CHIURI BUTTER
Enter the world of NAT oleis™

CHIURI BUTTER
Chiuri Butter – At a glance…

INCI name: Bassia Butyracea seed butter

- Native to the steep slopes of the Himalayas, Nepal, Chiuri is nicknamed the “butter tree”.
- Rich in Fatty acids

NATUREX ADVANTAGES

- Our virgin and refined grades allow for a very well-preserved oil, close to its original profile.
- A new value chain in an under-developed country organized via cooperatives and community enterprises.
- Sustainable forest management and integrated farming to respect the environment and populations.
- NGO support for a responsible management of resources.
- Grade available: Refined
- Potential: 10T/year

SKIN CARE
- Moisturizing
- Barrier repair, nourishing
- Dermo-purifying

HAIR CARE
- Repair
- Shine
Chiuri Butter -
From the Nepalese Himalayas

From peaks to plains…

- The Chiuri tree is widely distributed throughout Nepal.
- It grows on steep slopes, ravines and cliffs, between 300 and 1,500 meters.
- NATUREX’s Chiuri Butter is produced from fruits and seeds collected and stored in Jajarkot – a wild land of contrasts. Butter is extracted at the end of the wet season in Nepal in September.
- In this region, Chiuri trees are grow wild in forests.
Chiuri Butter – Botanical identity

- **Name:** Chiuri butter
  - Botanical name: *Diploknema butyracea*

- *Diploknema butyracea* is a medium-sized tree that can reach up to 20 meters in height. It belongs to the Sapotaceae family.

- Fruits are round with an orange flesh when ripe.
  - The flesh has significant nutritional value.
  - The butter is edible, and traditionally used in cooking as a substitute to vegetable oils.
  - Juice can be boiled to obtain a liquid sugar alternative.
Chiuri Butter – Traditional usages

- In Nepal, Chiuri butter is traditionally used for different cosmetic purposes.
  - Rural communities use it to treat rheumatic pains.
  - The sugary liquid of the pulp is also used by the local population as glue to trap insects and can also be used as a pesticide.
  - The butter is commonly applied on burns, wounds and chapped skin and lips to facilitate healing.
  - Can also be used as a remedy against skin infection.
Chiuri Butter – Harvesting & Processing

- **Harvesting**
  - Harvesting season: June – July (the wet season)
  - Harvested part: Fruits
  - It is dangerous and difficult to harvest the Chiuri fruit because of the trees’ location (on steep slopes).
Fruits are collected

Fruits are squeezed and the pulp is removed

Seeds are cleaned and graded

Sundrying

Crushing and steaming to obtain seed flour

Oil extraction

Filtration and purification

Packing
Chiuri Butter – Collection sites

Current:
- Jajarkot

Potential:
- Salyan
- Rukum
- Dang
- Pyuthan

Western Nepal
Chiuri Butter – From growing to industry

Blossoming (Nov-Jan)

Flower

Tree

Fruits (Apr-Jul)

Fruit

Seeds and butter

Harvesting (Jun-Jul)

Chiuri tree

Fruit

Seeds
Chiuri Butter – NATUREX premium quality

A butter is an oil that solidifies at ambient temperature. The fusion point is high and superior to other oils. Butters are rich in saturated fatty acids.

- **Melting point of Chiuri Butter**: 40-42°C.

The flour is pressed to extract the oil: cold-pressed, no use of solvent, only mechanical pressing. The oil is filtered and packed.

1 grade available:
- Refined grade: thanks to a decoloring and deodorization process, the butter is ready for cosmetic formulations (colorless & odorless)

Naturex guarantees premium quality via a highly strict quality control on each batch:

- Fatty acid profile
- Infra-red spectrum fingerprint
- Characteristic unsaponifiable compounds
- ADN authentication if necessary
- Low acid value*
- Low peroxide value*

*according to each botanical oil bibliographic data
Chiuri Butter - Composition

- The rancimat analysis shows that Chiuri Butter is very stable
- Chiuri Butter OSI rancimat: >60h [110°C, 10L/h]

**Triglycerides**

Rich in Fatty Acids:
- Palmitic acid (45-65%)
- Oleic acid (25-35%): w9
- Linoleic acid (2-8%): w6

**Unsaponifiables**

- **Phytosterols**
  - Beta-sitosterol is the main sterol present.
- **But also**
  - Abietatriene
  - Squalene
  - Dihydro-elasterol
  - α- β Amyrin
  - Erythrodial
Chiuri Butter – Examples of FA profiles

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

- Palmitic acid C16:0
- Palmitoleic acid C16:1
- Stearic acid C18:0
- Oleic acid (w9) C18:1
- Linoleic acid (w6) C18:2
- Linolenic acid (w3) C18:3
- Arachidic acid C20:0
- Gadoleic acid C20:1
- Behenic acid C22:0
- Erucic acid C22:1
Chiuri Butter – Fatty Acids (FA) Biochemistry

Omegas 6 & 9 - skin and hair effects

Mono-unsaturated FA

- Omega 9 (ω-9)
  - C18:1
  - Oleic acid
  - Important constituent of sebum and hair lipids
  - Deficit: dry skin, dry hair

Poly-unsaturated FA = Essential FA
Vital for healthy skin

- Omega 6 (ω-6)
  - C18:2
  - Linoleic Ac
  - Most important FA in epidermis.
  - Central role in the barrier function
  - Deficit: atopic dermatitis

- Omega 3 (ω-3)
  - C18:3
  - α-Linolenic Ac
  - Component of Stratum Corneum.
  - Deficit: inflammatory dermatosis, acne, psoriasis, atopic dermatitis
Chiuri Butter – Unsaponifiables for skin and hair benefits

- **Tocopherols**
  - Protect against the damaging effect of lipid peroxidation
  - Protect cell membranes and DNA from free radical damage

- **Phytosterols**
  - Have a chemical structure close to cholesterol, that composes intercorneocytary cement and sebum
  - Raise the stratum corneum cohesion and reform the protective hydrolipidic film of the skin
  - Reinforce the barrier function
Chiuri Butter – Main benefits summary

SKIN CARE
• Moisturizing
• Barrier repair, nourishing
• Dermo-purifying

HAIR CARE
• Repair
• Shine
What can be learned from local communities… and might become paths for clinical investigation

- **Barrier repair, nourishing**
  Butter can be used to treat skin infection and is applied on chapped hands and feet.

- **Dermo-purifying**
  Communities used chiuri cake as a anti-microbial.
## Chiuri Butter - Treasured beauty benefits

### Naturex’s guide of benefits

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<th>Radiance &amp; Whitening</th>
<th>Regenerating</th>
<th>Antioxidant</th>
<th>Anti-wrinkle</th>
<th>Calming</th>
<th>Dermopurifying</th>
<th>Photoprotection</th>
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Source 1: bibliography
Source 2: in vivo clinical studies (in red)
Chiuri Butter – Cosmetic applications

Sensorial profile: Chiuri butter is as creamy as butter

SKIN CARE
- Body creams
- Repairing lip balm for chapped lips
- Ultra nourishing body milks

HAIR CARE
- shampooos
- Restore mask treatment
Chiuri Butter – To summarize

- **100% natural process.** No chemical substances added when processing the oil.

- Chiuri Butter by Naturex is **very resistant to oxidation.** Shelf life 24 months.

- **Natural intrinsic properties of the oil are preserved** thanks to the cold-pressing: Calming, moisturizing, regenerative, hair repair.

- Unadulterated: from the tree to your product, **quality is traceable and measured.**

- **Packed in premium conditions** (Nitrogen blanketed) and stored at a chilled temperature, protected from light.

- **Sustainable sourcing:** contribution to Naturex sustainable program and helps communities (1% Foundation).
Chiuri Butter – References

- **References**
  - LA030090 for the refined grade

- **Recommended dosage**: 1-50%

- **Safety assessment**
  Good local tolerance safety assessment is available, established by expert toxicologist, based on the regulation (CE) N° 1223/2009 and based on the recommendations of the SCCS notes of guidance.