



Bulk Naturals Wholesale LLC

bulknaturalswholesale.com

212 N Jefferson Unit 12A Ava, Mo 65608, USA / Phone: 1-573-465-0612

RAW MANUKA HONEY UMF 20+

MGO FORECAST

LAB REFERENCE: 23-26420

Date Received: June 9, 2023
Date Completed: June 9, 2023

QA Signature: Steven Konert

INITIAL TEST RESULT		
Specification	Units	Result
Dihydroxyacetone (DHA)	mg/kg	2863
Methylglyoxal (MG/MGO)	mg/kg	923
Ratio DHA:MG/MGO	Ratio	3.1
Non-peroxide Activity (NPA)	%w/v phenol eq.	21.3
Hydroxymethylfurfural (HMF)	mg/kg	15

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 endeavors 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 the consequences of decisions made based on these forecasts.

MAXIMUM MG			
Storage Temperature	20°C	23°C	27°C
Storage Time (weeks) required from date tested	99	65	38
DHA (mg/kg) after this storage time	1610	1621	1633
Maximum Methylglyoxal (MG/MGO)	1217	1211	1203
Ratio DHA:MG/MGO	1.3	1.3	1.4
Maximum NPA (%w/v phenol equivalent)	25.2	25.1	25.0
HMF (mg/kg) after this storage time	29	33	40

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)	2863	2586	2336	2110	2458	2110	1812	2211	1708	1319
MG/MGO (mg/kg)	923	1032	1111	1165	1072	1161	1203	1134	1202	1180
DHA:MG/MGO	3.1	2.5	2.1	1.8	2.3	1.8	1.5	1.9	1.4	1.1
NPA	21.3	22.8	23.9	24.6	23.4	24.5	25.0	24.2	25.0	24.7
HMF (mg/kg)	15	17	20	22	20	25	30	27	38	50

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.