



## Certificate of Analysis

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Lab Reference: 16-07155  
 Submitted by:  
 Date Received: 24/05/2016  
 Date Completed: 25/05/2016  
 Order Number:  
 Reference:

### Results Summary

#### 3in1 Honey Analysis

**N. Lotto**

Laboratory ID	Sample ID	Dihydroxyacetone DHA	Methylglyoxal MG	Non-peroxide Activity NPA*	Hydroxymethylfurfural HMF
	<i>Units Reporting Limit</i>	mg/kg 10	mg/kg 4	%w/v phenol eq. 0.8	mg/kg 1
16-07155-1	AB10516	290	115	6.1	21
16-07155-2	AB11516	538	226	9.1	24
16-07155-3	AB12516	286	178	7.9	18

### Method Summary

#### MetilGlossale

**3in1** Determination of Dihydroxyacetone (DHA), Methylglyoxal (MG) and Hydroxymethylfurfural (HMF) by aqueous extraction, derivatisation, and UPLC analysis.

**NPA** Non-Peroxide Activity (NPA) values are not directly measured by the laboratory, but are calculated from the measured methylglyoxal concentration in the honey according to the requirements of the client. The calculation is based on published data(†) comparing the NPA and methylglyoxal concentration measured in a range of honey samples. These calculated values are not accredited by IANZ and do not imply that the honey is or is not manuka honey. NPA values less than 5 are an estimate based on extrapolation of the relationship between methylglyoxal and NPA

(†) 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. And, Corrigendum to "Isolation by HPLC and characterization of the bioactive fraction of New Zealand manuka (*Leptospermum scoparium*) honey" [*Carbohydr. Res.* 343 (2008) 651]. *Carbohydrate Research* 344 (2009) 2609. C. J. Adams, et al.

### Report Comments

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

  
 Megan Grainger, Ph.D.  
 Technologist