

Title:

Fatty Acid Analysis of Nutritional Supplement

Prepared for:

Eurofins Norsk Matanalyse AS
Møllebakken 50
NO-1506 Moss,
Norway

Compiled by:

Nutrition Analytical Service
Institute of Aquaculture
University of Stirling
Stirling
FK9 4LA
Telephone +44(0)1786 467997

Contract number: 19-EUR-035

Date of report: 26/08/2019

Company name:	Eurofins Food & Agro Testing Norway AS	Date sample received:	13/08/19
Customer contact name:	Hanne Abilgaard	Date report prepared:	26/08/19
Contract number:	19-EUR-035	No. of samples:	
P.O. number:	EUNOMO2-0050721	Sample type:	Nutritional supplement
Analysis performed:			
	Fatty acid analysis	Date of test:	13/08/19
		Date of test:	
		Date of test:	
		Date of test:	
		Date of test:	
Methods used:			
	LM033.R00		
Report prepared by:			
	M. Scolamacchia		

Sample condition (detail any non-conformance): _____

Name of approver: Fiona Strachan

Signature:

Fiona Strachan

(Quality Manager)

Date: 26 August 2019

RESULTS - Fri Flyt Omega-3

Fatty acid composition (% total fatty acids and mg FA.100g⁻¹) of total lipid from Nutritional Supplement

Fatty acid	440-2019-0808-097	
	%	mg. 100g ⁻¹
14:0	0.13	113.00
15:0	0.07	63.00
16:0	1.10	952.00
18:0	3.91	3386.00
20:0	0.81	702.00
22:0	0.08	66.00
24:0	<LOQ	<LOQ
Total saturated	6.11	5282.00
16:1n-9	<LOQ	<LOQ
16:1n-7	0.36	315.00
18:1n-9	6.89	5960.00
18:1n-7	2.76	2384.00
20:1n-11	0.22	186.00
20:1n-9	2.20	1906.00
20:1n-7	0.75	646.00
22:1n-11	1.03	894.00
22:1n-9	0.31	272.00
24:1n-9	<LOQ	<LOQ
Total monounsaturated	14.52	12563.00
18:2n-6	1.61	1392.00
18:3n-6	0.39	340.00
20:2n-6	0.35	299.00
20:3n-6	0.34	294.00
20:4n-6	2.34	2021.00
22:4n-6	0.18	159.00
22:5n-6	0.79	687.00
Total n-6 PUFA	6.00	5192.00
18:3n-3	0.85	738.00
18:4n-3	2.07	1787.00
20:3n-3	0.19	161.00
20:4n-3	1.69	1465.00
20:5n-3	38.21	33055.00
21:5n-3	1.79	1546.00
22:5n-3	3.49	3017.00
22:6n-3	24.93	21563.00
Total n-3 PUFA	73.22	63332.00
16:2	0.07	57.00
16:3	<LOQ	<LOQ
16:4	0.09	75.00
	0.15	132.00
Total PUFA	79.37	68656.00
Total	100.00	86501.00
n-3/n-6		12.20

The Limit of Quantification (LOQ) for fatty acid analysis is 0.06%

RESULTS - Biopharma Trippel Omega-3

Fatty acid composition (% total fatty acids and mg FA.100g⁻¹) of total lipid from Nutritional Supplement

Fatty acid	440-2019-0808-098	
	%	mg. 100g ⁻¹
14:0	0.13	116.00
15:0	0.08	71.00
16:0	2.91	2515.00
18:0	3.28	2838.00
20:0	1.08	935.00
22:0	0.26	227.00
24:0	0.06	56.00
Total saturated	7.82	6758.00
16:1n-9	<LOQ	<LOQ
16:1n-7	1.29	1113.00
18:1n-9	5.44	4700.00
18:1n-7	2.59	2242.00
20:1n-11	0.33	288.00
20:1n-9	3.48	3005.00
20:1n-7	0.50	430.00
22:1n-11	4.51	3900.00
22:1n-9	0.83	720.00
24:1n-9	1.05	903.00
Total monounsaturated	20.02	17301.00
18:2n-6	0.84	728.00
18:3n-6	0.34	296.00
20:2n-6	0.31	269.00
20:3n-6	0.28	238.00
20:4n-6	2.18	1884.00
22:4n-6	0.30	263.00
22:5n-6	0.67	581.00
Total n-6 PUFA	4.93	4259.00
18:3n-3	0.63	544.00
18:4n-3	2.36	2035.00
20:3n-3	0.23	201.00
20:4n-3	1.58	1362.00
20:5n-3	32.20	27820.00
21:5n-3	1.76	1520.00
22:5n-3	4.53	3917.00
22:6n-3	23.28	20111.00
Total n-3 PUFA	66.56	57510.00
16:2	0.17	143.00
16:3	0.16	136.00
16:4	0.34	295.00
	0.66	574.00
Total PUFA	72.15	62343.00
Total	100.00	86402.00
n-3/n-6		13.50

The Limit of Quantification (LOQ) for fatty acid analysis is 0.06%

RESULTS - Vita Helse Omega-3

Fatty acid composition (% total fatty acids and mg FA.100g⁻¹) of total lipid from Nutritional Supplement

Fatty acid	440-2019-0808-100	
	%	mg. 100g ⁻¹
14:0	0.28	206.52
15:0	0.09	66.79
16:0	2.83	2114.42
18:0	3.70	2759.47
20:0	0.72	539.59
22:0	0.27	203.88
24:0	0.12	87.00
Total saturated	8.01	5977.68
16:1n-9	<LOQ	<LOQ
16:1n-7	1.06	793.57
18:1n-9	6.97	5199.05
18:1n-7	3.18	2369.28
20:1n-11	0.24	179.28
20:1n-9	2.83	2113.54
20:1n-7	0.58	435.01
22:1n-11	2.22	1658.32
22:1n-9	0.76	565.95
24:1n-9	1.40	1041.39
Total monounsaturated	19.24	14355.39
18:2n-6	2.81	2099.48
18:3n-6	0.35	263.64
20:2n-6	0.31	233.76
20:3n-6	0.30	224.98
20:4n-6	2.11	1573.95
22:4n-6	0.25	183.67
22:5n-6	0.63	471.92
Total n-6 PUFA	6.77	5051.41
18:3n-3	0.81	601.99
18:4n-3	0.77	571.23
20:3n-3	0.21	158.19
20:4n-3	1.50	1116.09
20:5n-3	33.59	25068.99
21:5n-3	1.68	1254.06
22:5n-3	4.88	3638.28
22:6n-3	22.03	16440.81
Total n-3 PUFA	65.46	48849.64
16:2	0.14	101.06
16:3	0.15	108.97
16:4	0.24	178.40
	0.52	388.43
Total PUFA	72.75	54289.48
Total	100.00	74622.55
n-3/n-6		9.67

The Limit of Quantification (LOQ) for fatty acid analysis is 0.06%

RESULTS - Nycoplus Høykonsentrert Omega-3

Fatty acid composition (% total fatty acids and mg FA.100g⁻¹) of total lipid from Nutritional Supplement

Fatty acid	%	440-2019-0808-101 mg. 100g ⁻¹
14:0	0.06	52.00
15:0	0.06	56.00
16:0	1.26	1084.00
18:0	3.78	3258.00
20:0	0.90	774.00
22:0	0.10	88.00
24:0	<LOQ	<LOQ
Total saturated	6.16	5312.00
16:1n-9	<LOQ	<LOQ
16:1n-7	0.59	512.00
18:1n-9	7.43	6415.00
18:1n-7	3.27	2818.00
20:1n-11	0.24	206.00
20:1n-9	2.78	2403.00
20:1n-7	1.00	864.00
22:1n-11	1.17	1010.00
22:1n-9	0.38	329.00
24:1n-9	0.44	379.00
Total monounsaturated	17.31	14936.00
18:2n-6	1.27	1098.00
18:3n-6	0.44	380.00
20:2n-6	0.43	369.00
20:3n-6	0.34	297.00
20:4n-6	2.28	1967.00
22:4n-6	0.20	173.00
22:5n-6	0.71	611.00
Total n-6 PUFA	5.67	4895.00
18:3n-3	0.97	841.00
18:4n-3	2.33	2011.00
20:3n-3	0.25	220.00
20:4n-3	1.76	1518.00
20:5n-3	37.26	32152.00
21:5n-3	1.72	1488.00
22:5n-3	3.64	3144.00
22:6n-3	22.57	19476.00
Total n-3 PUFA	70.51	60850.00
16:2	0.10	83.00
16:3	0.11	93.00
16:4	0.15	131.00
	0.36	307.00
Total PUFA	76.54	66052.00
Total	100.00	86300.00
n-3/n-6		12.43

The Limit of Quantification (LOQ) for fatty acid analysis is 0.06%

RESULTS - Møller's Dobbel

Fatty acid composition (% total fatty acids and mg FA.100g⁻¹) of total lipid from Nutritional Supplement

Fatty acid	%	440-2019-0808-102 mg. 100g ⁻¹
14:0	3.27	2806.00
15:0	0.32	272.00
16:0	8.28	7103.00
18:0	2.90	2489.00
20:0	0.42	359.00
22:0	0.27	232.00
24:0	<LOQ	<LOQ
Total saturated	15.47	13261.00
16:1n-9	0.11	95.00
16:1n-7	4.40	3774.00
18:1n-9	5.82	4986.00
18:1n-7	2.50	2141.00
20:1n-11	0.33	282.00
20:1n-9	2.19	1875.00
20:1n-7	0.54	463.00
22:1n-11	3.16	2711.00
22:1n-9	0.47	404.00
24:1n-9	1.25	1070.00
Total monounsaturated	20.76	17801.00
18:2n-6	0.94	802.00
18:3n-6	0.18	156.00
20:2n-6	0.27	234.00
20:3n-6	0.24	209.00
20:4n-6	1.76	1507.00
22:4n-6	<LOQ	<LOQ
22:5n-6	0.84	721.00
Total n-6 PUFA	4.23	3629.00
18:3n-3	0.59	503.00
18:4n-3	1.79	1536.00
20:3n-3	0.14	122.00
20:4n-3	1.10	944.00
20:5n-3	23.31	19988.00
21:5n-3	1.40	1199.00
22:5n-3	4.67	4008.00
22:6n-3	24.47	20980.00
Total n-3 PUFA	57.48	49280.00
16:2	0.18	151.00
16:3	0.74	634.00
16:4	1.15	985.00
	2.06	1770.00
Total PUFA	63.77	54679.00
Total	100.00	85741.00
n-3/n-6		13.58

The Limit of Quantification (LOQ) for fatty acid analysis is 0.06%

RESULTS - Triomar Hjerte Omega-3

Fatty acid composition (% total fatty acids and mg FA.100g⁻¹) of total lipid from Nutritional Supplement

Fatty acid	440-2019-0808-103	
	%	mg. 100g ⁻¹
14:0	0.11	93.00
15:0	0.07	61.00
16:0	1.96	1684.00
18:0	3.83	3303.00
20:0	1.47	1264.00
22:0	0.21	181.00
24:0	<LOQ	<LOQ
Total saturated	7.65	6586.00
16:1n-9	<LOQ	<LOQ
16:1n-7	0.78	670.00
18:1n-9	6.39	5502.00
18:1n-7	2.30	1983.00
20:1n-11	0.30	259.00
20:1n-9	2.03	1751.00
20:1n-7	0.84	723.00
22:1n-11	1.32	1136.00
22:1n-9	0.33	285.00
24:1n-9	0.52	450.00
Total monounsaturated	14.81	12759.00
18:2n-6	1.11	956.00
18:3n-6	0.16	141.00
20:2n-6	0.42	360.00
20:3n-6	0.35	298.00
20:4n-6	2.40	2067.00
22:4n-6	<LOQ	<LOQ
22:5n-6	0.87	748.00
Total n-6 PUFA	5.31	4570.00
18:3n-3	0.73	625.00
18:4n-3	1.49	1284.00
20:3n-3	0.25	215.00
20:4n-3	1.64	1409.00
20:5n-3	36.57	31495.00
21:5n-3	1.95	1678.00
22:5n-3	5.25	4521.00
22:6n-3	23.89	20578.00
Total n-3 PUFA	71.76	61805.00
16:2	0.07	63.00
16:3	0.16	140.00
16:4	0.24	208.00
	0.48	411.00
Total PUFA	77.54	66786.00
Total	100.00	86131.00
n-3/n-6		13.52

The Limit of Quantification (LOQ) for fatty acid analysis is 0.06%

RESULTS - PurOmega 95%

Fatty acid composition (% total fatty acids and mg FA.100g⁻¹) of total lipid from Nutritional Supplement

Fatty acid	440-2019-0808-104	
	%	mg. 100g ⁻¹
14:0	0.09	85.00
15:0	<LOQ	<LOQ
16:0	0.32	290.00
18:0	0.13	116.00
20:0	<LOQ	<LOQ
22:0	<LOQ	<LOQ
24:0	<LOQ	<LOQ
Total saturated	0.55	491.00
16:1n-9	<LOQ	<LOQ
16:1n-7	0.15	134.00
18:1n-9	0.56	499.00
18:1n-7	0.07	61.00
20:1n-11	<LOQ	<LOQ
20:1n-9	0.13	116.00
20:1n-7	<LOQ	<LOQ
22:1n-11	0.25	224.00
22:1n-9	<LOQ	<LOQ
24:1n-9	<LOQ	<LOQ
Total monounsaturated	1.15	1034.00
18:2n-6	0.25	224.00
18:3n-6	<LOQ	<LOQ
20:2n-6	0.18	165.00
20:3n-6	0.18	165.00
20:4n-6	0.17	149.00
22:4n-6	<LOQ	<LOQ
22:5n-6	<LOQ	<LOQ
Total n-6 PUFA	0.78	703.00
18:3n-3	0.13	120.00
18:4n-3	1.72	1544.00
20:3n-3	<LOQ	<LOQ
20:4n-3	0.27	239.00
20:5n-3	51.93	46601.00
21:5n-3	1.46	1312.00
22:5n-3	1.54	1378.00
22:6n-3	40.24	36107.00
Total n-3 PUFA	97.29	87301.00
16:2	<LOQ	<LOQ
16:3	0.07	67.00
16:4	0.15	134.00
	0.22	201.00
Total PUFA	98.30	88205.00
Total	100.00	89730.00
n-3/n-6		124.18

The Limit of Quantification (LOQ) for fatty acid analysis is 0.06%

RESULTS - Møller's Omega-3 Direkte

Fatty acid composition (% total fatty acids and mg FA.100g⁻¹) of total lipid from Nutritional Supplement

Fatty acid	440-2019-0808-105	
	%	mg. 100g ⁻¹
14:0	0.45	391.00
15:0	0.08	68.00
16:0	1.64	1419.00
18:0	3.62	3130.00
20:0	0.62	538.00
22:0	0.23	197.00
24:0	<LOQ	<LOQ
Total saturated	6.64	5743.00
16:1n-9	<LOQ	<LOQ
16:1n-7	0.69	600.00
18:1n-9	5.94	5135.00
18:1n-7	2.43	2102.00
20:1n-11	0.49	428.00
20:1n-9	3.15	2721.00
20:1n-7	0.80	692.00
22:1n-11	2.76	2384.00
22:1n-9	0.25	220.00
24:1n-9	0.79	680.00
Total monounsaturated	17.30	14962.00
18:2n-6	0.88	758.00
18:3n-6	0.12	108.00
20:2n-6	0.42	366.00
20:3n-6	0.36	308.00
20:4n-6	2.53	2190.00
22:4n-6	<LOQ	<LOQ
22:5n-6	0.76	654.00
Total n-6 PUFA	5.07	4384.00
18:3n-3	0.60	515.00
18:4n-3	1.49	1290.00
20:3n-3	0.23	199.00
20:4n-3	1.57	1357.00
20:5n-3	35.98	31123.00
21:5n-3	1.53	1321.00
22:5n-3	4.35	3761.00
22:6n-3	24.95	21580.00
Total n-3 PUFA	70.69	61146.00
16:2	0.05	45.00
16:3	0.09	81.00
16:4	0.16	135.00
	0.30	261.00
Total PUFA	76.06	65791.00
Total	100.00	86496.00
n-3/n-6		13.95

The Limit of Quantification (LOQ) for fatty acid analysis is 0.06%