



Certificate of Analysis

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Client:	Midlands Apiaries Limited	Lab No:	2329672	HGPV1
Contact:	Claudine McCormick C/- Midlands Apiaries Limited PO Box 65 Ashburton 7740	Date Received:	26-Feb-2020	
		Date Reported:	27-Feb-2020	
		Quote No:	70096	
		Order No:		
		Client Reference:	Ecotrade	
		Submitted By:	Lily Zhao	

Sample Type: Honey

Sample Name:	100220B1A-1				
Lab Number:	2329672.1				
Manuka Honey Analysis					
Dihydroxyacetone (DHA)	mg/kg	1,160	-	-	-
5-Hydroxymethylfurfural (HMF)	mg/kg	15.9	-	-	-
Methylglyoxal (MGO)	mg/kg	492	-	-	-
Non Peroxide Activity (NPA)*	% Phenol Equivalent	14.6	-	-	-

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 Laboratories, 28 Duke Street, Frankton, Hamilton 3204.

Sample Type: Honey			
Test	Method Description	Default Detection Limit	Sample No
3-in-1 Honey Method	Aqueous extraction, derivatisation. Analysis by UPLC-UV (dihydroxyacetone, 5-hydroxymethylfurfural, methylglyoxal).	-	1
Non Peroxide Activity (NPA)*	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 (<i>Leptospermum scoparium</i>) 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 (<i>Leptospermum scoparium</i>) honey" [Carbohydr. Res. 343 (2008) 651]. C. J. Adams, et al. Carbohydrate Research 344 (2009) 2609.	1.0 % Phenol Equivalent	1

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

Dates of testing are available on request. Please contact the laboratory for more information.

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.

Martin Cowell - BSc
Client Services Manager - Environmental



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