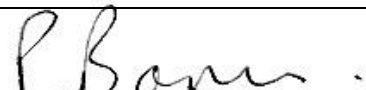


Laboratory Accreditation Programmes

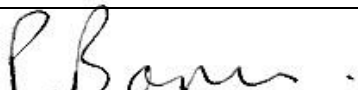
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Hill Laboratories Hamilton Private Bag 3205, Waikato Mail Centre, Hamilton, 3240 28 Duke St, Frankton, Hamilton, 3204 Telephone 0508 445-5522	Client No. 590 www.hill-laboratories.com																				
Authorised Representative Ms Gillian Lees Quality Management Contractor Programme Biological Testing Laboratory Accreditation Number 1287 Initial Accreditation Date 16 November 2017																					
Conformance Standard NZS ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories																					
Testing Services Summary Foods 1.11 Foods 1.71 Biological Condition Waters 1.12 Waters Molecular 1.62 Molecular Biology																					
Key Technical Personnel Foods <table style="width: 100%; border: none;"> <tr><td style="width: 30%;">Mrs Priya Babu</td><td style="width: 40%;">1.11 (selected), 1.71</td></tr> <tr><td>Ms April Flett</td><td>1.11, 1.71; selected</td></tr> <tr><td>Dr Eilidh Mowat</td><td>1.11, 1.71; selected</td></tr> <tr><td>Mrs Shobhna Ram</td><td>1.11, 1.71; selected</td></tr> <tr><td>Mr Kevin Wang</td><td>1.11, 1.71</td></tr> <tr><td>Ms Ester Woollaston</td><td>1.11, 1.71; selected</td></tr> </table> Waters <table style="width: 100%; border: none;"> <tr><td style="width: 30%;">Mrs Priya Babu</td><td style="width: 40%;">1.12</td></tr> <tr><td>Ms April Flett</td><td>1.12 (selected)</td></tr> <tr><td>Mrs Shobhna Ram</td><td>1.12</td></tr> <tr><td>Mr Kevin Wang</td><td>1.12</td></tr> </table>		Mrs Priya Babu	1.11 (selected), 1.71	Ms April Flett	1.11, 1.71; selected	Dr Eilidh Mowat	1.11, 1.71; selected	Mrs Shobhna Ram	1.11, 1.71; selected	Mr Kevin Wang	1.11, 1.71	Ms Ester Woollaston	1.11, 1.71; selected	Mrs Priya Babu	1.12	Ms April Flett	1.12 (selected)	Mrs Shobhna Ram	1.12	Mr Kevin Wang	1.12
Mrs Priya Babu	1.11 (selected), 1.71																				
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Laboratory Accreditation Programmes

Schedule to CERTIFICATE OF ACCREDITATION	
Ms Ester Woollaston	1.12 (selected)
Molecular	
Ms Ester Woollaston	1.62 (selected)
Ms Fiona Calvert	1.62 (selected)
Mr Jon Harris	1.62 (selected)
Dr Eilidh Mowat	1.62

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Schedule to
CERTIFICATE OF ACCREDITATION

Hill Laboratories
Biological Testing Laboratory
SCOPE OF ACCREDITATION

Accreditation Number 1287

Foods

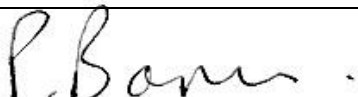
1.11 Foods

- (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
- (i) Eggs and egg products
- (k) Non-alcoholic beverages
- (p) Canned foods
- (q) Animal feeds

The following tests are in accordance with APHA Compendium for the Microbiological Examination of Foods (5th Edition) methods unless were otherwise stated:

Aerobic Plate Count	6.523, 8.72
Aerobic Plate Count	6.524, 8.73
Aerobic Plate Count	8.82
Aerobic Plate Count (pour plate)	MIMM 6
Aerobic Plate Count (spread plate)	MIMM 6
Aerobic Plate Count (petrifilm)	MIMM 6
Aerobic Plate Count	TEMPO AC
<i>Bacillus cereus</i>	31
<i>Bacillus cereus</i>	31 (modified)
<i>Bacillus cereus</i> (count)	TEMPO BC
Coliform (count)	TEMPO CC
<i>E. coli</i> – Petrifilm	9.935
<i>E. coli</i> – Petrifilm	MIMM 8.4.
<i>E. coli</i> -MPN	9.93
<i>E. coli</i> (count)	TEMPO EC
Enterobacteriaceae	MIMM 8.2
Enterobacteriaceae	9.62 (modified)
Enterobacteriaceae	9.63 (modified)
Enterobacteriaceae (count)	TEMPO EB
Faecal Coliforms MPN	9.81
<i>Listeria</i> count	ISO 11290-2 Amendment 1 (2004)(modified)
<i>Listeria</i> (PCR)	In-House
Mould	21.51
Presumptive Coliforms-MPN	9.71
Salmonella (PCR)	In-House

Authorised:
General Manager



Issue 3

Date: 19/11/18

Page 3 of 7

Schedule to
CERTIFICATE OF ACCREDITATION

Hill Laboratories
Biological Testing Laboratory
SCOPE OF ACCREDITATION

Accreditation Number 1287

<i>Staphylococcus aureus</i>	39.6
<i>Staphylococcus aureus</i>	MIMM 7.8
<i>Staphylococcus aureus</i> (count)	TEMPO STA
Total Coliforms – Petrifilm	9.935
Total Coliforms MPN	9.72
Yeast & Mould	21.51
Yeast & Mould	21.52
Yeast & Mould	TEMPO MPN
Yeast & Mould	21.5 (modified)

(f) Dairy products

Cronobacter (PCR)	In-House
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(k) Non-alcoholic beverages (syrups, juices)

Aciduric Plate Count	58.5 & 8.73
Aciduric Plate Count (MF using Orange Serum Agar)	6.54 / 58.552
Aerobic Plate Count (MF)	6.54
Yeasts & Moulds (MF)	21.51
Yeasts & Moulds (MF)	21.52
Xerophilic Yeast & Mould Counts (MF)	21.52

(n) Other specified fresh foods

Leptospermum scoparium DNA (PCR) (honey)	PCR as per MPI Technical Paper 2017/31.
Leptospermum scoparium DNA (PCR) (honey) (modified)	PCR as per MPI Technical Paper 2017/31
Osmophilic fungi count	17.3
<i>Staphylococcus aureus</i>	39.6

(n) Other specified fresh foods

(o) Other specified preserved foods

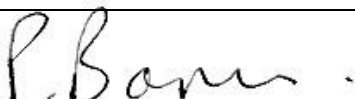
Aerobic Plate Count	TEMPO AC
<i>Bacillus cereus</i> (count)	TEMPO BC
Coliform (count)	TEMPO CC
<i>E. coli</i> (count)	TEMPO EC
Enterobacteriaceae (count)	TEMPO EB
<i>Staphylococcus aureus</i> (count)	TEMPO STA
Yeast & Mould	TEMPO MPN
Yeast & Mould	APHA 5 th Edition – Chapter 21.5 (modified)

1.71 Biological Condition

(b) Plant hygiene evaluation

The following tests are in accordance with APHA Compendium for the Microbiological Examination of Foods

Authorised:
General Manager



Issue 3

Date: 19/11/18

Page 4 of 7

Schedule to
CERTIFICATE OF ACCREDITATION

Hill Laboratories
Biological Testing Laboratory
SCOPE OF ACCREDITATION

Accreditation Number 1287

(5th Edition) methods unless were otherwise stated:

Aerobic Plate Count	8.82
Aerobic Plate Count	MIMM 6
Aerobic Plate Count	TEMPO AC
<i>Bacillus cereus</i> (count)	TEMPO BC
Coliform (count)	TEMPO CC
Cronobacter (PCR)	In-House
<i>E coli</i> – Petrifilm	9.935
<i>E coli</i> – Petrifilm	MIMM 8.4.
<i>E.coli</i> (count)	TEMPO EC
Enterobacteriaceae	MIMM 8.2
Enterobacteriaceae	9.62 (modified)
Enterobacteriaceae	9.63 (modified)
Enterobacteriaceae (count)	TEMPO EB
Listeria (PCR)	In-House
Listeria count	ISO 11290-2 Amendment 1 (2004) (modified)
Salmonella (PCR)	In-House
<i>Staphylococcus aureus</i> (count)	TEMPO STA
Total Coliforms – Petrifilm	9.935
Yeast & Mould	TEMPO MPN
Yeast & Mould	21.5 (modified)

Waters

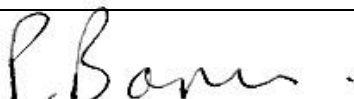
1.12 Waters

- (a) Potable waters
- (b) Non-potable waters e.g. receiving waters, ground waters
- (c) Sewage
- (d) Effluent and trade wastes
- (e) Cooling tower and industrial waters
- (f) Swimming and spa pools
- (g) Marine waters

The following tests are in accordance with APHA “Standard Methods for the Examination of Water and Wastewater” (23rd Edition) except where otherwise indicated.

Aerobic Plate Count 22°C	MIMM 11.6
<i>E coli</i> - MF	9222 G
<i>E coli</i> - MPN	9221 F
<i>E coli</i> -MPN (TBX)	9221 F (modified)
<i>E coli</i> - MPN	9223 B Colilert
<i>E coli</i> - P/A	9223 B Colilert

Authorised:
General Manager



Issue 3

Date: 19/11/18

Page 5 of 7

Schedule to
CERTIFICATE OF ACCREDITATION

Hill Laboratories
Biological Testing Laboratory
SCOPE OF ACCREDITATION

Accreditation Number 1287

<i>E. coli</i>	MIMM 11.A1.1
<i>E. coli</i> - MPN	MIMM 11.A2.6
Enterococci	MIMM 12.4
Enterococci - MF	9230 C (modified)
Faecal coliforms - MF	9222 D
Faecal coliforms - MPN	9221 E
Faecal Coliforms	MIMM 11.A2
Heterotrophic plate count	9215 B
<i>Pseudomonas aeruginosa</i>	9213 E
<i>Staphylococcus aureus</i>	9213 B
Total coliforms - MF	9222 B
Total coliforms - MPN	9221 B
Total coliforms - MPN	9223 B Colilert
Total coliforms - P/A	9223 B Colilert
Total Coliforms	MIMM 11.A1.1
Total Coliforms	MIMM 11.A2
Total Coliforms	MIMM 11.A2.6

(a) Potable waters

<i>Clostridium perfringens</i> , including Spores (MF)	MIMM 11.A3
<i>E. coli</i> (MF)	AS 4276.7: 2007
Faecal Coliforms (MF)	AS 4276.7: 2007
Faecal Streptococci (MF)	MIMM 11.7
Heterotrophic Plate Count	AS 4276.3.1: 2007
Heterotrophic Plate Count	ISO 6222:1999
<i>Pseudomonas aeruginosa</i> (MF)	AS 4276.13: 2008
Sulphite Reducing Clostridia including spores (MF)	EA Microbiology Drinking Water 2010 (Part 6)
Total Coliforms (MF)	AS 4276.5: 2007

(e) Cooling tower and industrial waters

Legionella AS/NZS 3896: 2017

Molecular

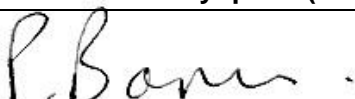
1.62 Molecular Biology

(b) DNA typing

Testing for the following bacteria in kiwifruit plant material using Psa-V Taqman Real-Time PCR

Pseudomonas syringae pv. *actinidiae* (Psa)
Detection of American Foulbrood by qPCR
Detection of American Foulbrood by qPCR (in-house)

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General Manager



Issue 3

Date: 19/11/18

Page 6 of 7

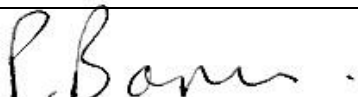
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References:

AS/NZS Australian / New Zealand Standards
ISO International Standards Organisation
MIMM Meat Industry Microbiological Methods (5th Edition)

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Issue 3

Date: 19/11/18

Page 7 of 7