

Pharmachem Jozef Susnik  
Dipl. Ing., S.P.

production date: 04/2013

expiry date: 03/2015

Vidovdanska 2  
1000 Ljubljana  
Slovenia

FARMADENT d.o.o.	
Minarikova ul. 6	
2000 Maribor	
Prejel: FUJS DRAGO	
<i>[Signature]</i>	
Datum prejema:	1.7.2013
Pregledal:	MAROLT Robert, mag. farm., spec.
<i>[Signature]</i>	
Datum pregleda:	17.2013

Order No.: via Email dated 07.05.2013

### Certificate of Analysis – KEY BRAND

Bremen, 18.06.2013

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

lot: 0123823

USP 35, Ph.Eur.7, Supplement 7.5 Typ A, BP 2013 Type A

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	0,08
Anisidine value	5,2
Peroxide value	complies
Iodine value	155
Saponification value	187
Water	0,01 %
Unsaponifiable Matter	0,8 %
Cold test 3h at 0°C	clear
Colour gardner	1,5
Colour lovibond 5 1/4" yellow	9,6
Colour lovibond 5 1/4" red	0,6

#### Fatty acid composition

##### Saturated fatty acids:

Lauric acid	(C 12:0)	< 0,05 %
Myristic acid	(C 14:0)	3,38 %
Pentadecane acid	(C 15:0)	0,32 %
Palmitic acid	(C 16:0)	10,83 %
Margaric acid	(C 17:0)	0,49 %
Stearic acid	(C 18:0)	2,63 %
Arachidic acid	(C 20:0)	0,13 %
Behenic acid	(C 22:0)	< 0,05 %
Lignoceric acid	(C 24:0)	0,40 %

##### Unsaturated fatty acids:

Myristoleic acid	(C 14:1)	0,21 %
Palmitoleic acid	(C 16:1)	7,88 %
cis-Vaccenic acid	(C 18:1 (n-7))	5,22 %
Oleic acid	(C 18:1 (n-9))	16,69 %
Gadoleic acid	(C 20:1 (n-11))	1,21 %
Gondoic acid	(C 20:1 (n-9))	10,76 %
Erucic acid	(C 22:1 (n-9))	0,58 %
Cetoleic acid	(C 22:1 (n-11))	5,86 %

ROŽAMARIJA ČUČNIK MAG.FARM.  
STROKOVNI SODELAVEC

*[Signature]*

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



USP 35, Ph.Eur.7, Supplement 7.5 Typ A, BP 2013 Type A  
lot: 0123823

Polyunsaturated fatty acids:

Linoleic acid	(C 18:2)	2,07 %
Linolenic acid	(C 18:3 (n-3))	1,21 %
Moroctic acid	(C 18:4 (n-3))	2,16 %
Eicosanedienoic acid	(C 20:2)	0,36 %
Eicosanetrienoic acid	(C 20:3 (n-3))	< 0,05 %
Eicosanetrienoic acid	(C 20:3 (n-6))	< 0,05 %
Eicosanetraenoic acid	(C 20:4 (n-3))	< 0,05 %
Arachidonic acid	(C 20:4 (n-6))	0,53 %
Eicosapentaenoic acid	(C 20:5 (n-3), EPA)	8,14 %
Docosatetraenoic acid	(C 22:4)	0,19 %
Docosapentaenoic acid	(C 22:5 (n-3), DPA)	0,89 %
Docosahexaenoic acid	(C 22:6 (n-3), DHA)	10,38 %

Vitamin A	1440 i.U./g
Vitamin D3	99 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)	0,277 pg/g
WHO-PCDD/F-PCB-TEQ (Dioxins + dioxin-like PCBs)	0,644 pg/g

Identity

Purity	complies
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Solvent residues: The pharmaceutical auxiliary material fulfills the requirements made of solvent residues in the European Pharmacopoeia (CPMP/ICH/283/95) and the USP (467 Residual solvents). Notwithstanding, the food law requirements are fulfilled.

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