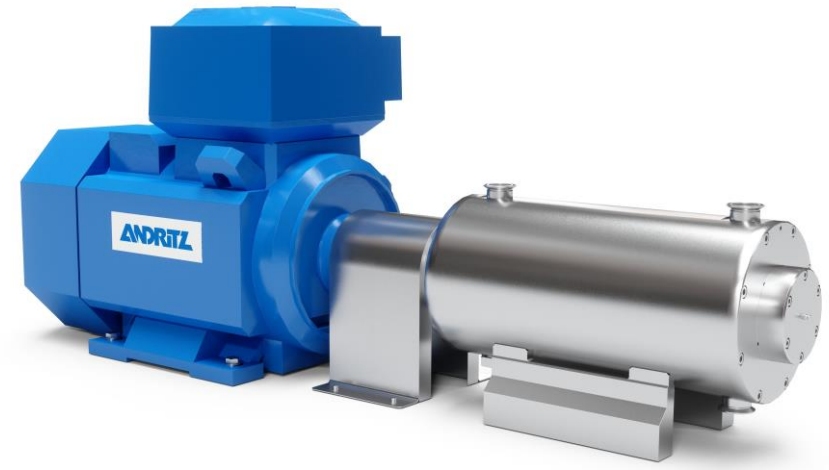
From polyphenols to plant proteins - Andritz focuses on extraction from by-products

With Turbex, Andritz has developed a highly efficient extraction system for the production of functional ingredients. The Turbex helps to produce high-quality extracts from plants and natural products and transforms residual streams from production, such as orange peel or spent grain, into valuable ingredients.



The Turbex extractor from Andritz enables the production of extracts from plant raw materials and combines a low extraction temperature with a short processing time.
(Photo: © Andritz)

New ingredients for plant-based food

Tapping into new plant-based raw materials is of key importance for the food and beverage industry. This is particularly true with regard to the plant-based food trend, as the most important driver in the development of sustainably produced products. The background to this is the increasing consumer demand for plant-based foods. Both flexitarians and vegans say they would like more choice. The following applies for food producers: Those who want to position themselves on the market here need know-how along the entire process chain. That' s why the latest technological developments in this field - from the extraction of herbal ingredients to systems for further processing - play a central role at the trade fair centre in Cologne.

Exhibitors in this segment include Andritz, a company specialising in separation technology with sites in Cologne, Krefeld, Selb and Vierkirchen in Germany. With Turbex, the technology provider has developed an extractor that enables the production of extracts from plant raw materials that result as by-products in production. Plant proteins, polyphenols, essential oils or antioxidants and dietary fibres can be extracted from products such as spent grains or coffee grounds, tea leaves or citrus peels.

Counterflow principle for high yields

The process uses a series of rotors and stators that generate high turbulence, shear forces and cavitation. This leads to higher yields with shorter processing times. These high yields are achieved with the support of a counterflow principle. The low extraction temperature combined with the short processing time improves the product quality, as the polyphenols and antioxidants obtained do not oxidise.

According to the manufacturer, the Turbex can be installed as a retrofit to improve the performance of existing process lines. This makes it a useful addition to process line solutions, for example for the ready-to-drink tea market. Another characteristic: The fact that the process does not necessarily require ethanol as an extraction solvent, but can be operated with water only, reduces both the costs and the ecological footprint.

Additional information and contact

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