

Analytical report AR-25-HD-015898-04



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Customer:

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CZECH REPUBLIC

Issue date 30.05.2025

Sample code 540-2025-00019444

Sample reception date: 11.04.2025
Date of Testing 11.04.2025 - 15.05.2025

Sample information:

Sample name, extended: ¹⁾ BrainMax Arctic Caviar Oil
Sample description: ¹⁾ 005-32407-220504
Client Purchase order nr.: BrainMax Arctic Caviar Oil
Order date: 09.04.2025
Client sample code: ¹⁾ 65706
Sampler: Customer
Additional sample description: 24772

Physical and chemical tests

Parameter	Unit	Result	Uncertainty of measurement *	Method	Method principle	TZ
Brutto sample weight of supplied sample	kg	0.29	7%	SOP MB.005.PB	Gravimetry	A
Anisidine number		14.9	4%	SOP 8.72. (ČSN EN ISO 6885)	Spectrophotometry	SA
Fat	g/100 g	46.98	3.05	Internal Method 1 [DE Food], SOP:00.12000.L, 2024-09	Gravimetry [Weibull-Stoldt]	SA
Capsule weight, whole	g/Capsule	0.761		Ph. Eur. 3th Ed., 1997, 2.9.5, 1315.01	Gravimetry	SN
Choline, total	mg/kg	25800	2580.000	AOAC Vol 91,1 2008	LC-MS/MS	SA
C 4:0 (Butyric Acid)	g/100 g fat	<0.1		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 5:0 (Valeric Acid)	g/100 g fat	<0.1		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 6:0 (Caproic acid)	g/100 g fat	<0.1		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 7:0 (Enanthic acid)	g/100 g fat	<0.1		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 8:0 (Caprylic acid)	g/100 g fat	0.5		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 9:0 (Nonanoic acid)	g/100 g fat	<0.1		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA

Physical and chemical tests

Parameter	Unit	Result	Uncertainty of measurement *	Method	Method principle	TZ
C 10:0 (Capric acid)	g/100 g fat	0.3		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 11:0 (Undecanoic acid)	g/100 g fat	<0.1		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 12:0 (Lauric acid)	g/100 g fat	<0.1		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 13:0 (Tridecanoic acid)	g/100 g fat	<0.1		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 14:0 (Myristic acid)	g/100 g fat	2.1	0.1	DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 14:1 (trans fatty acid)	g/100 g fat	0.1		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 14:1 (Myristoleic acid)	g/100 g fat	<0.1		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 15:0 (Pentadecanoic acid)	g/100 g fat	0.3		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 15:1 (Pentadecenoic acid)	g/100 g fat	<0.1		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 16:0 (Palmitic acid)	g/100 g fat	9.7	0.9	DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 16:1 (trans fatty acid)	g/100 g fat	0.6		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 16:1 (Palmitoleic acid)	g/100 g fat	2.1		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 17 (Heptadecanoic acid)	g/100 g fat	0.2		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 17:1 (Heptadecenoic acid)	g/100 g fat	0.1		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 18:0 (Stearic acid)	g/100 g fat	1.1	0.1	DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 18:1 (cis fatty acid)	g/100 g fat	0.5		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA

Physical and chemical tests

Parameter	Unit	Result	Uncertainty of measurement *	Method	Method principle	TZ
C 18:1 tr 6 (fatty acid)	g/100 g fat	<0.1		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 18:1 n6 cis-Petroselinic acid	g/100 g fat	0.8		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 18:1 n9 trans-Elaidic acid	g/100 g fat	<0.1		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 18:1 n9 (cis oleic acid)	g/100 g fat	4.2	0.4	DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 18:1 n11 trans-Vaccen acid	g/100 g fat	<0.1		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 18:1 n11 cis-Vaccen acid	g/100 g fat	1.9		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 18:2 trans (fatty acid)	g/100 g fat	<0.1		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 18:2 (trans-cis fatty acid)	g/100 g fat	<0.1		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 18:2 (cis-trans fatty acid)	g/100 g fat	<0.1		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 18:2 n6 (trans-Linolelaidic acid)	g/100 g fat	<0.1		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 18:2 n6 (cis-linoleic acid)	g/100 g fat	0.7	0.1	DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 18:3 (trans fatty acid)	g/100 g fat	0.2		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C18:3 n3 (Alpha-Linolenic acid)	g/100 g fat	0.5	0.1	DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 18:3 n6 (gamma-Linolenic acid)	g/100 g fat	<0.1		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C18:4 n3 (Octadecatetraenoic)	g/100 g fat	0.6		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 19:0 (Nonadecanoic acid)	g/100 g fat	<0.1		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA

Physical and chemical tests

Parameter	Unit	Result	Uncertainty of measurement *	Method	Method principle	TZ
C 20:0 (Arachidic acid)	g/100 g fat	0.4		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 20:1 (Eicosenoic acid)	g/100 g fat	1.6		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 20:2 (Eicosadienoic acid)	g/100 g fat	0.2		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 20:3 n3 (cis-11,14,17-Eicosatrien acid)	g/100 g fat	0.5		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 20:3 n6 (cis-8,11,14-Eicosatrien acid)	g/100 g fat	0.1		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 20:4n6 (Arachidonic Acid)	g/100 g fat	0.6		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 20:5n3 (cis-5,8,11,14,17-Eicosapentaenoic Acid)	g/100 g fat	12.8		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 21:0 (Heneicosanoic acid)	g/100 g fat	<0.1		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 22:0 (Behenic acid)	g/100 g fat	0.4		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C22:1 erucic acid	g/100 g fat	0.6		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 22:2 n6 (cis-13,16-docosadienoic acid)	g/100 g fat	0.2		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C22:5n-3 Docosapentaenoic (DPA)	g/100 g fat	7.1		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
DHA Docosahexaenoic acid C22:6	g/100 g fat	40.4		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 23:0 (Tricosanoic acid)	g/100 g fat	0.3		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 24:0 (Lignoceric acid)	g/100 g fat	<0.1		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
C 24:1 (Nervonic acid)	g/100 g fat	1.1		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA

Physical and chemical tests

Parameter	Unit	Result	Uncertainty of measurement *	Method	Method principle	TZ
saturated fatty acids in the fat	g/100 g	15.3	2.7	DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
monounsaturated fatty acids in the fat	g/100 g	12.8	1.3	DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
polyunsaturated fatty acids in the fat	g/100 g	63.7	13.1	DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
trans fatty acids in the fat	g/100 g	1.1	0.8	DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
unidentifiable fatty acids in the fat	g/100 g	7.0		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
saturated fatty acids in the product	g/100 g	7.2		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
monounsaturated fatty acids in the product	g/100 g	6.0		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
polyunsaturated fatty acids in the product	g/100 g	29.9		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
trans fatty acids in the product	g/100 g	0.5		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
unidentifiabel FA in the product	g/100 g	3.3		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
Omega-3 fatty acids in the fat	g/100 g	61.4	7.5	DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
Omega-6 fatty acids in the fat	g/100 g	1.3	0.2	DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
omega9 fatty acids in fat	g/100 g	7.5		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
Omega-3 and -6 fatty acids in the fat	g/100 g	62.7	6.9	DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
Omega-3 fatty acids in the product	g/100 g	28.9		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
Omega-6 fatty acids in the product	g/100 g	0.6		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA

Physical and chemical tests

Parameter	Unit	Result	Uncertainty of measurement *	Method	Method principle	TZ
omega9 fatty acids in the sample	g/100 g	3.5		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
Omega-3 and -6 fatty acids in the product	g/100 g	29.5		DGF C-VI 11e(18)/10a(00) mod. [DE Food], SOP:00.12100.L	GC-FID	SA
TOTOX		14.9	7%	SOP-N CH.37	Calculation	SN
Cholecalciferol (vitamin D3)	µg/100 g	51.2	13.312	EN 12821:2009 mod.	LC-DAD	SA
Vitamin B12 (cyanocobalamin)	µg/100 g	205	41.000	J. AOAC 2008, vol 91 No 4	LC-UV/DAD	SA
Riboflavin (vitamin B2)	mg/100 g	79.9	12.784	EN 14152:2014 mod..	LC-FLD	SA
Pantothenic acid (vitamin B5)	mg/100 g	292	58.400	AOAC 2012.16	LC-MS	SA
Pantothenic acid calc. as calcium pantothenate	mg/100 g	317	63.400	AOAC 2012.16	LC-MS	SA

Parameter	Unit	Result	Uncertainty of measurement *	Method	Method principle	TZ
Testing performed on whole capsule		Yes			Testing on whole capsules	SN
Peroxide value	meqO2/kg	<0.5		SOP 8.54.	Volumetry	SA
Acid value (mg KOH/g)	mg KOH/g fat	26.4	6%	SOP 8.55.**	Volumetry	SA

Additional information

Measured values after conversion to 2 capsules:

Choline: 39.3 mg
Vitamin D3: 0.779 µg
Vitamin B12: 3.12 µg
Vitamin B2: 1.22 mg
Vitamin B5 (Pantothenic acid): 4.44 mg
Calcium pantothenate: 4.82 mg
Omega-3 fatty acids: 440 mg
Omega-3 fatty acids: 9.13 mg
EPA: 195 mg
DHA: 615 mg

Decision rule: If the testing laboratory issues a statement of conformity, the decision-making rule according to ch. 4.2.1 of ILAC document G8:09/2019 Guidelines for the use of decision rules and statement of conformity. In such a case, the measurement uncertainty is not taken into account for the conformity statement. If measurement uncertainty is included the decision, this information is included in the statement of conformity. In such a case, proceed according to chap. 4.2.3 ILAC G8:09/2019.

Notes: SOP, ŠPP - Standard operation procedure
ND - not detected by given method
CFU - Colony forming unit
NM - necessary quantity
SN - subcontracted not accredited test
* - the expanded measurement uncertainty, as determined by the extension coefficient $k = 2$ (with a 95% probability), does not include sampling uncertainty; if the measurement uncertainty is expressed in %, it is its relative value
LOD – limit of detection, LOQ – limit of quantification, result between LOD and LOQ = detected
1) - Information supplied by customer
Unless otherwise stated in the notes, the place of the tests performance is workplace No. 1 - Prague - of EUROFINS CZ testing laboratory.

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Responsible for correctness: Pavlína Hejduková

Worked out by: Júlía Výbošťoková

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Head of Laboratory

