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Certificate of Analysis

Client: [redacted]
Contact:

Lab No: 3722246 HGPv1
Date Received: 22-Nov-2024
Date Reported: 02-Dec-2024
Quote No:
Order No:
Client Reference: [redacted] Blueprint
Submitted By: [redacted]

Sample Type: Honey

Sample Name:		131124B3-1; 131124B3-2; 131124B3-3; 131124B3-4
Lab Number:		3722246.1
MPI Manuka Classification		
MPI Manuka Honey Classification		Monofloral Manuka Honey
3-Phenyllactic acid (3-PA)	mg/kg	630
2'-Methoxyacetophenone (2'-MAP)	mg/kg	13.7
2-Methoxybenzoic acid (2-MBA)	mg/kg	7.5
4-Hydroxyphenyllactic acid (4-HPA)	mg/kg	6.5
Manuka DNA	Cq	24.08
Manuka Honey Analysis		
Dihydroxyacetone (DHA)	mg/kg	685
5-Hydroxymethylfurfural (HMF)	mg/kg	16.0
Methylglyoxal (MGO)	mg/kg	313
Non Peroxide Activity (NPA)*	% Phenol Equivalent	11.1
Leptosperin	mg/kg	340
Tutin Analysis		
Tutin Result Evaluation	Pass/Fail	PASS
Tutin	mg/kg	< 0.010
MRL as per Tutin in Honey Food Standard 2016	mg/kg	0.70
C-4 Sugar Analysis - AOAC method		
δ ^{13}C Honey (Whole)	‰	-25.59
δ ^{13}C Honey (Protein)	‰	-26.57
Difference (Whole - Protein)	‰	1.0
C-4 Sugar Content	%	5.8
Microbiological Analysis		
Osmophilic Yeasts	cfu / g	10 #1
Total Coliforms	cfu / g	< 10
Escherichia coli	cfu / g	< 10
Salmonella	per 25g	Not Detected
Staphylococcus aureus	cfu / g	< 10

Sample Type: Honey		
Sample Name:		131124B3-1; 131124B3-2; 131124B3-3; 131124B3-4
Lab Number:		3722246.1
American Foulbrood Analysis		
American Foulbrood (AFB)		Not Detected
American Foulbrood (AFB)	Spores and/or cells per g	< 92
Diatase Analysis		
Diastase Activity	DN	10.1
Heavy Metal Analysis		
Arsenic	mg/kg as rcvd	< 0.010
Cadmium	mg/kg as rcvd	< 0.004
Lead	mg/kg as rcvd	< 0.02
Mercury	mg/kg as rcvd	< 0.010
Glyphosate Analysis		
AMPA	mg/kg	< 0.010
Glufosinate	mg/kg	< 0.010
Glyphosate	mg/kg	< 0.010
Aflatoxin Analysis		
Aflatoxin B1*	mg/kg	< 0.0010
Aflatoxin B2*	mg/kg	< 0.0010
Aflatoxin G1*	mg/kg	< 0.0010
Aflatoxin G2*	mg/kg	< 0.0010
Other Analysis		
pH*	pH Units	4.2

Sample Type: Honey	
Sample Name:	131124B3-1; 131124B3-2; 131124B3-3; 131124B3-4
Lab Number:	3722246.1
Multiresidue Analysis 1 - Honey Samples	
Analytes Detected:	None

Multiresidue Analysis 2 - Honey Samples	
Analytes Detected:	None

Please refer to the detection limits table for the list of analytes screened and their detection limits.

Analyst's Comments

#1 Statistically estimated count based on the theoretical countable range for the stated method.

Sample 1 Comment:
AFB Comment:
Please note: The result of "Not Detected" could include situations where late amplification of the AFB marker was seen, past the limit of detection (LOD) of the assay (i.e. 1-91 cells and/or spores per g).

Sample 1 Comment:
C-4 Sugar Content:
As reported in AOAC method 998.12, pure honey (free of corn or cane sugars) with an exception of a few unusual varieties, yields a C-4 Sugar Content value of less than or equal to 7%. Some unusual varieties may slightly exceed this value, but will have a d ^{13}C for honey which is in the normal range (more negative than -24.0‰).

Sample 1 Comment:
MPI Classification Comment:
The results presented on the Certificate of Analysis have been rounded to an appropriate number of significant figures, based on the Uncertainty of Measurement of the methods performed. The 'MPI Manuka Honey Classification' has been determined using unrounded values. In cases where one or more values were close to the critical levels (as defined by MPI), there may be a seeming inconsistency between the classification and the rounded values reported.

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request. Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Honey

Test	Method Description	Default Detection Limit	Sample No
Individual Tests			
Diastase Activity	Aqueous extraction, analysed using the Phadebas amylase method. Diastase activity is expressed as the diastase number, equivalent to Schade units.	2.0 DN	1
pH*	As received sample fraction mixed with water, measurement of aqueous phase, pH meter.	0.1 pH Units	1
Biological Materials Digestion	Nitric and hydrochloric acid micro digestion, filtration. In-house based on APHA 3030.	-	1
TMAH Digestion	Tetramethylammonium hydroxide micro digestion, filtration. P.A.Fecher, I.Goldman and A.Nagengast. Journal of Analytical Atomic Spectrometry, 1998, **13**, 977-982.	-	1
Arsenic	TMAH digestion. Analysis by ICP-MS.	0.010 mg/kg as rcvd	1
Cadmium	Biological materials digestion. Analysis by ICP-MS. In-house based on APHA 3125.	0.004 mg/kg as rcvd	1
Lead	Biological materials digestion. Analysis by ICP-MS. In-house based on APHA 3125.	0.02 mg/kg as rcvd	1
Mercury	Biological materials digestion. Analysis by ICP-MS. In-house based on APHA 3125.	0.010 mg/kg as rcvd	1
3-in-1 Honey method	Aqueous extraction, derivatisation. Analysis by uHPLC / UV-Vis (dihydroxyacetone, 5-hydroxymethylfurfural, methylglyoxal). In-house.	1.0 - 10 mg/kg	1
C-4 Sugars Analysis - AOAC method	Methodology was performed in accordance with AOAC Official Method 998.12 (Revised First Edition 2013), C-4 Plant Sugars in Honey, using Internal Standard Stable Carbon Isotope Ratio Analysis (ISCIRA). All isotope ratios are reported as 'per mil' i.e. parts per thousand (‰), and are reported relative to the international standard for Carbon, V-PDB.	-	1
Leptosperin	Aqueous extraction, dilution, analysis by LC-MS/MS.	15 mg/kg	1
Non Peroxide Activity (NPA)*	NPA is calculated from methylglyoxal using an industry accepted correlation curve based on published data[1,2] for NPA and the primary active ingredient, methylglyoxal. [1] Isolation by HPLC and characterisation of the bioactive fraction of New Zealand manuka (Leptospermum scoparium) honey. C. J. Adams, et al. Carbohydrate Research 343 (2008) 651-659. [2] Corrigendum to "Isolation by HPLC and characterization of the bioactive fraction of New Zealand manuka (Leptospermum scoparium) honey" [Carbohydr. Res. 343 (2008) 651]. C. J. Adams, et al. Carbohydrate Research 344 (2009) 2609.	1.0 % Phenol Equivalent	1
Tutin Analysis in Honey	Solvent extraction, dilution. Analysis by LC-MS/MS. Results are representative of the liquid honey, not the sample as a whole. <u>Tutin Result Evaluation (PASS/FAIL)</u> The PASS/FAIL result is based on comparison of the tutin result with the "Food Standard: Tutin in Honey (2016)". A result that falls at or BELOW the maximum permitted tutin level will give a PASS result. A result that falls ABOVE the maximum permitted tutin level will give a FAIL result. <u>Individual Sample Testing Recommended?</u> Where a tutin result for a composited sample is above the maximum permitted level, it is recommended that the individual samples are retested. Please contact the laboratory to arrange for individual sample retesting. **RLP Official Test 8.42**.	0.010 mg/kg	1
Total Coliforms	Automated MPN count on TEMPO TC, incubated at 35°C for 24-27 hours. bioMérieux, TEMPO.	10 cfu / g	1
Escherichia coli	Automated MPN count on TEMPO EC, Incubated at 35°C for 22-27 hours. bioMérieux, TEMPO.	10 cfu / g	1
Staphylococcus aureus	Automated MPN count on TEMPO STA, Incubated at 35°C for 24-27 hours. bioMérieux, TEMPO.	10 cfu / g	1
Osmophilic Yeasts	Spread plate, Count on: MY40G agar, Incubated at 30°C for 5 days. APHA 17.3 5th Ed.	1 cfu / g	1
Salmonella	Detection of Salmonella by qualitative real-time PCR. In-house.	-	1
Aflatoxin Analysis - Type C samples*	Solvent extraction, SPE cleanup, analysis by LC-MS/MS.	0.0010 mg/kg	1

Sample Type: Honey			
Test	**Method Description**	**Default Detection Limit**	**Sample No**
Glyphosate LC-MS/MS Analysis	Aqueous extraction, Analysis by LC-MS/MS. In-house. **RLP Official Test 8.47.1**.	0.010 mg/kg	1
Multiresidue Analysis 1 - Honey Samples	Solvent extraction, SPE cleanup, dilution. Analysis by GC-MS/MS and LC-MS/MS. In-house (using a Citrate buffered QuEChERS extraction).	0.010 - 0.3 mg/kg	1
Multiresidue Analysis 2 - Honey Samples	Solvent extraction, SPE cleanup, dilution. Analysis by LC-MS/MS. In-house (using a Citrate buffered QuEChERS extraction).	0.010 - 0.3 mg/kg	1
MPI 5 Attributes Tests			
MPI Manuka Honey Classification	Evaluation of results against Ministry of Primary Industries (MPI) criteria for classification of monofloral and multifloral Manuka honey. General Export Requirements for Bee Products - 27 October 2021.	-	1
Manuka Honey Chemistry Profile			
3-Phenyllactic acid (3-PA)	Aqueous solvent extraction, dilution. LC-MS/MS analysis. MPI Technical Paper 2017/30 (modified) **RLP Official Test 10.05**.	5 mg/kg	1
2'-Methoxyacetophenone (2'-MAP)	Aqueous solvent extraction, dilution. LC-MS/MS analysis. MPI Technical Paper 2017/30 (modified) **RLP Official Test 10.05**.	0.50 mg/kg	1
2-Methoxybenzoic acid (2-MBA)	Aqueous solvent extraction, dilution. LC-MS/MS analysis. MPI Technical Paper 2017/30 (modified) **RLP Official Test 10.05**.	0.50 mg/kg	1
4-Hydroxyphenyllactic acid (4-HPA)	Aqueous solvent extraction, dilution. LC-MS/MS analysis. MPI Technical Paper 2017/30 (modified) **RLP Official Test 10.05**.	0.50 mg/kg	1
Manuka Honey PCR Profile			
Manuka DNA	Quantification of Manuka (*Leptospermum scoparium*) DNA by real time PCR. MPI Technical - Paper No: 2017/31 (modified). **RLP Official Test 10.04**.	> 36 Cq	1
American Foulbrood Profile			
American Foulbrood (AFB)	Quantification of Paenibacillus larvae, causative agent of American foulbrood (AFB), using real time PCR analysis. **RLP Official Test 2.14**.	92 Spores and/or cells per g	1

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 22-Nov-2024 and 02-Dec-2024. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

Helen McGowan BSc (Tech)
Operations Support - Food & Bioanalytical

Detection Limits

Analytes	Detection Limit
Multiresidue Analysis 1 - Honey Samples	
Acephate	0.03 mg/kg
Acetochlor	0.010 mg/kg
Acibenzolar-S-methyl	0.03 mg/kg
Acrinathrin	0.04 mg/kg
Alachlor	0.010 mg/kg
Aldrin	0.02 mg/kg
Anthraquinone	0.010 mg/kg
Atrazine	0.010 mg/kg
Atrazine-desethyl	0.010 mg/kg
Atrazine-desisopropyl	0.02 mg/kg
Azaconazole	0.010 mg/kg
Azinphos-methyl	0.010 mg/kg
Azoxystrobin	0.010 mg/kg
Benalaxyl	0.010 mg/kg
Bendiocarb	0.010 mg/kg
Benodanil	0.010 mg/kg
Benoxacor	0.010 mg/kg
alpha-BHC	0.010 mg/kg
beta-BHC	0.010 mg/kg
gamma-BHC (Lindane)	0.010 mg/kg
delta-BHC	0.010 mg/kg
Bifenox	0.010 mg/kg
Bifenthrin	0.010 mg/kg
Bitertanol	0.010 mg/kg
Bromacil	0.010 mg/kg
Bromophos-ethyl	0.010 mg/kg
Bromopropylate	0.010 mg/kg
Bupirimate	0.010 mg/kg
Buprofezin	0.010 mg/kg
Butachlor	0.010 mg/kg
Butamifos	0.010 mg/kg
Cadusafos	0.010 mg/kg
Captafol	0.3 mg/kg
Captan	0.05 mg/kg
Carbaryl	0.010 mg/kg
Carbofenothion	0.010 mg/kg
Carbofuran	0.010 mg/kg
Carboxin	0.010 mg/kg
cis-Chlordane	0.010 mg/kg
trans-Chlordane	0.010 mg/kg
Chlorfenapyr	0.010 mg/kg
Chlorfenvinphos	0.010 mg/kg
Chlorfluazuron	0.010 mg/kg
Chlorobenzilate	0.010 mg/kg
Chlorothalonil	0.05 mg/kg
Chlorpropham	0.010 mg/kg
Chlorpyrifos	0.010 mg/kg
Chlorpyrifos-methyl	0.010 mg/kg
Chlorthal-dimethyl	0.010 mg/kg
Chlortoluron	0.010 mg/kg
Chlozolinate	0.010 mg/kg
Clomazone	0.010 mg/kg
Coumaphos	0.010 mg/kg
Cyanazine	0.010 mg/kg
Cyanophos	0.010 mg/kg
Cyfluthrin	0.010 mg/kg

Analytes	Detection Limit
Cyhalothrin	0.010 mg/kg
Cypermethrin	0.010 mg/kg
Cyproconazole	0.010 mg/kg
Cyprodinil	0.010 mg/kg
2,4'-DDD	0.010 mg/kg
4,4'-DDD	0.010 mg/kg
2,4'-DDE	0.010 mg/kg
4,4'-DDE	0.010 mg/kg
2,4'-DDT	0.010 mg/kg
4,4'-DDT	0.010 mg/kg
Deltamethrin (including Tralomethrin)	0.02 mg/kg
Demeton-S-methyl	0.010 mg/kg
Diazinon	0.010 mg/kg
Dichlobenil	0.05 mg/kg
Dichlofenthion	0.010 mg/kg
Dichlofluanid	0.010 mg/kg
Dichloran	0.010 mg/kg
Dichlorvos	0.05 mg/kg
Dicofol	0.10 mg/kg
Dicrotophos	0.010 mg/kg
Dieldrin	0.010 mg/kg
Difenoconazole	0.010 mg/kg
Diflufenican	0.010 mg/kg
Dimethenamid	0.010 mg/kg
Dimethoate	0.010 mg/kg
Dimethomorph	0.010 mg/kg
Dimethylvinphos	0.010 mg/kg
Dioxabenzofos	0.010 mg/kg
Diphenylamine	0.010 mg/kg
Disulfoton	0.010 mg/kg
Diuron	0.010 mg/kg
Edifenphos	0.010 mg/kg
Endosulfan I	0.010 mg/kg
Endosulfan II	0.010 mg/kg
Endosulfan sulfate	0.02 mg/kg
Endrin	0.010 mg/kg
Endrin ketone	0.010 mg/kg
EPN	0.02 mg/kg
Epoxiconazole	0.010 mg/kg
EPTC	0.02 mg/kg
Esprocarb	0.010 mg/kg
Ethion	0.010 mg/kg
Ethoprophos	0.010 mg/kg
Etoxazole	0.010 mg/kg
Etridiazole	0.2 mg/kg
Etrimfos	0.010 mg/kg
Famphur	0.010 mg/kg
Fenamiphos	0.010 mg/kg
Fenarimol	0.010 mg/kg
Fenchlorphos	0.010 mg/kg
Fenitrothion	0.05 mg/kg
Fenobucarb	0.010 mg/kg
Fenoxaprop-ethyl	0.010 mg/kg
Fenpiclonil	0.010 mg/kg
Fenpropathrin	0.010 mg/kg
Fenpropimorph	0.010 mg/kg
Fensulfothion	0.010 mg/kg

Analytes	Detection Limit
Fenthion	0.010 mg/kg
Fenvalerate (including Esfenvalerate)	0.010 mg/kg
Fluazifop-butyl	0.010 mg/kg
Flucythrinate	0.010 mg/kg
Fludioxonil	0.010 mg/kg
Fluometuron	0.010 mg/kg
Flusilazole	0.010 mg/kg
Flutriafol	0.05 mg/kg
Fluvalinate	0.010 mg/kg
Folpet	0.05 mg/kg
Fonofos	0.010 mg/kg
Furalaxyl	0.010 mg/kg
Furathiocarb	0.010 mg/kg
Halfenprox	0.010 mg/kg
Haloxyfop-etotyl	0.010 mg/kg
Haloxyfop-methyl	0.010 mg/kg
Heptachlor	0.02 mg/kg
Heptachlor epoxide	0.010 mg/kg
Heptachlor endo-epoxide	0.010 mg/kg
Hexachlorobenzene	0.010 mg/kg
Hexaconazole	0.010 mg/kg
Hexazinone	0.010 mg/kg
Hexythiazox	0.010 mg/kg
Imazalil	0.010 mg/kg
Indoxacarb	0.010 mg/kg
Iodofenphos	0.010 mg/kg
Iprobenfos	0.010 mg/kg
Iprodione	0.010 mg/kg
Isazophos	0.010 mg/kg
Isofenphos	0.010 mg/kg
Isofetamid	0.010 mg/kg
Isoprocarb	0.010 mg/kg
Kresoxim-methyl	0.010 mg/kg
Leptophos	0.010 mg/kg
Linuron	0.010 mg/kg
Malathion	0.010 mg/kg
Mepronil	0.010 mg/kg
Metalaxyl (Mefenoxam)	0.010 mg/kg
Methacrifos	0.05 mg/kg
Methamidophos	0.010 mg/kg
Methidathion	0.010 mg/kg
Methiocarb	0.010 mg/kg
Methoxychlor	0.010 mg/kg
Metolachlor	0.010 mg/kg
Metribuzin	0.010 mg/kg
Mevinphos	0.010 mg/kg
Molinate	0.05 mg/kg
Monocrotophos	0.010 mg/kg
Myclobutanil	0.010 mg/kg
Naled	0.04 mg/kg
Napropamide	0.010 mg/kg
Nitrofen	0.010 mg/kg
Nitrothal-isopropyl	0.010 mg/kg
Norflurazon	0.010 mg/kg
Omethoate	0.010 mg/kg
Oxadiazon	0.010 mg/kg
Oxadixyl	0.010 mg/kg

Analytes	Detection Limit
Oxychlordane	0.02 mg/kg
Oxyfluorfen	0.010 mg/kg
Paclobutrazol	0.010 mg/kg
Parathion-ethyl	0.010 mg/kg
Parathion-methyl	0.05 mg/kg
Penconazole	0.010 mg/kg
Pendimethalin	0.010 mg/kg
Permethrin	0.010 mg/kg
Phenthoate	0.010 mg/kg
Phorate	0.010 mg/kg
Phosalone	0.010 mg/kg
Phosmet	0.010 mg/kg
Phosphamidon	0.010 mg/kg
Piperonyl-butoxide	0.010 mg/kg
Pirimicarb	0.010 mg/kg
Pirimiphos-methyl	0.010 mg/kg
Prochloraz	0.02 mg/kg
Procymidone	0.010 mg/kg
Profenofos	0.010 mg/kg
Prometryn	0.010 mg/kg
Propachlor	0.010 mg/kg
Propanil	0.010 mg/kg
Propaphos	0.010 mg/kg
Propazine	0.010 mg/kg
Propetamphos	0.010 mg/kg
Propham	0.05 mg/kg
Propiconazole	0.010 mg/kg
Propoxur	0.010 mg/kg
Propyzamide	0.010 mg/kg
Prothiofos	0.010 mg/kg
Pyraclofos	0.010 mg/kg
Pyrazophos	0.010 mg/kg
Pyrazoxyfen	0.010 mg/kg
Pyrethrin	0.04 mg/kg
Pyrifenox	0.010 mg/kg
Pyrimethanil	0.010 mg/kg
Pyriproxyfen	0.010 mg/kg
Quinalphos	0.010 mg/kg
Quintozene	0.010 mg/kg
Quizalofop-ethyl	0.010 mg/kg
Simazine	0.010 mg/kg
Simetryn	0.010 mg/kg
Sulfentrazone	0.010 mg/kg
Sulfotep	0.010 mg/kg
Tebuconazole	0.010 mg/kg
Tebufenpyrad	0.010 mg/kg
Tefluthrin	0.010 mg/kg
Terbacil	0.10 mg/kg
Terbufos	0.010 mg/kg
Terbumeton	0.010 mg/kg
Terbuthylazine	0.010 mg/kg
Terbuthylazine-desethyl	0.010 mg/kg
Terbutryn	0.010 mg/kg
Tetrachlorvinphos	0.010 mg/kg
Tetradifon	0.010 mg/kg
Thenylchlor	0.010 mg/kg
Thiobencarb	0.010 mg/kg
Thiometon	0.010 mg/kg
Tolclofos-methyl	0.010 mg/kg
Tolylfluanid	0.010 mg/kg
Transfluthrin	0.010 mg/kg
Triadimefon	0.010 mg/kg
Triallate	0.010 mg/kg
Triazophos	0.010 mg/kg
Trifloxystrobin	0.010 mg/kg
Trifluralin	0.05 mg/kg
Vinclozolin	0.010 mg/kg

Multiresidue Analysis 2 - Honey Samples	
Abamectin	0.02 mg/kg
Acetamiprid	0.010 mg/kg
Aldicarb	0.010 mg/kg
Aldicarb sulfone	0.010 mg/kg
Aldicarb sulfoxide	0.010 mg/kg
Ametoctradin	0.010 mg/kg
Ametryn	0.010 mg/kg
Anilazine	0.05 mg/kg
Anilofos	0.010 mg/kg
Azadirachtin	0.04 mg/kg
Benzalkonium chloride (C10)	0.05 mg/kg
Benzalkonium chloride (C12)	0.2 mg/kg
Benzalkonium chloride (C14)	0.2 mg/kg
Benzalkonium chloride (C16)	0.05 mg/kg
Bixafen	0.010 mg/kg
Boscalid	0.010 mg/kg
Carbendazim (including Benomyl and Thiophanate)	0.010 mg/kg
Carfentrazone-ethyl	0.010 mg/kg
Chlorantraniliprole	0.010 mg/kg
Chloridazon	0.010 mg/kg
Clethodim	0.010 mg/kg
Clofentezine	0.010 mg/kg
Clothianidin	0.02 mg/kg
Cyantraniliprole	0.03 mg/kg
Cyazofamid	0.010 mg/kg
Cyflufenamid	0.010 mg/kg
Cymoxanil	0.010 mg/kg
Didecyldimethylammonium chloride (DDAC)	0.10 mg/kg
Desmedipham	0.010 mg/kg
Diethofencarb	0.010 mg/kg
Diflubenzuron	0.03 mg/kg
Dinotefuran	0.010 mg/kg
Dodine	0.08 mg/kg
Emamectin	0.03 mg/kg
Empenthrin	0.3 mg/kg
Ethofumesate	0.010 mg/kg
Etobenzanid	0.010 mg/kg
Fenamidone	0.010 mg/kg
Fenbuconazole	0.010 mg/kg
Fenhexamid	0.04 mg/kg
Fenoxycarb	0.010 mg/kg
Fenpropidin	0.010 mg/kg
Fenpyrazamine	0.010 mg/kg
Fenpyroximate	0.010 mg/kg
Fipronil	0.010 mg/kg
Flonicamid	0.010 mg/kg
Fluazinam	0.010 mg/kg
Flufenacet	0.010 mg/kg
Flufenoxuron	0.010 mg/kg
Florasulam	0.010 mg/kg
Flumethrin	0.010 mg/kg
Flumetsulam	0.010 mg/kg
Flumioxazin	0.02 mg/kg
Fluopicolide	0.010 mg/kg
Fluopyram	0.010 mg/kg
Flusulfamide	0.010 mg/kg
Flutolanil	0.010 mg/kg
Fluxapyroxad	0.010 mg/kg
Forchlorfenuron	0.010 mg/kg
Gibberellic acid (GA3)	0.010 mg/kg
Halauxifen-methyl	0.010 mg/kg
Heptenophos	0.010 mg/kg
Imidacloprid	0.010 mg/kg
Indaziflam	0.010 mg/kg
Iodocarb (IPBC)	0.03 mg/kg
Ipconazole	0.010 mg/kg
Isoproturon	0.010 mg/kg
Isopyrazam	0.010 mg/kg
Isoxathion	0.010 mg/kg
Isoxathion oxon	0.010 mg/kg
Lufenuron	0.10 mg/kg
Mandipropamid	0.010 mg/kg
Mandestrobin	0.010 mg/kg
Mefentrifluconazole	0.010 mg/kg
Metamitron	0.010 mg/kg
Metaldehyde	0.2 mg/kg
Metconazole	0.010 mg/kg
Methabenzthiazuron	0.010 mg/kg
Methomyl	0.010 mg/kg
Methoxyfenozide	0.010 mg/kg
Methyl anthranilate	0.04 mg/kg
Metrafenone	0.010 mg/kg
Milbemectin	0.03 mg/kg
Nicosulfuron	0.010 mg/kg
Novaluron	0.010 mg/kg
Octhilinone	0.04 mg/kg
Oryzalin	0.02 mg/kg
Oxamyl	0.010 mg/kg
Oxathiapiprolin	0.010 mg/kg
Pencycuron	0.03 mg/kg
Penflufen	0.010 mg/kg
Penthiopyrad	0.010 mg/kg
Phenmedipham	0.010 mg/kg
Propamocarb	0.010 mg/kg
Propargite	0.010 mg/kg
Proquinazid	0.010 mg/kg
Prosulfocarb	0.010 mg/kg
Prothioconazole-desthio	0.010 mg/kg
Pydiflumetofen	0.010 mg/kg
Pyraclostrobin	0.010 mg/kg
Pyridaphenthion	0.010 mg/kg
Pyrifluquinazon	0.010 mg/kg
Pyriofenone	0.010 mg/kg
Quinoxyfen	0.010 mg/kg
Saflufenacil	0.010 mg/kg
Sethoxydim	0.010 mg/kg
Spinetoram	0.010 mg/kg

Analytes	Detection Limit
Multiresidue Analysis 2 - Honey Samples	
Spinosad	0.010 mg/kg
Spiromesifen	0.010 mg/kg
Spiromesifen-enol	0.010 mg/kg
Spirotetramat	0.010 mg/kg
Spirotetramat-cis-enol	0.010 mg/kg
Spirotetramat-cis-keto-hydroxy	0.010 mg/kg
Spirotetramat-enol-glucoside	0.010 mg/kg
Spirotetramat-mono-hydroxy	0.010 mg/kg
Spiroxamine	0.010 mg/kg
Sulfoxaflor	0.010 mg/kg
Tebufenozide (Mimic)	0.010 mg/kg
Teflubenzuron	0.04 mg/kg
Tepraloxydim	0.010 mg/kg
Tetraconazole	0.010 mg/kg
Thiabendazole	0.010 mg/kg
Thiacloprid	0.010 mg/kg
Thiamethoxam	0.010 mg/kg
Thifluzamide	0.010 mg/kg
Thiophanate-methyl	0.010 mg/kg
Triadimenol	0.010 mg/kg
Tribenuron-methyl	0.010 mg/kg
Trichlorfon	0.010 mg/kg
Triflumuron	0.010 mg/kg
Triforine	0.010 mg/kg
Uniconazole	0.010 mg/kg

[redacted]

[redacted]

Certificate of Analysis

Continuance LLC dba Blueprint
Bryan Johnson
5042 Wilshire Bld,
Los Angeles
CA 26878
United States

Date: 2-Dec-24
Lab Reference: 131124B3-5

Product Details

Contract Number: H240815
Item Number: FBLUE10+227G
Product Description: Blueprint Manuka Honey MGO263+ 227g

Batch Number: 131124B3-5
Manufacture Date: 29/11/2024
Best Before: 28/11/2028

Analysis	Actual Result	Units		Method	Default Detection Limit
Moisture	18.8	%	≤ 20	Refractometer	0.1%
Colour	88	mm Pfund	≥ 70	Honey Colour Photometer	1mm
C4 Sugars*	5.8	%	≤ 12	AOAC 998.12.	-
Leptosperin*	340	mg/kg	≥ 150	Aqueous Extraction, Derivatisation, UPLC Analysis	-
3-Phenyllactic acid*	630	mg/kg	≥ 400	LC-MSMS, RLP Official Test 10.05	5.0 mg/kg
2'-Methoxyacetophenone*	13.7	mg/kg	≥ 5.0	LC-MSMS, RLP Official Test 10.05	0.5 mg/kg
2-Methoxybenzoic acid*	7.5	mg/kg	≥ 1.0	LC-MSMS, RLP Official Test 10.05	0.5 mg/kg
4-Hydroxyphenyllactic acid*	6.5	mg/kg	≥ 1.0	LC-MSMS, RLP Official Test 10.05	0.5 mg/kg
Manuka Cq*	24.08	Cq	≤ 36	PCR, RLP Official Test 10.04	1.0 Cq
Dihydroxyacetone (DHA)*	685	mg/kg	≥ 526	Aqueous Extraction, Derivatisation, UPLC Analysis	1.0-10.0 mg/kg
Methylglyoxal (MGO)*	313	mg/kg	≥ 263	Aqueous Extraction, Derivatisation, UPLC Analysis	1.0-10.0 mg/kg
Hydroxymethylfurfural (HMF)*	16	mg/kg	≤ 40	Aqueous Extraction, Derivatisation, UPLC Analysis	1.0-10.0 mg/kg
Diastase Activity*	10.1	DN	≥ 8	Phadebas Amylase	3DN
Tutin*	<0.010	mg/kg	≤0.7	LC-MS/MS RLP Official Test 8.42.	0.010 mg/kg
Glyphosate*	<0.010	mg/kg	ND	Aqueous Extraction, Derivatisation, LC-MS/MS	0.005 - 0.02 mg/kg
Arsenic*	<0.010	mg/kg	<10	TMAH digestion. Analysis by ICP-MS.	0.010 mg/kg as rcvd
Cadmium*	<0.004	mg/kg	<4.1	Analysis by ICP-MS.	0.004 mg/kg as rcvd
Lead*	<0.02	mg/kg	< 0.5	Analysis by ICP-MS.	0.02 mg/kg as rcvd
Mercury*	<0.010	mg/kg	<0.1	Analysis by ICP-MS.	0.010 mg/kg as rcvd
Aerobic Plate Count 35C	100	cfu/g	≤ 1500	MPN TEMPO AC	10 cfu/g
Yeasts & Moulds	<10	cfu/g	≤ 300	MPN TEMPO YM	10 cfu/g
Total Coliforms*	<10	cfu/g	≤ 300	incubated at 35°C for 24-27 hours.	10 cfu / g
Escherichia coli*	<10	cfu/g	ND	incubated at 35°C for 22-27 hours.	10 cfu / g
Salmonella*	ND	per 25g	ND	Detection of Salmonella by qualitative real-time PCR.	-
Staphylococcus aureus	<10	cfu/g	ND	incubated at 35°C for 24-27 hours.	10 cfu / g

Honey samples are held at th [redacted] oom for the length of time depending on the expiry date after reporting. Once the storage period is completed the samples are discarded unless advised by the clients.

≥ means not less than, ≤ means not more than.

* Indicates an analysis that carried out by external Laboratory.

Lab Analyst

R J Hill Laboratories Limited
28 Duke Street Frankton 3204
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Hamilton 3240 New Zealand

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www.**hill-labs**.co.nz

Certificate of Analysis

Client:	[redacted]	**Lab No:**	3707286 HGPv1
Contact:		**Date Received:**	05-Nov-2024
		Date Reported:	15-Nov-2024
		Quote No:	[redacted]
		Order No:	MALTECH041124
		Client Reference:	Hone [redacted] lueprint
		Submitted By:	[redacted]

Sample Type: Honey

Sample Name:		291024B1 04-Nov-2024 9:48 am
Lab Number:		3707286.1
MPI Manuka Classification		
MPI Manuka Honey Classification		Monofloral Manuka Honey
3-Phenyllactic acid (3-PA)	mg/kg	530
2'-Methoxyacetophenone (2'-MAP)	mg/kg	14.4
2-Methoxybenzoic acid (2-MBA)	mg/kg	6.1
4-Hydroxyphenyllactic acid (4-HPA)	mg/kg	4.8
Manuka DNA	Cq	25.25
Manuka Honey Analysis		
Dihydroxyacetone (DHA)	mg/kg	555
5-Hydroxymethylfurfural (HMF)	mg/kg	29.5
Methylglyoxal (MGO)	mg/kg	344
Non Peroxide Activity (NPA)*	% Phenol Equivalent	11.8
Leptosperin	mg/kg	220
Tutin Analysis		
Tutin Result Evaluation	Pass/Fail	PASS
Tutin	mg/kg	< 0.010
MRL as per Tutin in Honey Food Standard 2016	mg/kg	0.70
C-4 Sugar Analysis - AOAC method		
δ ^{13}C Honey (Whole)	‰	-25.92
δ ^{13}C Honey (Protein)	‰	-26.73
Difference (Whole - Protein)	‰	0.8
C-4 Sugar Content	%	4.7
Microbiological Analysis		
Osmophilic Yeasts	cfu / g	< 10 #1
Total Coliforms	cfu / g	< 10
Escherichia coli	cfu / g	< 10
Salmonella	per 25g	Not Detected
Staphylococcus aureus	cfu / g	< 10

Sample Type: Honey		
Sample Name:		291024B1 04-Nov-2024 9:48 am
Lab Number:		3707286.1
Diatase Analysis		
Diastase Activity	DN	9.6
Heavy Metal Analysis		
Arsenic	mg/kg as rcvd	< 0.010
Cadmium	mg/kg as rcvd	< 0.004
Lead	mg/kg as rcvd	< 0.02
Mercury	mg/kg as rcvd	< 0.010
Glyphosate Analysis		
AMPA	mg/kg	< 0.010
Glufosinate	mg/kg	< 0.010
Glyphosate	mg/kg	< 0.010

Analyst's Comments

#1 Statistically estimated count based on the theoretical countable range for the stated method.

Sample 1 Comment:
C-4 Sugar Content:
As reported in AOAC method 998.12, pure honey (free of corn or cane sugars) with an exception of a few unusual varieties, yields a C-4 Sugar Content value of less than or equal to 7%. Some unusual varieties may slightly exceed this value, but will have a d ^{13}C for honey which is in the normal range (more negative than -24.0‰).

Sample 1 Comment:
MPI Classification Comment:
The results presented on the Certificate of Analysis have been rounded to an appropriate number of significant figures, based on the Uncertainty of Measurement of the methods performed. The 'MPI Manuka Honey Classification' has been determined using unrounded values. In cases where one or more values were close to the critical levels (as defined by MPI), there may be a seeming inconsistency between the classification and the rounded values reported.

Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively simple matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis. A detection limit range indicates the lowest and highest detection limits in the associated suite of analytes. A full listing of compounds and detection limits are available from the laboratory upon request.
Unless otherwise indicated, analyses were performed at Hill Labs, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Honey			
Test	**Method Description**	**Default Detection Limit**	**Sample No**
Individual Tests			
Diastase Activity	Aqueous extraction, analysed using the Phadebas amylase method. Diastase activity is expressed as the diastase number, equivalent to Schade units.	2.0 DN	1
Biological Materials Digestion	Nitric and hydrochloric acid micro digestion, filtration. In-house based on APHA 3030.	-	1
TMAH Digestion	Tetramethylammonium hydroxide micro digestion, filtration. P.A.Fecher, I.Goldman and A.Nagengast. Journal of Analytical Atomic Spectrometry, 1998, **13**, 977-982.	-	1
Arsenic	TMAH digestion. Analysis by ICP-MS.	0.010 mg/kg as rcvd	1
Cadmium	Biological materials digestion. Analysis by ICP-MS. In-house based on APHA 3125.	0.004 mg/kg as rcvd	1
Lead	Biological materials digestion. Analysis by ICP-MS. In-house based on APHA 3125.	0.02 mg/kg as rcvd	1
Mercury	Biological materials digestion. Analysis by ICP-MS. In-house based on APHA 3125.	0.010 mg/kg as rcvd	1
3-in-1 Honey method	Aqueous extraction, derivatisation. Analysis by uHPLC / UV-Vis (dihydroxyacetone, 5-hydroxymethylfurfural, methylglyoxal). In-house.	1.0 - 10 mg/kg	1
C-4 Sugars Analysis - AOAC method	Methodology was performed in accordance with AOAC Official Method 998.12 (Revised First Edition 2013), C-4 Plant Sugars in Honey, using Internal Standard Stable Carbon Isotope Ratio Analysis (ISCIRA). All isotope ratios are reported as 'per mil' i.e. parts per thousand (‰), and are reported relative to the international standard for Carbon, V-PDB.	-	1
Leptosperin	Aqueous extraction, dilution, analysis by LC-MS/MS.	15 mg/kg	1

Sample Type: Honey			
Test	**Method Description**	**Default Detection Limit**	**Sample No**
Non Peroxide Activity (NPA)*	NPA is calculated from methylglyoxal using an industry accepted correlation curve based on published data[1,2] for NPA and the primary active ingredient, methylglyoxal. [1] Isolation by HPLC and characterisation of the bioactive fraction of New Zealand manuka (Leptospermum scoparium) honey. C. J. Adams, et al. Carbohydrate Research 343 (2008) 651-659. [2] Corrigendum to "Isolation by HPLC and characterization of the bioactive fraction of New Zealand manuka (Leptospermum scoparium) honey" [Carbohydr. Res. 343 (2008) 651]. C. J. Adams, et al. Carbohydrate Research 344 (2009) 2609.	1.0 % Phenol Equivalent	1
Tutin Analysis in Honey	Solvent extraction, dilution. Analysis by LC-MS/MS. Results are representative of the liquid honey, not the sample as a whole. Tutin Result Evaluation (PASS/FAIL) The PASS/FAIL result is based on comparison of the tutin result with the "Food Standard: Tutin in Honey (2016)". A result that falls at or BELOW the maximum permitted tutin level will give a PASS result. A result that falls ABOVE the maximum permitted tutin level will give a FAIL result. Individual Sample Testing Recommended? Where a tutin result for a composited sample is above the maximum permitted level, it is recommended that the individual samples are retested. Please contact the laboratory to arrange for individual sample retesting. **RLP Official Test 8.42**.	0.010 mg/kg	1
Total Coliforms	Automated MPN count on TEMPO TC, incubated at 35°C for 24-27 hours. bioMérieux, TEMPO.	10 cfu / g	1
Escherichia coli	Automated MPN count on TEMPO EC, Incubated at 35°C for 22-27 hours. bioMérieux, TEMPO.	10 cfu / g	1
Staphylococcus aureus	Automated MPN count on TEMPO STA, Incubated at 35°C for 24-27 hours. bioMérieux, TEMPO.	10 cfu / g	1
Osmophilic Yeasts	Spread plate, Count on: MY40G agar, Incubated at 30°C for 5 days. APHA 17.3 5th Ed.	1 cfu / g	1
Salmonella	Detection of Salmonella by qualitative real-time PCR. In-house.	-	1
Glyphosate LC-MS/MS Analysis	Aqueous extraction, Analysis by LC-MS/MS. In-house. **RLP Official Test 8.47.1**.	0.010 mg/kg	1
MPI 5 Attributes Tests			
MPI Manuka Honey Classification	Evaluation of results against Ministry of Primary Industries (MPI) criteria for classification of monofloral and multifloral Manuka honey. General Export Requirements for Bee Products - 27 October 2021.	-	1
Manuka Honey Chemistry Profile			
3-Phenyllactic acid (3-PA)	Aqueous solvent extraction, dilution. LC-MS/MS analysis. MPI Technical Paper 2017/30 (modified) **RLP Official Test 10.05**.	5 mg/kg	1
2'-Methoxyacetophenone (2'-MAP)	Aqueous solvent extraction, dilution. LC-MS/MS analysis. MPI Technical Paper 2017/30 (modified) **RLP Official Test 10.05**.	0.50 mg/kg	1
2-Methoxybenzoic acid (2-MBA)	Aqueous solvent extraction, dilution. LC-MS/MS analysis. MPI Technical Paper 2017/30 (modified) **RLP Official Test 10.05**.	0.50 mg/kg	1
4-Hydroxyphenyllactic acid (4-HPA)	Aqueous solvent extraction, dilution. LC-MS/MS analysis. MPI Technical Paper 2017/30 (modified) **RLP Official Test 10.05**.	0.50 mg/kg	1
Manuka Honey PCR Profile			
Manuka DNA	Quantification of Manuka (*Leptospermum scoparium*) DNA by real time PCR. MPI Technical - Paper No: 2017/31 (modified). **RLP Official Test 10.04**.	> 36 Cq	1

These samples were collected by yourselves (or your agent) and analysed as received at the laboratory.

Testing was completed between 05-Nov-2024 and 15-Nov-2024. For completion dates of individual analyses please contact the laboratory.

Samples are held at the laboratory after reporting for a length of time based on the stability of the samples and analytes being tested (considering any preservation used), and the storage space available. Once the storage period is completed, the samples are discarded unless otherwise agreed with the customer. Extended storage times may incur additional charges.

This certificate of analysis must not be reproduced, except in full, without the written consent of the signatory.

Helen McGowan BSc (Tech)
Operations Support - Food & Bioanalytical

[redacted] [redacted]

Certificate of Analysis

Continuance LLC dba Blueprint
Bryan Johnson
5042 Wilshire Bld,
Los Angeles
CA 26878
United States

Date: 2-Dec-24
Lab Reference: 291024B1-2

Product Details

Contract Number: H240815
Item Number: FBLUE10+227G
Product Description: Blueprint Manuka Honey MGO263+ 227g

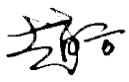
Batch Number: 291024B1-2
Manufacture Date: 04/11/2024
Best Before: 03/11/2028

Analysis	Actual Result	Units		Method	Default Detection Limit
Moisture	15.7	%	≤ 20	Refractometer	0.1%
Colour	96	mm Pfund	≥ 70	Honey Colour Photometer	1mm
C4 Sugars*	4.7	%	≤ 12	AOAC 998.12.	-
Leptosperin*	220	mg/kg	≥ 150	Aqueous Extraction, Derivatisation, UPLC Analysis	-
3-Phenyllactic acid*	530	mg/kg	≥ 400	LC-MSMS, RLP Official Test 10.05	5.0 mg/kg
2'-Methoxyacetophenone*	14.4	mg/kg	≥ 5.0	LC-MSMS, RLP Official Test 10.05	0.5 mg/kg
2-Methoxybenzoic acid*	6.1	mg/kg	≥ 1.0	LC-MSMS, RLP Official Test 10.05	0.5 mg/kg
4-Hydroxyphenyllactic acid*	4.8	mg/kg	≥ 1.0	LC-MSMS, RLP Official Test 10.05	0.5 mg/kg
Manuka Cq*	25.25	Cq	≤ 36	PCR, RLP Official Test 10.04	1.0 Cq
Dihydroxyacetone (DHA)*	555	mg/kg	≥ 526	Aqueous Extraction, Derivatisation, UPLC Analysis	1.0-10.0 mg/kg
Methylglyoxal (MGO)*	344	mg/kg	≥ 263	Aqueous Extraction, Derivatisation, UPLC Analysis	1.0-10.0 mg/kg
Hydroxymethylfurfural (HMF)*	29.5	mg/kg	≤ 40	Aqueous Extraction, Derivatisation, UPLC Analysis	1.0-10.0 mg/kg
Diastase Activity*	9.6	DN	≥ 8	Phadebas Amylase	3DN
Tutin*	<0.010	mg/kg	≤0.7	LC-MS/MS RLP Official Test 8.42.	0.010 mg/kg
Glyphosate*	<0.010	mg/kg	ND	Aqueous Extraction, Derivatisation, LC-MS/MS	0.005 - 0.02 mg/kg
Arsenic*	<0.010	mg/kg	<10	TMAH digestion. Analysis by ICP-MS.	0.010 mg/kg as rcvd
Cadmium*	<0.004	mg/kg	<4.1	Analysis by ICP-MS.	0.004 mg/kg as rcvd
Lead*	<0.02	mg/kg	< 0.5	Analysis by ICP-MS.	0.02 mg/kg as rcvd
Mercury*	<0.010	mg/kg	<0.1	Analysis by ICP-MS.	0.010 mg/kg as rcvd
Aerobic Plate Count 35C	400	cfu/g	≤ 1500	MPN TEMPO AC	10 cfu/g
Yeasts & Moulds	<10	cfu/g	≤ 300	MPN TEMPO YM	10 cfu/g
Total Coliforms*	<10	cfu/g	≤ 300	incubated at 35°C for 24-27 hours.	10 cfu / g
Escherichia coli*	<10	cfu/g	ND	incubated at 35°C for 22-27 hours.	10 cfu / g
Salmonella*	ND	per 25g	ND	Detection of Salmonella by qualitative real-time PCR.	-
Staphylococcus aureus	<10	cfu/g	ND	incubated at 35°C for 24-27 hours.	10 cfu / g

Honey samples are held at the [redacted] room for the length of time depending on the expiry date after reporting. Once the storage period is completed the samples are discarded unless advised by the clients.

≥ means not less than, ≤ means not more than.

* Indicates an analysis that carried out by external Laboratory.



Lab Analyst

[redacted]

[redacted]

Certificate of Analysis

Continuance LLC dba Blueprint
Bryan Johnson
5042 Wilshire Bld,
Los Angeles
CA 26878
United States

Date: 2-Dec-24
Lab Reference: 291024B1-3

Product Details

Contract Number: H240815
Item Number: FBLUE10+227G
Product Description: Blueprint Manuka Honey MGO263+ 227g

Batch Number: 291024B1-3
Manufacture Date: 05/11/2024
Best Before: 04/11/2028

Analysis	Actual Result	Units		Method	Default Detection Limit
Moisture	15.7	%	≤ 20	Refractometer	0.1%
Colour	96	mm Pfund	≥ 70	Honey Colour Photometer	1mm
C4 Sugars*	4.7	%	≤ 12	AOAC 998.12.	-
Leptosperin*	220	mg/kg	≥ 150	Aqueous Extraction, Derivatisation, UPLC Analysis	-
3-Phenyllactic acid*	530	mg/kg	≥ 400	LC-MSMS, RLP Official Test 10.05	5.0 mg/kg
2'-Methoxyacetophenone*	14.4	mg/kg	≥ 5.0	LC-MSMS, RLP Official Test 10.05	0.5 mg/kg
2-Methoxybenzoic acid*	6.1	mg/kg	≥ 1.0	LC-MSMS, RLP Official Test 10.05	0.5 mg/kg
4-Hydroxyphenyllactic acid*	4.8	mg/kg	≥ 1.0	LC-MSMS, RLP Official Test 10.05	0.5 mg/kg
Manuka Cq*	25.25	Cq	≤ 36	PCR, RLP Official Test 10.04	1.0 Cq
Dihydroxyacetone (DHA)*	555	mg/kg	≥ 526	Aqueous Extraction, Derivatisation, UPLC Analysis	1.0-10.0 mg/kg
Methylglyoxal (MGO)*	344	mg/kg	≥ 263	Aqueous Extraction, Derivatisation, UPLC Analysis	1.0-10.0 mg/kg
Hydroxymethylfurfural (HMF)*	29.5	mg/kg	≤ 40	Aqueous Extraction, Derivatisation, UPLC Analysis	1.0-10.0 mg/kg
Diastase Activity*	9.6	DN	≥ 8	Phadebas Amylase	3DN
Tutin*	<0.010	mg/kg	≤0.7	LC-MS/MS RLP Official Test 8.42.	0.010 mg/kg
Glyphosate*	<0.010	mg/kg	ND	Aqueous Extraction, Derivatisation, LC-MS/MS	0.005 - 0.02 mg/kg
Arsenic*	<0.010	mg/kg	<10	TMAH digestion. Analysis by ICP-MS.	0.010 mg/kg as rcvd
Cadmium*	<0.004	mg/kg	<4.1	Analysis by ICP-MS.	0.004 mg/kg as rcvd
Lead*	<0.02	mg/kg	< 0.5	Analysis by ICP-MS.	0.02 mg/kg as rcvd
Mercury*	<0.010	mg/kg	<0.1	Analysis by ICP-MS.	0.010 mg/kg as rcvd
Aerobic Plate Count 35C	400	cfu/g	≤ 1500	MPN TEMPO AC	10 cfu/g
Yeasts & Moulds	<10	cfu/g	≤ 300	MPN TEMPO YM	10 cfu/g
Total Coliforms*	<10	cfu/g	≤ 300	incubated at 35°C for 24-27 hours.	10 cfu / g
Escherichia coli*	<10	cfu/g	ND	incubated at 35°C for 22-27 hours.	10 cfu / g
Salmonella*	ND	per 25g	ND	Detection of Salmonella by qualitative real-time PCR.	-
Staphylococcus aureus	<10	cfu/g	ND	incubated at 35°C for 24-27 hours.	10 cfu / g

Honey samples are held at th [redacted] room for the length of time depending on the expiry date after reporting. Once the storage period is completed the samples are discarded unless advised by the clients.

≥ means not less than, ≤ means not more than.

* Indicates an analysis that carried out by external Laboratory.

Lab Analyst