FHI 059, Version 13	!	Issued by: FHI	Date of issue: 12/05/2020
Case No: 2021-0445			Date of visit: 21/10/2021
Time spent on site:	None	Main Insp	ector:
Site No: FS1239	Site Name:	Grampian	
Business No: FB0544	Business Name:	Scotland	
Case Types: 1 DIA	2 3	4 5	6
Water Temp (°C): N/A	Thermometer No:		FHI 045 completed
Observations:	Region: GR	Water type: B	CoGP MA
Dead/weak/abnormally behavir	•		nformation/clinical score sheet.
Clinical signs of disease observ	/ed?		information/clinical score sheet.
Gross pathology observed? Diagnostic samples taken?		Y Y Y Y Y Y	nformation/clinical score sheet.
UNI/REG only - if unable to car	ry out intended visit detail	l reason below:	

## **Additional Case Information:**

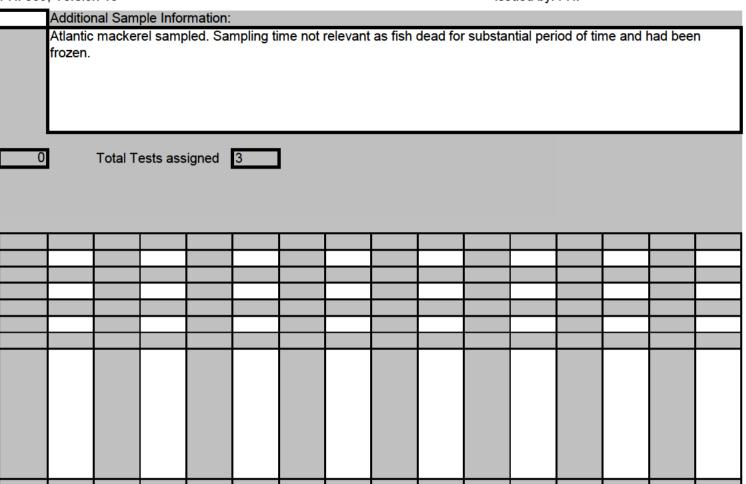
4 Atlantic mackerel (*Scomber scombrus*) were received to the Marine Lab, from a fish processor in Fraserburgh. The fish were caught and stored for several days before being frozen and sent for processing. They were then defrosted for processing 3 days before they arrived at the marine lab.

The company occasionally get 50-80 Kg of fish that have highly degraded flesh, in a batch (1000 tonnes) so it is negligable for the business.

The fish displayed post-mortem myoliquefaction (known by soft tissue) and it is known to be caused by Kudoa sp. parasites. This kind of pathology appears generally 24-56h post catch

Updated 31/01/2024 No report issued due to absence of contact information.

	Case no:	2021-04	145	Site No:		FS1239			Date of		21/	10/2021	
	Priority samples:	VI		ВА		PA		MG	Samplin	ig: HI		1	
	Time sampling starts/ends:					l	Inspecto	or:		l	VMD No	o.	
	Environmental conditions:	1	Indoors	2		3		4		5		l	
	Summary samples	HIST	Y	ВА		MG	Y	VI		PA	Y	Total Sa	amples
A	dd Fish/Pools - click												
	Pool/Fish No												
	Fish nos	F1	F2	F3	F4	P1							
	Pool Group												
	Species	4.16	0.14	0.17	4.14								
	Average weight	1 Kg	2 Kg	3 Kg	4 Kg								
	Sex												
	Water Type												
)etails													
et													
		Wild											
Stock	Stock Origin												
S	Facility No	N/A											



FHI 059, Version 13 Issued by: FHI Date of issue: 12/05/2020

Case no:	2021-0445	Site No:		:	FS1239 Me			ethod of killing: Unknown			
Date of visit:	21/10/2021	Inspector(s):		or(s):			s	Sheet Relevant: Y			
<b>S</b> for strong presen	ce: M for medium presence: W for w	veak pres	ence								
Fish Number											
Time sampled after	er death (if > 45 minutes)										
External Signs Behaviour	Moribund										
Denaviour	Lethargic										
	Hanging vertical										
	Spiralling										
	Flashing										
	Loss of equilibrium										
Body	Dark										
	Distended abdomen		$\Box$								
	Anorexic										
Opercula	Scale Oedema Shortened										
Opercula	Flared										
Haemorrhaging	Throat										
	Ventrum										
	Base of fins										
	Elsewhere										
Eyes	Exophthalmic										
	Enophthalmic (sunken)		$\Box$								
	Cataract										
Gills	Haemorrhagic Pale										
GIIIS	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										
I to a second	Deformed										
Liver	Petechial haem Gross haem										
	Tissue breakdown										
	Enlarged										
	Colour number(s)										
	Granulomas										
	Lesions										
Pyloric caeca	Petechial haem		$oxed{oxed}$								
	Tubules mauve										
Cnloon	Lack of fat										
Spleen	Enlarged Granulomas										
Gut	No food present										
	Yellow pseudo-faeces										
	External haem										
	Internal haem										
Body wall	Haemorrhaging										
Swim bladder	Haemorrhaging										
12: 1	Fluid filled										
Kidney	Swollen										
	Grey Granular										
	Liquefied										
General	Parasites present										
23110101	Anaemia										

Case no: 2021-0445

Date of visit: 21/10/2021

Stortsnorp presence: M for welding presence: W for well fish Number	Date of visit.	21/10/202	ш				
Fish Number Time sampled after death (if > 45 minutes) External Signs Behaviour Lethargic Hanging vertical Spiralling Flashing Loss of equilibrium Body Dork Obstended abdomen Obstended abdomen Anorexic Scale Oedema Scale Oedema Scale Oedema Scale Oedema Opercula Shortened Haemorrhaging Tirroat Haemorrhaging Flashing	for strong presen	ce: M for medium presence: W for	· <b>w</b>				
Time sampled after death (if - 45 minutes) External Signs Behaviour  Monibund  Lethargic  Hanging vertical  Spiralling  Flashing  Loss of equilibrium  Body  Dark  Ancresic  Scale Oddoma  Opercula Shortened  Flared Hamming Introst  Hamming Introst  Exercise  Exercise					_		
External Signs Behaviour  Moribund  Hanging vertical  Spiralling Flashing Flashing Flashing Distended abdomen  Distended abdomen  Anorexic  Opercula  Scale Oedema Opercula  Scale Oede		r death (if > 45 minutes)					
Behaviour   Moribund	xternal Signs	r usum (m.s. 40 mmutos)					
Lethargic		Moribund					
Hanging vertical		Lethargic			_		
Spiraling		Hanging vertical					
Flashing							
Loss of equilibrium							
Body   Dark							
Distended abdomen	Body						
Anorexic   Sale Oedema	,				_		
Scale Cedema							
Sportened					_		
Flared	Opercula						
Haemorrhaging   Throat	porouru						
Nentrum	-laemorrhaging						
Base of fins	y						
Elsewhere							
Exemplification							
Enophthalmic (sunken)	ves						
Cataract	-100						
Haemorrhagic							
Gills							
Zoned	Gille	Pale					
Necrotic	JIIIS						
Lesions							
Elsewhere	oniono				_		
Vent	esions						
Trailing faeces	/ont				_		
Lice Load	/ent						
Internal Signs	inaland			-	_		
Ascites   Clear	ice Load	Estimate numbers					
Ascites   Clear	-4			_	_		
Bloody					_		
Oedema         In tissues           Heart         Pale/anaemic           Granulomas         Image: Company of the parasition o	ASCITES				-		
Heart	N. d				_		
Granulomas					_		
Deformed	leart				_		
Liver							
Gross haem					_		
Tissue breakdown   Enlarged   Colour number(s)   Canulomas   Enlarged   Colour number(s)   Canulomas	ıver				-		
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 Granular Liquefied General Farasites present  Granulomas Gut Body wall Granular Granula							
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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 Granular Liquefied General Parasites present							
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 Granular Liquefied General Farasites present							
Lack of fat	yloric caeca						
Spleen         Enlarged							
Granulomas							
Gut         No food present	Spieen						
Yellow pseudo-faeces							
External haem	3ut						
Internal haem							
Body wall         Haemorrhaging         Image: Control of the control							
Swim bladder         Haemorrhaging         Image: Comparison of the comparison							
Fluid filled							
Kidney         Swollen	Swim bladder	Haemorrhaging					
Grey							
Granular	Kidney						
Liquefied Seneral Parasites present Seneral Se							
General Parasites present							
Anaemia Anaemia	General						
		Anaemia					

Additional comments:
Fish were received in poor condition. Histology and bacteriology could not be completed.
Flesh of the fish was very degraded until it was almost a milky liquid.
riesh of the fish was very degraded until it was aimost a milky liquid.

Casa Na	2024 0445			D-46-3-34	24/40/202	1					
Case No:	2021-0445	J		Date of visit	21/10/202	<u>"</u>					
Site No:	FS1239	]		Inspector	:						
Results Summary	Freq.	Date of Notification									
•		Database	Insp	Phone	Insp	Writing	Insp	2 <sup>nd</sup> Insp			
Kudoa thyrsites	4/4	31/01/2024		N/A		N/A					
	+	-									
	+										
	+										
	+										
	+										
	+										
Report Summary											
Case Type	Date	Insp	2 <sup>nd</sup> Insp								
No report issued	31/01/2024										
	+										
	<b>-</b>										
	1										
	+										