



Hill Laboratories

Hamilton

Client Number 590

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Authorised Representative

Ms Gillian Lees
Quality Management Contractor

Programme

Biological Testing Laboratory

Accreditation Number 1287

Initial Accreditation Date 16 November 2017

Conformance Standard

ISO/IEC 17025:2017

General requirements for the competence of testing and calibration laboratories

Laboratory Services Summary

Drugs and Pharmaceuticals

1.03 Drugs and Pharmaceuticals

Foods

1.11 Foods

1.71 Biological Condition

Waters

1.12 Waters

Molecular Biology

1.03 Drugs and Pharmaceuticals

1.11 Foods

1.62 Molecular Biology

1.71 Biological Condition

Key Technical Personnel

Drugs and Pharmaceuticals

Mrs Priya Babu 1.03

Ms April Flett 1.03

Operations Manager
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Mr Aarav Marwaha	1.03
Mrs Shobhna Ram	1.03
Mr Kevin Wang	1.03
Ms Ester Woollaston	1.03
Foods	
Mrs Priya Babu	1.11, 1.71
Ms April Flett	1.11, 1.71
Mr Aarav Marwaha	1.11, 1.71
Dr Eilidh Mowat	1.11, 1.71; selected
Mrs Shobhna Ram	1.11, 1.71
Mr Kevin Wang	1.11, 1.71
Ms Ester Woollaston	1.11, 1.71
Waters	
Mrs Priya Babu	1.12
Ms April Flett	1.12
Mrs Shobhna Ram	1.12
Mr Kevin Wang	1.12
Ms Ester Woollaston	1.12
Molecular Biology	
Mrs Priya Babu	1.03, 1.11 (selected), 1.71(selected)
Ms Fiona Calvert	1.62 (b)(selected)
Ms April Flett	1.03, 1.11 (selected), 1.71(selected)
Mr Jon Harris	1.62 (b)(selected)
Miss Fatima Hontiveros	1.03, 1.11, 1.71(selected)
Dr Sara Loeffen	1.62 (b)(selected)(d), 1.71(selected)
Mr Aarav Marwaha	1.03, 1.11 (selected), 1.71(selected)
Dr Eilidh Mowat	1.03, 1.11, 1.62, 1.71
Mrs Shobhna Ram	1.03, 1.11 (selected), 1.71(selected)
Mr Kevin Wang	1.03, 1.11, 1.71(selected)
Ms Ester Woollaston	1.03, 1.11, 1.62 (b)(selected) (d), 1.71

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Drugs and Pharmaceuticals

1.03 Drugs and Pharmaceuticals

(a) Microbiological quality (including sterility) (Cannabis)

Aerobic plate count	APHA 8.82 (modified)
Aerobic plate count	European Pharmacopoeia (Modified)
Bile Tolerant Gram Negative Bacteria	European Pharmacopoeia (Modified)
<i>E. coli</i>	European Pharmacopoeia (Modified)
<i>Pseudomonas aeruginosa</i>	European Pharmacopoeia (Modified)
Salmonella	European Pharmacopoeia (Modified)
Yeast & Mould(count)	APHA 21.51 (Modified)
Yeast & Mould(count)	European Pharmacopoeia (Modified)


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

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<i>Bacillus cereus</i>	31 (modified)
<i>Bacillus cereus</i> (count)	TEMPO BC
Coliform (count)	TEMPO CC
<i>E. coli</i> (count)	TEMPO EC
<i>E. coli</i> - Petrifilm	9.935
<i>E. coli</i> - Petrifilm	MIMM 8.4
<i>E. coli</i> - MPN	9.93
Enterobacteriaceae	MIMM 8.2
Enterobacteriaceae	9.62 (modified)
Enterobacteriaceae	9.63 (modified)
Enterobacteriaceae (count)	TEMPO EB
Faecal Coliforms MPN	9.81
Listeria count	ISO 11290-2 (2017) (modified)
Mould	21.51
Presumptive Coliforms-MPN	9.71
<i>Staphylococcus aureus</i>	39.6
<i>Staphylococcus aureus</i>	MIMM 7.8
<i>Staphylococcus aureus</i> (count)	TEMPO STA
Total Coliforms MPN	9.72
Total Coliforms - Petrifilm	9.935
Yeast & Mould	21.51
Yeast & Mould	21.52
Yeast & Mould	21.51 (modified)
Yeast & Mould (count)	TEMPO MPN

(k) Non-alcoholic beverages (syrops, 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

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

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<i>Staphylococcus aureus</i> (count)	TEMPO STA
Yeast & Mould (count)	TEMPO MPN
Yeast & Mould	APHA 5 th Edition – Chapter 21.51 (modified)

1.71 Biological Condition

(b) Plant hygiene evaluation

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	8.82
Aerobic Plate Count	MIMM 6
Aerobic Plate Count	TEMPO AC
<i>Bacillus cereus</i> (count)	TEMPO BC
Coliform (count)	TEMPO CC
<i>E. coli</i> (count)	TEMPO EC
<i>E. coli</i> - Petrifilm	9.935
<i>E. coli</i> - Petrifilm	MIMM 8.4
Enterobacteriaceae	MIMM 8.2
Enterobacteriaceae	9.62 (modified)
Enterobacteriaceae	9.63 (modified)
Enterobacteriaceae (count)	TEMPO EB
Listeria count	ISO 11290-2 (2017) (modified)
<i>Staphylococcus aureus</i> (count)	TEMPO STA
Total Coliforms - Petrifilm	9.935
Yeast & Mould	21.51 (modified)
Yeast & Mould (count)	TEMPO MPN

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.

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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> - Colilert Quantitray (97 well)	9223 B (excluding marine)
<i>E. coli</i> - Colilert Quantitray (51 well)	9223 B (excluding marine)
<i>E. coli</i> - Colilert-18 Quantitray (97 well)	9223 B
<i>E. coli</i> - Colilert-18 Quantitray (51 well)	9223 B
<i>E. coli</i> - MPN	9223 B Colilert
<i>E. coli</i> - P/A	9223 B Colilert
<i>E. coli</i>	MIMM 11.A1
<i>E. coli</i> - MPN	MIMM 11.A2
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 - Colilert Quantitray (97 well)	9223 B (excluding marine)
Total coliforms - Colilert Quantitray (51 well)	9223 B (excluding marine)
Total coliforms - Colilert-18 Quantitray (97 well)	9223 B (excluding marine)
Total coliforms - Colilert-18 Quantitray (51 well)	9223 B (excluding marine)
Total coliforms - P/A	9223 B Colilert
Total Coliforms	MIMM 11.A1
Total Coliforms	MIMM 11.A2
Total Coliforms	MIMM 11.A2

(a) Potable waters

<i>Clostridium perfringens</i> , including Spores (MF)	MIMM 11.A3
<i>E. coli</i> (MF)	AS/NZS 4276.7: 2007
Faecal Coliforms (MF)	AS/NZS 4276.7: 2007
Faecal Streptococci (MF)	MIMM 11.7
Heterotrophic Plate Count	AS/NZS 4276.3.1: 2007
<i>Pseudomonas aeruginosa</i> (MF)	AS/NZS 4276.13: 2008
Sulphite Reducing Clostridia including spores (MF)	Standing Committee of Analysts Microbiology Drinking Water 2015 (Part 6)
Total Coliforms (MF)	AS/NZS 4276.5: 2007

(e) Cooling tower and industrial waters

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Legionella AS/NZS 3896: 2017

Molecular Biology

1.03 Drugs and Pharmaceuticals

(a) Microbiological quality (including sterility) (Cannabis)

Salmonella PCR In-House method

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

Listeria PCR In-House method
 Salmonella PCR In-House method

(f) Dairy products


Cronobacter PCR In-House method

(n) Other specified fresh foods (honey)

Leptospermum scoparium DNA PCR as per MPI Technical Paper 2017/31
 Leptospermum scoparium DNA PCR as per MPI Technical Paper 2017/31 (modified)

1.62 Molecular Biology

(b) DNA typing

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Detection of American Foulbrood by qPCR
 Detection of American Foulbrood by qPCR (in-house)

Testing for the following bacteria in kiwifruit plant material using Psa-V Taqman Real-Time PCR
Pseudomonas syringae pv. *actinidiae* (Psa)

(d) Medical Testing – Swabs

SARs CoV-2 testing only

The following analyses carried out in accordance with in-house methods based on the references as stated below and the requirements of ISO 15189:2012 *Medical laboratories – Requirements for quality and competence*

RNA extraction
 Real time PCR

References:

NPAAC Requirements for Medical Testing on Microbial Nucleic Acids

1.71 Biological Condition

(b) Plant hygiene evaluation

Cronobacter (PCR)	In-House
Listeria (PCR)	In-House
Salmonella (PCR)	In-House

(c) Other specified tests – Environmental swab testing

SARs CoV-2	RNA extraction / Real time PCR
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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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