

CERTIFICATE OF ANALYSIS

ORGANIC ACEROLA DRY EXTRACT BIO = DE-ÖKO-039 Ref: PR 3629

Batch: P17112905
 Manufactured : 12.2017

Date : 2018, January 17th
 Shelf life : 12.2019

| CONTROLS | SPECIFICATIONS | RESULTS |
|---|--|-----------------------|
| <i>Botanical kind</i> | Organic <i>Malpighiaceae Malpighia glabra</i> L. (= <i>Malpighia punicifolia</i> L.) | Standard |
| <i>Part of the plant</i> | Fruit | Standard |
| <i>Ratio plant / final extract</i> | 3 - 4 to 1 | Standard |
| <i>Extraction solvent</i> | Water | Standard |
| <i>Description</i> | Thin, hygroscopic, light yellow to brown orangish powder | Beige orangish powder |
| <i>Carrier</i> | Organic manioc maltodextrin | Standard |
| <i>Solubility</i> | To be tested following the degree of incorporation | |
| <i>Bulk density</i> (Eur. Ph. VIII° Ed. 2.9.34) | 0.40 - 0.80 | 0.55 |
| <i>Loss on drying</i> (Eur. Ph. VIII° Ed. 2.8.17) | ≤ 8.00% | 4.97% |
| <i>pH</i> (Eur. Ph. VIII° Ed. 2.2.3) | 3.0 – 5.0 (1% in demineralized water) | 3.3 |
| <i>Total ash</i> ⁽⁰¹⁾ (Eur. Ph. VIII° Ed. 2.4.16) | < 10.00% | 4.26% |
| <i>Screening</i> (Internal method) | Min 95% < 500 µm | Standard |
| <i>Heavy metals (Control plan)*</i> (ICP, internal method) | | |
| <i>Pb</i> | < 3.00 ppm | Complies* |
| <i>Cd</i> | < 1.00 ppm | Complies* |
| <i>Hg</i> | < 0.10 ppm | Complies* |
| <i>Pesticides (Control plan)*</i> (GC-MSMS/LC-MSMS, internal method) | < detection limit | Complies* |
| PAH (Control plan)* <i>PaHs (sum of benzo(a)pyrene, benz(a)anthracene, benzo(b)fluoranthene and chrysene)</i> (GC-MS, internal method) | < 50 µg/kg | Complies* |
| <i>Benzo(a)pyrene</i> (GC-MS, internal method) | < 10 µg/kg | Complies* |
| Identification (on raw material) (Control plan)* (HPLC, internal method) | Complies with the phytochemical profile of <i>Malpighia glabra</i> L. | Complies* |
| Assay (HPLC, internal method) | > 17.00% Vitamin C expressed as L-Ascorbic-acid | 17.13% |
| Test (indicative value) (Control plan)* (Internal method:EA-IRMS, Isotopic analysis (Delta C13)) | Isotopic parameters of ascorbic acid are consistent with an acerola origin | Complies* |

INFORMATION ABOVE AS RECEIVED FROM OUR SUPPLIER

CONTROLS

SPECIFICATIONS

RESULTS

MICROBIOLOGY

(Eur. Ph. VIII° Ed. 2.6.12 and 2.6.31)

Total aerobic microbial count

< 10 000 CFU / g**

< 91 CFU / g

Total yeasts/moulds count

< 100 CFU / g**

< 10 CFU / g

Salmonella

Absent / 25g

Absent / 25g

Bile-tolerant Gram negative bacteria

< 100 CFU / g

< 10 CFU / g

Escherichia coli

Absent / g

Absent / g

**HACCP based control plan defined annually: one analysis on half finished product*

***Acceptable maximal count: 5 times the acceptance criterion according to Eur. Ph. VIII° Ed. 5.1.8 Category B*

Storage: Keep in a dry and clean place, protected from light.

QUALITY CONTROL


Laboratory Manager