



SPECIFICATION

Evening Primrose Oil, refined

- Quality according EP -

Article No.: 20-000017

Definition:

Fatty oil obtained from seeds of *Oenothera biennis* L. by mechanical pressing. It is then refined. In one gram oil 0,5 mg of a mixed tocopherols concentrate is added as an antioxidant.

Characters:

Appearance: clear, light yellow or yellow liquid
Solubility: practically insoluble in water and in ethanol (96 per cent), miscible with light petroleum (bp: 40-60°C).
Relative density: 0,921 – 0,931
Refractive index: 1,476 – 1,482

Identification: It complies with the test for the composition of fatty acids.

| <i>Tests according EP</i> | <i>Specification</i> | <i>Method</i> |
|---|--|------------------|
| <u>Acid value (mg KOH/g):</u> | ≤ 1,0* | ISO 660, 1996 |
| <u>Peroxide value (meq/kg):</u> (according EP ≤ 10,0 meq/kg) | ≤ 3.0* | ISO 3960, 1998 |
| <u>Unsaponifiable matter (%):</u> | ≤ 2.0 | ISO 3596, 2000 |
| <u>Brassicasterol (%):</u> | ≤ 0.3 | EP 2.4.23 |
| <u>Water (%):</u> | ≤ 0,1 | EP 2.5.32 |
| <u>Alkaline impurities (ml 0,01 N HCl/10ml):</u> | complies with the test for alkaline impurities in fatty oils | EP 2.4.19 |
| <u>Composition of fatty acids (%):</u> | | EP 2.4.22 (mod.) |
| Palmitic acid | C 16:0 | 5,0 - 7,0 |
| Stearic acid | C 18:0 | 1,0 - 3,0 |
| Oleic acid | C 18:1 | 6,0 - 10,0 |
| Linoleic acid | C 18:2 ω6 | 68,0 - 76,0 |
| Gamma-Linolenic acid (according EP 7.0-14.0%) | C 18:3 ω6 | ≥ 9,0 |
| Others | C 18:3 ω3 | 1,0 - 2,0 |

* At time of drumming





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| <u>Additional Tests</u> | <u>Specification</u> | <u>Method</u> |
|--|----------------------|---------------------|
| <u>Colour according Gardner:</u> | 1 – 7 | Goerlich 001 |
| <u>Anisidine value:</u> | ≤ 15 | ISO 6885, 1998 |
| <u>Iodine value:</u> | 145 - 162 | DGF C-V-11b |
| <u>Saponification value:</u> | 180 - 195 | ISO 3657, 2002 |
| <u>Heavy metals (ppm):</u> | | EN 13805 |
| Lead | < 0,100 | EN 14083 |
| Cadmium | < 0,050 | EN 14083 |
| Mercury | < 0,050 | EN 13806 |
| Arsenic | < 0,100 | EPA 206.2 |
| <u>Pesticides (according test list):</u> | according EP | EP 2.8.13 (mod.) |
| <u>Dioxine (pg WHO-PCDD/F-TEQ/g)**:</u> | ≤ 0,75 | DIN 38414/EPA 1613 |
| <u>Benzo(a)pyren (EG-VO Nr. 208/2005 - µg/kg)**:</u> | ≤ 1,0 | DGF CIII 17a (mod.) |
| <u>Microbiological quality**:</u> | according EP Cat. 3b | EP 2.6.12 &13 |

** These items are tested 2 times per year

Storage/Durability:

Under an inert gas (nitrogen), in a well-filled, airtight container, protected from light, cool (10-25°C).
18 months in original containers blanketed with nitrogen, proper storage provided

Remark:

This product is in accordance with Regulations (EC) No. 1829/2003 and No. 1830/2003. A labelling regarding presence of genetically modified organisms (GMO) is therefore not necessary.