



Certificate of Analysis

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Lab Reference: 20-27501
Submitted by: NZ Honey Farms Ltd
Date Received: 29/07/2020
Testing Initiated: 29/07/2020
Date Completed: 3/08/2020
Order Number: HF2007
Reference: N/A

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

Laboratory ID	Sample ID	①	②	③	④
		Dihydroxyacetone (DHA)	Methylglyoxal (MG)	Non-Peroxide Activity* (NPA)	Hydroxymethylfurfural (HMF)
Units Reporting Limit		mg/kg 40	mg/kg 8	%w/v phenol eq. 1.3	mg/kg 1
20-27501-1	2007RONGOM	709	263	10.0	14

3in1 Approver:

Gurmeet Singh, Dip. Tech. (Sci)
Technician

- ①ジヒドロアセキトンは、巣箱の中で熟成することでメチルグリオキサールに変容します
- ②メチルグリオキサールは、マヌカハニーの抗菌力を示す数値です
- ③非過酸化水素作用は、抗菌力を示す数値です。(NPA8.8レベル→UMFでいうところの8.8レベル)
- ④ヒドロキシメチルフルフラールは、低いほど良い。1kgあたり40mg以下でないといけません

Method Summary

3in1

Determination of Dihydroxyacetone (DHA), Methylglyoxal (MG) and Hydroxymethylfurfural (HMF) by aqueous extraction, derivatisation, and UPLC analysis in accordance with in-house procedures.

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.