High-Purity Coconut Oil

Ensuring quality from the plantation to the end product

Currently, coconut oil is experiencing a revival and there's no question that it's more popular than ever. However, a report by the magazine Ökotest, a German consumer magazine published since 1985, shows that even certified organic coconut oils can contain mineral oil residues. The reason for this is that the chemical structure of the raw material can sometimes accumulate MOSH/MOAH. To ensure the production of high-purity products, oil refinery expert Nutriswiss relies on controlled supply chain management.

Michel Burla, CEO of Nutriswiss

All-rounder coconut oil can be used both in the kitchen and the bathroom — for baking, cooking and body care. Although coconut oil is now widely used, sourcing remains a challenge for the industry. Why? "Cultivation and transport are always associated with risks for oils and fats," explains Michel Burla, CEO of Nutriswiss. "However, a controlled supply chain is even more important for coconut oil than other similar ingredients. Handling the product during transportation typically represents a major risk factor; the social conditions of the producers in the countries of origin are also a key issue. Therefore, we have installed mechanisms that guarantee the high quality of the raw material."

Quality control: decreasing the risk of contamination

Crude oils such as coconut quickly absorb contaminants from the environment. Aggravating factors can be a lack of expertise and limited economic and technical possibilities for coconut farmers: if the cobra (the fruit flesh) is dried in the traditional way over an open fire, contaminants from the smoke can get into the final foodstuff. Burla notes: "In the EU and Switzerland, a maximum limit for the sum of four heavy polycyclic hydrocarbons (PAHs) of 10 ppb applies to coconut oil; owing to the hazard potential of benzo(a)pyrene, only a maximum of 2 ppb is permitted." In addition, mineral oil residues can also originate from exhaust gases, technical oils or the additives needed to operate the machinery during pre-processing on the plantations and in the production facilities.

In terms of transportation, the longer the route, the more numerous the intermediaries and stations and, therefore, a greater risk of contamination. Open loading operations and contact with pipes, ambient air and other goods in transit can cause contaminants to accumulate in the raw material. Contact with oxygen causes the oil to oxidize and become rancid. In conventional logistics chains, every kilo of crude oil is reloaded or pumped up to six times during transport. To make matters worse, only the last three shipments are documented in maritime transport. In this way, it remains unclear whether a previous cargo contained diesel oil, for example. The composition of the cargo and the hygienic purity of the containers cannot then be guaranteed. As a specialist in the processing of oils and fats, Swiss company Nutriswiss relies on procedures that ensure the delivery of the highest quality products, even if the oils are very sensitive.

Maintaining a secure supply chain

The key to high-quality crude oils is raw material sourcing. In this regard, the Swiss refinery follows an individual and very elaborate path that prioritizes quality, sustainability and social standards. The coconut oil is sourced from long-standing contractual partners, mainly from countries in the west and southeast of the African continent. In-house standards and controls are a prerequisite. "Only close cooperation and knowledge of local conditions provide a suitable basis for safeguarding and improving the quality of coconut oil," explains Burla.

The collaboration makes it possible to influence the raw material´s properties, quality and, sometimes, even the harvest dates. The raw material is loaded into refinery-owned food-grade ISO containers, the purity of which is controlled by Nutriswiss. The loaded