

:always natural

# Global. Sustainable. Innovative.



We are pleased to give you an insight into Norevo's world of waxes and oils with this brochure. Natural raw ingredients, and specialty ingredients derived from them, have been our driving force for more than 120 years.

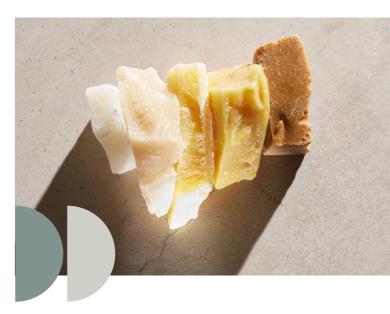
#### Norevo at a glance

- Privately owned and independent
- 210 employees worldwide from 18 nations
- ▶ 5 production sites on 5 continents
- ▶ In-house laboratory for R&D and product analysis
- Customers in 79 countries

## Natural raw ingredients – innovatively developed

Natural, pure, and sustainably produced raw materials are the basis on which we produce ingredients for our industrial partners.

Whether honey, licorice extract, gum acacia, or other fine raw ingredients – our products meet the high standards of the food, confectionery, and beverage industries. Our international customers from the pharmaceuticals and cosmetics sectors appreciate their long-standing partnership with Norevo.



# We act in a spirit of partnership and fairness

It has always been our top priority to cooperate fairly and in partnership with our raw ingredient producers – in many cases, this holds true for generations. Thanks to our locations all over the world, we are regionally anchored and interconnected.

This is the only way to ensure that our raw ingredients are of top quality from their very origin and produced in an environmentally sustainable manner. These strong partnerships provide us – and you – with a stable global supply chain. As a responsible company, we view certifications, sustainable procurement channels, transparent supply chains, and complete compliance all around the world as a key task – and happily and voluntarily go beyond existing standards to this end.

▶ To us, naturalness is more than just a trend. It is part of our DNA. <</p>

Johannes Wolff, Managing Director





We source our waxes and oils from all over the world. We place great value on the complete traceability back to their origin. Our close and cooperative partnerships with local producers allow us to ensure the sustainable and consistent quality of our raw ingredients on site.

We have our products certified according to various standards, offer diverse organic qualities, and fulfill even the most stringent processing requirements for a wide range of industries. In addition, we get involved in the regions of origin, e.g., with the "Initiative for Responsible Carnauba" in northeast Brazil.









# Our range of waxes

The high quality of our raw ingredients is ensured by strict quality controls, the highest certifications, and the gentlest processing procedures. Except for beeswax, all our waxes are vegan.



### Our commitment to sustainable production

We support a large number of projects in the countries of origin. As an example, we promote reforestation and biodiversity in East Africa.

The fight against youth unemployment is another important issue to us. In West Africa, we collaborate with two local NGOs. We offer material and educational opportunities, thus contributing to improved living conditions in the villages.

#### **Beeswax**

Beeswax gives products viscosity, has rich care properties, and provides for a good adhesion to the skin. Thanks to our many years of experience in the honey segment, we have a worldwide network of beekeepers in place. This allows us to source a wide range of beeswaxes that meet extensive quality requirements and can be traced back to their origin.

▶ At Norevo, we attach great importance to sustainability, social responsibility, and traceability. For this reason, we collaborate with suppliers who view these issues as equally important. ◀

Annabell Becker, waxes expert

#### **Applications**

#### Candles

Common household candles

#### **Polishes**

Leather and wood care

#### Food (E901)

Polishing and releasing agent, packaging coating for direct food contact, coating of fruit

#### Cosmetics

Nurturing properties, stabilizing agent for pastes and ointments



Carnauba wax is obtained from the leaves of the carnauba palm (Copernicia prunifera), which grows wild in the north of Brazil. Its wax is light yellow to gray to dark brown in color.

Carnauba wax is the hardest of all natural waxes. It has an exceptionally high melting temperature of  $82^{\circ}\text{C}$  to  $86^{\circ}\text{C}$ .

### Our commitment to sustainable production

Norevo is a member of the "Initiative for Responsible Carnauba" and promotes more responsible production procedures. We therefore exclusively work with UEBT certified suppliers.

#### **Applications**

#### Food (E903)

Polishing and releasing agent, packaging coating for direct food contact, coating of fruit

#### Pharma

Glazing and sealing agent for pills to protect them during the casting process and prevent dust from forming during production

#### Cosmetics

Raises the melting point, acts as a stabilizer for lipsticks, produces a long lasting shine

#### Technical applications

Additive for printing inks, packaging coating, can be processed into polymers, floor and car polishes



#### NEW

#### Bioethical Carnauba Standard

We exclusively import 100% bioethical carnauba wax from Brazil. Alongside our local partners, we are committed to improving the living standards of workers and their families.

Another important and decisive issue is the traceability of wax right to the harvest fields.







#### Candelilla wax

Candelilla wax is obtained from the leaves of the candelilla shrub (Euphorbia cerifera and Euphorbia antisyphilitica) native to northern Mexico. It has a yellow to light brown color and is often used as a vegan alternative to beeswax. Candelilla wax has a high melting point (68.5°C to 72.5°C), high strength, nice shine, and good oil-binding properties.



#### **EXCLUSIVE**

COSMOS-certified candelilla wax for organic products

As an exclusive partner of the manufacturer Multiceras, we distribute candelilla wax that complies with the high organic and natural cosmetics standard COSMOS throughout the EU.

Norevo sources candelilla wax exclusively from producers who strictly adhere to the CITES Convention – which was also signed by us.

Moreover, our suppliers are committed to complying with the guidelines of the Ethical Trading Initiative and the UN Global Compact.

CITES stands for "Convention on International Trade in Endangered Species of Wild Fauna and Flora".

#### **Applications**

#### Food (E902)

Polishing and releasing agent, packaging coating for direct food contact, coating of fruit

#### Cosmetics

Stabilizer for pencil formulations, excellent oil-binding properties, produces a long lasting shine

#### Pharma

Glazing and sealing agent for pills

#### Technical applications

Paper and cardboard coating, polishes, candles



#### Berry wax

Berry wax, also known as sumac wax or Japan wax, is obtained from the berry fruit peel of the lacquer tree (Rhus verniciflua). This vegan wax is often used as an alternative to beeswax. Moreover, it is ideally suited as an additive to waxes with higher melting temperatures and serves as a good stabilizer.

#### **Applications**

#### Candles

Vegan alternative to beeswax

#### Cosmetics

Moisturizing, soft consistency, good spreading behavior on the skin



#### Rice bran wax

The yellowish-white rice bran wax (Oryza Sativa Bran Cera) is extracted from rice hulls. It has a melting point of 79°C to 85°C, is highly hydrophobic, and forms rather soft oil gels. It primarily serves as a stabilizing agent in emulsions and is used, among other things, as a component of cosmetic pencils.

#### Sunflower wax

Sunflower wax (Helianthus Annuus Seed Cera) is extracted from the hulls of sunflower seeds and then further refined. It has a melting point of 75°C to 80°C, is quick to emulsify, and has excellent oil-binding properties. Sunflower wax is primarily used in natural cosmetics – e.g., in lipsticks – where it provides stability and caters for a long-lasting shine.

# Hydrogenated vegetable oils



### Hydrogenated rapeseed oil

Our fully hydrogenated rapeseed oil has a soft and creamy texture and can be used in various cosmetic formulations for skin, hair, and nail products. We provide two types of oils:

- ▶ High erucic acid rapeseed oil: with a high share of unsaturated fats and a low melting point (61-66°C)
- **▶ Low erucic acid rapeseed oil:** with a small share of monounsaturated fats and a melting point of 68-74°C.

## Hydrogenated sunflower oil

Fully hydrogenated sunflower oil is obtained from sunflower seeds. Its melting point is at about 69°C to 73°C. It serves as a film-building component in cosmetic products and caters for a soft and smooth skin surface.

#### **Applications**

#### Food

Coating and microencapsulation of active substances such as vitamins or essential oils, mechanical protection, protection against oxidation, gum base for chewing gums

#### Cosmetics

Alternative to micro-crystalline waxes, moisturizing and regenerating, stabilizing agent

#### Candles

Vegan alternative to beeswax

#### Pharma

Encapsulating agent for food supplements



### Overview waxes & hydrogenated oils

|               | PRODUCT      | Beeswax                                | Carnauba wax  | Candelilla wax                         | Berry wax            |
|---------------|--------------|--|---|--|----------------------|
|               | COLOR        | Cera Alba: white<br>Cera Flava: yellow | T1: light yellow<br>T3: yellow to<br>yellow-orange<br>T4: brown | Yellow to light brown<br>to dark brown | White to pale yellow |
| DELIVERY FORM | Powder       | -                                      | ✓   | ✓                                      | -                    |
|               | Pastilles    | ✓                                      | ✓   | ✓                                      | ✓                    |
|               | Flakes       | -                                      | ✓   | ✓                                      | -                    |
|               | Plates       | ✓                                      | -   | -                                      | -                    |
|               | Raw material | ✓                                      | -   | -                                      | -                    |
|               | In water     | ✓                                      | ✓   | ✓                                      | ✓                    |
|               | In oil       | ✓                                      | ✓   | ✓                                      | ✓                    |

| QUALITY AND DECLARATION | Food category                      | E901      | E903                       | E902                      | -   |
|-------------------------|------------------------------------|-----------|----------------------------|---------------------------|---|
|                         | Cosmetics category<br>INCI         | Cera Alba | Copernicia<br>Cerifera Wax | Euphorbia<br>Cerifera Wax | Rhus Succedanea<br>Fruit Cera/Rhus<br>Verniciflua peel Cera |
|                         | Pharma class                       | ✓         | ✓                          | ✓                         | ✓   |
|                         | Technical class                    | ✓         | ✓                          | ✓                         | ✓   |
| CERTIFICATES            | Kosher                             | ✓         | ✓                          | ✓                         | ✓   |
|                         | Hələl                              | ✓         | ✓                          | ✓                         | ✓   |
|                         | EU BIO                             | ✓         | ✓                          | -                         | -   |
|                         | Ecocert                            | ✓         | ✓                          | -                         | -   |
|                         | Cosmos                             | ✓         | ✓                          | ✓                         | ✓   |
| SPECIFICATIONS          | Melting point (°C)                 | 62-65     | 82-86                      | 68,5-72,5                 | 44-54   |
|                         | Acid content<br>(mg KOH/g)         | 17-24     | 2-7                        | 12-22                     | 5-30  |
|                         | Saponification value<br>(mg KOH/g) | 87-104    | 78-95                      | 43-65                     | 180-240   |

| Rice bran wax        | Sunflower wax        | Hydrogenated oils    |
|----------------------|----------------------|----------------------|
| White to pale yellow | White to pale yellow | White to pale yellow |
| -                    | -                    | -                    |
| <b>✓</b>             | <b>✓</b>             | -                    |
| -                    | -                    | <b>✓</b>             |
|                      |                      | -                    |
| -                    |                      | -                    |
| <b>✓</b>             | <b>✓</b>             | <b>✓</b>             |
| <b>✓</b>             | <b>✓</b>             | <b>✓</b>             |

| -                               | -                             | ✓  |
|---------------------------------|-------------------------------|--|
| Oryza Sativa<br>(Rice) Bran Wax | Helianthus<br>Annuus Seed Wax | Hydrogenated<br>Rapeseed Oil,<br>Hydrogenated<br>Sunflower Oil |
| -                               |                               | -  |
| ✓                               | ✓                             | ✓  |
| ✓                               | ✓                             | ✓  |
| ✓                               | ✓                             | ✓  |
| -                               | -                             | -  |
| -                               | -                             | -  |
| -                               | -                             | -  |
| 77-82                           | 74-80                         | 69-73  |
| <10                             | <8                            | -  |
| 75-120                          | 75-95                         | -  |











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