

## Specification

### ASTACOS<sup>®</sup> OL50

Astaxanthin-rich oleoresin with a minimum astaxanthin content of 5%, extracted from the crushed biomass of the green microalga *Haematococcus pluvialis*.

Physical	Unit	Specification
Appearance	–	Dark red liquid to highly viscous oil
Odour	–	Characteristic smell of algae
Flavour	–	Characteristic taste of algae
Ingredients	Unit	Specification
<i>Haematococcus pluvialis</i> extract	%	25.0 – 50.0
Jobba oil	%	≥ 50.0
Tocopherol	%	≤ 0.3
Sunflower oil	%	≤ 0.1
Astaxanthin specification	Unit	Specification
Astaxanthin	%	5.0 – 5.5
Total Carotenoids	%	5.3 – 6.5
Further parameters	Unit	Specification
Peroxide value	meq/kg	≤ 5.0
Heavy metals	Unit	Specification
Lead (Pb)	mg/kg	< 0.1
Cadmium (Cd)	mg/kg	< 1
Mercury (Hg)	mg/kg	< 0.1
Arsenic (As)	mg/kg	< 1
Chrome (Cr)	mg/kg	< 1
Microbiology	Unit	Specification
Aerobe total viable count 30°C	cfu/g	< 100
Yeast	cfu/g	< 100
Mould	cfu/g	< 100
Coliform bacteria	cfu/g	< 10
<i>Escherichia coli</i>	cfu/g	Not detected
<i>Staphylococcus aureus</i>	cfu/g	Not detected
<i>Salmonella Sp.</i>	cfu/25g	Not detected

Packaging:	aluminium bottles and CurTec container
Storage:	storage temperature from 3 to 15°C, in a dry and dark place
Safety precautions:	see MSDS
Stability:	at least 24 months unopened in original packaging

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**EU Cosmetic Regulation:** Product complies with Regulation (EC) No 1223/2009 and its alterations on cosmetic products.

**Microbiology:** The product complies with Regulation (EC) No 2073/2005 and No 1441/2007 and their alterations.

**Allergens:** The product does not contain any of the 26 allergens according to the Cosmetics Regulation (EC) No 1223/2009.

**GMO status:** The product does not contain nor consist of genetically modified ingredients or additives, nor were any ingredients gained from genetically modified organisms or additives used for the production.

**Contaminants:** The product complies with Regulation (EU) No 2023/915 and its alterations.

**Pesticides:** The product complies with the Regulation (EC) No 396/2005 and its alterations. No pesticides are used during the production process. All used accessory agents are selected according to high quality standards and are pesticide-free.

**Ionising radiation:** The product or its components are not treated with ionizing radiation during or after the production process.

**TSE/BSE:** The relevant raw materials of the product do not pose any risk in terms of TSE (transmissible spongiform encephalopathy) and BSE (bovine spongiform encephalopathy) according to Regulation (EC) No 999/2001. Neither animals nor parts of animals or animal products are used for the production.

**Vegan/vegetarian:** The relevant raw materials of the product are not manufactured with animals or parts of animals, nor is the product made of live animals or animal products taking account of all production and processing stages. The product is suitable for vegan cosmetics.

**Animal testing:** The product was not tested on animals.

**Microplastic:** The product does not contain any microplastic according to the definition of the microplastic restriction proposal by the ECHA.

**Nanomaterial:** The product is free from substances defined as nanomaterial according to article 2 paragraph 1 (k) of the Regulation (EC) No 1223/2009.

**Proposition 65 list:** The product does not contain any substances listed in the Californian Proposition List 65.

**CMR:** Due to the manufacturing process, no substances classified as CMR of categories 1A or 1B or 2 can be generated in the product.

**VOC:** The product does not contain any volatile organic compounds (VOC).

**Palm oil:** The product does not contain palm oil, palm kernel oil or palm oil derivate.

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<b>Preservatives:</b>	none
<b>Kosher certificate:</b>	yes
<b>Halal certificate:</b>	yes
<b>Natrue:</b>	approved
<b>COSMOS:</b>	certified (with at least 50% organic content)

The details and information in this document were compiled to the best of our knowledge and ability. They are based on the current state of knowledge and are not addressed to the end-consumer. As this is a natural product, the above characteristics may be subject to variation. This specification does not establish a contractual legal relationship and does not release the product purchaser from his or her responsibility regarding quality control and due diligence upon the products' market introduction.

Inspector: Lisa Bindhofer, Quality Assurance  
Authorised by: Renate Edlinger, Quality Management

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