



Fisheries and Oceans

Pêches et Océans

CERTIFICATE NO.: 01/08



FHPR FISH HEALTH CERTIFICATE

(Eggs Only)

Name of Facility/source: Stofniskur Ltd.
Address: P.O. Box 24, 222 Hafnarbjörður, ICELAND
Telephone No.: (+354) 564 6300

Fax No.: (+354) 564 6301

I, Dr. Gisli Jónsson, approved by the Secretary of the Department of the Interior, last certified on May 31st 2008 as a Certifying Official for Iceland, do hereby certify that the source indicated above was inspected by the methods approved by the Minister of Fisheries and Oceans Canada and that the following pathogen status was determined as required by the Canadian Fish Health Protection Regulations C.R.C.

Table with 3 columns: Pathogen Name, Detected, Not Detected, Not Testing. Rows include Viral Haemorrhagic Septicemia Virus (VHS), Infectious Hematopoietic Necrosis Virus (IHNV), Infectious Pancreatic Necrosis Virus (IPNV), etc.

Date of the last four inspections:

April 21st 2008 (DMM/Y)

April 28th 2008 (DMM/Y)

May 5th 2008 (DMM/Y)

May 13th 2008 (DMM/Y)

May 16th 2008 Date of Issue

Handwritten signature of Gisli Jónsson and official stamp: VETERINARY OFFICER FOR FISH DISEASES



This certificate expires on the date the pathogen status changes or February 1st 2009, whichever is earlier.

EXPORTER'S DECLARATION:

I, Gisli Jónsson, owner/manager of the above named facility which was last inspected on... declare that, to my knowledge, no disease agent listed in Schedule II of the Fish Health Protection Regulations (FHPR) that would alter the above described pathogen status have been detected, in this facility, according to the procedures outlined in the FHPR Manual of Compliance since the last FHPR inspection...

This shipment consists of:

800,000 Number

Live

Eggs

Species: Atlantic salmon (Salmo salar L.)

17.10.2008 Date

Handwritten signature and printed name: STOFNISKUR HF. Signature of Owner, Manager or Consignor

(+354) 564 6300 Telephone No

IMPORTING INFORMATION:

Departing city and country: Reykjavik, ICELAND

Carrier:

Bill of lading No.:

Date:

Anticipated port of arrival in Canada (City and Province):

Date:

Name and address of importer:

Date:

Signature of importer:

Telephone No:

Fish Health Service Report

Company: **Mainstream Canada**
Site: **Boat Lagoon Hatchery**
Work done: **Fish health check and virus screening**
Date submitted: **January 8, 2009**
Case number: **9-2625**
Contact: **Janusz Wicikowski**
Pr#: **7521532**

Final report issued: **January 22, 2009**

Sample description: Thirty atlantic fry were submitted to Microtek for a fish health check and virus screening. The average weight of the fish was 0.08 grams.

General bacteriology: Kidney tissues were plated onto Trypticase Soy Agar (TSA) media then incubated at 20°C. Kidney tissues were plated onto blood agar (BA; TSA with 5% blood) media then incubated at 16°C. Gill tissues were plated onto Trypticase Soy Agar media and Sabouraud Dextrose agar media then incubated at 20°C. Gill tissues were plated onto Tryptone yeast extract (TYES) media and incubated at 16°C.

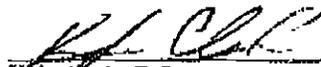
Virus screening: Six pools of 5 fish each were screened for the presence of virus as outlined in the Canadian Fish Health Protection Regulations Manual of Compliance (section X.A-E). The samples were inoculated onto the EPC (Epithelioma Papillosum Cyprini) and CHSE-214 (Chinook Salmon Embryo) cell lines and allowed to incubate for 14 days at 15°C.

Results: No bacteria were cultured from the kidneys of all 30 fish. Fungus was cultured from the kidney of 1 fish. A slight amount of mixed bacteria was cultured from the gills of 12 fish. None of the bacteria cultured were *Aeromonas salmonicida*, *Yersinia ruckeri* serotype 01 & 02 or *Listonella anguillarum* serotype 01 or 02. No cytopathic effects were observed during the viral screening. These samples have been determined to be free of virus based on the scope and sensitivity of this assay.

Slight amount of bacteria =	1 - 10 bacterial colonies
Moderate amount of bacteria =	11 - 20 bacterial colonies
Heavy amount of bacteria =	21 - too numerous to count

If you have any questions regarding these results, please call us.

Sincerely,



Kyle Clarke B.Sc.
Research and Development Technician



Tim Hewison B.Sc.
Fish Health Services Manager

Microtek International Inc.

6761 Kirkpatrick Crescent, Saanichton, B.C. Canada V8M 1Z8

Tel (250) 652-4482, Toll Free in Canada 1-800 667-5062, Fax (250) 652-4802, e-mail services@microtek-intl.com

Fish Health Service Report

Company: Mainstream Canada
Site: Boot Lagoon Hatchery
Work done: Fish health check and virus screening
Date submitted: February 10, 2009
Case number: 9-2637
Contact: Janusz Wicikowski
Pr#: 7521532

Final report issued: February 24, 2009

Sample description: Thirty atlantic fry were submitted to Microtek for a fish health check and virus screening. The average weight of the fish was 1.2 grams.

General bacteriology: Kidney tissues were plated onto Trypticase Soy Agar (TSA) media then incubated at 20°C. Kidney tissues were plated onto blood agar (BA; TSA with 5% blood) media then incubated at 16°C. Gill tissues were plated onto Trypticase Soy Agar media and Sabouraud Dextrose agar media then incubated at 20°C. Gill tissues were plated onto Tryptone yeast extract (TYES) media and incubated at 16°C.

Virus screening: Six pools of 5 fish each were screened for the presence of virus as outlined in the Canadian Fish Health Protection Regulations Manual of Compliance (section X.A-E). The samples were inoculated onto the EPC (Epithelioma Papillosum Cyprini) and CHSE-214 (Chinook Salmon Embryo) cell lines and allowed to incubate for 14 days at 15°C.

Results: No bacteria were cultured from the kidneys of all 30 fish. A slight amount of mixed bacteria was cultured from the gills of all 30 fish. Fungus was cultured from the gills of 4 fish. A slight amount of *Flavobacterium* spp was cultured from the gills of 4 fish. None of the bacteria cultured were *Aeromonas salmonicida*, *Yersinia ruckeri* serotype 01 & 02 or *Listonella anguillarum* serotype 01 or 02. No cytopathic effects were observed during the viral screening. These samples have been determined to be free of virus based on the scope and sensitivity of this assay.

Slight amount of bacteria =	1 - 10 bacterial colonies
Moderate amount of bacteria =	11 - 20 bacterial colonies
Heavy amount of bacteria =	21 - too numerous to count

If you have any questions regarding these results, please call us.

Sincerely,


Kyle Clarke B.Sc.
Fish Health Service Technician


Jim Hewison B.Sc.
Fish Health Services Manager

Microtek International Inc.

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Fish Health Service Report

Company: Mainstream Canada
Site: Boot Lagoon Hatchery
Work done: Fish health check and virus screening
Date submitted: March 19, 2009
Case number: 9-2654
Contact: Janusz Wlczkowski
Pr#: 7521532

Final report issued: April 2, 2009

Sample description: Thirty atlantic fry were submitted to Microtek for a fish health check and virus screening. The average weight of the fish was 2.85 grams.

General bacteriology: Kidney tissues were plated onto Trypticase Soy Agar (TSA) media then incubated at 20°C. Kidney tissues were plated onto blood agar (BA; TSA with 5% blood) media then incubated at 16°C. Gill tissues were plated onto Trypticase Soy Agar media and Sabouraud Dextrose agar media then incubated at 20°C. Gill tissues were plated onto Tryptone yeast extract (TYES) media and incubated at 16°C.

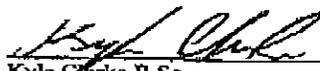
Virus screening: Six pools of 5 fish each were screened for the presence of virus as outlined in the Canadian Fish Health Protection Regulations Manual of Compliance (section X.A-B). The samples were inoculated onto the EPC (Epithelioma Papillosum Cyprini) and CHSE-214 (Chinook Salmon Embryo) cell lines and allowed to incubate for 14 days at 15°C

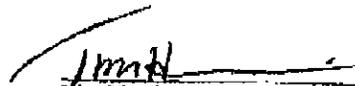
Results: No bacteria were cultured from the kidneys of all 30 fish. A slight amount of mixed bacteria was cultured from the gills of all 30 fish. A slight amount of *Flavobacterium* spp was cultured from the gills of 15 fish. None of the bacteria cultured were *Aeromonas salmonicida*, *Yersinia ruckeri* serotype 01 & 02 or *Listonella anguillarum* serotype 01 or 02. No cytopathic effects were observed during the viral screening. These samples have been determined to be free of virus based on the scope and sensitivity of this assay.

Slight amount of bacteria =	1 - 10 bacterial colonies
Moderate amount of bacteria =	11 - 20 bacterial colonies
Heavy amount of bacteria =	21 - too numerous to count

If you have any questions regarding these results, please call us.

Sincerely,


 Kyle Clarke B.Sc.
 Fish Health Service Technician


 Jim Hewison B.Sc.
 Fish Health Services Manager

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Fish Health Service Report

Company: **Mainstream Canada**
Site: **Boot Lagoon Hatchery**
Work done: **Fish health check and virus screening**
Date submitted: **April 9, 2009**
Case number: **9-2659**
Contact: **Janusz Wicikowski**
Pr#: **7521532**

Final report issued: **April 23, 2008**

Sample description: Sixty atlantic fry were submitted to Microtek for a fish health check and virus screening. The average weight of the fish was 2.52 grams.

General bacteriology: Kidney tissues were plated onto Trypticase Soy Agar (TSA) media then incubated at 20°C. Kidney tissues were plated onto blood agar (BA; TSA with 5% blood) media then incubated at 16°C. Gill tissues were plated onto Trypticase Soy Agar media and Sabouraud Dextrose agar media then incubated at 20°C. Gill tissues were plated onto Tryptone yeast extract (TYES) media and incubated at 16°C.

Virus screening: Twelve pools of 5 fish each were screened for the presence of virus as outlined in the Canadian Fish Health Protection Regulations Manual of Compliance (section X.A-E). The samples were inoculated onto the EPC (Epithelioma Papillosum Cyprini) and CHSE-214 (Chinook Salmon Embryo) cell lines and allowed to incubate for 14 days at 15°C

ISAV: Multi-organ samples were screened for the causative agent of Infectious salmon anemia (ISA) using the RT-PCR diagnostic test.

***Piscirickettsia salmonis*:** Liver and kidney tissues were screened for *Piscirickettsia salmonis* using giemsa staining and IFAT diagnostic tests.

Results: No bacteria were isolated from any of the kidney samples tested from all 60 fish. A slight amount of mixed bacteria were isolated from the gills samples tested from all 60 fish. Fungus was isolated from the gills samples tested for 16 fish. *Flavobacterium* spp was isolated from the gill samples tested for 7 fish. None of the bacteria cultured were *Aeromonas salmonicida*, *Yersinia ruckeri* serotype 01 or 02, *Listonella anguillarum* serotype 01 or 02, or *Flavobacterium* spp.

No cytopathic effects were observed during the viral screening. These samples have been determined to be free of virus based on the scope and sensitivity of this assay.

No cells matching the size and shape of the *P. salmonis* positive control were observed in any of the liver and kidney samples tested for all 60 fish.

None of the sixty fish samples tested by the ISAV RT-PCR had amplified PCR products corresponding to the base pair banding of the ISAV positive control.

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Slight amount of bacteria =	1 – 10 bacterial colonies
Moderate amount of bacteria =	11 – 20 bacterial colonies
Heavy amount of bacteria =	21 – too numerous to count

If you have any questions regarding these results, please call us.

Sincerely,

Hernán Pizarro B.Sc. Aquaculture
Fish Health Technician

Tim Hewison B.Sc.
Fish Health Services Manager

Microtek International Inc.

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Fish Health Service Report

Company: **Mainstream Canada**
Site: **Boot Lagoon Hatchery**
Work done: **Schedule II**
Date submitted: **August 14, 2009**
Case number: **9-2728**
Contact: **Janusz Wicikowski**
Pr#: **7521532**

Final report issued: **August 28, 2009**

Sample description: One hundred and fifty atlantic smolts were submitted to Microtek for a schedule II testing. The average weight of the fish was 49.8 grams.

Aeromonas salmonicida: Kidney tissues were plated onto Trypticase Soy Agar (TSA) and Blood Agar (TSA containing 5% sheep blood) media and screened for the causative agent of furunculosis using the culture method (incubated at 20°C and 16°C respectively).

Yersinia ruckeri: Kidney tissues were plated onto Trypticase Soy Agar (TSA) media and screened for the causative agent of Enteric Red Mouth (ERM) disease using the culture method (incubated at 20°C).

Virus screening: Thirty pools of 5 fish each were screened for the presence of virus as outlined in the Canadian Fish Health Protection Regulations Manual of Compliance (section X.A-E). The samples were inoculated onto the EPC (Epithelioma Papillosum Cyprini) and CHSE-214 (Chinook Salmon Embryo) cell lines and allowed to incubate for 14 days at 15°C.

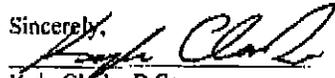
Myxobolus cerebralis: Head cartilage material was prepared and slide preparations were viewed for spores of *M. cerebralis*, the causative agent of whirling disease, as outlined in the Canadian Fish Health Protection Regulations Manual of Compliance (section XI.B.3.a).

Ceratomyxa shasta: Gut smears were prepared on slides and viewed for spores of *C. shasta*, as outlined in the Canadian Fish Health Protection Regulations Manual of Compliance (section XI.C).

Results: No cytopathic effects were observed during the viral screening. These samples have been determined to be free of virus based on the scope and sensitivity of this assay. No *A. salmonicida* or *Y. ruckeri* were cultured from any of the 150 fish. No *C. shasta* or *M. cerebralis* were observed in any of the fish samples.

If you have any questions regarding these results, please call us.

Sincerely,


Kyle Clarke B.Sc.
Research and Development Technician


Jim Hewison B.Sc.
Canadian Fish Health Official

Microtek International Inc.

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**Source Facility Inspection prior to the importation of
fertilized Atlantic salmon eggs from Iceland into the Province of BC**

*Intended to fulfill the requirements for health that are stipulated in Item 5 of the
"Federal-Provincial Policy for the Importation of Atlantic Salmon into British
Columbia," of May 03, 1988.*

I undersigned, Veterinary Officer and Certifying Official, can hereby confirm that STOFNFISKUR LTD, brood stock farm in Iceland fulfill all following requirements:

Elements

1. Origin of eggs

- a. Fertilized eggs originate from brood stock that resided in the waters of the Icelandic facility for 1 full generation.

2. Freedom from Disease

- a. Fertilized eggs originate from brood stock that were tested and determined to be compliant with Canadian Fish Health Protection Regulations.
- b. Fertilized eggs originate from brood stock that was inspected by Dr. Gíslí Jónsson and determined to be apparently healthy at the time of collection of eggs and milt.
- c. As best can be determined, there have been no significant losses in any stocks at the facility due to disease within 30 days prior to export of fertilized eggs to British Columbia.

3. Freedom from exposure to disease

- a. Within 30 days of export of fertilized eggs, brood stock were not exposed to waters containing fish of non-equivalent status, or unknown status, in respect to tests for compliance with Canadian Fish Health Protection Regulations.
- b. The facilities at which the brood stock were maintained, and the facilities where fertilized eggs are processed provide biosecurity measures sufficient to prevent exposure of fish and eggs to diseases for which testing has been completed in regards to Canadian Fish Health Protection Regulations.

4. Treatments and Packaging

- a. The facility will surface disinfect the fertilized eggs offered for import into British Columbia prior to shipment.
- b. The facility's standard procedure includes that surface-disinfected, fertilized eggs are packaged and sealed for shipment to BC in a manner that will prevent exposure to diseases for which brood stock have been tested.



Iceland, November 11th 2008

Gíslí Jónsson

Veterinary Officer for Fish Diseases