Case No:	2023-0497	Date of visit:	08/11/2023
Time spent on site:	9 hrs	Main Inspector:	[redacted]
Site No:	FS0016	Site Name:	Loch Alsh (Sron)
Business No:	FB0119	Business Name:	Mowi Scotland Ltd

Case Types: 1 REP 2 DIA 3 4 5 6

Water Temp (°C): 12.56 Thermometer No: T304 FHI 045 completed N/A

Observations: Region: HI Water type: S CoGP MA: M-21

Dead/weak/abnormally behaving fish present?	Y	If yes, see additional information/clinical score sheet.
Clinical signs of disease observed?	Y	If yes, see additional information/clinical score sheet.
Gross pathology observed?	Y	If yes, see additional information/clinical score sheet.
Diagnostic samples taken?	Y	

UNI/REG only - if unable to carry out intended visit detail reason below:

Additional Case Information:

Large number of mortalities observed floating on surface of a number of pens. Site is actively removing mortalities, normal practice for mortality removal is uplift to bins and the bins are transferred to Ardintoul, the site are using the Aqua Scotia for mortality removal at present (whole fish removed from pens and transferred to tanks at pier. Mowi have also used the Bakkaness for mortality removal with fish removed by uplift and ensiled onboard.
It was reported that the site conducted a FW treatment in mid September and followed this up with a hydrogen peroxide treatment at the beginning of October (07/10 to 10/10), the mortalities began reportedly to increase following this treatment, with pens 3,4, 7 and 8 reported to be affected initially, before all pens on site being affected. Operator has been conducting their own sampling and these results have identified CGD, they have also had Pharmaq Analytiq on site recently and the results from that visit/sampling also identified CGD, but also noted "no history of exposure to harmful phytoplankton or zooplankton despite extensive monitoring"
Site manager reported that although site has CGD, there have been no environmental issues this year. Sea lice numbers on site are extremely low with wk 44 count being 0 adult female leps, 0.01 mobile leps and 0.01 chalimus . Site currently in withdrawal for hydrogen peroxide (500 degree days) due to treatment being for gills rather than sea lice.
WRA mortality - WK42 - 1,741 (3.39%), WK 41 - 2,762 (5.11%), wk 40 - 1,830 (3.94%) and wk 39 - 1,306 (2.93%)
LUM mortality - wk 42 - 2,112 (7.13%), wk 41 - 5,793 (16.36%), wk 40 - 7,902 (18.24%) and wk 39 - 5,628% (11.50%)
Site currently conducting FW treatments using the Inter Atlantic and plan to treat the whole site by 10/11/23 (weather dependant)
Weather was very changeable during the site inspection. Fish sampled for VMD appeared healthy.

Case No: 2023-0497 Site No: FS0016

Date of Visit: 08/11/2023 Inspector(s): [redacted]

Registration/Authorisation Details

1. Business/site details summary checked by site representative?	Y
2. Changes made to details?	N

Site Details (include cleaner fish for all sections)

Total No facilities	10	Facilities stocked		9	No facilities inspected		10	
Species	SAL	WRA	LUM					
Age group	2023 Q1	MIX	MIX					
No Fish	543, 917	~50,000	~27,000					
Mean Fish Wt	2.393 kg	MIX	MIX					
Next Fallow Date (Site)	July 2024		Next Input Date (Site)		2025 Q1			
Recent (last 4 wks) disease problems?			Y	Any escapes (since last visit)?			N	
If yes, detail:	CGD							

Movement Records

1. Movement records available for inspection?	Y
2. Date of last inspection:	16/05/2023
3. Are records complete and correctly entered?	Y
4. Are movement records available for dead fish and waste?	Y
5. Are records complete and correctly entered?	Y
6. Are health certificates for introductions (outwith GB) available?	N/A

Transport Records

1. Are any movements carried out by (or on behalf) of the business (not using a STB)?	
If yes, is there a system in place for maintenance of transportation records?	

Mortality Records

1. Mortality records available for inspection?	Y
2. How are mortalities disposed of?	Biogas - Energen, Cumbernauld
If other detail:	
3. Mortality records complete and correctly entered?	Y
4. Recent mortality (last 4 wks):	WK 40 - 7,960 (0.97%) - All attributed to gill infection, WK 41 - 21,118 (2.6%) - 20,968 attributed to gill health, WK42 - 35,318 (4.46%) - 35,226 attributed to gill infection and WK 43 - 99,717 (13.19%) - all attributed to gill infection.
5. Evidence of recent increased/atypical mortalities?	Y
If yes, facility nos/no mortality per facility/no stock per facility/reason:	
See Q4 whole site, rather than specific pens.	
6. Any other peaks in mortality during period checked?	N
If yes, detail:	
7. Have increased (unexplained) mortalities been reported to vet or FHI?	N/A
If yes, detail action:	
8. Have 'mortality events' been reported to FHI? If no, enter details on mortality events sheet.	Y

Treatments and Medicines Records

1. Recent treatments (see comment)?	Y
If yes, detail:	T.M.S., hydrogen peroxide
If other, detail:	
2. Medicines records available for inspection?	Y
3. Are records complete and correctly entered?	Y
4. Are fish in a withdrawal period?	Y
5. If yes, what treatment(s)?	T.M.S., hydrogen peroxide
If other, detail:	
6. Are medicines stored appropriately?	Y

Biosecurity Records

1. Biosecurity records available for inspection?	
2. Has the manner and frequency of mortality removal, recording and safe disposal been considered?	
3. Has the manner and period in which the APB will notify Scottish Ministers or veterinary professional of any *increased* (*unexplained)* mortality at the site been included?	
4. Has the action that will be taken in the event that the presence or suspicion of the presence of a listed disease is detected been included and *how* and *when* that will be notified to Scottish Ministers?	
5. Has the health status of aquaculture animals being stocked on the farm site been covered (equal or higher health status, certification if required)?	
6. Have the husbandry and biosecurity measures implemented between each epidemiological unit to minimise transmission of disease been covered (movement of staff, visitors, equipment, live or dead fish etc.)?	
7. Is documentation available regarding the measures in place to maintain the physical containment of aquaculture animals held on site?	
8. Have the biosecurity procedures been adequately implemented on site?	
If no, detail:	

Results of Surveillance

1. Has any animal health surveillance been carried out by, or on behalf of, the business?	Y
2. If yes, are results available for inspection?	Y
3. Any significant results?	Y
If yes, detail (if not detailed under recent disease problems).	CGD

Records checked between:	16/05/23 to 08/11/23

Case no:	2023-0497	Site No:	FS0016	Date of visit/ Sampling:	08/11/2023	08/1							
Priority samples:	VI		BA		PA		MG		HI				
Time sampling starts/ends:	12:00:00	13:30:00	Inspector:		VMD No.	5							
Environmental conditions:	1	Indoors	2		3		4		5				
Summary samples	HIST	Y	BA	Y	MG	Y	VI		PA		Total Samples		

Add Fish/Pools - click

	Pool/Fish No	F1	F2	F3	F4	F5							
	Fish nos	1	2	3	4	5	6						
	Pool Group												
Stock Details	Species	SAL	SAL	SAL	SAL	SAL	SAL						
	Average weight	2.4 kg	2.4kg	2.4kg	2.4kg	2.4kg	2.4kg						
	Sex												
	Water Type	SW	SW	SW	SW	SW	SW						
	Stock Origin	Lochailort Recirculation Hatchery (FS1269)	Lochailort Recirculation Hatchery (FS1269)	Lochailort Recirculation Hatchery (FS1269)	Lochailort Recirculation Hatchery (FS1269)	Lochailort Recirculation Hatchery (FS1269)	Lochailort Recirculation Hatchery (FS1269)						
	Facility No	10	10	6	8	8	9						

11/2023 Additional Sample Information:

5 Total Tests assigned 5

Case no: 2023-0497 Site No: FS0016 Method of killing: Percussive

Date of visit: 08/11/2023 Inspector(s): [redacted] Sheet Relevant: Y

S for strong presence: **M** for medium presence: **W** for weak presence

Fish Number		1	2	3	4	5					
Time sampled after death (if > 45 minutes)		60 min	65 min	75 min	80 min	90 min					
External Signs											
Behaviour	Moribund	S	S	S	S	S					
	Lethargic										
	Hanging vertical	S	S	S	S	S					
	Spiralling										
	Flashing										
	Loss of equilibrium										
Body	Dark										
	Distended abdomen										
	Anorexic										
	Scale Oedema										
Opercula	Shortened										
	Flared										
Haemorrhaging	Throat										
	Ventrum										
	Base of fins										
	Elsewhere										
Eyes	Exophthalmic										
	Enophthalmic (sunken)										
	Cataract										
	Haemorrhagic										
Gills	Pale										
	Zoned										
	Necrotic				M						
Lesions	Flank										
	Elsewhere				W						
Vent	Inflamed										
	Trailing faeces										
Lice Load	Estimate numbers	0	0	0	0	0					
Internal Signs											
Ascites	Clear										
	Bloody	W	W	W							
Oedema	In tissues										
Heart	Pale/anaemic										
	Granulomas										
	Deformed										
Liver	Petechial haem										
	Gross haem										
	Tissue breakdown										
	Enlarged										
	Colour number(s)	4	3	4	5	4					
	Granulomas										
	Lesions										
Pyloric caeca	Petechial haem										
	Tubules mauve										
	Lack of fat										
Spleen	Enlarged										
	Granulomas										
Gut	No food present										
	Yellow pseudo-faeces				W	W					
	External haem										
	Internal haem										
Body wall	Haemorrhaging										
Swim bladder	Haemorrhaging										
	Fluid filled										
Kidney	Swollen										
	Grey										
	Granular										
	Liquefied										
General	Parasites present										
	Anaemia										

Case no: 2023-0497

Date of visit: 08/11/2023

S for strong presence: **M** for medium presence: **W** for w

Fish Number											
Time sampled after death (if > 45 minutes)											
External Signs											
Behaviour	**Moribund**										
	Lethargic										
	Hanging vertical										
	Spiralling										
	Flashing										
	Loss of equilibrium										
Body	**Dark**										
	Distended abdomen										
	Anorexic										
	Scale Oedema										
Opercula	**Shortened**										
	Flared										
Haemorrhaging	**Throat**										
	Ventrum										
	Base of fins										
	Elsewhere										
Eyes	**Exophthalmic**										
	Enophthalmic (sunken)										
	Cataract										
	Haemorrhagic										
Gills	**Pale**										
	Zoned										
	Necrotic										
Lesions	**Flank**										
	Elsewhere										
Vent	**Inflamed**										
	Trailing faeces										
Lice Load	**Estimate numbers**										
Internal Signs											
Ascites	**Clear**										
	Bloody										
Oedema	**In tissues**										
Heart	**Pale/anaemic**										
	Granulomas										
	Deformed										
Liver	**Petechial haem**										
	Gross haem										
	Tissue breakdown										
	Enlarged										
	Colour number(s)										
	Granulomas										
	Lesions										
Pyloric caeca	**Petechial haem**										
	Tubules mauve										
	Lack of fat										
Spleen	**Enlarged**										
	Granulomas										
Gut	**No food present**										
	Yellow pseudo-faeces										
	External haem										
	Internal haem										
Body wall	**Haemorrhaging**										
Swim bladder	**Haemorrhaging**										
	Fluid filled										
Kidney	**Swollen**										
	Grey										
	Granular										
	Liquefied										
General	**Parasites present**										
	Anaemia										

Additional comments:

F4 lesion on ventral surface

Site No: FS0016

Case No: 2023-0497

Nature of non-compliance:

Action taken (FHI):

Non-compliance relevant to (delete): VirologyMolGen/Bacteriology/Histology/Parasitology

Case No: 2023-0497 Date of visit: 08/11/2023

Site No: FS0016 Inspector: [redacted]

Results Summary	Freq.	Date of Notification						
		Database	Insp	Phone	Insp	Writing	Insp	2nd Insp
AGDQ	5/5	15/11/2023		15/11/2023		29/12/2025		
IHNP	0/5	15/11/2023		15/11/2023		29/12/2025		
IPNM	0/5	15/11/2023		15/11/2023		29/12/2025		
ISAQ	0/5	15/11/2023		15/11/2023		29/12/2025		
PNST	5/5	15/11/2023		15/11/2023		29/12/2025		
PMVP	0/5	15/11/2023		15/11/2023		29/12/2025		
SPVP	5/5	15/11/2023		15/11/2023		29/12/2025		
SALP	4/5	15/11/2023		15/11/2023		29/12/2025		
VHSP	0/5	15/11/2023		15/11/2023		29/12/2025		
NSIG	5/5	22/11/2023		22/11/2023		29/12/2025		
VSPE	5/5	22/11/2023		22/11/2023		29/12/2025		
CGDH	5/5	27/11/2023		27/11/2023		29/12/2025		
GPAT	5/5	27/11/2023		27/11/2023		29/12/2025		
LPAT	5/5	27/11/2023		27/11/2023		29/12/2025		
HPAT	5/5	27/11/2023		27/11/2023		29/12/2025		
SPAT	1/4	27/11/2023		27/11/2023		29/12/2025		

Report Summary			
Case Type	Date	Insp	2nd Insp
DIA, REP	29/12/2025		

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FISH HEALTH INSPECTORATE VISIT REPORT

SUMMARY FOR INFORMATION OF SITE OPERATOR

BUSINESS NO	FB0119	**DATE OF VISIT**	08/11/2023
SITE NO	FS0016	**SITE NAME**	Loch Alsh (Sron)
CASE NO	20230497	**INSPECTOR**	[redacted]

Section one: summary

The above site was inspected following reports of mortalities exceeding the reporting threshold. Five fish were removed for diagnostic sampling.

Histopathological examination revealed features consistent with mild, multifocal, hyperplasic branchitis that resemble amoebic gill disease. F3 and F4 also displayed features resembling gill poxvirus-like. Epitheliocystis also observed. Gill samples tested by qPCR were positive for *Neoparamoeba perurans* (AGD), *Paranucleospora theridion* and salmon gill pox virus

Hepatocellular necrosis, minor to mild myocarditis (could be related to the presence of salmonid alphavirus) also observed. Minor to mild foci of lighter HE stains (F2, F5). Samples tested by qPCR were positive for salmonid alphavirus.

Please contact myself or the duty inspector should you require any further information, have any queries regarding this report or if any problems develop.

Section two: case detail

Observations

The site was inspected following a four week period where mortalities were above the reporting threshold, wk 41 – 21,118 (2.6%), wk 42 – 35, 318 (4.46%), wk 43 - 99,717 (13.19%) and wk 44 - 112,206 (17.10%). Mortalities on site had been attributed to complex gill disease and were reported to have began to increase following a hydrogen peroxide treatment conducted between 07/10/23 to 10/10/23. The site reported that regular water quality monitoring had been conducted and no environmental challenges had occurred on site during this input of stock.

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Email – ms.fishhealth@gov.scot
Fish Health Inspectorate Website

During the inspection of stock on site five moribund were removed for diagnostic sampling. All five fish were moribund and hanging vertically. F4 had necrotic gills and a lesion on the ventral surface.

Internally F1 – F3 had bloody ascites and F4 and F5 had yellow pseudo-faeces present.

Samples

Samples were collected from five fish according to the table below:

Fish number	Facility number	Species	Stage	Origin
F1	10	Atlantic salmon	2023 Q1; 2.4 kg	Lochailort Recirculation Hatchery (FS1269)
F2	10	Atlantic salmon	2023 Q1; 2.4 kg	Lochailort Recirculation Hatchery (FS1269)
F3	6	Atlantic salmon	2023 Q1; 2.4 kg	Lochailort Recirculation Hatchery (FS1269)
F4	8	Atlantic salmon	2023 Q1; 2.4 kg	Lochailort Recirculation Hatchery (FS1269)
F5	8	Atlantic salmon	2023 Q1; 2.4 kg	Lochailort Recirculation Hatchery (FS1269)

Results

Bacteriology:

Kidney, gill and lesion material from F1 - F5 were inoculated onto appropriate media for the isolation of bacteria.

The following bacteria were isolated from fish F1 - F5

Vibrio Sp. (gill F1 - F5, lesion F3)

The level and purity of growth would not suggest this bacterium would be implicated in morbidity and it is likely to be of environmental origin.

Virology:

Tissue samples were tested for segments of nucleic acid indicative of the presence of the pathogens specified below using real-time PCR (qPCR).

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Salmonid alphavirus (SAV)

Fish Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
F1	14.99	20.48	20.10	20.03	POSITIVE
F2	14.99	28.37	28.54	28.14	POSITIVE
F3	-	-	-	-	Negative
F4	15.21	21.34	21.51	21.59	POSITIVE
F5	15.18	34.73	34.19	34.29	POSITIVE

Salmon gill poxvirus (SGPV)

Fish Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
F1	21.67	28.09	27.98	28.06	POSITIVE
F2	21.87	27.12	27.23	27.16	POSITIVE
F3	21.85	24.31	24.46	24.38	POSITIVE
F4	21.51	22.33	22.34	22.51	POSITIVE
F5	21.50	31.19	31.15	31.13	POSITIVE

The samples tested negative for infectious haematopoietic necrosis virus (IHNV), infectious pancreatic necrosis virus (IPNV), infectious salmon anaemia virus (ISAV), piscine myocarditis virus (PMCV) and viral haemorrhagic septicemia virus (VHSV).

Parasitology:

Tissue samples were tested for segments of nucleic acid indicative of the presence of the parasites specified below using real-time PCR (qPCR).

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Neoparamoeba perurans (AGD)

Fish Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
F1	21.67	34.70	34.66	35.15	POSITIVE
F2	21.87	35.56	35.44	35.75	POSITIVE
F3	21.85	29.34	29.48	29.44	POSITIVE
F4	21.51	33.46	33.71	33.69	POSITIVE
F5	21.50	35.88	36.50	35.96	POSITIVE

Paranucleospora theridion

Fish Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
F1	21.67	30.82	30.83	30.85	POSITIVE
F2	21.87	27.13	27.18	27.20	POSITIVE
F3	21.85	28.17	28.23	28.24	POSITIVE
F4	21.51	26.68	26.64	26.65	POSITIVE
F5	21.50	28.75	28.71	28.72	POSITIVE

Histology:

Tissue samples of gill, skin and skeletal muscle, heart, pyloric caeca, pancreas, hind gut, liver, spleen and kidney were taken from F1 – F5 The tissue samples were fixed in 10% neutral buffered formalin.

Histopathological examination revealed the following:

Gill: Lamellar hyperplasic branchitis, minor to moderate, multifocal (F1-F5), some lamellar vascular disturbances with necrosis (F1-F5). F1 also displayed cell debris with bacteria. F3 and F4 showed few apoptotics cells shedding off potentially associated with gill poxvirus. Few basophilic epithelial inclusions (likely epitheliocystis) F1-F5. Cell debris with bacteria observed among gill filaments (F1). Aneurysmal dilation/Lamellar telangiectasia observed in F3.
Skin & Muscle: Within normal range.

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Heart: Minor, multifocal, myocarditis (F1, F2, F4). Some thrombi nests in ventricular chamber (F1, F3), in F3 located at the spongy-compact layer platform. Mild epericarditis (F1, F2, F3, F4). Minor to mild foci of lighter HE stains (F2, F5).
Gut and pyloric caeca: Mild peritonitis (F1, F2, F3, F4) (potentially associated with vaccine administration). Cell sloughing potentially associated with post-mortem artefact observed in F3.
Pancreas: Within the normal range.
Liver: Hepatocellular necrosis, mild, multifocal (F1-F4), hepatocellular vacuolation (macrovesicles), mild, diffuse (F1-F5). Minor cell inflammation observed in F5.
Kidney: Some renal tubule dilation (F1), some renal tubules with hyaline droplets on the lining epithelium (F4). F4 also displayed foci of reduced interstitial cell (haemopoietic).
Spleen: F5 displayed splenic necrosis. F3: Not present.

Please contact myself or the duty inspector should you require any further information or have any queries regarding this report.

Signed: [redacted] Date: 29/12/25

Fish Health Inspector

The Fish Health Inspectorate Service Charter detailing standards of service is available on the Scottish Government website at Fish Health Inspectorate Service Charter - gov.scot (www.gov.scot)

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2023-0497 -Loch Alsh (Sron)

Fish 1 to 5 external

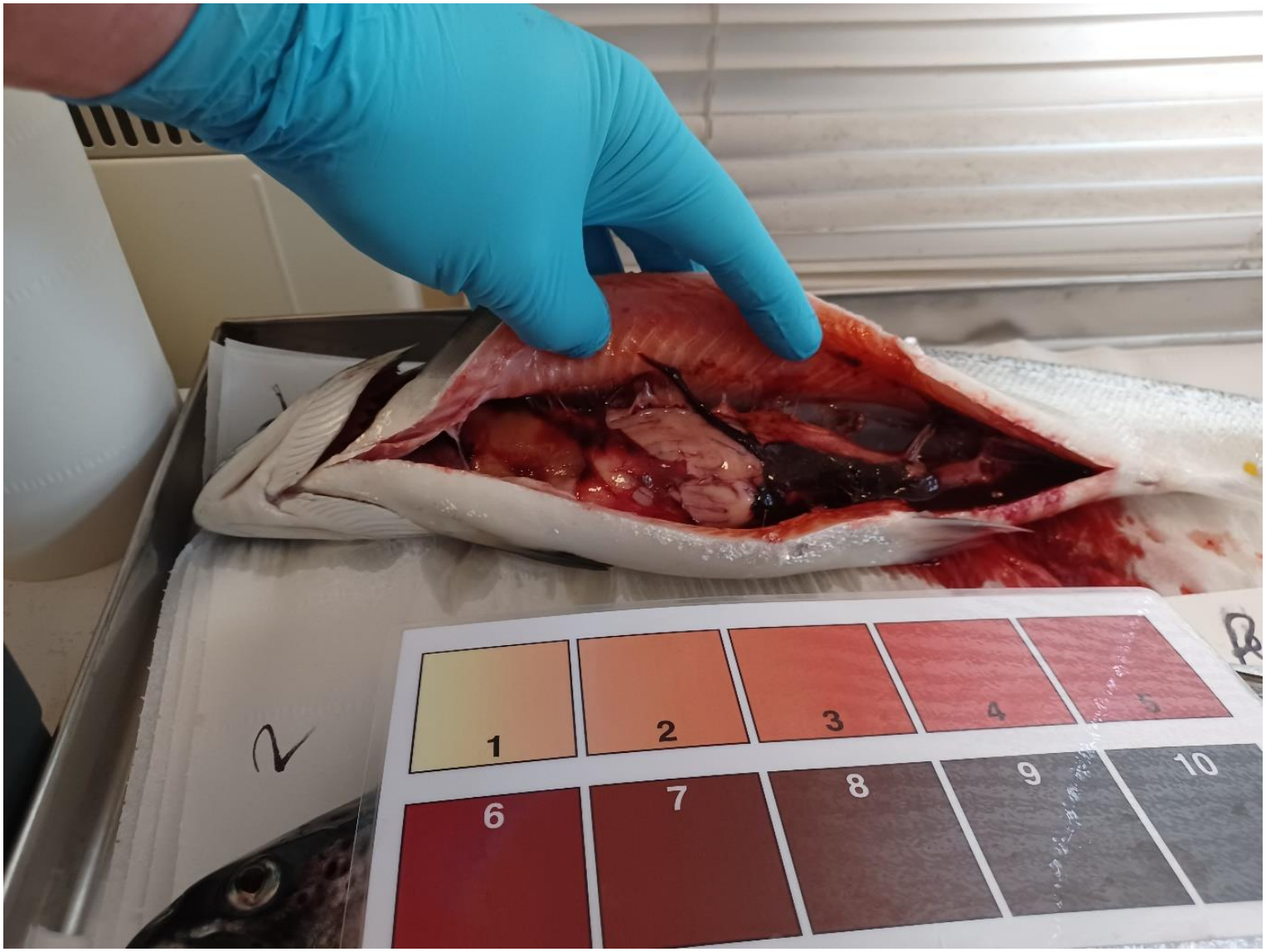
Fish 1 – Gill

F2 – Gill

F3 – Gill

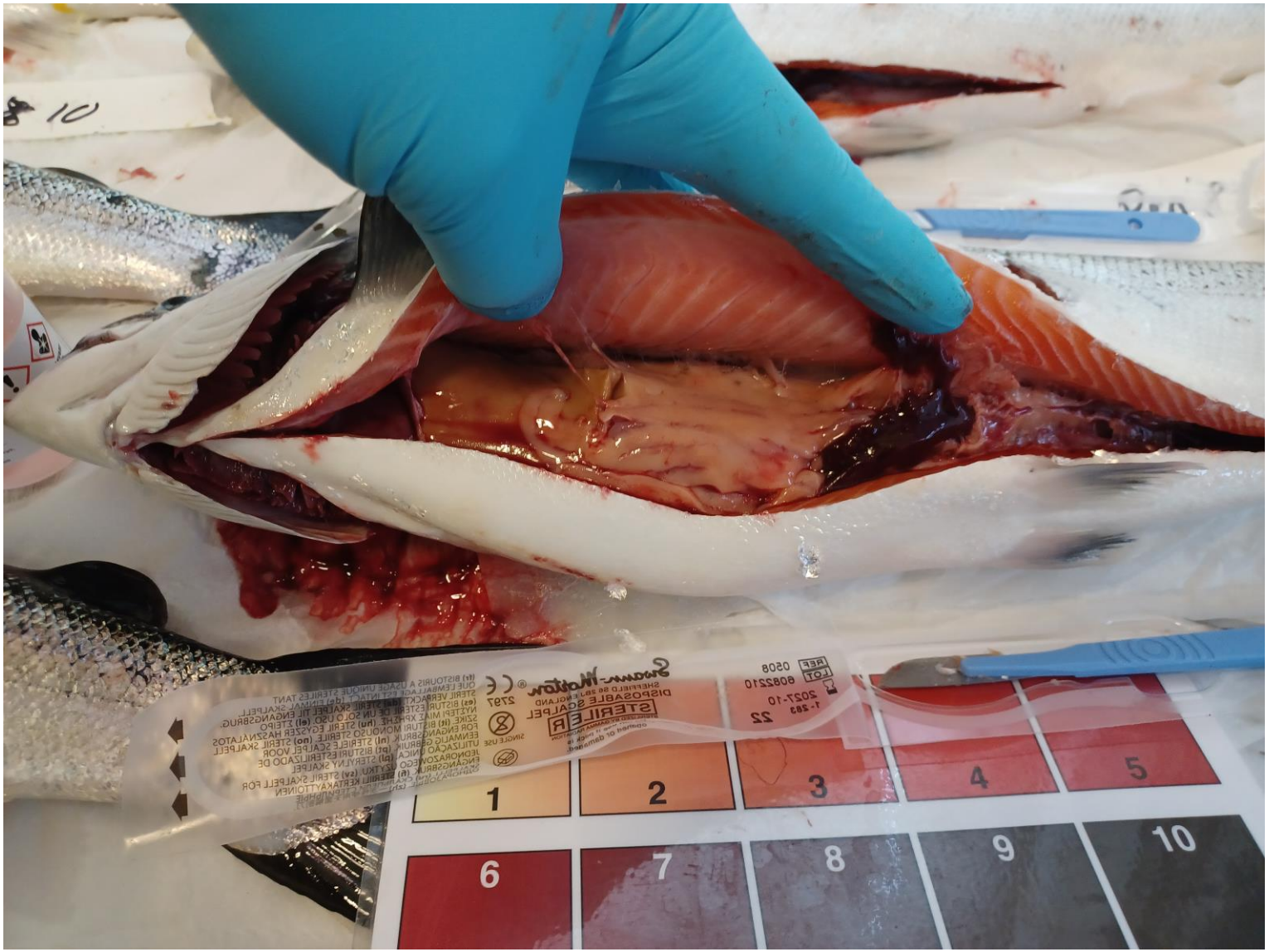
F4 – Gill

F5 – Gill



F1 – Internal

F2 - Internal



F3 - Internal

STERILE
DISPOSABLE SCALPEL
SHEFFIELD S6 2BJ ENGLAND
Swann-Morton
2797
SINGLE USE
Do not use if pack is opened or damaged.
STERILIZED BY GAMMA RADIATION
LOT
REF
0508
2027-10

F4 - Internal