

Certificate of Analysis

Hello Honey Ltd

Lab tests performed by:

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SAMPLE NAME

Cascade 001

LAB REFERENCE DU2306247



MPI Mānuka Markers (4 chemical)

DATE RECEIVED 03 Mar 2023

DATE COMPLETED 08 Mar 2023

ANALYTE	RESULT	METHOD	AUTHORISED APPROVER
2'-MAP	7.1 mg/kg	LC-MS/MS In-House Procedure	 Henry Dunne KTP
2-MBA	7.4 mg/kg	LC-MS/MS In-House Procedure	
3-PLA	386 mg/kg	LC-MS/MS In-House Procedure	
4-HPLA	7.1 mg/kg	LC-MS/MS In-House Procedure	

Mānuka 3 in 1 (MGO, DHA, HMF, NPA)

DATE RECEIVED 03 Mar 2023

DATE COMPLETED 08 Mar 2023

ANALYTE	RESULT	METHOD	AUTHORISED APPROVER
DHA	540 mg/kg	HPLC-UV, In-House Procedure	 Henry Dunne KTP
HMF	7 mg/kg	HPLC-UV, In-House Procedure	
MGO	208 mg/kg	HPLC-UV, In-House Procedure	
NPA	8.7 % ph. eq.	Calculation	

Note: Results apply only to samples received, on an as found basis. Precision data will be supplied upon request. All tests reported herein have been performed in accordance with the laboratory's scope of accreditation with the exception of tests marked ● which are not accredited. This test report shall not be reproduced except in full, without the written permission of Gribbles Scientific.

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Method Summaries

MPI Mānuka Markers (4 chemical)
FCHROM

MPI Chemical Markers for Manuka Honey

2'-Methoxyacetophenone (2'-MAP), 2-methoxybenzoic acid (2-MBA), 3-phenyllactic acid (3-PLA), and 4-hydroxyphenyllactic acid (4-HPLA) are analysed after solvent extraction and dilution by LC-MS/MS. Chemical markers are an approved MPI RLP test for Manuka honey.

According to MPI classification criteria for monofloral (Mono) and multifloral (Multi) Manuka honey, all chemical markers need to be present at the following levels (mg/kg):

2'-MAP Mono greater than or equal to 5 Multi greater than or equal to 1

2-MBA Mono greater than or equal to 1 Multi greater than or equal to 1

3-PLA Mono greater than or equal to 400 Multi greater than or equal to 20 and less than 400

4-HPLA Mono greater than or equal to 1 Multi greater than or equal to 1

Gribbles Scientific is approved by the New Zealand Ministry of Primary Industries to conduct this analysis under the Recognised Laboratory Programme (RLP Method 10.05).

Note: the MPI classification criteria for monofloral and multifloral Manuka honey also requires a DNA test for Manuka pollen.

Mānuka 3 in 1 (MGO, DHA, HMF, NPA)
FCHROM

Honey 3-in-1

Dihydroxyacetone (DHA), methylglyoxal (MGO), and hydroxymethylfurfural (HMF) are analysed after solvent extraction and derivatisation followed by HPLC.

Reporting limits: 5 mg/kg MGO, 30 mg/kg DHA, and 1 mg/kg HMF.

NPA

Non-Peroxide Activity (NPA) is calculated as % phenol equivalent from the measured methylglyoxal concentration in the honey. The calculation is based on published data.

Adams et al. (2008), Carbohydrate Research 343 (4): 651-659

Adams et al. (2009), Carbohydrate Research 344: 2609 (Corrigendum)

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