

## CERTIFICATE OF ANALYSIS

**PRODUCT NAME: BORAGE OIL (19% GLA), REFINED**

**LOT NUMBER: LOT0000380**

PRODUCT INCI: BORAGE OFFICINALIS OIL

PRODUCT CODE: K0075

CAS NUMBER: 225234-12-8

EINECS NUMBER: 281-661-4

MANUFACTURING METHOD: EXPPELLER PRESSED, REFINED

MANUFACTURING DATE: 25/05/2018

BEST BEFORE DATE: 25/05/2020

| ANALYTICAL DETAILS                       | RANGE %              | RESULTS |
|--|----------------------|---------|
| APPEARANCE                               | OILY LIQUID          | -       |
| ODOUR                                    | ODOURLESS            | -       |
| COLOUR                                   | CLEAR - LIGHT YELLOW | -       |
| COLOUR LOVIBOND (GARDNER)                | < 7.0                | 0.3     |
| REFRACTIVE INDEX @ 20°C                  | 1.465 – 1.485        | 1.4758  |
| SPECIFIC GRAVITY @ 20°C                  | 0.910 – 0.925        | 0.919   |
| PEROXIDE VALUE (MEQ O <sub>2</sub> / KG) | <10.0                | 0.2     |
| IODINE VALUE                             | 129 - 150            | 135.0   |
| ACID VALUE                               | <1.0                 | 0.11    |
| SAPONIFICATION VALUE (MG KOH/GR)         | 185.0 – 195.0        | 190.2   |
| UNSAAPONIFIABLE MATTER                   | <1.5                 | 0.63    |
| ANISDINE VALUE                           | <15.0                | 3.2     |
| TOTOX VALUE                              | <20.0                | 3.6     |

| FATTY ACID PROFILE |                 | RANGE %     | RESULTS |
|--------------------|-----------------|-------------|---------|
| C-CHAIN            | ACID NAME       |             |         |
| C16:0              | PALMITIC        | 5.0 – 12.0  | 10.0    |
| C16:1              | PALMITOLEIC     | <0.6        | 0.3     |
| C18:0              | STEARIC         | 1.0 – 5.5   | 5.2     |
| C18:1              | OLEIC           | 5.0 – 20.0  | 19.5    |
| C18:2              | LINOLEIC        | 35.0 – 40.0 | 36.0    |
| C18:3              | ALPHA LINOLENIC | <1.0        | 0.1     |
| C18:3              | GAMMA LINOLENIC | >19.0       | 19.0    |
| C20:0              | ARACHIDIC ACID  | <0.5        | 0.3     |
| C20:1              | EICOSENOIC ACID | 3.0 – 5.0   | 4.2     |
| C22:1              | ERUCIC ACID     | 1.0 – 3.0   | 2.6     |
| C24:0              | LIGNOCERIC ACID | 1.0 – 2.0   | -       |

**FREE FROM TESTS**

|                            |      |
|----------------------------|------|
| APRICOT & PEACH KERNAL OIL | PASS |
| SESAME SEED OIL            | PASS |
| COTTONSEED OIL             | PASS |
| ARACHIS OIL                | PASS |
| MINERAL OIL                | PASS |
| FOREIGN OILS               | PASS |