

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

Metapharmaceutical Ind., S.L.

production date: 11/2018

Josep Plà, 163, 2º 5ª

expiry date: 11/2020

08020 Barcelona

Spain

Order No.: 2019 - 1 /45 dated 04.02.2019

Certificate of Analysis

04.02.2019

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

lot: 8004742001

Ph.Eur.9, 2017, Typ A, BP 2018 Type A, USP 41

Appearance	complies
Specific gravity (20 degree C)	0,924
Specific gravity (25 degree C)	0,922
Refractive index (20 degree C)	1,479
Acid value	0,12
Anisidine value	0,6
Peroxide value	complies
Iodine value	158
Saponification value	186
Water	0,01 %
Unsaponifiable Matter	1,1 %
Cold test 3h at 0°C	clear
Colour gardner	3,6
Colour lovibond 5 1/4" yellow	28,0
Colour lovibond 5 1/4" red	1,2

Fatty acid composition

Saturated fatty acids:

Lauric acid	(C 12:0)	< 0,1 %
Myristic acid	(C 14:0)	4,3 %
Pentadecane acid	(C 15:0)	0,3 %
Palmitic acid	(C 16:0)	10,7 %
Margaric acid	(C 17:0)	0,5 %
Stearic acid	(C 18:0)	2,4 %
Arachidic acid	(C 20:0)	0,1 %
Behenic acid	(C 22:0)	< 0,1 %
Lignoceric acid	(C 24:0)	< 0,1 %

Unsaturated fatty acids:

Myristoleic acid	(C 14:1)	0,2 %
Palmitoleic acid	(C 16:1)	7,2 %
cis-Vaccenic acid	(C 18:1 (n-7))	4,0 %
Oleic acid	(C 18:1 (n-9))	14,2 %
Gadoleic acid	(C 20:1 (n-11))	1,9 %
Gondoic acid	(C 20:1 (n-9))	11,5 %
Erucic acid	(C 22:1 (n-9))	0,8 %

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Cetoleic acid	(C 22:1 (n-11))	9,1 %
Polyunsaturated fatty acids:		
Linoleic acid	(C 18:2)	1,4 %
Linolenic acid	(C 18:3 (n-3))	0,4 %
Morotic acid	(C 18:4 (n-3))	2,0 %
Eicosanedienoic acid	(C 20:2)	< 0,1 %
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))	0,7 %
Eicosapentaenoic acid	(C 20:5 (n-3), EPA)	8,4 %
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)	10,3 %

Vitamin A	1250 i.U./g
Vitamin D3	104 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)	0,223 pg/g
WHO-PCDD/F-PCB-TEQ (Dioxins + dioxin-like PCBs)	0,630 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.

HENRY LAMOTTE OILS GMBH

Computer edited certificate - valid without signature