

SPECIFICATION

Cod Liver Oil EP, BP, USP



SINCE 1743

PAGE 1 OF 2

INTRODUCTION

In accordance to European Pharmacopeia (type A), British Pharmacopeia and United States Pharmacopeia.

GENERAL DESCRIPTION

The Cod Liver Oil is obtained from the fresh livers of wild cod, *Gadus morhua* L., and other species of *Gadidae*.

The process is heating extraction and centrifugation, refining, cold filtration, deodorisation and adding of Vitamins A and D3

ORIGIN

North Atlantic (FAO fishing zone 27 subarea Va1 and Va2).

Product certified MSC sustainable fishing.

ANALYTICAL CHARACTERISTICS

| | Standards | Method |
|---|------------------------------|---------------|
| Colour | max. 5.0 | Gardner |
| Acid Value (mg KOH/g) | max. 1.00 | PE 2.5.1 |
| Peroxide Value (meq O ₂ /kg) | max. 10.0 at time of release | PE 2.5.5 |
| Anisidine Value | max. 30.0 at time of release | PE 2.5.36 |
| Iodine Value | 150 – 180 | PE 2.5.4 |
| Saponification Value | 180 – 192 | PE 2.5.6 |
| Unsaponifiable Matter (%) | max. 1.3 | PE 2.5.7 |
| Density @ 20 deg. C | 0.918 – 0.927 | PE 2.2.5 |
| Refractive Index @ 20 deg. C | 1.477 – 1.484 | PE 2.2.6 |
| Cold test | min. 3 hrs at 0 deg. Celsius | AOCS Cc 11-53 |
| Vitamin A (iu/g) | 1000 - 2500 | |
| Vitamin D3 (iu/g) | 100 – 250 | |

FATTY ACID COMPOSITION IN %

AOCS Ce 11-07

Saturated fatty acids

| | |
|-------|------------|
| C14:0 | 2.0 – 6.0 |
| C16:0 | 7.0 – 14.0 |
| C18:0 | 1.0 – 4.0 |

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PAGE 2 OF 2

Mono-unsaturated fatty acids

| | |
|---------------|-------------|
| C16:1 n-7 | 4.5 – 11.5 |
| C18:1 n-7 | 2.0 – 7.0 |
| C18:1 n-9 | 12.0 – 21.0 |
| C20:1 n-11 | 1.0 – 5.5 |
| C20:1 n-9 | 5.0 – 17.0 |
| C22:1 n-9 | 0.0 -1.5 |
| C22:1 n-11 | 5.0 – 12.0 |
| C22:1 n-11+13 | 5.0 – 12.0 |

Poly-unsaturated fatty acids

| | |
|-----------|------------|
| C18:2 n-6 | 0.5 – 3.0 |
| C18:3 n-3 | 0.0 – 2.0 |
| C18:4 n-3 | 0.5 – 4.5 |
| C20:5 n-3 | 7.0 – 16.0 |
| C22:6 n-3 | 6.0 – 18.0 |

HEALTH SAFETY

Product compliant with the hygiene regulation (EC) no. 853/2004 and (EC) no. 1020/2008 on fish oils.
Ionization: This product did not undergo any ionizing treatment and does not contain any ingredient or additive that was treated by ionization.

Identity preserved: In accordance with regulations (EC) no. 1829/2003 & no. 1830/2003.

Pesticides: Contents in conformity with regulation (EC) no. 396/2005 and its last amendments.

Dioxins and furans – Dioxin-like PCBs and PCBs indicators: Contents in conformity with regulation (EU) no. 1259/2011.

Heavy metals: Contents in conformity with regulation (EC) no. 1881/2006.

A monitoring plan of the contaminants has been set up to ensure the observance of the European regulations in force.

NUTRITIONAL CHARACTERISTICS

Lipids content: 100%

Energy value: 9000 kcal/kg oil

PACKING

The Oil is packed in 200 kg net new steel drums (food contact material).

STORAGE & SHELF LIFE

The storage conditions are optimal when the oil is preserved in a full and closed packing in cool premises protected from light and heating.

Best before Date: 24 months as from the date of manufacturing in the required conditions.

At the best before date, the oil preserves all its nutritional and functional characteristics and its health safety.

We consider its manufacturing process, conditioning, as well as the applied storage to allow a possible extent of its validity beyond this date by reapproving its analytical characteristics.

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