



Forecast of MG, NPA and HMF in Honey

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Initial Test Results

Laboratory ID	Sample ID	Date Tested	Dihydroxyacetone (DHA)	Methylglyoxal (MG)	Non-peroxide Activity (NPA)	Hydroxymethylfurfural (HMF)
	Units	-	mg/kg	mg/kg	%w/v phenol eq.	mg/kg
20-04559-1	200117_SOTA_25	07/02/2020	311	283	10.5	16

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	0	0	0
Maximum MG (mg/kg)	283	283	283
Maximum NPA (%w/v phenol equivalent)	10.5	10.5	10.5
HMF (mg/kg) after this storage time	16	16	16

Forecast Over Time

Compound	Initial Value	Storage at 20°C			Storage at 23°C			Storage at 27°C		
		4 Months	8 Months	12 Months	4 Months	8 Months	12 Months	4 Months	8 Months	12 Months
MG (mg/kg)	283	277	270	261	273	261	246	264	240	213
NPA	10.5	10.3	10.2	10.0	10.2	10.0	9.6	10.0	9.5	8.8
HMF (mg/kg)	16	18	21	23	21	25	30	27	39	51

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

Manuka Honey Forecast Approver:

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