

## Laboratory Accreditation Programmes

Schedule to <b>CERTIFICATE OF ACCREDITATION</b>																	
Hill Laboratories Christchurch  PO Box 16607, Hornby, Christchurch, 8441 101C Waterloo Road, Hornby, Christchurch, 8042  <b>Telephone 0508 445-5522</b>	<b>Client No. 6706</b>       <b>www.hill-laboratories.com</b>																
<b>Authorised Representative</b> Mrs Debra McLachlan SI Quality Assurance and Health and Safety Coordinator																	
<b>Programme</b> Biological Testing Laboratory  <b>Accreditation Number 685</b>																	
<b>Initial Accreditation Date 1 September 1998</b>																	
<b>Conformance Standard</b> NZS ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories																	
<b>Testing Services Summary</b>  <table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">1.11</td> <td>Foods</td> </tr> <tr> <td>1.12</td> <td>Waters</td> </tr> <tr> <td>1.71</td> <td>Biological Condition</td> </tr> </table>		1.11	Foods	1.12	Waters	1.71	Biological Condition										
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<b>Key Technical Personnel</b>  <table style="width: 100%; border: none;"> <tr> <td style="width: 35%;">Mrs Lisa Bullock</td> <td>1.11 (selected), 1.12, 1.71 (selected)</td> </tr> <tr> <td>Mrs Marisa Fonseca</td> <td>1.11, 1.12, 1.71</td> </tr> <tr> <td>Mrs Yu (Dominique) Gao</td> <td>1.11, 1.12, 1.71</td> </tr> <tr> <td>Mrs Renee Kellerhals</td> <td>1.12</td> </tr> <tr> <td>Miss Jill Martin</td> <td>1.11, 1.12, 1.71</td> </tr> <tr> <td>Ms Barbara Müller</td> <td>1.11 (selected), 1.12, 1.71 (selected)</td> </tr> <tr> <td>Mrs Lucia Olmos</td> <td>1.11, 1.12, 1.71</td> </tr> <tr> <td>Mr Padam (Nishan) Subba</td> <td>1.11, 1.12, 1.71</td> </tr> </table>		Mrs Lisa Bullock	1.11 (selected), 1.12, 1.71 (selected)	Mrs Marisa Fonseca	1.11, 1.12, 1.71	Mrs Yu (Dominique) Gao	1.11, 1.12, 1.71	Mrs Renee Kellerhals	1.12	Miss Jill Martin	1.11, 1.12, 1.71	Ms Barbara Müller	1.11 (selected), 1.12, 1.71 (selected)	Mrs Lucia Olmos	1.11, 1.12, 1.71	Mr Padam (Nishan) Subba	1.11, 1.12, 1.71
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Schedule to  
**CERTIFICATE OF ACCREDITATION**

Hill Laboratories  
 Biological Testing Laboratory  
**SCOPE OF ACCREDITATION**

Accreditation Number 685

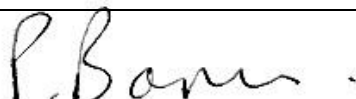
**1.11 Foods**

- (a) Cereals and cereal products
- (b) Edible oils, fats and derived products
- (c) Nuts, fruits, vegetables and derived products
- (d) Sauces, herbs, spices and condiments
- (e) Sugar and sugar confectionery
- (f) Dairy products
- (g) Meat, poultry and derived products
- (h) Fish and fish products (including shellfish)
- (i) Eggs and egg products
- (k) Non-alcoholic beverages (fruit juices, bottled water)
- (n) Other specified fresh foods (salads, airline meals)
- (o) Other specified preserved foods (dried, frozen)
- (p) Canned foods
- (q) Animal feeds

In accordance with APHA “Compendium of Methods for the Microbiological Examination of Foods” 5<sup>th</sup> Edition except where otherwise indicated.

Aerobic plate count	6.523
Aerobic plate count	6.524
Aerobic plate count	8.72
Aerobic plate count	8.73
Aerobic plate count	8.82
Aerobic plate count	TEMPO AC
Anaerobic plate count	6.7
<i>Bacillus cereus</i>	31.6
<i>Bacillus cereus</i>	31.6 (modified)
<i>Bacillus cereus</i> (count)	TEMPO BC
Campylobacter	30
<i>Clostridium perfringens</i>	33.7
Coliform (count)	TEMPO CC
Cronobacter spp. including <i>Cronobacter sakazkii</i>	PCR (In-house)
<i>E coli</i> - MPN	9.93
<i>E coli</i> - MPN	FDA BAM Ch. 4
<i>E coli</i> - Petrifilm	9.935
<i>E coli</i> (count)	TEMPO EC
<i>E coli</i> O157	Assurance GDS
Enterobacteriaceae	9.62 (modified)
Enterobacteriaceae	9.63 (modified 37°C)
Enterobacteriaceae (count)	TEMPO EB
Faecal coliforms - MPN	9.81
Faecal coliforms - MPN	FDA BAM Ch. 4 (modified)
Listeria	APHA 35.5

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Listeria (PCR)	In-house method
<i>Listeria monocytogenes</i>	ISO 11290-2:1998 (Modified) - with Amendment 1 2004
<i>Listeria monocytogenes</i>	35.5
<i>Listeria monocytogenes</i> (PCR)	In-house method
Mesophilic spore formers	23
pH	In-house method
Salmonella (PCR)	In-house method
<i>Staphylococcus aureus</i>	39.6
<i>Staphylococcus aureus</i>	FDA BAM Ch. 12
<i>Staphylococcus aureus</i> (count)	TEMPO STA
Sulphite reducing anaerobes	33.7 (modified)
Total coliforms - MPN	9.72
Total coliforms - MPN	FDA BAM Ch. 4
Total coliforms - MPN (presumptive)	9.71
Total coliforms - MPN (presumptive)	FDA BAM Ch. 4
Total coliforms - Petrifilm	9.935
<i>Vibrio cholerae</i> (P/A)	FDA BAM Ch. 9 (modified)
<i>Vibrio cholerae</i> (P/A)	APHA Ch. 40 (modified)
<i>Vibrio parahaemolyticus</i> (P/A)	FDA BAM Ch. 9 (modified)
<i>Vibrio parahaemolyticus</i> (P/A)	APHA Ch. 40 (modified)
Yeasts and moulds	21.5
Yeasts and moulds	21.5 (modified)

- (a) Cereals and cereal products
- (b) Edible oils, fats and derived products
- (c) Nuts, fruits, vegetables and derived products
- (d) Sauces, herbs, spices and condiments
- (e) Sugar and sugar confectionery
- (f) Dairy products
- (g) Meat, poultry and derived products
- (h) Fish and fish products (including shellfish)
- (i) Food additives and supplements
- (n) Other specified fresh foods (salads, airline meals)
- (o) Other specified preserved foods (dried, frozen)
- (p) Canned foods
- (q) Animal feeds

The following testing by the TEMPO automated MPN system:

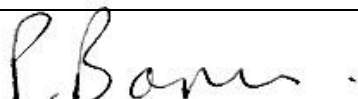
Yeast and moulds TEMPO MPN

**(i) Food additives and supplements**

Salmonella (PCR) In-house method

**1.12 Waters**

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In accordance with APHA “Standard Methods for the Examination of Water and Wastewater” 23<sup>rd</sup> Edition except where otherwise indicated.

- (a) Potable waters**
- (b) Non-potable waters**
- (c) Sewage**
- (d) Effluent and trade wastes**
- (g) Marine waters**

<i>E coli</i> - MF	9222 G
<i>E coli</i> - MF	9222 B (modified)
<i>E coli</i> - MF	9222 D
<i>E coli</i> - MF	9222 D (modified)
<i>E coli</i> - MF	9221 F (modified)
<i>E coli</i> - MPN	9221 F
<i>E coli</i> - MPN	9223 B
<i>E coli</i> - P/A	9221 F (modified)
<i>E coli</i> - P/A	9223 B
Enterococci	9230 C
Enterococci	USEPA 1106.1
Enterococci (excluding sewage)	MIMM 12.4
Faecal coliforms - MF	9222 D
Faecal coliforms - MF	9222 D (modified)
Faecal coliforms - MF	9221 E
Faecal coliforms - MPN	9221 B
Faecal coliforms - MPN	9221 E
Faecal coliforms – P/A	9221 E
Heterotrophic plate count	9215 B
Heterotrophic plate count	MIMM 11.6
Total coliforms - MPN	9221 B
Total coliforms - MPN	9223 B
Total coliforms - P/A	9223 B
Total coliforms (presumptive) - MPN	9221 B
Total coliforms (presumptive) - MPN	9223 B

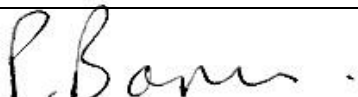
- (b) Non-potable waters**
- (c) Sewage**
- (d) Effluent and trade wastes**
- (g) Marine waters**

<i>E coli</i> – MPN	IDEXX Colilert-18
Faecal coliforms – MPN	IDEXX Colilert-18

**(a) Potable Waters**

<i>E coli</i>	AS 4276.7
Faecal coliforms	AS 4276.7

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Faecal streptococci	MIMM 11.7
Heterotrophic plate count	AS 4276.3.1: 2007
<i>Pseudomonas aeruginosa</i>	AS 4276.13
<i>Pseudomonas aeruginosa</i>	APHA 9213 E
Sulphite reducing clostridia	EA Micro Drinking Water 2010 (Part 6)
Sulphite reducing clostridia	MIMM 11.8
Total coliforms	AS 4276.5

**(e) Cooling tower and industrial waters**

Heterotrophic plate count (22°C, 35°C)	9215 B
Heterotrophic plate count	AS 4276.3.1: 2007
<i>Legionella pneumophila</i>	AS/NZS 3896:2017
Legionella species	AS/NZS 3896:2017

**(f) Swimming and spa pools**

Faecal coliforms - MF	9222 B
Faecal coliforms - MF	9222 D
Faecal coliforms - MF	9222 D (modified)
Faecal coliforms - MF	9221 E
Faecal coliforms - MPN	9221 B
Faecal coliforms - MPN	9221 E
Heterotrophic plate count (22°C, 35°C)	9215 B
<i>Pseudomonas aeruginosa</i> (MF)	9213 E
<i>Staphylococcus aureus</i> (MF)	9213 B
<i>Staphylococcus aureus</i> (MPN)	9213 B
Total coliforms (presumptive) - MPN	9221 B
Total coliforms (presumptive) - MPN	9221 E

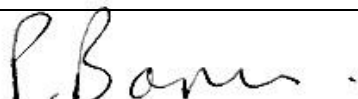
**1.71 Biological Condition**

**(b) Plant hygiene evaluation (environmental swabs)**

In accordance with APHA "Compendium of Methods for the Microbiological Examination of Foods" 4<sup>th</sup> Edition except where otherwise indicated.

Aerobic plate count	6.523
Aerobic plate count	6.524
Aerobic plate count	8.72
Aerobic plate count	8.73
Aerobic plate count	8.82
Aerobic plate count	TEMPO AC
<i>Bacillus cereus</i> (count)	TEMPO BC
Coliform (count)	TEMPO CC
<i>Cronobacter</i> spp. including <i>Cronobacter sakazkii</i>	PCR (In-house)

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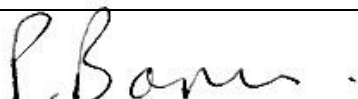
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<i>E coli</i>	9.93 (modified)
<i>E coli</i>	9.935
<i>E coli</i> (count)	TEMPO EC
Enterobacteriaceae	9.63 (modified)
Enterobacteriaceae (count)	TEMPO EB
Faecal coliforms	9.81
Hygiene evaluation	NZTM 2.120 (modified)
<i>Listeria monocytogenes</i>	35.5
<i>Listeria monocytogenes</i> (PCR)	In-house method
Listeria species	35.5
Listeria species (PCR)	In-house method
Salmonella (PCR)	In-house method
<i>Staphylococcus aureus</i> (count)	TEMPO STA
Total coliforms	9.935
Total coliforms	9.72
Total coliforms (presumptive)	9.71
Yeasts and moulds	21.5
Yeasts and moulds	21.5 (modified)
Yeasts and moulds	TEMPO MPN

**References:**

APHA	American Public Health Association
AS	Australian Standard
FDA BAM	United States Food and Drug Administration Bacteriological Analytical Manual
MIMM	Microbiological Methods for the Meat Industry (5 <sup>th</sup> Edition)
NMD	NZFSAN National Microbiological Database Technical Procedures
NZTM 2	New Zealand Dairy Industry Microbiological Test Methods Manual
USEPA	United States Environmental Protection Agency

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