Analytica Laboratories Limited
Ruakura Research Centre
10 Bisley Road
Hamilton 3214, New Zealand
Ph +64 (07) 974 4740
sales@analytica.co.nz
www.analytica.co.nz

Certificate of Analysis

HBK Limited
PO Box 9
Waipu 0510
Attention: Isaac Flitta
Phone: 0212166152
Email: info@gmail.com

Lab Reference: 18-15918
Submitted by:
Date Received: 3/05/2018
Date Completed: 4/05/2018
Order Number:
Reference:

Report Comments

Samples were received by Analytica Laboratories in acceptable condition unless otherwise noted on this report.

Results Summary

MPI Manuka Honey Classification*

Laboratory ID	Sample ID	MPI Manuka Classification
18-15918-2	170016/1	MONOFLORAL MANUKA
18-15918-3	170017/1	MONOFLORAL MANUKA

MPI Manuka Honey Classification* Approver:

Maria Tourna, Ph.D.
C4 & DNA Team Leader

MPI Manuka DNA

Laboratory ID	Sample ID	Manuka DNA
	Units *Reporting Limit*	Cq
18-15918-2	170016/1	30.70
18-15918-3	170017/1	32.12

MPI Manuka DNA Approver:

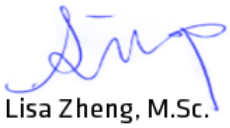
Maria Tourna, Ph.D.
C4 & DNA Team Leader

IANZ ACCREDITED LABORATORY

MPI Manuka Markers

Laboratory ID	Sample ID	4-Hydroxyphenyllactic acid (4-HPLA)	2-Methoxybenzoic acid (2-MBA)	2'-Methoxy acetophenone (2'-MAP)	3-Phenyllactic acid (3-PLA)
	Units *Reporting Limit*	mg/kg 0.8	mg/kg 0.8	mg/kg 0.8	mg/kg 20
18-15918-2	170016/1	5.7	14	12	780
18-15918-3	170017/1	3.6	9.5	5.3	760

MPI Manuka Markers Approver:



Lisa Zheng, M.Sc.
Senior Technologist

Method Summary

MPI Manuka Classification

For classification as monofloral manuka, the following chemicals all need to be present and at these levels:

- 4-hydroxyphenyllactic acid at a level greater than or equal to 1mg/kg
- 2-methoxybenzoic acid at a level greater than or equal to 1mg/kg
- 2'-methoxyacetophenone at a level greater than or equal to 5mg/kg
- 3-phenyllactic acid at a level greater than or equal to 400mg/kg

And the DNA level from manuka pollen is less than Cq 36, which is approximately 3fg/µL.

For classification as multifloral manuka, the following chemicals all need to be present and at these levels:

- 4-hydroxyphenyllactic acid at a level greater than or equal to 1mg/kg
- 2-methoxybenzoic acid at a level greater than or equal to 1mg/kg
- 2'-methoxyacetophenone at a level greater than or equal to 1mg/kg
- 3-phenyllactic acid at a level greater than or equal to 20 mg/kg but less than 400mg/kg

And the DNA level from manuka pollen is less than Cq 36, which is approximately 3fg/µL

MPI Manuka Markers

Solvent extraction, LC-MS/MS and HPLC analysis.
Analytica Laboratories Ltd., is approved by the New Zealand Ministry of Primary Industries to conduct this analysis under the Recognised Laboratory Programme (RLP Method 10.05).

MPI Manuka DNA

Samples were analysed as received by the Laboratory for Manuka Pollen DNA by pollen DNA extraction followed by qPCR.
Analytica Laboratories Ltd., is approved by the New Zealand Ministry of Primary Industries to conduct this analysis under the Recognised Laboratory Programme (RLP Method 10.04).

The DNA component of the MPI Manuka Honey Definition requires a Cq value of less than 36 to qualify for either a monofloral or multifloral manuka honey.