

CERTIFICATE OF ANALYSIS

| COA No: | BRN-39587709-0 |
|-------------|----------------|
| Supersedes: | None |
| COA Date | 11/29/16 |
| Page 1 of 3 | • |

Silliker, JR Laboratories

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

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

Analytical Results

Desc. 1: **Halibut Portion** Laboratory ID: 364977945

| Desc. 2: | WO16846 | | | | Condition Rec'd: | NORMAL |
|-----------------------------------|---------|--------|------------------|----------------------|-------------------|----------------|
| | | | | | Temp Rec'd (°C): | -9.6 |
| Analyte | | Result | Units | Method Reference | Method | Test Date Loc. |
| Fat by GC | | | | AOAC 996.06 | QA-9901-2056 | 11/29/16 MRK |
| Total Fat as Triglycerides by GC | | 14.43 | g/100g | | | |
| Saturated Fatty Acids | | 3.99 | g/100g | | | |
| cis-Monounsaturated Fatty Acids | | 7.60 | g/100g | | | |
| cis-Polyunsaturated Fatty Acids | | 2.20 | g/100g | | | |
| Omega-6 Fatty Acids | | 0.33 | g/100g | | | |
| Omega-3 Fatty Acids | | 1.51 | 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) | | 0.07 | % FA of Total FA | | | |
| 14:0 Tetradecanoic (Myristic) | | 4.92 | % FA of Total FA | | | |
| 14:1 Tetradecenoic (Myristoleic) | | 0.16 | % FA of Total FA | | | |
| 15:0 Pentadecanoic | | 0.44 | % FA of Total FA | | | |
| 15:1 Pentadecenoic | | <0.01 | % FA of Total FA | | | |
| 16:0 Hexadecanoic (Palmitic) | | 19.80 | % FA of Total FA | | | |
| 16:1 n-9 Hexadecenoic | | 0.18 | % FA of Total FA | | | |
| 16:1 n-7 Hexadecenoic (Palmitolei | С | 9.44 | % FA of Total FA | | | |
| 16:1 n-5 Hexadecenoic | | 0.23 | % FA of Total FA | | | |
| 16:2 n-6 Hexadecadienoic | | 0.08 | % FA of Total FA | | | |
| 16:2 n-4 Hexadecadienoic | | 0.73 | % FA of Total FA | | | |
| 16:3 n-4 Hexadecatrienoic | | 0.48 | % FA of Total FA | | | |
| 16:3 n-3 Hexadecatrienoic | | <0.01 | % FA of Total FA | | | |
| 16:3 n-1 Hexadecatrienoic | | 0.14 | % FA of Total FA | | | |
| 16:4 n-3 Hexadecatetraenoic | | 0.07 | % FA of Total FA | | | |
| 16:4 n-1 Hexadecatetraenoic | | 0.66 | % FA of Total FA | | | |
| 17:0 Heptadecanoic (Margaric) | | 0.20 | % FA of Total FA | | | |
| 17:1 Heptadecenoic (Margaroleic) | | 0.47 | % FA of Total FA | | | |
| 18:0 Octadecanoic (Stearic) | | 3.23 | % FA of Total FA | | | |
| | | | | | | |

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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

Test Date Loc.

<u>Method</u>

Analytical Results

Desc. 1:Halibut PortionLaboratory ID:364977945Desc. 2:WO16846Condition Rec'd:NORMALTemp Rec'd (°C):-9.6

Method Reference

| <u>Analyte</u> | Result Units |
|--------------------------------------|------------------------|
| 18:1 n-9 Octadecenoic (Oleic) | 25.98 % FA of Total FA |
| 18:1 n-7 Octadecenoic | 7.12 % FA of Total FA |
| 18:1 n-5 Octadecenoic | 0.33 % FA of Total FA |
| 18:2 n-9 Octadecadienoic | 0.04 % FA of Total FA |
| 18:2 n-6 Octadecadienoic (Linoleic) | 1.00 % FA of Total FA |
| 18:2 n-4 Octadecadienoic | 0.22 % FA of Total FA |
| 18:3 n-6 Octadecatrienoic | 0.11 % FA of Total FA |
| 18:3 n-4 Octadecatrienoic | 0.11 % FA of Total FA |
| 18:3 n-3 Octadecatrienoic (Linolenic | 0.50 % FA of Total FA |
| 18:3 n-1 Octadecatrienoic | 0.05 % FA of Total FA |
| 18:4 n-3 Octadecatetraenoic | 1.12 % FA of Total FA |
| 18:4 n-1 Octadecatetraenoic | 0.23 % FA of Total FA |
| 20:0 Eicosanoic (Arachidic) | 0.16 % FA of Total FA |
| 20:1 n-11+13 Eicosenoic | 1.82 % FA of Total FA |
| 20:1 n-9 Eicosenoic | 2.97 % FA of Total FA |
| 20:1 n-7 Eicosenoic | 0.78 % FA of Total FA |
| 20:1 n-5 Eicosenoic | 0.06 % FA of Total FA |
| 20:2 n-6 Eicosadienoic | 0.17 % FA of Total FA |
| 20:3 n-6 Eicosatrienoic | 0.05 % FA of Total FA |
| 20:3 n-3 Eicosatrienoic | 0.09 % FA of Total FA |
| 20:4 n-6 Eicosatetraenoic (Arachido | 0.80 % FA of Total FA |
| 20:4 n-3 Eicosatetraenoic | 0.32 % FA of Total FA |
| 20:5 n-3 Eicosapentaenoic (EPA) | 4.88 % FA of Total FA |
| 21:5 n-3 Heneicosapentaenoic | 0.19 % FA of Total FA |
| 22:0 Docosanoic (Behenic) | 0.06 % FA of Total FA |
| 22:1 n-11+13 Docosaenoic | 3.55 % FA of Total FA |
| 22:1 n-9 Docosaenoic | 1.11 % FA of Total FA |
| 22:1 n-7 Docosaenoic | 0.19 % FA of Total FA |
| 22:4 n-6 Docosatetraenoic | 0.07 % FA of Total FA |
| 22:4 n-3 Docosatetraenoic | 0.02 % FA of Total FA |
| 22:5 n-6 Docosapentaenoic | 0.07 % FA of Total FA |
| 22:5 n-3 Docosapentaenoic | 0.68 % FA of Total FA |
| 22:6 n-3 Docosahexaenoic (DHA) | 3.08 % FA of Total FA |

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| Received Date: | 11/15/16 |

Location of Test: (except where noted)

Burnaby, BC

11/18/16

Analytical Results

 Desc. 1:
 Halibut Portion
 Laboratory ID:
 364977945

 Desc. 2:
 WO16846
 Condition Rec'd:
 NORMAL

 Temp Rec'd (°C):
 -9.6

Analyte Result Units Method Reference Method Test Date Loc.

24:0 Tetracosanoic (Lignoceric)

24:1 Tetracosaenoic (Nervonic)

7 Total Saturates

28.92 % FA of Total FA

Total cis-Monounsaturated Fatty Aci

Total cis-Polyunsaturated Fatty Acid

7 Total Cis-Polyunsaturated Fatty Acid

8 Total Cis-Polyunsaturated Fatty Acid

9 Total FA

15.99 % FA of Total FA

15.99 % FA of Total FA

15.99 % FA of Total FA

16 Total FA

17 Total FA

18 Total FA

18 Total FA

19 Total FA

C22:2 n-6 Docosadienoic 0.03 % FA of Total FA
ICP-MS Sample Prep Acid Digest - EPA 3050b

Mercury 0.088 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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