

Food & Water Testing

ANALYTICAL REPORT

REPORT CODE

AR-25-NC-035502-01

REPORT DATE

25/11/2025

Attention Otago Regional Council

Private Bag 1954

9054 DUNEDIN

NEW ZEALAND

Phone

Email

Copy to:

Contact for your orders:

Contract:

Submission Reference:

Shotover WWTP

Emergency Discharge to Shotover River

Order code:

EUNZCH-00235914

Purchase Order Number:

SAMPLE CODE

817-2025-00111096

Sample Name

GT7800RC

Sampling Point code:

GT7800RC

Sampling Point name:

1. Upstream WWTP (before the SH6 bridge) - ORC Sam

Reception Date & Time:

10/11/2025 12:45

Reception temperature:

11.1 °C

Analysis Started on:

11/11/2025

Analysis Ending Date:

25/11/2025

Product Type

Surface water, raw water

Sampler(s)

Sampled Date & Time

10/11/2025 11:04

RESULTS

LOQ

NC03M Total Nitrogen in Water by Discrete Analyser (Trace)

Total Nitrogen (N) 0.05 mg/l 0.01

NC04C Total Oxidised Nitrogen in Water by Discrete Analyser

Total Oxidised Nitrogen 0.02 mg/l 0.01

NC05B Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode

Biochemical oxygen demand (BOD) <2 mg/l 2

NC0AE Total Suspended Solids in Water by Gravimetry

Suspended Solids 118 mg/l 2.5

NC0AF pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time)

pH 7.8 0.1

© NC0AK Ammoniacal Nitrogen by Discrete Analyser

Ammonia nitrogen <0.01 mg/l 0.01

NC76G Total Phosphorus in Water by Discrete Analyser (Trace)

Total phosphorus 0.08 mg/l 0.01

ZMJU7 Enumeration of Escherichia coli by Membrane Filtration

Escherichia coli 120 cfu/100 ml 1

SAMPLE CODE

817-2025-00111097

Sample Name

GT7790RC

Sampling Point code:

GT7790RC

Sampling Point name:

2. Final Discharge post UV - ORC Sampling

Reception Date & Time:

10/11/2025 12:45

Reception temperature:

11.1 °C

Analysis Started on:

11/11/2025

Analysis Ending Date:

25/11/2025

Product Type

Surface water, raw water

Sampler(s)

Sampled Date & Time

10/11/2025 12:07

RESULTS

LOQ

Food & Water Testing

RESULTS			LOQ
NC03M	Total Nitrogen in Water by Discrete Analyser (Trace)		
	Total Nitrogen (N)	4.30	mg/l
			0.01
NC04C	Total Oxidised Nitrogen in Water by Discrete Analyser		
	Total Oxidised Nitrogen	3.2	mg/l
			0.01
NC05B	Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode		
	Biochemical oxygen demand (BOD)	2	mg/l
			2
NC0AE	Total Suspended Solids in Water by Gravimetry		
	Suspended Solids	7.5	mg/l
			2.5
NC0AF	pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time)		
	pH	6.9	
			0.1
© NC0AK	Ammoniacal Nitrogen by Discrete Analyser		
	Ammonia nitrogen	0.09	mg/l
			0.01
NC76G	Total Phosphorus in Water by Discrete Analyser (Trace)		
	Total phosphorus	1.82	mg/l
			0.01
ZMJU7	Enumeration of Escherichia coli by Membrane Filtration		
	Escherichia coli	5	cfu/100 ml
			1

SAMPLE CODE		817-2025-00111098	
Sample Name		GT7810RC	
Sampling Point code:		GT7810RC	Sampling Point name:
			3. Discharge to the river - ORC Sampling
Reception Date & Time:		10/11/2025 12:45	Reception temperature:
Analysis Started on:		11/11/2025	11.1 °C
Product Type		Surface water, raw water	Analysis Ending Date:
Sampled Date & Time		10/11/2025 11:47	25/11/2025
			Sampler(s)

RESULTS			LOQ
NC03M	Total Nitrogen in Water by Discrete Analyser (Trace)		
	Total Nitrogen (N)	4.23	mg/l
			0.01
NC04C	Total Oxidised Nitrogen in Water by Discrete Analyser		
	Total Oxidised Nitrogen	3.3	mg/l
			0.01
NC05B	Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode		
	Biochemical oxygen demand (BOD)	3	mg/l
			2
NC0AE	Total Suspended Solids in Water by Gravimetry		
	Suspended Solids	4.2	mg/l
			2.5
NC0AF	pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time)		
	pH	7.1	
			0.1
© NC0AK	Ammoniacal Nitrogen by Discrete Analyser		
	Ammonia nitrogen	0.09	mg/l
			0.01
NC76G	Total Phosphorus in Water by Discrete Analyser (Trace)		
	Total phosphorus	1.92	mg/l
			0.01
ZMJU7	Enumeration of Escherichia coli by Membrane Filtration		
	Escherichia coli	380	cfu/100 ml
			1

Food & Water Testing

SAMPLE CODE 817-2025-00111099

Sample Name GT782ORC
Sampling Point code: GT782ORC

Sampling Point name: 4. 200 meters downstream - ORC Sampling

Reception Date & Time: 10/11/2025 12:45
Analysis Started on: 11/11/2025

Reception temperature: 11.1 °C
Analysis Ending Date: 25/11/2025

Product Type Surface water, raw water

Sampler(s)

Sampled Date & Time 10/11/2025 11:39

RESULTS

LOQ

NC03M Total Nitrogen in Water by Discrete Analyser (Trace)

Total Nitrogen (N) 0.19 mg/l 0.01

NC04C Total Oxidised Nitrogen in Water by Discrete Analyser

Total Oxidised Nitrogen 0.09 mg/l 0.01

NC05B Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode

Biochemical oxygen demand (BOD) <2 mg/l 2

NC0AE Total Suspended Solids in Water by Gravimetry

Suspended Solids 33.3 mg/l 2.5

NC0AF pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time)

pH 7.8 0.1

©NC0AK Ammoniacal Nitrogen by Discrete Analyser

Ammonia nitrogen 0.01 mg/l 0.01

NC76G Total Phosphorus in Water by Discrete Analyser (Trace)

Total phosphorus 0.19 mg/l 0.01

ZMJU7 Enumeration of Escherichia coli by Membrane Filtration

Escherichia coli 40 cfu/100 ml 1

SAMPLE CODE 817-2025-00111100

Sample Name GT784ORC
Sampling Point code: GT784ORC

Sampling Point name: 5. Upstream of Kawarau River - ORC Sampling

Reception Date & Time: 10/11/2025 12:45
Analysis Started on: 11/11/2025

Reception temperature: 11.1 °C
Analysis Ending Date: 25/11/2025

Product Type Surface water, raw water

Sampler(s)

Sampled Date & Time 10/11/2025 11:20

RESULTS

LOQ

NC03M Total Nitrogen in Water by Discrete Analyser (Trace)

Total Nitrogen (N) 0.05 mg/l 0.01

NC04C Total Oxidised Nitrogen in Water by Discrete Analyser

Total Oxidised Nitrogen 0.03 mg/l 0.01

NC05B Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode

Biochemical oxygen demand (BOD) <2 mg/l 2

NC0AE Total Suspended Solids in Water by Gravimetry

Suspended Solids <2.5 mg/l 2.5

NC0AF pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time)

pH 7.7 0.1

©NC0AK Ammoniacal Nitrogen by Discrete Analyser

Ammonia nitrogen <0.01 mg/l 0.01

NC76G Total Phosphorus in Water by Discrete Analyser (Trace)

Food & Water Testing

	RESULTS	LOQ
NC76G Total Phosphorus in Water by Discrete Analyser (Trace)		
Total phosphorus	0.01 mg/l	0.01
ZMJU7 Enumeration of Escherichia coli by Membrane Filtration		
Escherichia coli	2 cfu/100 ml	1

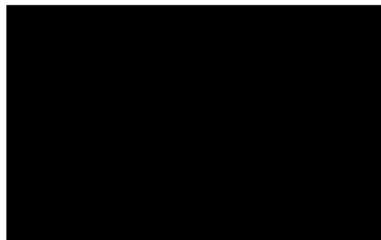
SAMPLE CODE	817-2025-00111101		
Sample Name	GT783ORC		
Sampling Point code:	GT785ORC	Sampling Point name:	6. Downstream of Kawarau River - ORC Sampling
Reception Date & Time:	10/11/2025 12:45	Reception temperature:	11.1 °C
Analysis Started on:	11/11/2025	Analysis Ending Date:	25/11/2025
Product Type	Surface water, raw water	Sampler(s)	
Sampled Date & Time	10/11/2025 10:21		

	RESULTS	LOQ
NC03M Total Nitrogen in Water by Discrete Analyser (Trace)		
Total Nitrogen (N)	0.10 mg/l	0.01
NC04C Total Oxidised Nitrogen in Water by Discrete Analyser		
Total Oxidised Nitrogen	0.03 mg/l	0.01
NC05B Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode		
Biochemical oxygen demand (BOD)	<2 mg/l	2
NC0AE Total Suspended Solids in Water by Gravimetry		
Suspended Solids	248 mg/l	2.5
NC0AF pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time)		
pH	7.9	0.1
© NC0AK Ammoniacal Nitrogen by Discrete Analyser		
Ammonia nitrogen	<0.01 mg/l	0.01
NC76G Total Phosphorus in Water by Discrete Analyser (Trace)		
Total phosphorus	0.16 mg/l	0.01
ZMJU7 Enumeration of Escherichia coli by Membrane Filtration		
Escherichia coli	35 cfu/100 ml	1

LIST OF METHODS			
NC03M	Total Nitrogen in Water by Discrete Analyser (Trace): APHA 24th Edition 4500-P J/4500-NH * Test was performed at 142 Esk Street, Invercargill	NC04C	Total Oxidised Nitrogen in Water by Discrete Analyser: APHA 24th Edition 4500-NO3 H * Test was performed at 142 Esk Street, Invercargill
NC05B	Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode: APHA 24th Edition 5210 B * Test was performed at 142 Esk Street, Invercargill	NC0AE	Total Suspended Solids in Water by Gravimetry: APHA 24th Edition 2540 D * Test was performed at 142 Esk Street, Invercargill
NC0AF	pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time): APHA 24th Edition 4500-H B * Test was performed at 142 Esk Street, Invercargill	NC0AK	Ammoniacal Nitrogen by Discrete Analyser: ISBN 0117516139 mod. * Test was performed at 142 Esk Street, Invercargill
NC76G	Total Phosphorus in Water by Discrete Analyser (Trace): APHA 24th Edition 4500 P B/J mod * Test was performed at 142 Esk Street, Invercargill	ZMJU7	Escherichia coli E [IVC] <1 >8 000 cfu/100 ml (0) mTEC Agar-F: US EPA 1603 2014 * Test was performed at 142 Esk Street, Invercargill

Signature

Food & Water Testing



EXPLANATORY NOTE

- ① Test is not accredited
- ② Test is subcontracted within Eurofins group and is accredited
- ③ Test is subcontracted within Eurofins group and is not accredited
- ④ Test is subcontracted outside Eurofins group and is accredited
- ⑤ Test is subcontracted outside Eurofins group and is not accredited
- ⑥ Test result is provided by the customer and is not accredited
- ⑦ Tested at the sampling point by Eurofins and is not accredited
- ⑧ Tested at the sampling point by Eurofins and is accredited
- ⑨ Test is RLP accredited
- ⑩ Test is subcontracted within Eurofins group and is RLP accredited

N/A means Not Applicable

Not Detected means not detected at or above the Limit of Quantification (LOQ)

LOQ means Limit of Quantification and the unit of LOQ is the same as the result unit

✗ (Unsatisfactory) means does not meet the specification

✓ (Satisfactory) means meets the specification

MAV means Maximum Allowable Value

The Customer acknowledges and accepts that: (a) where Eurofins is not responsible for sampling, the test result(s) in this report apply only to the sample as received. Customer is solely responsible for the sampling process and warrants that the sample provided to Eurofins is representative of the lot / batch from which the samples were drawn; and (b) Eurofins expresses no opinion and accepts no liability in respect of the Customer's production process or homogeneity of the product.

The tests are identified by a five-digit code, their description is available on request.

Accreditation does not apply to comments or graphical representations.

Unless otherwise stated, all tests in this analytical report (except for subcontracted tests) are performed at 16 Lorne Street, Dunedin.

The laboratory is not responsible for the information provided by the customer which can affect the validity of the results, for example: sampling information such as date/time, field data etc.

Eurofins may subcontract the performance of part or all of the Services to a third party and the Customer authorises the release of all information necessary to the third party for the provision of the Services.

All samples become the property of Eurofins to the extent necessary for the performance of the Services.

Eurofins will not be required to store samples and may destroy or otherwise dispose of the samples or return the samples to the Customer (at the Customer's cost in all respects) immediately following analysis of the samples.

If the Customer pays for storage of the samples Eurofins will take commercially reasonable steps to store the samples for the agreed period in terms of industry practice.

The Eurofins water sampling service follows methodology based on AS/NZS 5667 and / or best practice to collect and transport samples that are fit for the purpose of analytical testing. The laboratory is not responsible for sampling activities unless explicitly indicated by the statement "Sampled by Eurofins" on the report for water samples.

The Customer acknowledges that the Services are provided using the current state of technology and methods developed and generally applied by Eurofins and involve analysis, interpretations, consulting work and conclusions. Eurofins shall use commercially reasonable degree of care in providing the Services.

This report is produced and issued on the basis of information, documents and/or samples provided by, or on behalf of, the Customer and solely for the benefit of the Customer who is responsible for acting as it sees fit on the basis of this report. Neither Eurofins nor any of its officers, employees, agents or subcontractors shall be liable to the Customer nor any third party for any actions taken or not taken on the basis of this report nor for any incorrect results arising from unclear, erroneous, incomplete, misleading or false information provided to Eurofins.

The Customer shall not alter any report or other Output provided to the Customer by Eurofins or misrepresent the contents of such Outputs in any way. The Customer shall be entitled to make copies for its internal purposes only.

The Customer may only reproduce or publish any report or document provided to the Customer by Eurofins in full without alteration. Eurofins' name, logo or service marks, or any other means of identification cannot be used in any publication by the Customer, unless the Customer has obtained the prior written consent of Eurofins.

Eurofins shall have no liability for any indirect or consequential loss including, without limitation, loss of production, loss of contracts, loss of profits, loss of business or costs incurred from business interruption, loss of opportunity, loss of goodwill or damage to reputation and cost of product recall (including any losses suffered as a result of distribution of the Customer's products subject of the Services prior to the report being released by Eurofins). It shall further have no liability for any loss, damage or expenses arising from the claims of any third party (including, without limitation, product liability claims) that may be incurred by the Customer.

Eurofins General Terms and Conditions apply.

END OF REPORT

**EUROFINS ELS LIMITED IS A MINISTRY FOR PRIMARY INDUSTRIES
RECOGNISED LABORATORY UNDER SECTION 101 OF THE ANIMAL PRODUCTS ACT:1999.**