## | Firmenich Context

Collected from several varieties of trees in Southeast Asia, Benzoin is a gum with a variety of reported benefits.

It is cultivated after incisions are made in the bark and outer layers of the trunk of a *Styrax tonkinensis* or a *Styrax benzoin* tree.

Resin is secreted, and six months later (between January and April), the Benzoin fragments are collected.

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The resin is in the form of hard, brittle "tears" - like pebbles.

Firmenich sources Benzoin from the *Styrax tonkinensis* tree in Laos (Siam) and the *Styrax benzoin* tree in Sumatra (Indonesia).

In both locations, Firmenich is a key actor and has established strong relationships at the source to ensure consistent quality as well as support the producers with long-term commitments.

# l Technology

Traditionally extracted with volatile solvent (resinoids) or with ethanol (tincture), Benzoin is used both in flavor and fragrance.

Firmenich Natural Innovation Center's high-tech Benzoin extracts offer pure

and precise olfactive profiles to perfumers.

Firmenich's Supercritical Fluid Extraction (SFE) technology enables the production of a premium extract.

### Forty-five Years' Experience in Supercritical Fluid Extracts

Since the 1970's when initial Supercritical Fluid Extraction (SFE) trials took place, Firmenich has consistently strengthened its position in the field and is now a premier SFE supplier to the Flavor & Fragrance industry.

Supercritical  $\mathrm{CO}_2$  Extraction is a technology in which carbon dioxide, put beyond its critical point (73 bars and 30°C), becomes a supercritical fluid with special properties.

SFE Key Benefits

- No petrochemical solvent used.
- Safe for workers & the environment.
- Extraction at low temperature preserves the natural profile identity of the raw material.
- Highly selective extraction is possible because of the precise pressure and temperature setup.
- Process conforms with Organic, Natural Ecocert, Halal and Kosher prerogatives.

# Reported Benefits

Known for its sacred and antiseptic properties, Benzoin has been used for thousands of years.

In the early days of the Ancient Roman Empire, Benzoin was said to be an offering of the Wise Men.

There is evidence that Benzoin was traded in China as early as 800 AD, where it was used as a fixative for perfume.

It is frequently used in church incense in Russia, Orthodox Christian and Western Catholic societies, and due to its ability to destroy foul smells, it is a key ingredient in Armenian incense paper.

Studies have shown that Benzoin resin relieves nervous tension and headaches, and thus facilitates intellectual concentration.

#### Balsamic – Ambery - Spicy



Styrax tonkinensis & Styrax benzoin

## Portfolio

Sweet, delicate, with a slightly cinnamic profile, Benzoin is a typical ambery-balsamic key ingredient for perfumery.

Benzoin Siam is typically sweet and vanilla-like with an almond facet.

Benzoin Sumatra is typically powdery, balsamic, spicy and cinnamic. Less gourmandthan Siamorigin. Particularly suitable for body care applications.

### BENZOIN SIAM RES 915058

Pure & Natural.

#### BENZOIN SIAM RES / 50% DPG 915085

Pure & Natural, on carrier.

#### BENZOIN SIAM RES ORGANIC 915069

Pure & Natural. Ecocert Certified.

#### BENZOIN SIAM SFE 915063

Pure & Natural.

The SFE version is colorless, with a bright balsamic note and a clean vanilla effect.

## BENZOIN SUMATRA RES 915034

Pure & Natural.

## BENZOIN SUMATRA RES / 50% DPG 915090

Pure & Natural. on carrier.

