

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-38948225-0 |
| Supersedes: | BRN-38716536-0 |
| COA Date | 4/26/16 |
| 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: | 1/22/16 |

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

Desc. 1: Halibut (WO12964) **Laboratory ID:** 358459998

Condition Rec'd: NORMAL

Temp Rec'd (°C): -3.4

| <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 | 4/26/16 | MRK |
| Total Fat as Triglycerides by GC | 0.39 | g/100g | | | | |
| Saturated Fatty Acids | 0.12 | g/100g | | | | |
| cis-Monounsaturated Fatty Acids | 0.07 | g/100g | | | | |
| cis-Polyunsaturated Fatty Acids | 0.18 | g/100g | | | | |
| Omega-6 Fatty Acids | 0.02 | g/100g | | | | |
| Omega-3 Fatty Acids | 0.16 | g/100g | | | | |
| Trans Fatty Acids | <0.01 | g/100g | | | | |
| Conjugated Linoleic Acid | <0.01 | g/100g | | | | |
| Fatty Acid Profile | | | AOCS Ce 1b-89 (1999) | 2056/SL-0250-4904 | 2/5/16 | 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) | <0.01 | % FA of Total FA | | | | |
| 14:0 Tetradecanoic (Myristic) | 1.52 | % FA of Total FA | | | | |
| 14:1 Tetradecenoic (Myristoleic) | <0.01 | % FA of Total FA | | | | |
| 15:0 Pentadecanoic | 0.42 | % FA of Total FA | | | | |
| 15:1 Pentadecenoic | <0.01 | % FA of Total FA | | | | |
| 16:0 Hexadecanoic (Palmitic) | 20.51 | % FA of Total FA | | | | |
| 16:1 n-9 Hexadecenoic | 0.14 | % FA of Total FA | | | | |
| 16:1 n-7 Hexadecenoic (Palmitoleic) | 1.64 | % FA of Total FA | | | | |
| 16:1 n-5 Hexadecenoic | <0.01 | % FA of Total FA | | | | |
| 16:2 n-6 Hexadecadienoic | <0.01 | % FA of Total FA | | | | |
| 16:2 n-4 Hexadecadienoic | 0.07 | % FA of Total FA | | | | |
| 16:3 n-4 Hexadecatrienoic | <0.01 | % FA of Total FA | | | | |
| 16:3 n-3 Hexadecatrienoic | <0.01 | % FA of Total FA | | | | |
| 16:3 n-1 Hexadecatrienoic | <0.01 | % FA of Total FA | | | | |
| 16:4 n-3 Hexadecatetraenoic | <0.01 | % FA of Total FA | | | | |
| 16:4 n-1 Hexadecatetraenoic | <0.01 | % FA of Total FA | | | | |
| 17:0 Heptadecanoic (Margaric) | 0.19 | % FA of Total FA | | | | |
| 17:1 Heptadecenoic (Margaroleic) | 0.09 | % FA of Total FA | | | | |
| 18:0 Octadecanoic (Stearic) | 8.14 | % FA of Total FA | | | | |

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| <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) | 8.56 | % FA of Total FA | | | | |
| 18:1 n-7 Octadecenoic | 2.57 | % FA of Total FA | | | | |
| 18:1 n-5 Octadecenoic | 0.13 | % FA of Total FA | | | | |
| 18:2 n-9 Octadecadienoic | <0.01 | % FA of Total FA | | | | |
| 18:2 n-6 Octadecadienoic (Linoleic) | 0.73 | % FA of Total FA | | | | |
| 18:2 n-4 Octadecadienoic | <0.01 | % FA of Total FA | | | | |
| 18:3 n-6 Octadecatrienoic | <0.01 | % FA of Total FA | | | | |
| 18:3 n-4 Octadecatrienoic | <0.01 | % FA of Total FA | | | | |
| 18:3 n-3 Octadecatrienoic (Linolenic) | 0.13 | % FA of Total FA | | | | |
| 18:3 n-1 Octadecatrienoic | <0.01 | % FA of Total FA | | | | |
| 18:4 n-3 Octadecatetraenoic | 0.14 | % FA of Total FA | | | | |
| 18:4 n-1 Octadecatetraenoic | <0.01 | % FA of Total FA | | | | |
| 20:0 Eicosanoic (Arachidic) | 0.12 | % FA of Total FA | | | | |
| 20:1 n-11+13 Eicosenoic | 0.81 | % FA of Total FA | | | | |
| 20:1 n-9 Eicosenoic | 1.82 | % FA of Total FA | | | | |
| 20:1 n-7 Eicosenoic | 0.19 | % FA of Total FA | | | | |
| 20:1 n-5 Eicosenoic | <0.01 | % FA of Total FA | | | | |
| 20:2 n-6 Eicosadienoic | 0.17 | % FA of Total FA | | | | |
| 20:3 n-6 Eicosatrienoic | <0.01 | % FA of Total FA | | | | |
| 20:3 n-3 Eicosatrienoic | <0.01 | % FA of Total FA | | | | |
| 20:4 n-6 Eicosatetraenoic (Arachidic) | 3.63 | % FA of Total FA | | | | |
| 20:4 n-3 Eicosatetraenoic | 0.23 | % FA of Total FA | | | | |
| 20:5 n-3 Eicosapentaenoic (EPA) | 9.59 | % FA of Total FA | | | | |
| 21:5 n-3 Heneicosapentaenoic | <0.01 | % FA of Total FA | | | | |
| 22:0 Docosanoic (Behenic) | 0.26 | % FA of Total FA | | | | |
| 22:1 n-11+13 Docosaenoic | 0.99 | % FA of Total FA | | | | |
| 22:1 n-9 Docosaenoic | 0.24 | % FA of Total FA | | | | |
| 22:1 n-7 Docosaenoic | <0.01 | % FA of Total FA | | | | |
| 22:4 n-6 Docosatetraenoic | <0.01 | % FA of Total FA | | | | |
| 22:4 n-3 Docosatetraenoic | <0.01 | % FA of Total FA | | | | |
| 22:5 n-6 Docosapentaenoic | 0.59 | % FA of Total FA | | | | |
| 22:5 n-3 Docosapentaenoic | 2.38 | % FA of Total FA | | | | |
| 22:6 n-3 Docosahexaenoic (DHA) | 31.81 | % FA of Total FA | | | | |

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Temp Rec'd (°C): -3.4

| <u>Analyte</u> | <u>Result</u> | <u>Units</u> | <u>Method Reference</u> | <u>Method</u> | <u>Test Date</u> | <u>Loc.</u> |
|--------------------------------------|---------------|------------------|-------------------------|---------------|------------------|-------------|
| 24:0 Tetracosanoic (Lignoceric) | <0.01 | % FA of Total FA | | | | |
| 24:1 Tetracosanoic (Nervonic) | 2.21 | % FA of Total FA | | | | |
| Total Saturates | 31.16 | % FA of Total FA | | | | |
| Total cis-Monounsaturated Fatty Aci | 19.39 | % FA of Total FA | | | | |
| Total cis-Polyunsaturated Fatty Acid | 49.47 | % FA of Total FA | | | | |
| Omega-6 Fatty Acids | 5.12 | % FA of Total FA | | | | |
| Omega-3 Fatty Acids | 44.28 | % FA of Total FA | | | | |
| ICP-MS Sample Prep | Acid Digest - | | EPA 3050b | | 1/25/16 | |
| Mercury | 0.324 | ppm (w/w) | EPA 3050/6020 USP730 | M-C043 | 1/27/16 | |



 Cathy Shevchuk Laboratory Director

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

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