

Nutriswiss sets new standards with purification plant

Short path distillation preserves valuable nutrients when refining edible oils and prevents process contaminants

Lyss/Switzerland, July 2020: The Swiss edible oil and fat specialist, Nutriswiss AG, is expanding its refining operations with new short path distillation (SPD) equipment. The process removes contaminants and isolates fatty acids at particularly low process temperatures. At the same time, it prevents the contaminations of food products and preserves micronutrients. With this new technology, Nutriswiss is able to achieve previously unattained levels of quality and overcome a key hurdle for manufacturers.

Since June 2020, Nutriswiss has been using SPD to refine and produce pure, high-quality products. The process gently removes pollutants such as pesticides from palm, rapeseed and other crude oils without forming contaminants in situ owing to the low thermal load applied. In conventional refining, high temperatures and pressure — and deodorization — are often required to effectively remove contaminants. However, heat promotes the formation of trans fatty acids, glycidyl fatty acid esters and chlorinated fatty acid esters such as 3-MCPD. Because of the extremely low pressures used in SPD, high temperatures can be avoided. The distance from the evaporating flask to the condenser is short, so there's very little pressure loss compensate.

Valuable components such as micronutrients are preserved and yields of essential omega-3 fatty acids, for example, can be maximized. At the same time, hydrocarbons (MOSH/MOAH), pesticides or plasticizers such as DEHP derived from mineral oil are significantly reduced or even removed. Thanks to the application of this method, Nutriswiss is setting new standards in terms of the purity, quality and nutrient content of the oils they offer.

The SPD plant occupies a new seven-storey facility and has been expanded in cooperation with plant manufacturer, VTA, to include supplementary process technology. SPD is a well established process and has been used in the fish oil industry for years. In Southeast Asia, red palm oil is refined by the

method to obtain micronutrients and carotenoids. Nutriswiss is initially focusing on the contract refining of palm oil. An average of two tons per hour can be processed in continuous mode. Thanks to the flexible plant technology designed to comply with current GMPs, product changeovers are fast and simple. As such, the fat specialist is also able to focus on numerous other oils, including sensitive omega-3 oils from algae and fish. For each oil, a comprehensive profile with more than 30 different fat indicators is drawn up before, during and after the production process and an individual process plan is defined.

Michel Burla, Managing Director of Nutriswiss, commented: “The construction of the new plant is very important to us and is our response to the growing demands of our customers. Applications of exceptional quality, the isolation of certain fatty acids, the enrichment with valuable essential fatty acids and the targeted use of free fatty acids are just some of the possibilities we’ll be offering in the future. Even those facing stricter legal limits will be able to meet the higher requirements with our help. Together with our plant engineering company, we have developed innovative solutions that give us a major quality advantage when refining edible oils. This benefits our customers and, ultimately, the consumer.”

About Nutriswiss

Nutriswiss AG specialises in the refining of high-quality, tailor-made edible fats and is the Swiss leader in special and organic products. For national and international food manufacturers, the catering, cosmetic and pharmaceutical industries, as well as artisan bakers, crude oils from all over the world are neutralized, bleached, modified by fractionation, transesterification or hydrogenation, mixed and deodorized. At its headquarters in Lyss in the canton of Berne in Switzerland, a total of 90 employees produce around 55,000 tonnes of high-purity edible oils and fats annually, 95 percent of which are of vegetable origin. Under the brand name, Belfina, sister company Grüninger supplies the national catering trade, food craft and retail trade with special fats and margarines. Nutriswiss is part of Centravo Holding, which was founded in 1879.

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