

CERTIFICATE OF ANALYSIS

Silliker, JR Laboratories
 12-3871 North Fraser Way, Burnaby, BC V5J 5G6
 604/ 432 9311 Fax 604/ 432 7768

COA No:	BRN-39586694-0
Supersedes:	BRN-39575341-0
COA Date	11/29/16
Page 1 of 3	

TO:
 Ms. Shirley Zhu
 Quality Assurance Manager
 Seven Seas Fish Co., Ltd
 12411 Vulcan Way
 Richmond, BC V6V 1J7

Received From:	Richmond, BC
Received Date:	11/15/16

Location of Test: (except where noted) Burnaby, BC
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Analytical Results

Desc. 1:	Desc. 2:	Laboratory ID:	Condition Rec'd:	Temp Rec'd (°C):		
Blackcod Portion	WO16839	364977956	NORMAL	-9.6		
<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Method Reference</u>	<u>Method</u>	<u>Test Date</u>	<u>Loc.</u>
Fat by GC			AOAC 996.06	QA-9901-2056	11/24/16	MRK
Total Fat as Triglycerides by GC	14.15	g/100g				
Saturated Fatty Acids	4.02	g/100g				
cis-Monounsaturated Fatty Acids	8.32	g/100g				
cis-Polyunsaturated Fatty Acids	1.18	g/100g				
Omega-6 Fatty Acids	0.23	g/100g				
Omega-3 Fatty Acids	0.72	g/100g				
Trans Fatty Acids	<0.05	g/100g				
Conjugated Linoleic Acid	<0.01	g/100g				
Fatty Acid Profile			AOCS Ce 1b-89 (1999)	2056/SL-0250-4904	11/29/16	MRK
4:0 Butanoic (Butyric)	<0.01	% FA of Total FA				
6:0 Hexanoic (Caproic)	<0.01	% FA of Total FA				
8:0 Octanoic (Caprylic)	<0.01	% FA of Total FA				
10:0 Decanoic (Capric)	<0.01	% FA of Total FA				
12:0 Dodecanoic (Lauric)	0.05	% FA of Total FA				
14:0 Tetradecanoic (Myristic)	4.36	% FA of Total FA				
14:1 Tetradecenoic (Myristoleic)	0.21	% FA of Total FA				
15:0 Pentadecanoic	0.41	% FA of Total FA				
15:1 Pentadecenoic	<0.01	% FA of Total FA				
16:0 Hexadecanoic (Palmitic)	20.92	% FA of Total FA				
16:1 n-9 Hexadecenoic	0.22	% FA of Total FA				
16:1 n-7 Hexadecenoic (Palmitoleic)	10.04	% FA of Total FA				
16:1 n-5 Hexadecenoic	0.38	% FA of Total FA				
16:2 n-6 Hexadecadienoic	0.05	% FA of Total FA				
16:2 n-4 Hexadecadienoic	0.55	% FA of Total FA				
16:3 n-4 Hexadecatrienoic	0.31	% FA of Total FA				
16:3 n-3 Hexadecatrienoic	0.03	% FA of Total FA				
16:3 n-1 Hexadecatrienoic	0.14	% FA of Total FA				
16:4 n-3 Hexadecatetraenoic	0.04	% FA of Total FA				
16:4 n-1 Hexadecatetraenoic	0.38	% FA of Total FA				
17:0 Heptadecanoic (Margaric)	0.17	% FA of Total FA				
17:1 Heptadecenoic (Margaroleic)	0.54	% FA of Total FA				
18:0 Octadecanoic (Stearic)	3.61	% FA of Total FA				

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Analytical Results

Desc. 1: Blackcod Portion **Laboratory ID:** 364977956
Desc. 2: WO16839 **Condition Rec'd:** NORMAL
Temp Rec'd (°C): -9.6

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Method Reference</u>	<u>Method</u>	<u>Test Date</u>	<u>Loc.</u>
18:1 n-9 Octadecenoic (Oleic)	32.90	% FA of Total FA				
18:1 n-7 Octadecenoic	7.70	% FA of Total FA				
18:1 n-5 Octadecenoic	0.32	% FA of Total FA				
18:2 n-9 Octadecadienoic	0.03	% FA of Total FA				
18:2 n-6 Octadecadienoic (Linoleic)	0.98	% FA of Total FA				
18:2 n-4 Octadecadienoic	0.10	% FA of Total FA				
18:3 n-6 Octadecatrienoic	0.09	% FA of Total FA				
18:3 n-4 Octadecatrienoic	0.04	% FA of Total FA				
18:3 n-3 Octadecatrienoic (Linolenic)	0.33	% FA of Total FA				
18:3 n-1 Octadecatrienoic	0.05	% FA of Total FA				
18:4 n-3 Octadecatetraenoic	0.64	% FA of Total FA				
18:4 n-1 Octadecatetraenoic	0.10	% FA of Total FA				
20:0 Eicosanoic (Arachidic)	0.14	% FA of Total FA				
20:1 n-11+13 Eicosenoic	2.21	% FA of Total FA				
20:1 n-9 Eicosenoic	1.69	% FA of Total FA				
20:1 n-7 Eicosenoic	0.45	% FA of Total FA				
20:1 n-5 Eicosenoic	0.03	% FA of Total FA				
20:2 n-6 Eicosadienoic	0.06	% FA of Total FA				
20:3 n-6 Eicosatrienoic	0.02	% FA of Total FA				
20:3 n-3 Eicosatrienoic	0.04	% FA of Total FA				
20:4 n-6 Eicosatetraenoic (Arachidic)	0.41	% FA of Total FA				
20:4 n-3 Eicosatetraenoic	0.07	% FA of Total FA				
20:5 n-3 Eicosapentaenoic (EPA)	2.01	% FA of Total FA				
21:5 n-3 Heneicosapentaenoic	0.04	% FA of Total FA				
22:0 Docosanoic (Behenic)	0.06	% FA of Total FA				
22:1 n-11+13 Docosaenoic	2.72	% FA of Total FA				
22:1 n-9 Docosaenoic	0.95	% FA of Total FA				
22:1 n-7 Docosaenoic	0.15	% FA of Total FA				
22:4 n-6 Docosatetraenoic	0.02	% FA of Total FA				
22:4 n-3 Docosatetraenoic	<0.01	% FA of Total FA				
22:5 n-6 Docosapentaenoic	0.05	% FA of Total FA				
22:5 n-3 Docosapentaenoic	0.18	% FA of Total FA				
22:6 n-3 Docosahexaenoic (DHA)	1.93	% FA of Total FA				

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Temp Rec'd (°C): -9.6

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24:0 Tetracosanoic (Lignoceric)	0.02	% FA of Total FA				
24:1 Tetracosanoic (Nervonic)	1.03	% FA of Total FA				
Total Saturates	29.74	% FA of Total FA				
Total cis-Monounsaturated Fatty Aci	61.54	% FA of Total FA				
Total cis-Polyunsaturated Fatty Acid	8.71	% FA of Total FA				
Omega-6 Fatty Acids	1.70	% FA of Total FA				
Omega-3 Fatty Acids	5.31	% FA of Total FA				
C22:2 n-6 Docosadienoic	0.02	% FA of Total FA				
ICP-MS Sample Prep	Acid Digest -		EPA 3050b		11/18/16	
Mercury	0.371	ppm (w/w)	EPA 3050/6020 USP730	M-C043	11/21/16	



 Cathy Shevchuk Laboratory Director

Noted Test Locations: MRK-Silliker, Canada Co., 90 Gough Road, Unit 4, Markham, Ontario L3R 5V5

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