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Certificate of Analysis

Client:	[redacted]	**Lab No:**	3905777 HGPv2
Contact:	[redacted] Greerton Tauranga 3142	**Date Received:**	05-Jun-2025
		Date Reported:	10-Jun-2025 **(Amended)**
		Quote No:	109187
		Order No:	
		Client Reference:	Capita Marketing Ltd
		Submitted By:	[redacted]

Sample Type: Honey

Sample Name:		Vitahouse MGO 970+ Manuka Honey - Lot: F25A - Best Before: 2030 JN 02
Lab Number:		3905777.1
MPI Manuka Classification		
MPI Manuka Honey Classification		Monofloral Manuka Honey
3-Phenyllactic acid (3-PA)	mg/kg	1,250
2'-Methoxyacetophenone (2'-MAP)	mg/kg	32
2-Methoxybenzoic acid (2-MBA)	mg/kg	10.8
4-Hydroxyphenyllactic acid (4-HPA)	mg/kg	9.5
Manuka DNA	Cq	31.79
Manuka Honey Analysis		
Dihydroxyacetone (DHA)	mg/kg	1,200
5-Hydroxymethylfurfural (HMF)	mg/kg	27.5
Methylglyoxal (MGO)	mg/kg	975
Non Peroxide Activity (NPA)*	% Phenol Equivalent	22.1
Leptosperin	mg/kg	470

Analyst's Comments

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.

Amended Report: This certificate of analysis replaces report '3905777-HGPv1' issued on 05-Jun-2025 at 2:38 pm.
Reason for amendment: Sample name and client reference have been amended, at the request of the client.

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			
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

Sample Type: Honey			
Test	**Method Description**	**Default Detection Limit**	**Sample No**
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
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 on 05-Jun-2025. 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