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Forecast of DHA, MG, NPA and HMF in Honey

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Lab Reference: 21-10107
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Initial Test Results

Laboratory ID	Sample ID	Date Tested	Dihydroxyacetone (DHA)	Methylglyoxal (MG)	Ratio DHA:MG	Non-peroxide Activity (NPA)	Hydroxymethylfurfural (HMF)
Units		-	mg/kg	mg/kg	Ratio	%w/v phenol eq.	mg/kg
21-10107-1	MVH20.52	06/03/2021	547	306	1.8	11.0	17

Forecast of Results

This forecast is based on a model developed by Analytica, and validated using test results from samples incubated by Analytica at known temperatures. Best endeavours have been used to verify that the model provides a reasonable forecast of changes in honey samples. However, Analytica provides no guarantee that future test results will be the same as those provided in this forecast report, and accepts no liability for consequences of decisions made based on these forecasts. Model Version: V 2.0

Maximum MG

Storage Temperature	20°C	23°C	27°C
Storage Time (weeks) required from date tested	44	29	16
DHA (mg/kg) after this storage time	422	426	428
Maximum MG (mg/kg)	319	318	317
Ratio DHA:MG	1.3	1.3	1.4
Maximum NPA (%w/v phenol equivalent)	11.2	11.2	11.2
HMF (mg/kg) after this storage time	23	25	28

Forecast Over Time

		Storage at 20°C			Storage at 23°C			Storage at 27°C		
Compound	Initial Value	4 Months	8 Months	12 Months	4 Months	8 Months	12 Months	4 Months	8 Months	12 Months
DHA (mg/kg)	547	494	446	403	469	403	346	422	326	252
MG (mg/kg)	306	314	318	318	316	317	312	317	307	285
DHA:MG	1.8	1.6	1.4	1.3	1.5	1.3	1.1	1.3	1.1	0.9
NPA	11.0	11.1	11.2	11.2	11.2	11.2	11.1	11.2	11.0	10.5
HMF (mg/kg)	17	19	22	24	22	27	32	29	40	52

Non-peroxide activity (NPA) values are calculated from the methylglyoxal concentration in the honey according to the requirements of the client. The calculation is based on published data (*) comparing the NPA and the methylglyoxal concentration measured in a range of honey samples. These calculated values do not infer that the honey is or is not manuka honey.

(*) isolation by HPLC and the characterisation of the bioactive fraction of New Zealand manula (Leptospermum scoparium) honey. C. J. Admans, et al. Carbohydrate Research 343 (2008) 651-659. And, Corrigendum to "IsolationLevel by HPLC and characterization of the bioacive New Zealand manuka (Leptospermum scoparium) honey " [Carbohydr. Res. 343 (2008) 651]. Carbohydrate Research 344 (2009) 2609. C. J. Adams, at al.

Manuka Honey Forecast Approver:

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