



## Certificate of Analysis

Tarata Honey for Bees & Trees Honey  
 1900 Tarata Road  
 Inglewood, Taranaki 4387 Attention:  
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Lab Reference: 22-27558  
 Submitted by: E. Mateas - Orban  
 Date Received: 02/08/2022  
 Testing Initiated: 2/08/2022  
 Date Completed: 4/08/2022  
 Order Number:  
 Reference: TFNB20

### Report Comments

Samples were collected by yourselves (or your agent) and analysed as received at Analytica Laboratories. Samples were in acceptable condition unless otherwise noted on this report.  
 Specific testing dates are available on request.

### Results Summary

#### 3in1 in Honey

Laboratory ID	Sample ID	Dihydroxyacetone (DHA)	Methylglyoxal (MG/MGO)	Non-Peroxide Activity* (NPA)	Hydroxymethylfurfural (HMF)
	<i>Units Reporting Limit</i>	mg/kg 40	mg/kg 8	%w/v phenol eq. 1.3	mg/kg 1
22-27558-1	TFNB20	1,160	629	16.9	22.6

#### 3in1 in Honey Approver:

Devon Nolan, BBiomedSc(Hons)  
 Honey Chemistry Team Leader

#### Leptosperin in Honey

Laboratory ID	Sample ID	Leptosperin
	<i>Units Reporting Limit</i>	mg/kg 20
22-27558-1	TFNB20	344

#### Leptosperin in Honey Approver:

Devon Nolan, BBiomedSc(Hons)  
 Honey Chemistry Team Leader

## Method Summary

<b>3in1</b>	Determination of Dihydroxyacetone (DHA), Methylglyoxal (MG/MGO) and Hydroxymethylfurfural (HMF) by aqueous extraction, derivatisation, and UPLC (diode array) analysis in accordance with in-house procedures.
<b>NPA</b>	<p>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</p> <p>(†) <i>Isolation by HPLC and characterisation of the bioactive fraction of New Zealand manuka (Leptospermum scoparium) honey.</i> C. J. Adams, et al. <i>Carbohydrate Research</i> 343 (2008) 651-659. And, <i>Corrigendum to "Isolation by HPLC and characterization of the bioactive fraction of New Zealand manuka (Leptospermum scoparium) honey" [Carbohydr. Res. 343 (2008) 651].</i> <i>Carbohydrate Research</i> 344 (2009) 2609. C. J. Adams, et al.</p>
<b>Leptosperin</b>	Aqueous extraction, dilution, analysis by UPLC-PDA/FLD in accordance with in-house procedures.