

Shark Dissection Report Summary

Sample Details

Date collected – 18 April 2025

Species – White Shark (*Carcharodon carcharias*)

Location – Port Willunga, Gulf St Vincent

Reference code – CCWI180425

Sample History

Members of the public reported a stranded white shark at Port Willunga to Fishwatch in the morning of 18 April 2025. PIRSA Fisheries Compliance Officers responded and collected the carcass. Carcass was transported to SARDI/PIRSA West Beach and then stored frozen until dissection.

Dissection was conducted by SARDI research scientists on 23 April 2025 at SARDI Aquatic Sciences West Beach.

Dissection interpretation

Specimen was identified as a juvenile male white shark. No external significant physical damage or injury was evident. Physical body condition was considered normal. No signs of significant gill hemorrhaging or damage. Livor mortis evident post-mortem resulting in pink discoloration along ventral surfaces. Liver was considered healthy, robust and not discolored. The liver to body weight ratio was normal at 13%. Stomach was empty, no remnant hard parts or recent eversion evident.

Biological Information

Length metrics (mm)				
Total	Fork	Precaudal	Clasper	Uterus width
1750	1521	1371	62	NA

Maturity information		
Sex	Maturity status	Maturity Indicator
Male	Immature	Claspers flaccid

Weights (kg)					
Total	Liver	Heart	Gonad	Stomach whole	Stomach empty
34.53	4.44	0.05	0.06	1.12	0.96

Prey items	Item weights (kg)
Nil	Nil

Histology

Histology was not conducted due to the specimen being frozen after collection precluding the effectiveness of the histological examination of tissues.

Toxicology

Gill and liver tissue samples were sent for toxicological analysis, the results were received on 2 June 2025 from Analytical Services Tasmania. Brevetoxin 3 was found in low concentrations, while brevetoxin 2 was not found above the reporting limit in either liver or gill tissue.

Tissue	Biotoxin	Concentration	Units
Liver	Brevetoxin 2	<0.01*	mg/kg WMB
Liver	Brevetoxin 3	<0.01*	mg/kg WMB
Gill	Brevetoxin 2	<0.01*	mg/kg WMB
Gill	Brevetoxin 3	0.04	mg/kg WMB
* below reporting limit			

Summary

The cause of mortality of this juvenile male white shark is not able to be determined. Vertebral growth ring counts estimate this shark was 1-year of age. The sharks overall body condition was considered good, with a healthy liver suggesting it was not malnourished. Low concentrations of a brevetoxin were identified in analyzed tissue. However, it is unknown if the presence or concentration of brevetoxin resulted or contributed to the mortality of this shark.

Appendix

Analytical Services Tasmania brevetoxin results (received 2 June 2025).

ANALYTICAL SERVICES TASMANIA

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Submission Number: [REDACTED]
Report Number: [REDACTED]
Issue Date: 2/06/2025
Status: Final

CERTIFICATE OF ANALYSIS

Customer: Department of Primary Industries and Regions
Address: [REDACTED]
Contact: [REDACTED]

Submission Description: Biotoxins
Sample Received Date: 27/05/2025
Contract Number: [REDACTED]
Client Order Number: [REDACTED]
Program/Quote Reference: P22500011 - Biotoxins

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



10. 5. 2025 10:00:00
25/05/2025

Test Information:

Method ID	Test Description
3411A	Brevetoxins in Biota by LC-MS/MS

Date Commenced:
29-05-2025

ANALYTICAL SERVICES TASMANIA

Submission Number: 
Report Number: 

Chemistry Test Results (Biota - Food)			Sample Description	CCCJ040425-L	CCHB050525-L	CCPM180425-L	CCPM180425-G	CCWI180425-L	CCWI180425-G	CCPW130525-L	CCPW130525-G
			Sampled Date/ Time	04/04/25 0:00	05/05/25 0:00	18/04/25 0:00	18/04/25 0:00	18/04/25 0:00	18/04/25 0:00	13/05/25 0:00	13/05/25 0:00
Method ID	Analyte	Units		298535	298536	298537	298538	298539	298540	298541	298542
3411A	Brevetoxin 2	mg/kg WMB		<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*
	Brevetoxin 3	mg/kg WMB		<0.01*	<0.01*	0.02*	0.01*	<0.01*	0.04*	0.01*	0.04*

Chemistry Test Results (Biota - Food)			Sample Description	CCAR090525-L	CCAR090525-G	CCSP160525-L	CCSP160525-G	CCSB101123 L	CCCE240921 L	CCHB041223 L
			Sampled Date/ Time	09/05/25 0:00	09/05/25 0:00	16/05/25 0:00	16/05/25 0:00	10/11/23 0:00	24/09/21 0:00	04/12/23 0:00
Method ID	Analyte	Units		298543	298544	298545	298546	298547	298548	298549
3411A	Brevetoxin 2	mg/kg WMB		<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*	<0.01*
	Brevetoxin 3	mg/kg WMB		0.01*	<0.01*	0.01*	0.05*	<0.01*	<0.01*	<0.01*

* NATA accreditation does not cover this result