

CERTIFICATE OF ANALYSIS

Batch no: **0000036302**
 Product: **VivoMega 3322 TG60**
 GC Rieber spec.no: **23610-10, rev.12**
 Date of production: **5 January 2021**
 Date of issue: **6 January 2021**
 Description: High EPA concentrate on triglyceride (TG) basis made from fish oil. The specification is a min 60% TG product with 3.0 - 4.0 mg/g of mixed tocopherols added. The mixed tocopherol (E306) is of non -GMO and identity preserved quality.
 Comment: Sell-by date is 3 years from the date of production.
 Shelf life is guaranteed if the product is stored in unopened original closed containers, protected from heat and light.

Analysis:

Description	Unit	Specification		Results	Methods	Remark
		Min	Max			
C20:5 n3 (EPA)	Area%	33		34	GCRO001	1)
	mg/g as TG	300		330	GCRO001	1)
	mg/g as FFA	290		320	GCRO001	1)
C22:6 n3 (DHA)	Area%	22		23	GCRO001	1)
	mg/g as TG	200		210	GCRO001	1)
	mg/g as FFA	190		200	GCRO001	1)
C22:5 n3 (DPA)	Area%			4	GCRO001	1)
	mg/g as TG			40	GCRO001	1)
	mg/g as FFA			40	GCRO001	1)
EPA + DHA	mg/g as TG			540	GCRO001	1)
	mg/g as FFA			520	GCRO001	1)
Total omega-3	Area%	60		70	GCRO001	1)
	mg/g as TG	600		640	GCRO001	1)
	mg/g as FFA	570		610	GCRO001	1)
Acid Value	mg KOH/g		1.0	0.1	GCRO003	1)
Peroxide Value	mEq/kg		2.0	0.5	GCRO006	1)
Anisidine Value			8	2	GCRO007	1)
Totox			10	3	Calculation	1)
Colour	Gardner		4	2	GCRO004	1)
Cold test		min 3h/0°C		Passed	GCRO005	1)
Specific gravity		0.93	0.95	Conforms	GCRO015	2)
Absorbance at 233 nm			0.6	0.3	GCRO022	1)
Oligomers	Area%		1.0	0.1	GCRO023	1)
Triglycerides	Area%	60		92	GCRO023	1)
Ethyl Esters	Area%		10	1	GCRO023	1)
Mixed tocopherol	mg/g	3.0	4.0	3.2	Addition	3)

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Environmental analysis						
Dioxins and furans	ng/kg WHOTEQ (2005)		1.0	<1.0	External lab	2)
Dioxin-like PCBs	ng/kg WHOTEQ (2005)		0.5	<0.5	External lab	2)
Sum of Dioxins, furans and Dioxin-like PCBs	ng/kg WHOTEQ (2005)		1.5	<1.5	External lab	2)
PCBs (209 congeners)	mg/kg		0.005	<0.005	External lab	2)
Benzo(a)pyrene	µg/kg		1.0	<1.0	External lab	2)
Sum PAH4	µg/kg		2.0	<2.0	External lab	2)
Arsenic (As)	mg/kg		0.1	<0.1	External lab	2)
Cadmium (Cd)	mg/kg		0.002	<0.002	External lab	2)
Lead (Pb)	mg/kg		0.003	<0.003	External lab	2)
Mercury (Hg)	mg/kg		0.002	<0.002	External lab	2)
Pesticides:*	mg/kg		0.01	<0.01	External lab	2)
Microbiological analysis:						
Total aerobic microbial count	cfu/1 g		10 ³	Conforms	External lab	2)
Total yeast and mould count	cfu/1 g		10 ²	Conforms	External lab	2)
<i>Staphylococcus aureus</i>	cfu/1 g		Absent	Conforms	External lab	2)
<i>Escherichia coli</i>	cfu/1 g		Absent	Conforms	External lab	2)
<i>Salmonella spp</i>	cfu/10 g		Absent	Conforms	External lab	2)
Bile-tolerant Gram neg. (<i>Enterobacteriaceae</i>)	cfu/1 g		10 ²	Conforms	External lab	2)
<i>Pseudomonas aeruginosa</i>	cfu/1 g		Absent	Conforms	External lab	2)

Quality evaluation: This batch is approved according to specification.

Arnd Ole J. Olsen
 Analysed by

Vitalija Mozeikouite
 Quality Control by

- 1) Parameter analyzed in accordance with specified method on every batch, and reported on Certificate of Analysis.
- 2) Parameter is analyzed at least 3 times/ year. Conformity is reported in Certificate of Analysis.
- 3) Parameter is reported in CofA based on the amount added in the product.

*Pesticides are tested as specified in "pesticide specification attachment" which is available on request.
 The limit of 0.01 mg/kg applies to each pesticide.

Produced from human consumption approved fish oil, in accordance with current EU Regulations.