

## Data Profile

### Extra Virgin Beeswax Cera Alba Purified

This data profile is given to specify our product quality control evaluation

#### 1. Product Identification

|                 |   |
|-----------------|---|
| Product Code    | 002nascoad  |
| Product Name    | Extra Virgin Beeswax Cera Alba Purified                         |
| Natural Product | Yes   |
| INCI Name       | Cera Alba   |
| Cas No          | 8012-89-3   |
| EC No           | 232-383-7   |
| Chemical name   | Beeswax   |
| Functions       | Creams, Ointments, Masking, Skin & Hair Conditioning, Lip balms |

#### 2. Product Description

##### 2.1 Technical data

Cera Alba is the natural wax made by bees for their honeycomb. The bees seal their honeycombs again with fresh wax each year period. This wax consists primarily of myricyl palmitate, cerotic acid and esters and some high carbon paraffins (30-32 carbon atoms) and aliphatic alcohols.

##### 2.2 Our Laboratories Data

The Cera Alba (beeswax) we use is the finest scarce, form produced by *Apis Mellifera Macedonica* bees. It is the seal fresh wax that bees produce each year period to block the honeycombs. This wax which is precious for the honey producers is carefully selected, cleaned and purified by our unique laboratory physical methods. This wax is thereafter made in cubes of 3-3,3 gr each ready for usage by the cosmetic industry. Due to its natural origin this wax smells perfectly and makes the finest cosmetics like W/O creams, hair and makeup products.

#### 3. Legislation information

100% Natural material. This product complies the PH Eur 7<sup>0</sup>.

#### 4. Product characteristics

| Physical properties |                                  |
|---------------------|----------------------------------|
| Colour              | Yellow - light yellow*           |
| Appearance          | Lightly solid                    |
| Odour               | Characteristic of virgin beeswax |
| Size of particles   | Cubes 3x3x1,5 cm appx.           |

\* Due to our laboratories cleansing and purification physical method

| Chemical properties  |                     |
|----------------------|---------------------|
| Auto ignition point  | > 180 °C            |
| Flashpoint           | > 150 °C            |
| Melting point        | 63-66 °C(*)         |
| Peroxide value       | 2-5 meq/kg(*)       |
| Saponification value | 80-120 mg KOH/kg(*) |
| Specific gravity     | 090-0,94 Kg/l(*)    |
| Arsenic              | No detectable       |
| Lead                 | No detectable       |
| Mercury              | No detectable       |

(\*) Data refer to the company quality control. Different Lots have properties within limits.

#### Microbiological & antioxidant properties

The mixture of higher aliphatic alcohols termed D 002 show extreme anti-inflammatory and anti-oxidative properties against lipid peroxidation of liver and brain cells<sup>1,3</sup>. Moreover, the same mixture of alcohols present in virgin beeswax, can be related to the reduction of hydroxyl radical generation, lipid peroxidation, protein oxidation and MPO activity, and to the increase of the antioxidant enzymes activities in the rat gastric mucosa<sup>2</sup>. The potent anti-oxidant and anti-inflammatory effect of our virgin purified beeswax renders its use in the cosmetic formulas priceless. Moreover, our cosmetic formulations that contain even 10 % of Extra Virgin Beeswax Cera Alba Purified, pass with easiness the necessary Microbiological Control Test and Challenge Test (Antimicrobial Preservative Effectiveness Test / Category 2), with limited or no use of chemical preservatives.

<sup>1</sup> Ravelo Y, et al. Evaluation of anti-inflammatory and antinociceptive effects of D-002 alcohols (beeswax alcohols). J. Nat. Med. 2011. 65(2). 330-5.

<sup>2</sup> Perez Y, et al. protective effect of D-002, a mixture of beeswax alcohols, against indomethacin-induced gastric ulcers and mechanism of action. J. Nat. Med. 2013. 67(1), 182-9.

<sup>3</sup> Menendez R, et al. Inhibition of rat microsomal peroxidation by the oral administration of D002. Braz. J. Med. Biol. Res. 2000. 33(1), 85-90.

## 5. Identification of dangers

No specific hazard known. An extensive investigation for the not wanted presence of heavy metals is being made by our company. The exclusion of heavy metals is a being displayed on each certificate of analysis provided by each order. Furthermore, each Lot is Microbiologically tested for the absence of *Staphylococcus aureus*, *Pseudomonas aeruginosa*, and *Candida albicans*.

## 6. Shelf life

Stable natural material. Expiration date : 24 months after production date, due colour change (yellow-light yellow, turns to brown). Laboratory data show extreme stability results of tested finished cosmetic products (creams) containing of up to 30 % of our Extra Virgin Beeswax Cera Alba Purified.

## 7. Safety & Handling

Use protective laboratory coat, gloves and eye glasses. Keep away from ignition and fire sources. Wash hands. Handle as not hazardous material. Avoid sunlight exposure.

## 8. Packaging

Suitable PET packaging (with material certificate of Conformity) of 300 gr and 1000 gr are used. ISO and HACCP for packaging is a prerequisite for the selection of packaging material.

## 9. Additional Data

- ✓ This is a natural product. It is not a genetically modified organism, nor does it contain any other product derived by such organisms. It complies with the EC 1829/2003 reference. This product complies with Eur Pharm 7.

- ✓ Extra Virgin Beeswax Cera Alba Purified is physically cleaned and filtered in our laboratory avoiding unnecessary material left from honey producer collection, making this product ideal for industrial use.
- ✓ The cleaning and filtering process renders this product chemically compatible for production of various range of cosmetics such as o/w and w/o cream formulations, make up and hair conditioning products.
- ✓ Our cross laboratory data show that Extra Virgin Beeswax Cera Alba Purified high content in cosmetics limits down the use of chemical preservatives used in products providing increased safety of products.
- ✓ Our cross laboratory data show that Extra Virgin Beeswax Cera Alba Purified high content in cosmetics gives products of high stability in combination with other raw material ingredients of natural origin.