

## Food &amp; Water Testing

## ANALYTICAL REPORT

REPORT CODE

AR-25-NC-018563-01

REPORT DATE

30/06/2025

Attention Otago Regional Council

Private Bag 1954

9054 DUNEDIN

NEW ZEALAND

Phone

Copy to: regulatory

Email

Contact for your orders:

Contract:

Submission Reference:

Shotover WWTP

Emergency Discharge To Shotover River

Order code:

EUNZCH-00221111

Purchase Order Number:

SAMPLE CODE

817-2025-00061586

Sample Name

GT7800RC

Sample Reference

U/S WWTP and SH6 Bridge GT7800RC

Reception Date &amp; Time:

23/06/2025 14:28

Reception temperature:

5.3 °C

Analysis Started on:

24/06/2025

Analysis Ending Date:

30/06/2025

Product Type

Surface water, raw water

Sampler(s)

Sampled Date &amp; Time

23/06/2025 13:08

## RESULTS

## LOQ

*NCOAK	<b>Ammoniacal Nitrogen by Discrete Analyser</b>			
	Ammonia nitrogen	<0.01	mg/l	0.01
*ZMJU7	<b>Enumeration of Escherichia coli by Membrane Filtration</b>			
	Escherichia coli	2	cfu/100 ml	1
*NCOAF	<b>pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time)</b>			
	pH	7.8		0.1
*NC05B	<b>Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode</b>			
	Biochemical oxygen demand (BOD)	<2	mg/l	2
*NC03M	<b>Total Nitrogen in Water by Discrete Analyser (Trace)</b>			
	Total Nitrogen (N)	0.06	mg/l	0.01
*NC04C	<b>Total Oxidised Nitrogen in Water by Discrete Analyser</b>			
	Total Oxidised Nitrogen	0.03	mg/l	0.01
*NC76G	<b>Total Phosphorus in Water by Discrete Analyser (Trace)</b>			
	Total phosphorus	<0.01	mg/l	0.01
*NCOAE	<b>Total Suspended Solids in Water by Gravimetry</b>			
	Suspended Solids	45.1	mg/l	2.5

SAMPLE CODE

817-2025-00061587

Sample Name

GT7790RC

Sample Reference

Final Discharge Post UV GT7790RC

Reception Date &amp; Time:

23/06/2025 14:28

Reception temperature:

5.3 °C

Analysis Started on:

24/06/2025

Analysis Ending Date:

30/06/2025

Product Type

Surface water, raw water

Sampler(s)

Sampled Date &amp; Time

23/06/2025 14:00

## RESULTS

## LOQ

*NCOAK	<b>Ammoniacal Nitrogen by Discrete Analyser</b>			
	Ammonia nitrogen	9.75	mg/l	0.01

## Food & Water Testing

RESULTS			LOQ
*ZMJU7	<b>Enumeration of Escherichia coli by Membrane Filtration</b>		
	Escherichia coli	<1	cfu/100 ml
			1
*NCOAF	<b>pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time)</b>		
	pH	7.4	0.1
*NC05B	<b>Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode</b>		
	Biochemical oxygen demand (BOD)	12	mg/l
			2
*NC03M	<b>Total Nitrogen in Water by Discrete Analyser (Trace)</b>		
	Total Nitrogen (N)	15.8	mg/l
			0.01
*NC04C	<b>Total Oxidised Nitrogen in Water by Discrete Analyser</b>		
	Total Oxidised Nitrogen	1.1	mg/l
			0.01
*NC76G	<b>Total Phosphorus in Water by Discrete Analyser (Trace)</b>		
	Total phosphorus	3.29	mg/l
			0.01
*NCOAE	<b>Total Suspended Solids in Water by Gravimetry</b>		
	Suspended Solids	47.5	mg/l
			2.5

SAMPLE CODE		817-2025-00061588	
Sample Name	GT7810RC		
Sample Reference	Shotover WWTP Discharge to Shotover River GT7810RC		
Reception Date & Time:	23/06/2025 14:28	Reception temperature:	5.3 °C
Analysis Started on:	24/06/2025	Analysis Ending Date:	30/06/2025
Product Type	Surface water, raw water	Sampler(s)	
Sampled Date & Time	23/06/2025 13:31		

RESULTS			LOQ
⑨*NCOAK	<b>Ammoniacal Nitrogen by Discrete Analyser</b>		
	Ammonia nitrogen	11.5	mg/l
			0.01
*ZMJU7	<b>Enumeration of Escherichia coli by Membrane Filtration</b>		
	Escherichia coli	24	cfu/100 ml
			1
*NCOAF	<b>pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time)</b>		
	pH	7.5	0.1
*NC05B	<b>Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode</b>		
	Biochemical oxygen demand (BOD)	24	mg/l
			2
*NC03M	<b>Total Nitrogen in Water by Discrete Analyser (Trace)</b>		
	Total Nitrogen (N)	18.4	mg/l
			0.01
*NC04C	<b>Total Oxidised Nitrogen in Water by Discrete Analyser</b>		
	Total Oxidised Nitrogen	1.0	mg/l
			0.01
*NC76G	<b>Total Phosphorus in Water by Discrete Analyser (Trace)</b>		
	Total phosphorus	3.23	mg/l
			0.01
*NCOAE	<b>Total Suspended Solids in Water by Gravimetry</b>		
	Suspended Solids	50.0	mg/l
			2.5

SAMPLE CODE		817-2025-00061589	
Sample Name	GT7820RC		
Sample Reference	Approx 200m d/s of discharge to shotover river GT7820RC		
Reception Date & Time:	23/06/2025 14:28	Reception temperature:	5.3 °C
Analysis Started on:	24/06/2025	Analysis Ending Date:	30/06/2025
Product Type	Surface water, raw water	Sampler(s)	
Sampled Date & Time	23/06/2025 13:39		

## Food & Water Testing

RESULTS			LOQ
*NC0AK	<b>Ammoniacal Nitrogen by Discrete Analyser</b>		
	Ammonia nitrogen	0.41 mg/l	0.01
*ZMJU7	<b>Enumeration of Escherichia coli by Membrane Filtration</b>		
	Escherichia coli	2 cfu/100 ml	1
*NC0AF	<b>pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time)</b>		
	pH	7.8	0.1
*NC05B	<b>Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode</b>		
	Biochemical oxygen demand (BOD)	<2 mg/l	2
*NC03M	<b>Total Nitrogen in Water by Discrete Analyser (Trace)</b>		
	Total Nitrogen (N)	0.74 mg/l	0.01
*NC04C	<b>Total Oxidised Nitrogen in Water by Discrete Analyser</b>		
	Total Oxidised Nitrogen	0.13 mg/l	0.01
*NC76G	<b>Total Phosphorus in Water by Discrete Analyser (Trace)</b>		
	Total phosphorus	0.15 mg/l	0.01
*NC0AE	<b>Total Suspended Solids in Water by Gravimetry</b>		
	Suspended Solids	25.0 mg/l	2.5

<b>SAMPLE CODE</b>	<b>817-2025-00061590</b>		
<b>Sample Name</b>	GT784ORC		
<b>Sample Reference</b>	U/S of Kawarau River GT784ORC		
<b>Reception Date &amp; Time:</b>	23/06/2025 14:28	<b>Reception temperature:</b>	5.3 °C
<b>Analysis Started on:</b>	24/06/2025	<b>Analysis Ending Date:</b>	30/06/2025
<b>Product Type</b>	Surface water, raw water	<b>Sampler(s)</b>	
<b>Sampled Date &amp; Time</b>	23/06/2025 13:18		

RESULTS			LOQ
*NC0AK	<b>Ammoniacal Nitrogen by Discrete Analyser</b>		
	Ammonia nitrogen	<0.01 mg/l	0.01
*ZMJU7	<b>Enumeration of Escherichia coli by Membrane Filtration</b>		
	Escherichia coli	17 cfu/100 ml	1
*NC0AF	<b>pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time)</b>		
	pH	7.6	0.1
*NC05B	<b>Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode</b>		
	Biochemical oxygen demand (BOD)	<2 mg/l	2
*NC03M	<b>Total Nitrogen in Water by Discrete Analyser (Trace)</b>		
	Total Nitrogen (N)	0.04 mg/l	0.01
*NC04C	<b>Total Oxidised Nitrogen in Water by Discrete Analyser</b>		
	Total Oxidised Nitrogen	0.03 mg/l	0.01
*NC76G	<b>Total Phosphorus in Water by Discrete Analyser (Trace)</b>		
	Total phosphorus	<0.01 mg/l	0.01
*NC0AE	<b>Total Suspended Solids in Water by Gravimetry</b>		
	Suspended Solids	3.5 mg/l	2.5

## Food & Water Testing

**SAMPLE CODE** 817-2025-00061591

**Sample Name** GT785ORC

**Sample Reference** D/S of Kawarau River GT785ORC

**Reception Date & Time:** 23/06/2025 14:28

**Reception temperature:** 5.3 °C

**Analysis Started on:** 24/06/2025

**Analysis Ending Date:** 30/06/2025

**Product Type** Surface water, raw water

**Sampler(s)** [REDACTED]

**Sampled Date & Time** 23/06/2025 12:23

### RESULTS

### LOQ

*NC0AK	<b>Ammoniacal Nitrogen by Discrete Analyser</b>			
	Ammonia nitrogen	0.01	mg/l	0.01
*ZMJU7	<b>Enumeration of Escherichia coli by Membrane Filtration</b>			
	Escherichia coli	1	cfu/100 ml	1
*NC0AF	<b>pH in Water by Manual Electrode (Tested beyond 15 minute APHA holding time)</b>			
	pH	7.9		0.1
*NC05B	<b>Total Biochemical Oxygen Demand (TBOD 5 Days) by Electrode</b>			
	Biochemical oxygen demand (BOD)	<2	mg/l	2
*NC03M	<b>Total Nitrogen in Water by Discrete Analyser (Trace)</b>			
	Total Nitrogen (N)	0.07	mg/l	0.01
*NC04C	<b>Total Oxidised Nitrogen in Water by Discrete Analyser</b>			
	Total Oxidised Nitrogen	0.04	mg/l	0.01
*NC76G	<b>Total Phosphorus in Water by Discrete Analyser (Trace)</b>			
	Total phosphorus	0.06	mg/l	0.01
*NC0AE	<b>Total Suspended Solids in Water by Gravimetry</b>			
	Suspended Solids	104	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

[REDACTED]

[REDACTED]

[REDACTED]

### 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.

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### END OF REPORT

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