

HENRY LAMOTTE OILS GMBH, POSTFACH / P.O. BOX 10 38 49, D-28038 BREMEN

Metapharmaceutical Ind., S.L.

production date: 10/2019

expiry date: 10/2021

Josep Plà, 163, 2º 5ª

08020 Barcelona

Spain

Order No.: 2019-1/417 dated 05.11.2019

## Certificate of Analysis

12.11.2019

### MEDICINAL COD LIVER OIL, PH.EUR., IDENTITY PRESERVED

lot: 8005296002

Ph.Eur.9, 2017, Typ A, BP 2019 Type A

|                                |          |
|--------------------------------|----------|
| Appearance                     | complies |
| Specific gravity (20 degree C) | 0,923    |
| Specific gravity (25 degree C) | 0,921    |
| Refractive index (20 degree C) | 1,478    |
| Acid value                     | 0,17     |
| Anisidine value                | 12,0     |
| Peroxide value                 | complies |
| Iodine value                   | 154      |
| Saponification value           | 187      |
| Water                          | < 0,01 % |
| Unsaponifiable Matter          | 1,3 %    |
| Cold test 3h at 0°C            | clear    |
| Colour gardner                 | 4,1      |
| Colour lovibond 5 1/4" yellow  | 40,0     |
| Colour lovibond 5 1/4" red     | 1,8      |

#### Fatty acid composition

##### Saturated fatty acids:

|                  |          |         |
|------------------|----------|---------|
| Lauric acid      | (C 12:0) | < 0,1 % |
| Myristic acid    | (C 14:0) | 3,6 %   |
| Pentadecane acid | (C 15:0) | 0,3 %   |
| Palmitic acid    | (C 16:0) | 10,9 %  |
| Margaric acid    | (C 17:0) | 0,4 %   |
| Stearic acid     | (C 18:0) | 2,6 %   |
| Arachidic acid   | (C 20:0) | < 0,1 % |
| Behenic acid     | (C 22:0) | 0,6 %   |
| Lignoceric acid  | (C 24:0) | < 0,1 % |

##### Unsaturated fatty acids:

|                   |                 |        |
|-------------------|-----------------|--------|
| Myristoleic acid  | (C 14:1)        | 0,3 %  |
| Palmitoleic acid  | (C 16:1)        | 6,8 %  |
| cis-Vaccenic acid | (C 18:1 (n-7))  | 4,6 %  |
| Oleic acid        | (C 18:1 (n-9))  | 15,3 % |
| Gadoleic acid     | (C 20:1 (n-11)) | 2,1 %  |
| Gondoic acid      | (C 20:1 (n-9))  | 10,2 % |
| Erucic acid       | (C 22:1 (n-9))  | 0,8 %  |

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|                              |                     |         |
|------------------------------|---------------------|---------|
| Cetoleic acid                | (C 22:1 (n-11))     | 8,7 %   |
| Polyunsaturated fatty acids: |                     |         |
| Linoleic acid                | (C 18:2)            | 1,3 %   |
| Linolenic acid               | (C 18:3 (n-3))      | 0,7 %   |
| Moroctic acid                | (C 18:4 (n-3))      | 1,9 %   |
| Eicosanedienoic acid         | (C 20:2)            | 0,3 %   |
| Eicosanetrienoic acid        | (C 20:3 (n-3))      | 0,1 %   |
| Eicosanetrienoic acid        | (C 20:3 (n-6))      | < 0,1 % |
| Eicosanetraenoic acid        | (C 20:4 (n-3))      | < 0,1 % |
| Arachidonic acid             | (C 20:4 (n-6))      | 0,4 %   |
| Eicosapentaenoic acid        | (C 20:5 (n-3), EPA) | 8,5 %   |
| Docosatetraenoic acid        | (C 22:4)            | 0,5 %   |
| Docosapentaenoic acid        | (C 22:5 (n-3), DPA) | 1,1 %   |
| Docosahexaenoic acid         | (C 22:6 (n-3), DHA) | 9,8 %   |

|            |             |
|------------|-------------|
| Vitamin A  | 1220 i.U./g |
| Vitamin D3 | 111 i.U./g  |

|                            |                  |
|----------------------------|------------------|
| Pesticides                 |                  |
| Organochloropesticides     | complies to RHmV |
| Organophosphoruspesticides | complies to RHmV |
| Toxaphen                   | complies to RHmV |

|                           |              |
|---------------------------|--------------|
| Polychlorinated biphenyls |              |
| 28                        | < 0,02 mg/kg |
| 52                        | < 0,02 mg/kg |
| 101                       | < 0,02 mg/kg |
| 138                       | < 0,02 mg/kg |
| 153                       | < 0,02 mg/kg |
| 180                       | < 0,02 mg/kg |

|                                                 |            |
|-------------------------------------------------|------------|
| Dioxin                                          |            |
| WHO-PCDD/F-TEQ (Total Dioxins)                  | 0,288 pg/g |
| WHO-PCDD/F-PCB-TEQ (Dioxins + dioxin-like PCBs) | 0,915 pg/g |

|          |          |
|----------|----------|
| Identity | complies |
| Purity   | complies |

This product in question is not affected by the GMO problem. Therefore this product does not need to be labelled regarding any genetic modification as per the new GMO regulations 1829/2003 and 1830/2003.

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Computer edited certificate - valid without signature