



Certificate of Analysis

International Food Europe SRL
 Viale Giulio Cesare 92
 Roma 00192
 Attention: Francesco De Santis
 Phone: 800 180 766
 Email: info@naturalepiu.it

Lab Reference: 18-02308
 Submitted by:
 Date Received: 24/01/2018
 Date Completed: 2/02/2018
 Order Number:
 Reference: NaturalePiu

Report Comments

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

Amended report. Sample ID for 18-02308-6 changed at request of the client.

Results Summary

3in1 Honey Analysis

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
18-02308-6	17A3	484	342	11.7	28

3in1 Honey Analysis Approver:

Jacob Jaime, Ph.D.
 Senior Technologist

Method Summary

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.