Hill Laboratories
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# Certificate of Analysis



| | | | | |
|---|---|---|---|---|
| **Client:** | Midlands Apiaries Limited | **Lab No:** | 2191454 | HGPv3 |
| **Contact:** | Claudine McCormick | **Date Received:** | 12-Jun-2019 | |
| | C/- Midlands Apiaries Limited | **Date Reported:** | 20-Jun-2019 | **(Amended)** |
| | PO Box 65 | **Quote No:** | 70096 | |
| | Ashburton 7740 | **Order No:** | | |
| | | **Client Reference:** | Larnac | |
| | | **Submitted By:** | Lily Zhao | |

**Sample Type: Honey** — 300+

| | | | | | | |
|---|---|---|---|---|---|---|
| **Sample Name:** | | 11619B2-1 | | | | |
| **Lab Number:** | | 2191454.2 | | | | |
| **MPI Manuka 5 Attributes Analysis** | | | | | | |
| MPI Manuka Honey Classification | | Monofloral Manuka Honey | - | - | - | |
| 3-Phenyllactic acid | mg/kg | 610 | - | - | - | |
| 2'-Methoxyacetophenone | mg/kg | 16.6 | - | - | - | |
| 2-Methoxybenzoic Acid | mg/kg | 11.5 | - | - | - | |
| 4-Hydroxyphenyllactic acid | mg/kg | 8.4 | - | - | - | |
| Manuka Cq | Cq | 21.81 #1 | - | - | - | |
| | | | | | | |
| **Manuka Honey Analysis** | | | | | | |
| Dihydroxyacetone (DHA) | mg/kg | 750 | - | - | - | |
| 5-hydroxymethylfurfural (HMF) | mg/kg | 17.8 | - | - | - | |
| Methylglyoxal (MGO) | mg/kg | 350 | - | - | - | |
| Non Peroxide Activity (NPA)* | % Phenol Equivalent | 11.9 | - | - | - | |
| | | | | | | |
| **Tutin Analysis** | | | | | | |
| Tutin Result Evaluation | Pass/Fail | PASS | - | - | - | |
| Tutin | mg/kg | < 0.010 | - | - | - | |
| MRL as per Tutin in Honey Food Standard 2016 | mg/kg | 0.70 | - | - | - | |
| | | | | | | |
| **Microbiological Analysis** | | | | | | |
| Aerobic Count 35°C | cfu / g | - | - | - | - | |
| Yeasts & Moulds | cfu / g | - | - | - | - | |

## Analyst's Comments

#1 The Key Technical Personnel for this analysis is Eilidh Mowat.

**Amended Report:** This certificate of analysis replaces an earlier report issued on 17 Jun 2019 at 8:30 am
Reason for amendment: This report represents a subset of requested tests

# Summary of Methods

The following table(s) gives a brief description of the methods used to conduct the analyses for this job. The detection limits given below are those attainable in a relatively clean matrix. Detection limits may be higher for individual samples should insufficient sample be available, or if the matrix requires that dilutions be performed during analysis.
Unless otherwise indicated, analyses were performed at Hill Laboratories, 28 Duke Street, Frankton, Hamilton 3204.

**Sample Type: Honey**

| Test | Method Description | Default Detection Limit | Sample No |
|---|---|---|---|
| Individual Tests | | | |
| 3-in-1 Honey Method | Aqueous extraction, derivatisation. Analysis by UPLC-UV (dihydroxyacetone, 5-hydroxymethylfurfural, methylglyoxal). | - | 1-2 |

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The tests reported herein have been performed in accordance with the terms of accreditation, with the exception of tests marked *, which are not accredited.