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#anugafoodtec

Innovative food ingredients and processes as a foundation for the reformulation and development of new product concepts

Anuga FoodTec 2021 will present solutions for forward-looking food and beverages

What do the products of the future look like? Discussions about ingredients, sustainability, traceability in the supply chain, health and saving resources are driving the development of new, needs-based food and beverages. But also price increases or the shortage of individual raw materials as well as changed consumer preferences can also lead to manufacturers revising or redeveloping their recipes. Innovative food ingredients and technological methods play a major role in this process. Anuga FoodTec, the world's leading trade fair for the food and beverage industry offers a comprehensive overview of the latest technologies and ingredients. Numerous suppliers occupy themselves with this theme at different process levels and they will present their solutions at the trade fair in Cologne from 23 to 26 March 2021.

Product recipes on the test bench

The challenges and solutions related to the reduction of sodium, sugar and fat or also meat, milk and gluten - ranging from the technical obstacles, to the selection of suitable ingredients, through to the effect on the costs - occupy many food and beverage manufacturers. The particular problems this faces the product developers with: Omitting or adding ingredients has an effect on the sell-by date, the texture and on the all-decisive perception criteria of a product - the taste. For example, salt in cheese inhibits the growth of dangerous microorganisms, sugar influences the fermentation of yoghurt and fat is an important component for the texture of bakery products. If only one ingredient in the recipe is changed, the entire product changes.

Fat reduction without compromising the taste

Hunting for solutions the scientists and product developers combine traditional manufacturing processes with innovative technologies and tailor-made, functional food ingredients. At Anuga FoodTec, the suppliers will demonstrate which solutions suit which challenge. Plant-based proteins play an important role here as structure-forming elements, emulsifiers and stabilisers. Against this backdrop, the aim of a research project at the Fraunhofer Institute in Munich is to reduce the fat content in sauces and cream fillings for bakery products by 30 percent. As a substitute, ball-like, micelle proteins obtained from lupins or other pulses are implemented. They have fat-like structural characteristics and make it possible to increase the protein content - while at the same time reducing the overall energy density. The scientists



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aim to reach this goal using among other things a new ultra-high pressure technology. This also enables the reduction or the complete omission of preservatives. Furthermore, the implementation of plant-based proteins as a substitute for gelatine, caseins, whey proteins or yolk proteins in their function as emulsifiers, foam or gel formers in bakery products, soups, sauces and spreads is also very promising.

Plant-based proteins for meat-like textures

Depending on how plant-based proteins are treated, their sensory and techno-functional characteristics change. In order to manufacture convincing plant-based products comprehensive technological know-how is necessary. In the case of demanding extrusion processes for example this lies in the choice of the appropriate temperature and the speed at which the raw material is pressed through a nozzle. The process has been used for some time to produce peanut flaps, breakfast cereals or pet food products. Modern complete production lines for such applications encompass weighing, mixing, extruding, drying and roasting, grinding, sieving, storing and packing. The method is also suitable for lending food that is rich in protein due to its plant-based raw materials a texture that resembles meat as much as possible. Whilst soya or wheat protein dominated the texture formation scene for a long time, now allergy-free proteins obtained from legumes, potatoes, sunflowers or algae are increasingly taking over this role now. Thanks to hybrid executions of twin-screw extruders, both textured plant-based protein as well as meat analogues with a high water content can be produced with minimum change-over efforts. The extrudates form the basis for a multitude of reformulated burger patties, nuggets or sausages with significantly less fat and a favourable fatty acid profile, which are free from cholesterol, nitrites and phosphates.

Inspiration for the product development

Regardless of whether it is about reducing the salt content in fish products and vegetable juices, reducing the amount of sugar in breakfast cereals and milk products or the fats in meat products and bakery products: Food producers will find a wide variety of food ingredients and technologies at Anuga FoodTec 2021 that will pave the way to reformulated foodstuffs for them while at the same time retaining the sensory quality thereof. Parallel to this leading experts from the fields of industry and science will discuss the current challenges and legal issues of product development in the accompanying specialised forums.

Koelnmesse - Global Competence in Food and FoodTec:

Koelnmesse is an international leader in organising food fairs and events regarding food and beverage processing. Trade fairs such as the Anuga, ISM and Anuga FoodTec are established world leaders. Koelnmesse not only organises food and food technology trade fairs in Cologne, Germany, but also in further growth markets around the globe, for example, in Brazil, China, Colombia, India, Italy, Japan, Thailand and the United Arab Emirates, which have different focuses and contents. These global activities enable us to offer our customers a network of events, which in turn grant access to different markets and thus create a basis for sustainable and stable international business.

Further Information is available at: <http://www.global-competence.net/food/>

The next events:

THAIFEX - Anuga Asia - International Trade Exhibition for Food & Beverages, Food Technology and Food Service in Asia, Bangkok 22.09. - 26.09.2020

yummex Middle East - The Event for Sweets & Snacks Professionals, Dubai 03.11. - 05.11.2020

Annapoorna - ANUFOOD India - India's international exhibition on food & beverage trade and retail market, Mumbai 26.11. - 28.11.2020

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