



Certificate of Analysis

Page 1 of 2

Client:	Midlands Apiaries Limited	Lab No:	2020783	SPv1
Contact:	Hamish Finnie C/- Midlands Apiaries Limited PO Box 65 Ashburton 7740	Date Received:	25-Jul-2018	
		Date Reported:	26-Jul-2018	
		Quote No:	70096	
		Order No:		
		Client Reference:		
		Submitted By:	Lily Zhao	

Sample Type: Honey

Sample Name:	23718B2				
Lab Number:	2020783.1				
Individual Tests					
Leptosperin	mg/kg	790			-
NPA (Non Peroxide Activity)*	% Phenol Equivalent	19.8			-
MPI 5 Attributes Tests					
MPI Manuka Honey Classification	Monofloral Manuka Honey				-
Manuka Honey Chemistry Profile					
3-Phenyllactic acid	mg/kg	1,270			-
2'-Methoxyacetophenone	mg/kg	15.4			-
2-Methoxybenzoic Acid	mg/kg	17.0			-
4-Hydroxyphenyllactic acid	mg/kg	7.5			-
Manuka Honey PCR Profile					
Manuka Cq	Cq	24.85 #1			-
3-in-1 Honey Analysis					
Dihydroxyacetone	mg/kg	1,430			-
5-hydroxymethylfurfural (HMF)	mg/kg	27			-
Methylglyoxal	mg/kg	812			-

Analyst's Comments

#1 Report Signatory for this analysis is Kevin Wang.

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 clean 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.

Sample Type: Honey			
Test	Method Description	Default Detection Limit	Sample No
Individual Tests			
Leptosperin	Aqueous extraction, dilution, analysis by LC-MS/MS.	15 mg/kg	1-4
NPA (Non Peroxide Activity)*	NPA is calculated from methylglyoxal using a correlation curve based on published data for NPA and the primary active ingredient, methylglyoxal. (1,2). (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	1-4
3-in-1 Honey Analysis	Aqueous extraction, derivatisation. Analysis by UPLC-UV (dihydroxyacetone, 5-hydroxymethylfurfural, methylglyoxal).	1.0 - 10 mg/kg	1-4
MPI 5 Attributes Tests			



This Laboratory is accredited by International Accreditation New Zealand (IANZ), which represents New Zealand in the International Laboratory Accreditation Cooperation (ILAC). Through the ILAC Mutual Recognition Arrangement (ILAC-MRA) this accreditation is internationally recognised. The tests reported herein have been performed in accordance with the terms of accreditation, with the exception of tests marked *, which are not accredited.