

Algal bloom wildlife post-mortem report



Species – Long-nosed fur seal

Date collected – 4 September 2025

Location – O’Sullivan’s Beach, Port Stanvac

History relating to the animal

An adult male long-nosed fur seal (*Arctocephalus forsteri*) was found dead near the boat ramp at O’Sullivan’s Beach, Port Stanvac on 4 September 2025.

Clinical examination

The animal was already dead and so could not be examined prior to death. There were no visible injuries.

Necropsy

The necropsy (looking at the whole body) revealed that the animal was in good body condition, weighing 86kg and was 192cm in length. The subcutaneous (under the skin) fat was 4cm thick on the ventral abdomen (the underside of the body) and 3cm thick over the vertebrae (the spine). There was moderate post-mortem autolytic change (decomposition after death).

There were multiple encapsulated (within a capsule), yellow, firm, caseous (solid pus) nodules (lumps) through the subcutaneous fat over the flanks (upper hindlimbs). There were multiple pale, firm, white nodules (1-3mm diameter) within both lungs. There was 1L of opaque (cloudy) pink to dark red fluid within the abdominal cavity. The stomach contained approximately 100mL of dark red fluid, along with some small fish bones. There was scant food material within the small intestines, and minimal faeces in the rectum.

Tissues were collected for histopathology (looking at tissues under the microscope for more detailed information) and testing for avian influenza, *Mycobacterium tuberculosis* (MTb) complex organisms, and brevetoxins and other algal biotoxins (a possibility due to the algal bloom).

Histopathology

Samples from every major body system were examined under the microscope. Examination of the lung revealed acute (recent) pulmonary haemorrhage (bleeding in the lungs) and mild neutrophilic, histiocytic (types of inflammatory cells) bronchopneumonia (lung infection) with intralesional (within the affected tissue) short rod and coccoid (spherical shaped) bacteria. The bronchial lymph nodes were reactive (enlarged from producing inflammatory cells).

There was moderate autolysis (decomposing after death) of the gastrointestinal (gut) sections including the pancreas, with evidence of cestodes (tapeworms) within the colon. There was mild, multifocal (multiple areas), acute myocardial haemorrhage (recent bleeding within the

Algal bloom wildlife post-mortem report



muscle cells of the heart). There were no microorganisms (bacteria, fungi or parasites) seen within the subcutaneous abscesses (abscesses under the skin).

Bacteriology

Culture of the lung revealed a heavy growth of *Edwardsiella tarda*, a moderate growth of *Clostridium perfringens*, and a moderate growth of multiple other organisms (unidentified).

Culture of the liver revealed a moderate growth of *Edwardsiella tarda*, a light growth of *Clostridium perfringens*, and a light growth of multiple other organisms (unidentified).

Gram-negative bacilli and gram-positive cocci, and no fungi, yeast or *Mycobacterium* species bacteria were seen when the lung and liver tissues were examined using special stains. Polymerase chain reaction (PCR) testing for *MTb* complex organisms was negative.

Virology

Testing results for avian influenza were negative.

Brevetoxins

No samples were above the limits of reporting.

Other algal biotoxins

Neosaxitoxin (a type of paralytic shellfish toxin) was found in the stomach contents (0.13mg/kg).

Summary

An adult male long-nosed fur seal (*Arctocephalus forsteri*) was found dead. Laboratory examination found a bacterial infection (*Edwardsiella tarda*) causing peritonitis (infection in the abdominal cavity) and bronchopneumonia (infection in the lungs and large airways, which would have contributed to the animal's death).

The seal also had multiple small abscesses under the skin that may have been caused by bite wounds or the bacterial infection spreading via the bloodstream. Tapeworms were found in the colon. Both the abscesses and the tapeworms are likely to be incidental findings (not contributing to disease).

Testing for avian influenza, tuberculosis (*Mycobacterium tuberculosis* complex organisms) and brevetoxins was negative. Neosaxitoxin (a type of paralytic shellfish toxin) was found in the stomach contents. This is a potent neurotoxin (nerve toxin) and may have contributed to illness and death of this animal. Given the animal was not observed prior to death this is purely speculative.

PATH RESULTS: WILD, SEAL (Ma) [REDACTED]

From [REDACTED]
Date Thu 04/09/2025 6:30 PM
To [REDACTED]

[REDACTED]

Tested on 04/09/25
Reported on 04/09/25 19:00
Referred on 04/09/25 **by:**

[REDACTED]

[REDACTED]

Owner:
WILD

PORT STANVAC 5160

Animal/s:
Marine Mammal
SEAL
DOB: N/A

Collected: 04/09/25 00:25 **Subm.No:** [REDACTED] **Lab No.:** [REDACTED]

Samples tested as received

NECROPSY REPORT

CLINICAL HISTORY

Please refer to the clinical history on the request form. A brief summary of the clinical history;
The long nosed first seal was reported deceased north of O'Sullivan's Beach boat ramp near Port Stanvac on 3/9/2025. The animal was collected by NPWS on 4/9/2025

SAMPLES SUBMITTED

One dead adult male long nosed fur seal, *Arctocephalus forsteri*

NECROPSY FINDINGS

The animal is in good body condition and weighs 86 kg and the animal was approximately 1.92 m long. The subcutaneous fat over the ventral abdomen is approximately 40mm deep and the subcutaneous fat over the vertebrae is approximately 30mm deep. There are moderate post mortem autolytic changes.

There are multiple pale, partially encapsulated yellow firm caseous nodules within the subcutaneous fat over the right and left flanks of the abdomen.

Multifocally there are variably sized 1 to 3 mm pale white firm nodules within the left and right lungs.

There is approximately 1L opaque pale pink to dark red fluid in the abdominal cavity.

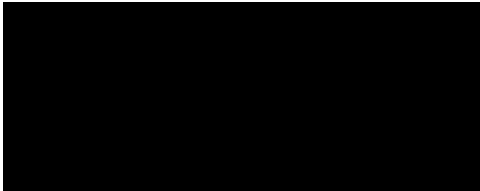
There is approximately 100 mm of dark red fluid within the stomach and scant small fish bones. There is scant brown pasty ingesta in the intestines and scant faeces in the rectum.

GROSS SUMMARY

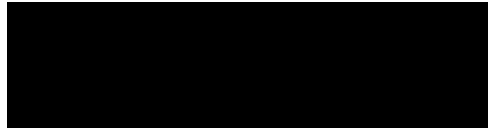
Probable bronchopneumonia
Peritoneal effusion with probable peritonitis
Mild multifocal subcutaneous abscesses

SAMPLES COLLECTED & TESTING

Formalin fixed tissues will be processed for histopathology as you requested.



Tested on 04/09/25
Reported on 04/09/25 19:00
Referred on 04/09/25 **by:**



Owner:

WILD

PORT STANVAC 5160

Animal/s:

Marine Mammal

SEAL

DOB: N/A

Collected: 04/09/25 00:25

Subm.No:

Lab No.:

Samples tested as received

Fresh liver, kidney, spleen, heart, lung, brain, (in 5ml, 70ml and 200ml containers), an oropharyngeal swabs in virus transport medium and a swab from subcutaneous abscess in Ames transport medium are stored.

COMMENTS

The probable bronchopneumonia and peritonitis contributed to morbidity for the animal. The animal was in good body condition and for this reason, these disease processes were probably not long-standing.

Histopathology is in progress.

In light of the probable bronchopneumonia and peritonitis, the following tests are recommended

- a) Avian influenza testing on liver, lung, spleen, heart, kidney, brain and oropharyngeal swab at and ACDP
- b) microbiological culture of liver and lung at for endemic pathogens
- c) Mycobacterium tuberculosis complex testing of lung and liver at ACDP

Does the Chief Veterinary Officer approve Avian influenza testing at and ACDP and Mycobacterium testing at ACDP ?

Please contact the laboratory if culture of endemic pathogens at VETLAB is required; additional charges will apply

The small subcutaneous abscesses are an incidental finding and could be due to bite wounds or systemic bacteraemia which have localized in the small capillaries of the adipose tissue. There were no scars in the overlying skin. Microbiology of the abscesses could be considered but they are an incidental finding and identifying a pathogen would not

contribute to understanding the cause of death.

[REDACTED]
Specialist Veterinary Anatomic Pathologist
[REDACTED]

Validated by [REDACTED]

PATH RESULTS: SEAL LONG NOSED FUR, [REDACTED]

From [REDACTED]
Date Wed 17/09/2025 11:40 AM
To [REDACTED]

[REDACTED]

Tested on 04/09/25
Reported on 17/09/25 12:10
Referred on 04/09/25 by:

[REDACTED]

[REDACTED]

Owner: SEAL LONG NOSED FUR
PORT STANVAC 5160
Animal/s: Marine Mammal
DOB: N/A

Collected: 04/09/25 00:25 Subm.No: [REDACTED] Lab No.: [REDACTED]

Samples tested as received

HISTOPATHOLOGY FROM NECROPSY

REF: [REDACTED]

ADDITIONAL FINDINGS 17/9/2025
CLINICAL HISTORY

Please refer to the clinical history on the request form. A brief summary of the clinical history;
The long nosed fur seal was reported deceased north of O'Sullivan's Beach boat ramp near Port Stanvac on 3/9/2025. The animal was collected by NPWS on 4/9/2025.

One dead adult male long nosed fur seal, *Arctocephalus forsteri*

MACROSCOPY
A: medulla and cerebellum
B: midbrain
C: occipital cortex
D: parietal cortex
E: thalamus
F: frontal cortex

G: basal ganglia
H: frontal cortex
I: lung
J: kidney, lung
K: Liver , spleen, cutaneous abscess
L lung, adrenal gland, heart
M: caecum,, ileum, colon
N: jejunum, duodenum, pancreas
O: trachea, bronchial lymph node
P: oesophagus, stomach; Ae GK

MICROSCOPY

Lung: Diffusely lumen of alveoli and bronchi and bronchioles are distended by haemorrhage and oedema. Multifocally low numbers of alveolar spaces contain alveolar macrophages, neutrophils admixed with low numbers of coccoid and short rod bacteria. (Acute pulmonary haemorrhage and mild neutrophilic, histiocytic bronchopneumonia with intralesional short rod and coccoid bacteria)

Subcutaneous abscess: There is central lytic necrosis surrounded by large numbers of viable and degenerate neutrophils, macrophages, lymphocytes, and plasma cells, enclosed in a dense fibrous capsule.

[REDACTED]

Tested on 04/09/25
Reported on 17/09/25 12:10
Referred on 04/09/25 by:
[REDACTED]

Owner:
SEAL LONG NOSED FUR

Animal/s:
Marine Mammal

PORT STANVAC 5160

DOB: N/A

Collected: 04/09/25 00:25

Subm.No: [REDACTED]

Lab No.: [REDACTED]

Samples tested as received

Microorganisms are not evident. (Subcutaneous abscess)

Heart: Multifocally haemorrhage expands the interstitium between myocardiocytes. (Mild, multifocal, acute myocardial haemorrhage)

There is moderate autolysis of alimentary sections and the pancreas. Aside from these artifact changes the following findings are described.

Colon and caecum: There are multiple cross sections of cestodes 40-50 micron across, and cestode ova, within the lumen. The cestodes have a smooth tegument, spongy parenchyma, no alimentary tract and calcareous corpuscles. (Intestinal cestodiasis)

Bronchial lymph node: There is diffuse cortical lymphoid hyperplasia. The medullary sinuses are expanded by moderate numbers of macrophages, lymphocytes and plasma cells (Moderate, diffuse, chronic lymphoid hyperplasia and reactive lymph node)

Those tissues not described appear normal.

DIAGNOSIS

Lung: Acute pulmonary haemorrhage and mild neutrophilic, histiocytic bronchopneumonia with intralesional short rod and coccoid bacteria

Subcutaneous abscess

Heart: Mild, multifocal, acute myocardial haemorrhage

Colon and caecum: Intestinal cestodiasis

Bronchial lymph node: Moderate, diffuse, chronic lymphoid hyperplasia and reactive lymph node

Peritonitis

COMMENTS

Differential diagnoses for the multiorgan haemorrhage include (but are not limited to) Influenza A (Avian influenza) and exposure to brevetoxins. Avian influenza testing is in progress. Biotoxin and brevetoxin testing of lung, liver, spleen, heart, kidney, brain is recommended for this animal.

[REDACTED]

Tested on 04/09/25
Reported on 17/09/25 12:10
Referred on 04/09/25 by: [REDACTED]

Owner:
SEAL LONG NOSED FUR

Animal/s:
Marine Mammal

PORT STANVAC 5160

DOB: N/A

Collected: 04/09/25 00:25

Subm.No: [REDACTED]

Lab No.: [REDACTED]

Samples tested as received

There is a very mild mixed bacterial bronchopneumonia. Bacterial cultures are in progress for the lung.

Bacterial cultures are in progress for the liver in light of the peritonitis. Mycobacterium sp. testing is also in progress for the lung at Aust. Centre for Disease Preparedness. Special stains will be done on the lungs.

Tetraphyllidae cestodes are reported to be incidental findings in a range of pinnipeds.

MICROSCOPY 17/9/2025

Lung: Abundant Gram negative rods and rare Gram positive cocci are seen within the inflammation. Microorganisms are not seen on PAS (no fungi or yeast) and Ziehl Neelsen stains (no acid-fast bacteria such as Mycobacterium sp.)

DIAGNOSIS

Lung: Acute pulmonary haemorrhage and mild *Edwardsiella tarda* bronchopneumonia

Subcutaneous abscess

Heart: Mild, multifocal, acute myocardial haemorrhage

Colon and caecum: Intestinal cestodiasis

Bronchial lymph node: Moderate, diffuse, chronic lymphoid hyperplasia and reactive lymph node

Edwardsiella tarda peritonitis

COMMENTS

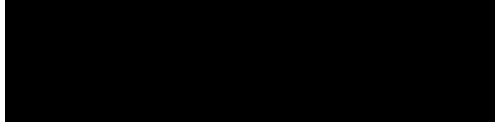
The long nosed fur seal had Edwardsiella peritonitis with intercurrent Edwardsiella bronchopneumonia. These contributed to the animal's death.

There are no gross or histological findings consistent with disease due to Mycobacterium sp. (such as Mycobacterium pinnipedii).





Tested on 04/09/25
Reported on 17/09/25 12:10
Referred on 04/09/25 by:

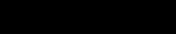


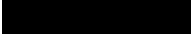
Owner:
SEAL LONG NOSED FUR

Animal/s:
Marine Mammal

PORT STANVAC 5160

DOB: N/A

Collected: 04/09/25 00:25 Subm.No: 

Lab No.: 

Samples tested as received
Specialist Veterinary Anatomic Pathologist



Validated by 

PATH RESULTS: SEAL LONG NOSED FUR, (Ma) [REDACTED]

From [REDACTED]

Date Sat 13/09/2025 12:30 PM

To [REDACTED]

[REDACTED]

Tested on 04/09/25
Reported on 13/09/25 13:00
Referred on 04/09/25 **by:**

[REDACTED]

[REDACTED]

Owner:
SEAL LONG NOSED FUR

PORT STANVAC 5160

Animal/s:
Marine Mammal

DOB: N/A

Collected: 04/09/25 00:25 **Subm.No:** [REDACTED] **Lab No.:** [REDACTED]

Samples tested as received

MICROBIOLOGY

SPECIMEN: Lung
ANIMAL ID:Long-nosed fur seal

MICROSCOPY

Scanty mixed bacteria moderate leucocytes.

CULTURE

1. Heavy growth of *Edwardsiella tarda*
2. Moderate growth of *Clostridium perfringens*
3. Moderate growth of Mixed organisms

COMMENT: No *Salmonella* or *Listeria* spp. isolated.

Antibiotic	Organism 1
Oxytetracycline	S
Trim/Sulpha	S
Amp/Amoxycillin	S
Chloramphenicol	S

Legend:

S = Sensitive

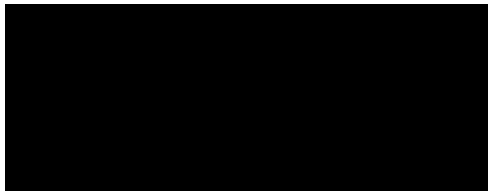
I = Intermediate susceptibility

R = Resistant

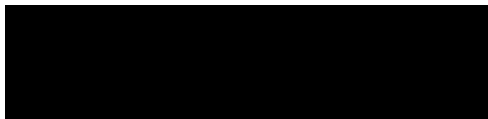
Due to the antimicrobial resistance characteristics of certain bacteria some organism/antibiotic combinations are not validated by the CLSI method.

Antimicrobial disk diffusion susceptibility testing is performed according to the methods and standards of the Clinical Laboratories Standards Institute (CLSI).

Organism 1: This organism was identified using the MALDI-TOF at



Tested on 04/09/25
Reported on 13/09/25 13:00
Referred on 04/09/25 **by:**



Owner:
SEAL LONG NOSED FUR

Animal/s:
Marine Mammal

PORT STANVAC 5160

DOB: N/A

Collected: 04/09/25 00:25 **Subm.No:**  **Lab No.:** 

Samples tested as received

Final Report _____
13/09/25



Tested on 04/09/25
Reported on 13/09/25 13:00
Referred on 04/09/25 **by:**



Owner:
 SEAL LONG NOSED FUR

 PORT STANVAC 5160

Animal/s:
 Marine Mammal

DOB: N/A

Collected: 04/09/25 00:25 **Subm.No:**  **Lab No.:** 

Samples tested as received

MICROBIOLOGY

SPECIMEN: Liver
 ANIMAL ID: Long-nosed fur seal

MICROSCOPY

A small number of gram negative bacilli. A small number of gram positive cocci. A small number of leucocytes.

CULTURE

1. Moderate growth of *Edwardsiella tarda*
2. Light growth of *Clostridium perfringens*
3. Light growth of Mixed organisms

COMMENT: No *Salmonella* or *Listeria* spp. isolated.

Antibiotic	Organism 1

Oxytetracycline	S
Trim/Sulpha	S
Amp/Amoxycillin	S
Chloramphenicol	S

Legend:
 S = Sensitive

I = Intermediate susceptibility

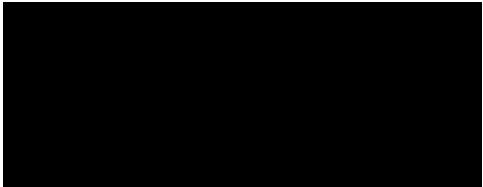
R = Resistant

Due to the antimicrobial resistance characteristics of certain bacteria some organism/antibiotic combinations are not validated by the CLSI method.

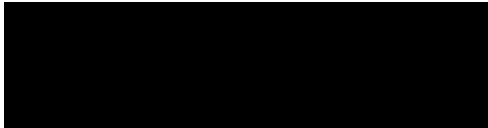
Antimicrobial disk diffusion susceptibility testing is performed according to the methods and standards of the Clinical Laboratories Standards Institute (CLSI).

Organism 1: This organism was identified using the MALDI-TOF at

[REDACTED]



Tested on 04/09/25
Reported on 13/09/25 13:00
Referred on 04/09/25 **by:**



Owner:
SEAL LONG NOSED FUR

Animal/s:
Marine Mammal

PORT STANVAC 5160

DOB: N/A

Collected: 04/09/25 00:25 **Subm.No:**  **Lab No.:** 

Samples tested as received

Final Report _____
13/09/25

PATH RESULTS: SEAL LONG NOSED FUR, [REDACTED]

From [REDACTED]

Date Wed 12/11/2025 3:00 PM

To [REDACTED]

[REDACTED]

Tested on 04/09/25
Reported on 12/11/25 15:30
Referred on 04/09/25 by:

[REDACTED]

[REDACTED]

Owner:
SEAL LONG NOSED FUR

Animal/s:
Marine Mammal

PORT STANVAC 5160

DOB: N/A

Collected: 04/09/25 00:25 Subm.No: [REDACTED]

Lab No.: [REDACTED]

Samples tested as received

All Tests Complete

REFERRED TEST

Disease/Test : Mycobacterium Isolation
Specimen Type: Lung

RESULT : Mycobacterium sp. was not isolated

Comment : NATA accreditation does not cover the performance of this service. Cultures were incubated for 8 weeks.

This test was performed by: Australian Centre for Disease Preparedness (CSIRO)
NATA accreditation number: 13546

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PATH RESULTS: SEAL LONG NOSED FUR, [REDACTED]

From [REDACTED]

Date Wed 17/09/2025 12:40 PM

To [REDACTED]

[REDACTED]

Tested on 04/09/25
Reported on 17/09/25 13:10
Referred on 04/09/25 by:

[REDACTED]

[REDACTED]

Owner:
SEAL LONG NOSED FUR

Animal/s:
Marine Mammal

PORT STANVAC 5160

DOB: N/A

Collected: 04/09/25 00:25 Subm.No: [REDACTED]

Lab No.: [REDACTED]

Samples tested as received

REFERRED TEST

Disease/Test : Mycobacterium avium complex Taqman
Specimen Type: Lung

RESULT : Negative

Comment : NATA/RCPA accreditation does not cover the performance of
this service

This test was performed by: Australian Centre for Disease Preparedness
(CSIRO)
NATA accreditation number: 13546

Validated by [REDACTED], Laboratory Scientist.

REFERRED TEST

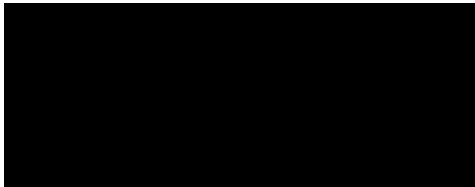
Disease/Test : Pan-Mycobacterium Taqman
Specimen Type: Lung

RESULT : Negative

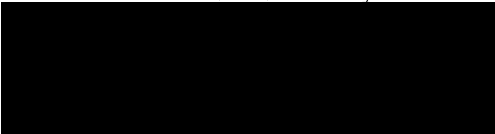
Comment : NATA/RCPA accreditation does not cover the performance of
this service

This test was performed by: Australian Centre for Disease Preparedness
(CSIRO)
NATA accreditation number: 13546

Validated by [REDACTED] Laboratory Scientist.



Tested on 04/09/25
Reported on 17/09/25 13:10
Referred on 04/09/25 by:



Owner:
SEAL LONG NOSED FUR

Animal/s:
Marine Mammal

PORT STANVAC 5160

DOB: N/A

Collected: 04/09/25 00:25

Subm.No:



Lab No.:



Samples tested as received

REFERRED TEST

Disease/Test : Mycobacterium tuberculosis complex IS6110
Method : TaqMan Assay
Specimen Type: Lung

RESULT : Negative

Comment : NATA/RCPA accreditation does not cover the performance of
this service

This test was performed by: Australian Centre for Disease Preparedness
(CSIRO)
NATA accreditation number: 13546

Validated by  Laboratory Scientist.

PATH RESULTS: SEAL LONG NOSED FUR, [REDACTED]

From [REDACTED]
Date Fri 19/09/2025 4:15 PM
To [REDACTED]

[REDACTED]

Tested on 04/09/25
Reported on 19/09/25 16:45
Referred on 04/09/25 by:

[REDACTED]

[REDACTED]

Owner: SEAL LONG NOSED FUR
Animal/s: Marine Mammal
PORT STANVAC 5160
DOB: N/A

Collected: 04/09/25 00:25 Subm.No: [REDACTED] Lab No.: [REDACTED]

Samples tested as received

MOLECULAR DIAGNOSTICS

INFLUENZA A RNA PCR (REAL TIME REVERSE TRANSCRIPTASE)

Specimen type: Tissue & Oropharyngeal swab in VTM (OP SWAB)

SPECIMEN ID	Type A	H5	H7
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OP SWAB	Not detected		
LIVER	Not detected		

LUNG	Not detected
SPLEEN	Not detected
HEART	Not detected
KIDNEY	Not detected
BRAIN	Not detected

COMMENT: NATA accreditation does not cover the performance of this test for non-avian species.

Validated by [REDACTED] Laboratory Scientist.

CERTIFICATE OF ANALYSIS

Customer:	[REDACTED]	Submission Description:	Long nosed fur seal
Address:	[REDACTED]	Sample Received Date:	11/12/2025
Contact:	[REDACTED]	Contract Number:	[REDACTED]
		Client Order Number:	[REDACTED]
		Program/Quote Reference:	[REDACTED] Biotoxin and Brevotoxins

*Sample(s) analysed as received. Sampling date and time data supplied by the client. The document shall not be reproduced except in full.
Additional information relating to this submission can be found in the sample receipt notification.
This report supersedes any previous reports with this submission number.
Many tests specify a holding time which gives the recommended timeframe by which a sample should be preserved/extracted and/or analysed after the sample is taken.
Holding time information can be found on the AST website <https://analyticalservices.tas.gov.au/our-services/containers-samples-and-submissions>.
Whilst every effort is made to analyse samples within these timeframes, situations can occur where this is not possible.
Where a test has been conducted outside the recommended sample holding time this should be taken into account when interpreting results.*

The results in this report were authorised by:

Name	Position
[REDACTED]	Section Head - Organic Chemistry

Test Information:

Method ID	Test Description	Date Commenced:
3411	Lipophilic Toxins in Shellfish by LC-MS/MS	05-02-2026
3411A	Brevetoxins in Shellfish by LC-MS/MS	13-02-2026
3416	PST in Biota by LC-MS/MS (Boundy Method)	05-02-2026

Chemistry Test Results (Biota - Food)		Sample Description	Spleen	Kidney	Liver	Brain	Lung	Heart	Stomach Content
Method ID	Analyte	Units	04/09/25 0:00	04/09/25 0:00	04/09/25 0:00	04/09/25 0:00	04/09/25 0:00	04/09/25 0:00	04/09/25 0:00
			391475	391476	391477	391478	391479	391480	391481
	AZA1	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*
	AZA2	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*
	AZA3	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*
	Domoic Acid	mg/kg WMB	<0.05*	<0.05*	<0.05*	<0.05*	<0.05*	<0.05*	<0.05*
	DTX1 Free	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*
	DTX1 Total	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*
	DTX2 Free	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*
	DTX2 Total	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*
3411	GYM	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*
	Homo-YTX	mg/kg WMB	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*
	OA Free	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*
	OA Total	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*
	PnTx-G	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*
	PTX2	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*
	SPX1	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*
	Total DST	OA eq. mg/kg	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*
	YTX	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*
3411A	Brevetoxin 1	mg/kg WMB	<0.10*	<0.10*	<0.10*	<0.10*	<0.10*	<0.10*	<0.10*
	Brevetoxin 2	mg/kg WMB	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*
	Brevetoxin 3	mg/kg WMB	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*
	C1	STX.2HCl eq. mg/kg	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*
	C2	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*
	C3	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*
3416	C4	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*
	dcGTX1	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*
	dcGTX2	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*
	dcGTX3	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*
	dcGTX4	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*

* NATA accreditation does not cover this result



Chemistry Test Results (Biota - Food)		Sample Description	Spleen	Kidney	Liver	Brain	Lung	Heart	Stomach Content
Method ID	Analyte	Units	04/09/25 0:00	04/09/25 0:00	04/09/25 0:00	04/09/25 0:00	04/09/25 0:00	04/09/25 0:00	04/09/25 0:00
3416	dcNEO	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*
	dcSTX	STX.2HCl eq. mg/kg	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*
	doSTX	STX.2HCl eq. mg/kg	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*
	GTX1	STX.2HCl eq. mg/kg	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*
	GTX2	STX.2HCl eq. mg/kg	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*
	GTX3	STX.2HCl eq. mg/kg	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*
	GTX4	STX.2HCl eq. mg/kg	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*
	GTX5	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*
	GTX6	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*
	NEO	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	0.13*
	STX	STX.2HCl eq. mg/kg	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*
	Total PST	STX.2HCl eq. mg/kg	<0.10*	<0.10*	<0.10*	<0.10*	<0.10*	<0.10*	0.13*

* NATA accreditation does not cover this result

PATH RESULTS: SEAL LONG NOSED FUR, [REDACTED]

From [REDACTED]

Date Tue 21/10/2025 5:15 PM

To [REDACTED]

[REDACTED]

Tested on 04/09/25
Reported on 21/10/25 17:45
Referred on 04/09/25 by:

[REDACTED]

[REDACTED]

Owner:
SEAL LONG NOSED FUR

PORT STANVAC 5160

Animal/s:
Marine Mammal

DOB: N/A

Collected: 04/09/25 00:25 Subm.No: [REDACTED] Lab No.: [REDACTED]

Samples tested as received

SUMMARY DIAGNOSIS

Lung: Acute pulmonary haemorrhage and mild *Edwardsiella tarda* bronchopneumonia

Edwardsiella tarda peritonitis

COMMENTS

The long nosed fur seal had *Edwardsiella* peritonitis with intercurrent *Edwardsiella* bronchopneumonia. These contributed to the animal's death.

There are no gross or histological findings consistent with disease due to *Mycobacterium* sp. (such as *Mycobacterium pinnipedii*). Molecular testing for *Mycobacterium* sp. is negative. The animal tested negative to AI.

[REDACTED]

Specialist Veterinary Anatomic Pathologist

[REDACTED]

Validated by [REDACTED]

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