

# Algal bloom wildlife post-mortem report



## **Species – Little penguin**

## **Date collected – 29 May 2025**

## **Location – North Shore, Granite Island**

### History relating to the animal

One adult male little penguin (*Eudyptula minor*) was found dead on the North Shore of Granite Island, near the Causeway on 29 May 2025.

### Clinical examination

The animal was already dead and so could not be examined prior to death.

### Necropsy

The necropsy (looking at the whole body) revealed that the little penguin was in good body condition and weighed 1.1kg. There was mild post-mortem autolytic change (decomposing after death). There was approximately 300mL of clear fluid within the coelomic cavity (body cavity containing organs). The lungs had some frothy fluid when cut, and the kidneys were enlarged, pale red and had fine pinpoint spots on them. The stomach contained fish material. The proventriculus (upper part of the gut) contained fish material, and a small erosion (disruption to the surface, a shallow ulcer) 8mm diameter.

Samples were collected to test for avian influenza and Newcastle disease. Tissues were collected for histopathology (looking at tissues under the microscope for more detailed information) and testing for 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 tissues revealed a mild interstitial pneumonia (lung inflammation) throughout the lungs. There was necrotising hepatitis (liver inflammation and areas of cell death) within the liver. There was acute (recent) renal tubular necrosis (death of cells in the tubules of the kidneys), and mild chronic renal coccidiosis (long term parasitic infection in the kidney). There were worms (Spirurids) found within the proventriculus (upper part of the gut).

### Culture

Samples were collected following the histopathology findings in the liver, which suggested a possible bacterial infection. There was a heavy growth of *Clostridium perfringens*, and a moderate growth of *Escherichia coli* and other mixed bacterial organisms (all common, widespread bacteria).

# Algal bloom wildlife post-mortem report



## Virology

Testing results for avian influenza and Newcastle disease were negative.

## Brevetoxins

No samples were above the limits of reporting.

## Other algal biotoxins

No samples were above the limits of reporting.

## Summary

An adult male little penguin was found dead at Granite Island. Laboratory examination could not identify the cause of death, however the signs of disease in the liver (hepatitis) and kidneys (renal tubular necrosis) may have contributed. The worms found in the gut (spirurids) was likely a subclinical process (not contributing to clinical disease) because the bird was in good body condition. The bacterial proventriculitis (inflammation of the proventriculus) is secondary (caused by) to the worm burden. The renal coccidiosis (kidney parasite) is a common finding in little penguins and is not likely to have been causing clinical disease. Testing for avian influenza and Newcastle disease was negative. Brevetoxins and other algal biotoxins were also not detected.

---

**PATH RESULTS: PENGUIN LITTLE, (Wi) [REDACTED]**

---

**From** [REDACTED]  
**Date** Wed 13/08/2025 5:00 PM  
**To** [REDACTED]

[REDACTED]

**Tested on** 30/05/25  
**Reported on** 13/08/25 17:30  
**Referred on** 29/05/25 **by:**

[REDACTED]

[REDACTED]

**Owner:**  
PENGUIN LITTLE  
  
VICTOR HARBOR 5211

**Animal/s:**  
Wild Birds  
  
**DOB:** N/A

**Collected:** 29/05/25 14:00 **Subm.No:** [REDACTED] **Lab No.:** [REDACTED]

---

**Samples tested as received** All Tests Complete

**SUMMARY DIAGNOSES**

Lung: Mild, multifocal, subacute lymphocytic plasmacytic interstitial pneumonia

Kidney: Mild, multifocal, acute renal tubular necrosis, and mild chronic renal coccidiosis

Liver: Mild, multifocal, subacute lymphocytic, histiocytic, necrotizing hepatitis

Proventriculus: Proventricular nematodiasis (spirurids)

**COMMENTS**

There are multiple disease processes occurring in this penguin.

The necrotizing hepatitis is suggestive of a bacterial process. Microbiological culture of the liver is recommended. Please contact the laboratory to request this test. Tissues are held for one month, in line

with the laboratory's quality assurance process.

The proventricular spirurid infection (e.g. Tetramere sp.) was likely a subclinical process because the bird was in good body condition. The bacterial proventriculitis is secondary to the nematodiasis.

The renal coccidiosis is a subclinical finding.

[REDACTED]

Specialist Veterinary Anatomic Pathologist

[REDACTED]

Validated by [REDACTED]

[REDACTED]

**Tested on** 30/05/25  
**Reported on** 13/08/25 17:30  
**Referred on** 29/05/25 **by:**  
DR LYNLEY JOHNSON  
ANIMAL HEALTH ADVISOR  
135 GORDON STREET  
NARACOOORTE SA 5271

**Owner:**  
PENGUIN LITTLE

**Animal/s:**  
Wild Birds

VICTOR HARBOR 5211

**DOB:** N/A

**Collected:** 29/05/25 14:00

**Subm.No:** [REDACTED]

**Lab No.:** [REDACTED]

---

**Samples tested as received**

All Tests Complete

HISTOPATHOLOGY FROM NECROPSY

REF: [REDACTED]

ADDITIONAL FINDINGS 13/6/2025

CLINICAL HISTORY

Please refer to the clinical history on the request form and the clinical notes sent with the request form. A brief summary of the clinical history;

One little penguin was found today on the North shore of Granite island near the causeway on 29/5/25.

MACROSCOPY

Slides A-F contain liver, spleen, heart, lung, kidney, brain, trachea, oesophagus, proventriculus - ventriculus, duodenum, pancreas, jejunum, ileum, caecum, eye, pectoral muscle

MICROSCOPY

Liver: Multifocally, predominantly around central veins and also scattered randomly through the hepatic parenchyma, there are low numbers of lymphocytes, macrophages, fewer plasma cells and rare heterophils. Occasionally there is karyorrhectic debris admixed with the inflammation. (Mild, multifocal, subacute lymphocytic, histiocytic, necrotizing hepatitis)

Lung: Multifocally low numbers of lymphocytes and plasma cells expand the interstitium of air capillaries. Rarely heterophils form small aggregates within the lumen of infundibulum. There is diffuse hyepraemia / congestion. (Mild, multifocal, subacute lymphocytic, plasmacytic interstitial pneumonia)

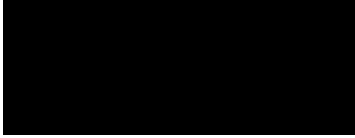
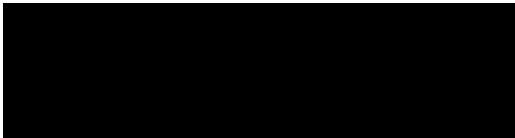
Kidney : Approximately 1% of tubules are lined by necrotic epithelium (pyknotic nucleus with hypereosinophilic shrunken cytoplasm). (Mild, multifocal, acute, renal tubular necrosis)

Low numbers of epithelial cells lining the pelvis are expanded by intracytoplasmic protozoal cysts. The cysts are 20 micron diameter with abundant 1 micron long sporozoites. Within the subjacent interstitium there are moderate numbers of lymphocytes and plasma cells. (Mild, multifocal, chronic pyelitis with intraepithelial coccidial oocysts)

Proventriculus: Focally there is effacement and replacement of the



Tested on 30/05/25  
Reported on 13/08/25 17:30  
Referred on 29/05/25 by:



**Owner:**  
PENGUIN LITTLE

**Animal/s:**  
Wild Birds

VICTOR HARBOR 5211

**DOB:** N/A

**Collected:** 29/05/25 14:00 **Subm.No.:** [Redacted] **Lab No.:** [Redacted]

**Samples tested as received** All Tests Complete

mucosal epithelium, lamina propria, submucosa and smooth muscle by lytic necrosis, large numbers of heterophils, macrophages, lymphocytes, plasma cells, extensive fibrosis. Within the inflammation are multiple colonies short rod bacteria and coccoid bacteria and multiple cross sections of nematodes. The nematodes are 30-50 micron across with smooth cuticle, platymyarian musculature, lateral cords, pseudocoelom, alimentary tract lined by a monolayer of cuboidal cells (characteristic of spirurid nematodes e.g., Tetramere sp.). (Moderate, focal chronic necrotizing proventriculitis with intralesional nematodes and bacteria)

Those tissues not described appear normal.

**DIAGNOSIS**

Lung: Mild, multifocal, subacute lymphocytic plasmacytic interstitial pneumonia

Kidney: Mild, multifocal, acute renal tubular necrosis, and mild chronic renal coccidiosis

Liver: Mild, multifocal, subacute lymphocytic, histiocytic, necrotizing hepatitis

Proventriculus: Proventricular nematodiasis (spirurids) and secondary bacterial proventriculitis

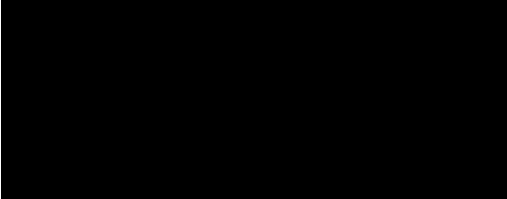
**COMMENTS**

There are multiple disease processes occurring in this penguin.

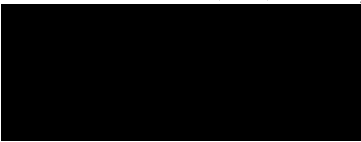
The necrotizing hepatitis is suggestive of a bacterial process. Microbiological culture of the liver is recommended. Please contact the laboratory to request this test.

The proventricular spirurid infection (e.g. *Tetramere* sp.) was likely a subclinical process because the bird was in good body condition. The bacterial proventriculitis is secondary to the nematodiasis.

The renal coccidiosis is a subclinical finding. This has been reported as a normal finding in little penguins (Obendorf et al 1980). The mild renal tubular necrosis may be an acute change due to morbidity. There are no remarkable histological findings to explain the gross appearance of the kidney.



Tested on 30/05/25  
Reported on 13/08/25 17:30  
Referred on 29/05/25 by:



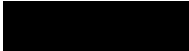
**Owner:**  
PENGUIN LITTLE

**Animal/s:**  
Wild Birds

VICTOR HARBOR 5211

**DOB:** N/A

**Collected:** 29/05/25 14:00 **Subm.No:**



**Lab No.:**



**Samples tested as received**

All Tests Complete

Obendorf, D.L. and McColl, K., 1980. Mortality in little penguins (Eudyptula minor) along the coast of Victoria, Australia. Journal of Wildlife Diseases, 16(2), pp.251-260.

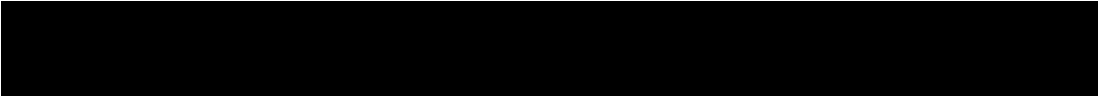
MICROSCOPY 13/6/2025

Liver: Microorganisms are not seen on Gram, PAS (no fungal hyphae or yeast are seen) , Wade fite or Ziehl Neelsen stains (no acid fast bacteria are seen).

COMMENTS

Please note that microbiological culture is more sensitive than the special stains. For this reason an infectious microbial cause for the hepatitis cannot be excluded.

As you requested, samples will be sent to Analytical Services Tasmania for biotoxin and brevetoxin testing.



Specialist Veterinary Anatomic Pathologist



Validated by



[REDACTED]

**Tested on** 30/05/25  
**Reported on** 13/08/25 17:30  
**Referred on** 29/05/25 **by:** [REDACTED]

**Owner:**  
PENGUIN LITTLE

**Animal/s:**  
Wild Birds

VICTOR HARBOR 5211

**DOB:** N/A

**Collected:** 29/05/25 14:00

**Subm.No:** [REDACTED]

**Lab No.:** [REDACTED]

---

**Samples tested as received**

All Tests Complete

**MICROBIOLOGY**

**SPECIMEN:** Liver  
ANIMAL ID:Little penguin

**MICROSCOPY**

A small number of gram positive bacilli.

**CULTURE**

1. Moderate growth of Escherichia coli
2. Heavy growth of Clostridium perfringens
3. Moderate growth of Mixed organisms

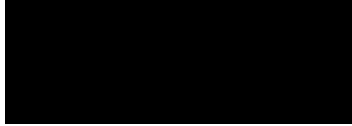
**COMMENT:** No Salmonella sp., Listeria sp. or Yersinia sp. isolated.

These organisms were identified using the MALDI-Tof at [REDACTED]

Final Report \_\_\_\_\_  
23/06/25  
Validated by [REDACTED] Laboratory Scientist.



**Tested on** 30/05/25  
**Reported on** 13/08/25 17:30  
**Referred on** 29/05/25 **by:**



**Owner:**  
 PENGUIN LITTLE

**Animal/s:**  
 Wild Birds

VICTOR HARBOR 5211

DOB: N/A

**Collected:** 29/05/25 14:00 **Subm.No.:**  **Lab No.:** 

---

**Samples tested as received** All Tests Complete

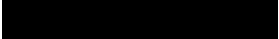
**MOLECULAR DIAGNOSTICS**

**NEWCASTLE DISEASE VIRUS RNA PCR (REAL TIME REVERSE TRANSCRIPTASE)**

Specimen type: Tracheal & Number of specimens: 1  
 cloacal swab in VTM

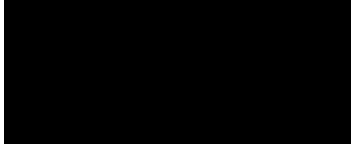
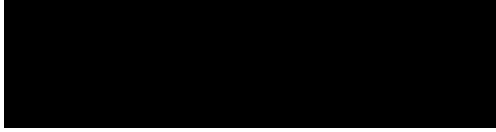
---

SPECIMEN ID	F Gene	M Gene	L Gene
PENGUIN	Not detected	Not detected	Not detected

Validated by  Laboratory Scientist.



**Tested on** 30/05/25  
**Reported on** 13/08/25 17:30  
**Referred on** 29/05/25 **by:**



**Owner:**  
 PENGUIN LITTLE

**Animal/s:**  
 Wild Birds

VICTOR HARBOR 5211

DOB: N/A

Collected: 29/05/25 14:00 Subm.No:

Lab No.:

Samples tested as received

All Tests Complete

**MOLECULAR DIAGNOSTICS**

**INFLUENZA A RNA PCR (REAL TIME REVERSE TRANSCRIPTASE)**



Specimen type: Tracheal & cloacal swab in VTM

---

SPECIMEN ID	Type A	H5	H7
PENGUIN	Not detected		

Validated by Laboratory Scientist.

**CASE MANAGEMENT DETAILS**

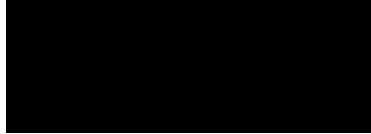
Case Managed by:   
Case Management Requested by:   
Case Management Requested on: 29/05/25

Case Details: Little penguin found dead at Granite Island.

Number of samples 5



**Tested on** 30/05/25  
**Reported on** 13/08/25 17:30  
**Referred on** 29/05/25 **by:**



**Owner:**  
 PENGUIN LITTLE

**Animal/s:**  
 Wild Birds

VICTOR HARBOR 5211

DOB: N/A

**Collected:** 29/05/25 14:00 **Subm.No:**  **Lab No.:** 

---

**Samples tested as received** All Tests Complete

NECROPSY REPORT  
 5/6/25

The grammatical errors were corrected for the clinical history.

CLINICAL HISTORY  
 Please refer to the clinical history on the request form and the clinical notes sent with the request form. A brief summary of the clinical history;

One little penguin was found today on the North shore of Granite island near the causeway on 29/5/25.

The remaining three bodies were collected and frozen at DEW office Victor Harbour post algal bloom.

Date	Species	Location	Note
22/03/2025	Little Penguin	Victor Harbor Yacht Club	Collected and stored in VH freezer.
27/03/2025	Little Penguin	Murray Mouth	Collected and stored in VH freezer.
3/04/2025	Little Penguin	Victor Harbor Skate Park	Collected and stored in VH freezer.

If appropriate we may investigate brevetoxin in the remaining three frozen bodies in the tissue(s) in which the toxin is most concentrated. Biotoxin testing may also be done for the penguin which was found dead on 29/5/25. Please keep the remaining three penguins in the freezer until further advice.

#### SAMPLES SUBMITTED

One dead adult male little penguin (*Edulypus minor*) is submitted in a bag labelled "29/5/2025 Granite island causeway"

#### NECROPSY FINDINGS

The bird is in good body condition and weighs 1.1 kg. The pectoral muscles are convex. There are mild post-mortem autolytic changes. There is approximately 300 ml of clear fluid within the coelomic cavity. The lungs on cut surface have abundant frothy fluid (oedema). The kidneys are enlarged, pale red and have a myriad of pale white fine pinpoint foci over the serosal surface and extending into the parenchyma.

[REDACTED]

**Tested on** 30/05/25  
**Reported on** 13/08/25 17:30  
**Referred on** 29/05/25 **by:**

[REDACTED]

**Owner:**  
PENGUIN LITTLE

**Animal/s:**  
Wild Birds

VICTOR HARBOR 5211

**DOB:** N/A

**Collected:** 29/05/25 14:00

**Subm.No.:** [REDACTED]

**Lab No.:** [REDACTED]

---

**Samples tested as received**

All Tests Complete

There is focal erosion of the proventriculus, 8mm across. The proventriculus contains macerated fish material.

**GROSS SUMMARY**

Pulmonary oedema  
Coelomic effusion  
Possible renal nephrosis / urates  
Focal proventriculitis

**SAMPLES COLLECTED & TESTING**

As you have requested:  
Cloacal and trachea swabs in virus transport media are taken and will be tested for AI and NDV by qPCR.

Formalin fixed tissues will be processed for histopathology.

We will contact analytical services Tasmania for a quote for biotoxin testing. Fresh liver, spleen, heart, lung, kidney, brain, proventricular contents are stored frozen.

**COMMENTS**

The range of changes including acute pulmonary oedema, coelomic effusion and possible renal nephrosis suggest multiple pathological processes such as acute vascular injury, or subacute hypoproteinaemia secondary to renal nephrosis and secondary coelomic effusion. Differential diagnoses for the gross findings include Avian influenza, Newcastle disease virus, ochratoxins (fungal toxin), lead poisoning, acute Pasteurellosis.

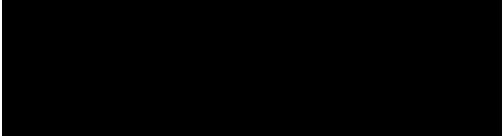
Avian influenza and Newcastle disease virus testing are in progress. Histopathology will clarify some of the pathological processes.

Liver is stored if microbiological culture is required.

[REDACTED]  
Specialist Veterinary Anatomic Pathologist  
[REDACTED]



Tested on 30/05/25  
Reported on 13/08/25 17:30  
Referred on 29/05/25 by:



**Owner:**  
PENGUIN LITTLE

**Animal/s:**  
Wild Birds

VICTOR HARBOR 5211

**DOB:** N/A

**Collected:** 29/05/25 14:00

**Subm.No:**



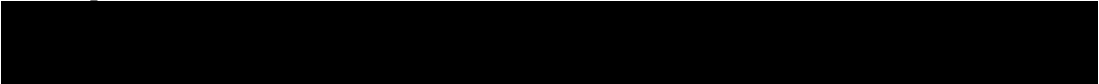
**Lab No.:**



---

**Samples tested as received**

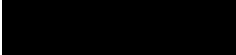
All Tests Complete



Specialist Veterinary Anatomic Pathologist



Validated by



**PATH RESULTS: PENGUIN LITTLE, (Wi) [REDACTED]**

**From** [REDACTED]  
**Date** Fri 20/02/2026 3:30 PM  
**To** [REDACTED]

[REDACTED]

**Tested on** 30/05/25  
**Reported on** 20/02/26 16:00  
**Referred on** 29/05/25 **by:**

[REDACTED]

[REDACTED]

**Owner:**  
PENGUIN LITTLE  
VICTOR HARBOR 5211

**Animal/s:**  
Wild Birds  
**DOB:** N/A

**Collected:** 29/05/25 14:00 **Subm.No:** [REDACTED] **Lab No.:** [REDACTED]

---

**Samples tested as received** All Tests Complete

ADDITIONAL FINDINGS 20/2/2026

SUMMARY DIAGNOSES

Lung: Mild, multifocal, subacute lymphocytic plasmacytic interstitial pneumonia

Kidney: Mild, multifocal, acute renal tubular necrosis, and mild chronic renal coccidiosis

Liver: Mixed bacterial hepatitis including E coli

Proventriculus: Proventricular nematodiasis (spirurids)

COMMENTS

There are multiple disease processes occurring in this penguin.

The proventricular spirurid infection (e.g. Tetramere sp.) was likely a

subclinical process because the bird was in good body condition. The bacterial proventriculitis was secondary to the nematodiasis. The bacterial hepatitis likely followed from the bacterial proventriculitis. Please note some of the bacteria cultured from the liver were post mortem overgrowth.

The renal coccidiosis was a subclinical finding.

AI and NDV are excluded as causes of death or interstitial pneumonia, based on the negative PCR results.

Biotoxins and brevetoxins were not detected in multiple tissues (Please refer to the report from Analytical Services Tasmania attached to the related submission [REDACTED]).

[REDACTED]

Specialist Veterinary Anatomic Pathologist  
[REDACTED]

Validated by [REDACTED]

*This email is confidential and may contain legally privileged information and copyright material. You may not disclose, copy, distribute, rely on, modify or use this email except as authorised by Clinical Laboratories Pty Ltd. If you have received this message in error, please notify us immediately by return email and delete this email. Any opinions expressed in emails are those of the individual author of the email and do not necessarily represent the views of Clinical Laboratories Pty Ltd. The sender is not responsible for any changes made to this email other than those made by the sender, or for the effect of any such changes on the meaning of the email. It is the responsibility of the recipient to virus check this email and any attachments.*

## CERTIFICATE OF ANALYSIS

Customer:  
Address:  
Contact:



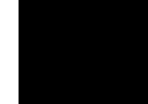
Submission Description:

Little Penguin

Sample Received Date:

11/12/2025

Contract Number:



Client Order Number:

Program/Quote Reference:

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



Section Head - Organic  
Chemistry

### Test Information:

Method ID

Test Description

Date Commenced:

3411	Lipophilic Toxins in Shellfish by LC-MS/MS	10-02-2026
3411A	Brevetoxins in Shellfish by LC-MS/MS	06-02-2026
3416	PST in Biota by LC-MS/MS (Boundy Method)	10-02-2026

10-02-2026  
06-02-2026  
10-02-2026

Chemistry Test Results (Biota - Food)		Sample Description	Kidney	Heart	Brain	Lung	Spleen	Proventricular CT
		Sampled Date/ Time	30/05/25 0:00	30/05/25 0:00	30/05/25 0:00	30/05/25 0:00	30/05/25 0:00	30/05/25 0:00
Method ID	Analyte	Units	391421	391422	391423	391424	391425	391426
3411	AZA1	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	*IS*
	AZA2	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	*IS*
	AZA3	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	*IS*
	Domoic Acid	mg/kg WMB	<0.05*	<0.05*	<0.05*	<0.05*	*IS*	*IS*
	DTX1 Free	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	*IS*
	DTX1 Total	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	*IS*
	DTX2 Free	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	*IS*
	DTX2 Total	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	*IS*
	GYM	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	*IS*
	Homo-YTX	mg/kg WMB	<0.02*	<0.02*	<0.02*	<0.02*	*IS*	*IS*
	OA Free	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	*IS*
	OA Total	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	*IS*
	PnTx-G	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	*IS*
	PTX2	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	*IS*
	SPX1	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	*IS*
	Total DST	OA eq. mg/kg	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	*IS*
	YTX	mg/kg WMB	<0.01*	<0.01*	<0.01*	<0.01*	*IS*	*IS*
3411A	Brevetoxin 1	mg/kg WMB	<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*
	Brevetoxin 3	mg/kg WMB	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*
3416	C1	STX.2HCl eq. mg/kg	<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*
	C3	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*
	C4	STX.2HCl eq. mg/kg	<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*
	dcGTX2	STX.2HCl eq. mg/kg	<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*
	dcGTX4	STX.2HCl eq. mg/kg	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*	<0.02*

\*IS\* - Insufficient Sample

\* NATA accreditation does not cover this result

Chemistry Test Results (Biota - Food)		Sample Description	Kidney	Heart	Brain	Lung	Spleen	Proventricular CT
Method ID	Analyte	Units	30/05/25 0:00	30/05/25 0:00	30/05/25 0:00	30/05/25 0:00	30/05/25 0:00	30/05/25 0:00
3416	dcNEO	STX.2HCl eq. mg/kg	<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*
	doSTX	STX.2HCl eq. mg/kg	<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*
	GTX2	STX.2HCl eq. mg/kg	<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*
	GTX4	STX.2HCl eq. mg/kg	<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*
	GTX6	STX.2HCl eq. mg/kg	<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*
	STX	STX.2HCl eq. mg/kg	<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*

\*IS\*- Insufficient Sample

\* NATA accreditation does not cover this result