

info@natureinbottle.com \(\rightarrow \) www.natureinbottle.com

CERTIFICATE OF ANALYSIS (COA)

| Product Name | COCOA BEAN OIL |
|----------------|----------------------------------|
| Botanical Name | Theobroma cacao |
| Product Code | PCO4146 |
| CAS# | 8002-31-1 |
| INCI Name | Theobroma Cacao (Cocoa) Seed Oil |

| Batch # | 41462405 | |
|--------------------|------------|--|
| Manufacturing Date | MAY 2024 | |
| Best Before Date | APRIL 2026 | |

| Part Used | Beans | |
|-------------------|-------------------------------|--|
| Extraction Method | Cold Pressed and Fractionated | |
| Quality | 100% Pure and Natural | |

| <u>PROPERTIES</u> | SPECIFICATIONS | <u>RESULTS</u> |
|---|---|----------------|
| Appearance | Pale yellow to golden colored liquid | CONFORMS |
| Odour | Characteristic faint odour | CONFORMS |
| Refractive Index | 1.450 - 1.490 @ 20°C | 1.465 |
| Specific Gravity (g/mL) | 0.890 - 0.930 @ 20°C | 0.913 |
| Saponification Value (mgKOH/g) | 170 - 200 | 185 |
| Peroxide Value (meq O ₂ /kg) | Less than 4.0 | CONFORMS |
| lodine Value (g l ₂ /100g) | 30 - 85 | CONFORMS |
| Free Fatty Acids (% oleic) | Less than 1.5 | CONFORMS |
| Moisture (%) | Less than 0.1% | 0.01 |
| Solubility | Soluble in Cosmetic esters and fixed oils; Insoluble in water | CONFORMS |



info@natureinbottle.com (a) www.natureinbottle.com

FATTY ACID COMPOSITION:

| FATTY ACID | C-CHAIN | SPECIFICATIONS (%) | RESULTS (%) |
|---------------|-------------|--------------------|-------------|
| Palmitic Acid | C16:0 | 5.00 – 12.00 | 7.50 |
| Stearic Acid | C18:0 | 6.00 – 16.00 | 8.60 |
| Oleic Acid | C18:1 (n-9) | 66.00 – 78.00 | 72.20 |
| Linoleic Acid | C18:2 (n-6) | 5.00 – 14.00 | 10.70 |

| MICROBIAL ANALYSIS | SPECIFICATIONS | STANDARDS | RESULTS |
|------------------------------------|----------------|-----------|----------|
| Aerobic Mesophilic Bacterial Count | < 100 CFU/g | ISO 21149 | CONFORMS |
| Yeast and Mould | < 10 CFU/g | ISO 16212 | CONFORMS |
| Candida albicans | ABSENT / 1g | ISO 18416 | CONFORMS |
| Escherichia coli | ABSENT / 1g | ISO 21150 | CONFORMS |
| Pseudomonas aeruginosa | ABSENT / 1g | ISO 22717 | CONFORMS |
| Staphylococcus aureus | ABSENT / 1g | ISO 22718 | CONFORMS |

| HEAVY METAL TESTS | SPECIFICATIONS | STANDARDS | <u>RESULTS</u> |
|----------------------------|----------------|-----------|----------------|
| Lead: Pb (mg/kg or ppm) | < 10 ppm | na | CONFORMS |
| Arsenic: As (mg/kg or ppm) | < 2 ppm | na | CONFORMS |
| Mercury: Hg (mg/kg or ppm) | < 1 ppm | na | CONFORMS |

STABILITY AND STORAGE:

Keep in tightly closed container in a cool and dry place, protected from sunlight. When stored for more than 24 months, quality should be checked before use.

As it is electronically generated document, hence no signature required.

Disclaimer & Caution: Please refer to all relevant technical information specific to the product, prior to use. The information contained in this document is obtained from current and reliable sources. Nature In Bottle provides the information contained herein, but makes no representation as to its comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose. The user of the product is solely responsible for compliance with all laws and regulations applying to the use of the product, including intellectual property rights of third parties. As the ordinary or otherwise use(s) of this product is outside the control of Nature In Bottle, no representation or warranty - expressed or implied - is made as to the effect(s) of such use(s), (including damage or injury), or the results obtained. The liability of Nature In Bottle is limited to the value of the goods and does not include any consequential loss. Nature In Bottle shall not be liable for any errors or delays in the content, or for any actions taken in reliance thereon. Nature In Bottle shall not be responsible for any damages resulting from the use of or reliance upon this information.