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Forecast of DHA, MG, NPA and HMF in Honey

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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
21-49765-1	Nf012020	30/11/2021	270	79	3.4	4.8	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	105	70	41
DHA (mg/kg) after this storage time	146	146	148
Maximum MG (mg/kg)	110	110	109
Ratio DHA:MG	1.3	1.3	1.4
Maximum NPA (%w/v phenol equivalent)	5.9	5.9	5.9
HMF (mg/kg) after this storage time	32	37	44

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)	270	244	220	199	232	199	171	209	161	124
MG (mg/kg)	79	90	98	104	94	103	108	101	108	108
DHA:MG	3.4	2.7	2.2	1.9	2.5	1.9	1.6	2.1	1.5	1.2
NPA	4.8	5.2	5.5	5.7	5.4	5.7	5.9	5.6	5.9	5.8
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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