

Food & Water Testing

ANALYTICAL REPORT

REPORT CODE

AR-25-NC-017879-01

REPORT DATE

23/06/2025

Attention Otago Regional Council

Private Bag 1954
9054 DUNEDIN
NEW ZEALAND

Phone

Email

Copy to: regulatory

Contact for your orders:

Contract: Shotover WWTP

Submission Reference: Emergency Discharge to Shotover River

Order code:

EUNZCH-00220093

Purchase Order Number:

SAMPLE CODE

817-2025-00058270

Sample Name

GT7800RC

Sample Reference

U/S WWTP and SH6 Bridge GT7800RC

Reception Date & Time:

17/06/2025 12:51

Reception temperature:

6.1 °C

Analysis Started on:

18/06/2025

Analysis Ending Date:

23/06/2025

Product Type

Surface water, raw water

Sampler(s)

Sampled Date & Time

17/06/2025 12:51

RESULTS

LOQ

*NC0AK Ammoniacal Nitrogen by Discrete Analyser

Ammonia nitrogen <0.01 mg/l 0.01

*ZMJU7 Enumeration of Escherichia coli by Membrane Filtration

Escherichia coli <1 cfu/100 ml 1

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

pH 7.8 0.1

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

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

*NC03M Total Nitrogen in Water by Discrete Analyser (Trace)

Total Nitrogen (N) 0.02 mg/l 0.01

*NC04C Total Oxidised Nitrogen in Water by Discrete Analyser

Total Oxidised Nitrogen 0.03 mg/l 0.01

*NC76G Total Phosphorus in Water by Discrete Analyser (Trace)

Total phosphorus <0.01 mg/l 0.01

*NC0AE Total Suspended Solids in Water by Gravimetry

Suspended Solids 6.1 mg/l 2.5

SAMPLE CODE

817-2025-00058271

Sample Name

GT7790RC

Sample Reference

Final Discharge Post UV GT7790RC

Reception Date & Time:

17/06/2025 13:55

Reception temperature:

6.1 °C

Analysis Started on:

18/06/2025

Analysis Ending Date:

23/06/2025

Product Type

Surface water, raw water

Sampler(s)

Sampled Date & Time

17/06/2025 13:55

RESULTS

LOQ

*NC0AK Ammoniacal Nitrogen by Discrete Analyser

Ammonia nitrogen 0.06 mg/l 0.01

Food & Water Testing

RESULTS			LOQ
*ZMJU7	Enumeration of Escherichia coli by Membrane Filtration		
	Escherichia coli	3	cfu/100 ml
			1
*NCOAF	pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time)		
	pH	7.0	0.1
*NC05B	Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode		
	Biochemical oxygen demand (BOD)	<6	mg/l
			2
*NC03M	Total Nitrogen in Water by Discrete Analyser (Trace)		
	Total Nitrogen (N)	5.40	mg/l
			0.01
*NC04C	Total Oxidised Nitrogen in Water by Discrete Analyser		
	Total Oxidised Nitrogen	4.0	mg/l
			0.01
*NC76G	Total Phosphorus in Water by Discrete Analyser (Trace)		
	Total phosphorus	1.48	mg/l
			0.01
*NCOAE	Total Suspended Solids in Water by Gravimetry		
	Suspended Solids	3.0	mg/l
			2.5

SAMPLE CODE		817-2025-00058272	
Sample Name	GT7810RC		
Sample Reference	Shotover WWTP Discharge to shotover river GT7810RC		
Reception Date & Time:	17/06/2025 13:18	Reception temperature:	6.1 °C
Analysis Started on:	18/06/2025	Analysis Ending Date:	23/06/2025
Product Type	Surface water, raw water	Sampler(s)	
Sampled Date & Time	17/06/2025 13:18		

RESULTS			LOQ
*NCOAK	Ammoniacal Nitrogen by Discrete Analyser		
	Ammonia nitrogen	0.06	mg/l
			0.01
*ZMJU7	Enumeration of Escherichia coli by Membrane Filtration		
	Escherichia coli	32	cfu/100 ml
			1
*NCOAF	pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time)		
	pH	7.3	0.1
*NC05B	Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode		
	Biochemical oxygen demand (BOD)	<6	mg/l
			2
*NC03M	Total Nitrogen in Water by Discrete Analyser (Trace)		
	Total Nitrogen (N)	6.17	mg/l
			0.01
*NC04C	Total Oxidised Nitrogen in Water by Discrete Analyser		
	Total Oxidised Nitrogen	4.2	mg/l
			0.01
*NC76G	Total Phosphorus in Water by Discrete Analyser (Trace)		
	Total phosphorus	1.70	mg/l
			0.01
*NCOAE	Total Suspended Solids in Water by Gravimetry		
	Suspended Solids	4.6	mg/l
			2.5

SAMPLE CODE		817-2025-00058273	
Sample Name	GT7820RC		
Sample Reference	Approx 200m d/s of Discharge to shotover river GT7820RC		
Reception Date & Time:	17/06/2025 13:24	Reception temperature:	6.1 °C
Analysis Started on:	18/06/2025	Analysis Ending Date:	23/06/2025
Product Type	Surface water, raw water	Sampler(s)	
Sampled Date & Time	17/06/2025 13:24		

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RESULTS			LOQ
*NC0AK	Ammoniacal Nitrogen by Discrete Analyser		
	Ammonia nitrogen	0.01 mg/l	0.01
*ZMJU7	Enumeration of Escherichia coli by Membrane Filtration		
	Escherichia coli	3 cfu/100 ml	1
*NC0AF	pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time)		
	pH	7.9	0.1
*NC05B	Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode		
	Biochemical oxygen demand (BOD)	<2 mg/l	2
*NC03M	Total Nitrogen in Water by Discrete Analyser (Trace)		
	Total Nitrogen (N)	0.30 mg/l	0.01
*NC04C	Total Oxidised Nitrogen in Water by Discrete Analyser		
	Total Oxidised Nitrogen	0.23 mg/l	0.01
*NC76G	Total Phosphorus in Water by Discrete Analyser (Trace)		
	Total phosphorus	0.10 mg/l	0.01
*NC0AE	Total Suspended Solids in Water by Gravimetry		
	Suspended Solids	15.4 mg/l	2.5

SAMPLE CODE		817-2025-00058274	
Sample Name		GT7840RC	
Sample Reference		u/s of kawarau river GT7840RC	
Reception Date & Time:		17/06/2025 13:00	Reception temperature: 6.1 °C
Analysis Started on:		18/06/2025	Analysis Ending Date: 23/06/2025
Product Type		Surface water, raw water	Sampler(s) XXXXXXXXXX
Sampled Date & Time		17/06/2025 13:01	

RESULTS			LOQ
*NC0AK	Ammoniacal Nitrogen by Discrete Analyser		
	Ammonia nitrogen	<0.01 mg/l	0.01
*ZMJU7	Enumeration of Escherichia coli by Membrane Filtration		
	Escherichia coli	140 cfu/100 ml	1
*NC0AF	pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time)		
	pH	7.3	0.1
*NC05B	Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode		
	Biochemical oxygen demand (BOD)	<2 mg/l	2
*NC03M	Total Nitrogen in Water by Discrete Analyser (Trace)		
	Total Nitrogen (N)	0.14 mg/l	0.01
*NC04C	Total Oxidised Nitrogen in Water by Discrete Analyser		
	Total Oxidised Nitrogen	0.09 mg/l	0.01
*NC76G	Total Phosphorus in Water by Discrete Analyser (Trace)		
	Total phosphorus	<0.01 mg/l	0.01
*NC0AE	Total Suspended Solids in Water by Gravimetry		
	Suspended Solids	3.0 mg/l	2.5

Food & Water Testing

SAMPLE CODE 817-2025-00058275

Sample Name GT785ORC

Sample Reference d/s of kawarau river GT785ORC

Reception Date & Time: 17/06/2025 12:32

Reception temperature: 6.1 °C

Analysis Started on: 18/06/2025

Analysis Ending Date: 23/06/2025

Product Type Surface water, raw water

Sampler(s)

Sampled Date & Time 17/06/2025 12:32

RESULTS

LOQ

*NC0AK	Ammoniacal Nitrogen by Discrete Analyser			
	Ammonia nitrogen	<0.01	mg/l	0.01
*ZMJU7	Enumeration of Escherichia coli by Membrane Filtration			
	Escherichia coli	1	cfu/100 ml	1
*NC0AF	pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time)			
	pH	7.9		0.1
*NC05B	Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode			
	Biochemical oxygen demand (BOD)	<2	mg/l	2
*NC03M	Total Nitrogen in Water by Discrete Analyser (Trace)			
	Total Nitrogen (N)	0.02	mg/l	0.01
*NC04C	Total Oxidised Nitrogen in Water by Discrete Analyser			
	Total Oxidised Nitrogen	0.04	mg/l	0.01
*NC76G	Total Phosphorus in Water by Discrete Analyser (Trace)			
	Total phosphorus	<0.01	mg/l	0.01
*NC0AE	Total Suspended Solids in Water by Gravimetry			
	Suspended Solids	7.9	mg/l	2.5

LIST OF METHODS

NC03M **Total Nitrogen in Water by Discrete Analyser (Trace):**
 APHA Online Edition 4500-P J/4500-NH

NC05B **Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode:** APHA Online Edition 5210 B

NC0AF **pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time):** APHA 24th Edition 4500-H B

NC76G **Total Phosphorus in Water by Discrete Analyser (Trace):** APHA Online Edition 4500-P B/J mod.

NC04C **Total Oxidised Nitrogen in Water by Discrete Analyser:**
 APHA Online Edition 4500-NO3 H

NC0AE **Total Suspended Solids in Water by Gravimetry:** APHA Online Edition 2540 D

NC0AK **Ammoniacal Nitrogen by Discrete Analyser:** ISBN 0117516139 mod.

ZMJU7 **Escherichia coli E [IVC] <1 >8 000 cfu/100 ml (0) mTEC Agar-F:** US-EPA 1603:2014

Signature



Tonia Bulling Head of Southern Laboratory (K T P)

EXPLANATORY NOTE

Food & Water Testing

- 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
- *Test was performed at Eurofins ELS Limited, 142 Esk Street, Invercargill

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 43 Detroit Drive, Rolleston, Christchurch, NEW ZEALAND.

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