For this reason, Astaxanthin supplements have become widespread on the market, capable of facilitating its intake without resorting to the consumption of large quantities of fatty fish.

A regulation, **2023/1581 series L 194/August 2023**, has been published in the Official Journal of the European Union, which modifies the previous application standard (EU) 2017/2470 for the use of NOVEL FOOD named « Astaxanthin rich oleoresin from the *Haematococcus pluvialis* algae ».

In particular, the use of the novel food in food supplements containing 40-80 mg of astaxanthin-rich oleoresin derived from the algae *Haematococcus pluvialis*, corresponding to astaxanthin levels of up to 8 mg, was limited to adults and older adolescents at 14 years old. The change was based on the opinion of the European Food Safety Authority.

To comply with the requirements of this Regulation, a transitional period has been established for food supplements containing  $\leq 8.0$  mg of astaxanthin and intended for the population aged over 14 years which have been placed on the market or dispatched to the Union from third countries before the date of entry into force of this regulation.



### NEOTRON PROPOSAL

Neutron performs the analysis of Astaxanthin derived from *Haematococcus pluvialis* using HPLC-DAD technique.

The use of a chromatographic technique coupled with DAD detector allows the discrimination, once hydrolyzed, of the various isomers of the molecule: 13 CIS astaxanthin, 9 cis astaxanthin and TRANS ASTAXANTHIN (most abundant form).

The method was developed by Neutron following the principles of the USP USP42-NF37 1S method.

Neutron, part of the Cotecna Group, is a global player in analytical services on food and feed products, supplements, materials in contact with food (FCM), cosmetics, and pharmaceutical products.



Neutron Spa, Stradello Aggazzotti 104, 41126  
Modena, Italy



Contact us [www.neutron.it](http://www.neutron.it)

### References:

1. **2023/1581 series L 194/August 2023**

<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023R1581>