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Certificate of Analysis

Savage Horticulture Ltd
557 Bushmere Rd, RD1
Gisborne 4071
Attention: Bill Savage
Phone: 021 963 461
Email: thesavages@xtra.co.nz

Lab Reference: 21-16816
Submitted by: N/A
Date Received: 14/04/2021
Testing Initiated: 14/04/2021
Date Completed: 15/04/2021
Order Number: N/A
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	Dihydroxyacetone (DHA)	Methylglyoxal (MG)	Non-Peroxide Activity* (NPA)	Hydroxymethylfurfural (HMF)
	Units	mg/kg	mg/kg	%w/v phenol eq.	mg/kg
	Reporting Limit	40	8	1.3	1
21-16816-2	210409	276	136	6.7	11

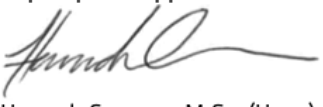
3in1 Approver:

Hannah Crossan, M.Sc. (Hons)
Senior Technician

Leptosperin

Laboratory ID	Sample ID	Leptosperin
	Units	mg/kg
	Reporting Limit	20
21-16816-2	210409	199

Leptosperin Approver:



Hannah Crossan, M.Sc. (Hons)
Senior Technician

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.*
Leptosperin	Aqueous extraction, dilution, analysis by UPLC in accordance with in-house procedures.