



## Certificate of Analysis

|                 |                               |                   |               |
|-----------------|-------------------------------|-------------------|---------------|
| Product Name:   | <b>Theobromine</b>            | Batch Number:     | <b>Varies</b> |
| Botanical Name: | <b><i>Theobroma cacao</i></b> | Manufacture Date: | <b>Varies</b> |
| Used part:      | <b>Seeds</b>                  | Expiry Date:      | <b>Varies</b> |

| IDENTIFICATION |                                     | SPECIFICATION     | RESULT         |
|----------------|-------------------------------------|-------------------|----------------|
| Assay          |                                     | 98.0 - 101.0%     | 98.28 - 99.77% |
| Physical       | Appearance                          | White powder      | Complies       |
|                | Odor & Taste                        | Characteristic    | Complies       |
|                | Particle size                       | 100% pass 80 mesh | Complies       |
|                | Loss on drying                      | ≤ 0.5 - 3%        | 0.02 - 0.80%   |
|                | Sulphated ash                       | ≤ 0.1 - 1%        | 0.03 - 0.95%   |
|                | Related substances                  | ≤ 0.5%            | Complies       |
| Chemical       | Heavy Metals                        | ≤ 10 - 20 ppm     | Complies       |
|                | Lead (Pb)                           | ≤ 2 - 3 ppm       | Complies       |
|                | Arsenic (As)                        | ≤ 1 - 2 ppm       | Complies       |
|                | Cadmium (Cd)                        | ≤ 1 - 2 ppm       | Complies       |
|                | Mercury (Hg)                        | ≤ 0.1 - 0.5 ppm   | Complies       |
| Microbial      | Total Plate Count                   | ≤ 1000 cfu/g      | Complies       |
|                | Yeast & Mold                        | ≤ 100 cfu/g       | Complies       |
|                | E. Coli, Salmonella, Staphylococcus | Negative          | Complies       |

|      |                   |                                     |
|------|-------------------|-------------------------------------|
| Else | Storage condition | Sealed, kept in shady and dry place |
|      | Shelf life        | Three years                         |

