Shark Dissection Report Summary

Sample Details

Date collected – 13 May 2025

Species – White Shark (*Carcharodon carcharias*)

Location – Port Wakefield, Gulf St Vincent

Reference code – CCPW130525

Sample History

Commercial fishers reported a stranded white shark on an inter-tidal sandbar near Port Wakefield in Gulf St Vincent to Fishwatch mid-morning of 13 May 2025. PIRSA Fisheries Compliance Officers and SARDI scientists attended Port Wakefield boat ramp in the afternoon of 13 May 2025 and collected the shark carcass which was retrieved by a commercial fisher. A white shark had been observed in the area in the days prior behaving unusually. The shark carcass was delivered to PIRSA/SARDI West Beach.

Dissection was conducted by SARDI research scientists in the morning of 14 May 2025 at SARDI Aquatic Sciences West Beach.

Dissection interpretation

The shark was identified as a sub-adult 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 were observed. Livor mortis was 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 17%. Stomach was empty, no remnant hard parts or recent eversion.

Biological Information

Length metrics (mm)				
Total	**Fork**	**Precaudal**	**Clasper**	**Uterus width**
3094	2710	2374	244	NA

Maturity information		
Sex	**Maturity status**	**Maturity Indicator**
Male	Immature sub-adult	Claspers semi-rigid

Weights (kg)					
Total	Liver	Heart	Gonad	Stomach whole	Stomach empty
227	38.43	0.49	1.13	4.41	4.2

Prey items	Item weights (kg)
NIL	

Histology

Histology was not conducted due to the time between the reported stranding and dissection, precluding the effectiveness of the histological examination of tissues.

Toxicology

Gill and liver tissue samples were sent for toxicological analysis, results were received 2 June 2025 from Analytical Services Tasmania. The liver and gill tissue contained low concentrations of brevetoxin 3, while the brevetoxin 2 in both the liver and gill tissue was found to be below the reporting limit.

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 sub-adult male white shark could not be definitively concluded. The sharks overall body condition was good, the stomach was empty, with no evidence of recent feeding or stomach eversion. The liver to body to weight ratio was normal, suggesting it was not malnourished. Low concentrations of a brevetoxin were identified in both liver and gill tissues. However, it is unknown if the presence or concentration of the brevetoxin resulted or contributed to the mortality of this shark.

Appendix

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

Tasmanian Government

ANALYTICAL SERVICES TASMANIA

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enquiries@ast.tas.gov.au
www.analyticalservices.tas.gov.au

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**

Test Information:

Method ID	*Test Description*	*Date Commenced:*
3411A	Brevetoxins in Biota by LC-MS/MS	29-05-2025

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