

## Certificate of Analysis

|                   |                                   |
|-------------------|-----------------------------------|
| <b>Product</b>    | SEABUCKTHORN PULP, CO2-TO EXTRACT |
| <b>Lot #</b>      | 391108                            |
| <b>Shelf Life</b> | 5 years                           |

| Properties   | Specifications | Results        |
|--|----------------|----------------|
| <b>Analytical Check</b>  |                |                |
| Sum of carotenoids (calc. as $\beta$ -Carotene)                            | 0.10 – 0.20    | 0.12           |
| Sum of Sterols (calc. as Sitosterol)                                       | >1             | 1.4            |
| Sum of Tocopherols (calc.as alpha Tocopherol)                              | Not specified  | 0.11           |
| Aw-value   | <0.7           | 0.41 (23.0 OC) |
| Content of water   | <1             | 0.11           |
| Refractive Index 20 °C   | 1.460 – 1.480  | 1.4710         |
| Density 20 °C  | 0.910 – 0.925  | 0.9108         |
| Benz(a)pyrene  | <0.002         | Meets ppm      |
| Sum of Benz(a)pyrene, benz(a)anthracene, benzo(b)fluoranthene and chrysene | <0.010         | Meets ppm      |

### Sensory Check

|            |  |       |
|------------|--|-------|
| Appearance | Orange-red, at room temperature turbidness by some precipitates possible | Meets |
| Odour      | Seabuckthorn typical smell   | Meets |

### Analytical Check

#### Fatty Acid Composition

|                               |               |       |
|-------------------------------|---------------|-------|
| Palmitic Acid C16:0           | 30 – 40       | 34.1  |
| Palmitoleic Acid C16:1 w7     | 22 – 40       | 32.2  |
| Stearic Acid C18:0            | <3            | 0.74  |
| Oleic Acid C18:1 w9           | 10 – 28       | 20.7  |
| Vaccenic Acid C18:1 w7        | 4 – 9         | 6.9   |
| Linoleic Acid C18:2 w6        | 4 – 9         | 4.0   |
| Alpha Linolenic Acid C18:3 w3 | <5            | 1.3   |
| Arachidic Acid C20:0          | Not specified | 0.17  |
| Total fat                     | Not specified | 100.0 |
| Saturated fatty acids         | Not specified | 35.4  |
| Monounsaturated fatty acids   | Not specified | 60.4  |
| Polyunsaturated fatty acids   | Not specified | 4.2   |

#### Fat numbers



| Properties           | Specifications | Results |
|----------------------|----------------|---------|
| Unsaponifiables      | 1 – 7          | 4.7     |
| Peroxide Value       | <11            | 2.3     |
| Acid Value           | 4 – 18         | 8.9     |
| Saponification Value | 170 – 210      | 180     |
| Ester Value          | Not specified  | 171     |
| Iodine Value         | 50 – 90        | 59.2    |

This Certificate of Analysis was created by the manufacturer/distiller of the product. This information is believed to be up-to-date and correct; however, it is provided without any warranty. The customer is responsible for examining the product upon arrival and determining the safe use of the product in order to be in compliance with all applicable laws and regulations. The product must be stored in a cool, dry place away from direct light and heat, tightly sealed and away from children, the mentally infirm and pets. Essential oils shipped in amber plastic pharmaceutical grade bottles must be transferred to amber glass upon arrival, those shipped in aluminum bottles may be stored in such bottles for a minimum of 6 months, tightly sealed. All responsibility (including damage or injury) for the use of this and any other product purchased from Camden-Grey Essential Oils, Inc. rests with the purchaser/user. Camden-Grey's liability is limited to the paid value of this product.