

Kronen GmbH introduces a new drying system

Customized solutions for the benefit of our customers

The production of ready-to-eat, pre-packaged fresh products such as salads has grown rapidly in recent years. A recent trend is the production of packaged, fresh fruit salads. Customers are both private households (via the retail trade) and large customers such as canteens, hospitals and restaurants, but schools at break-time are offered -for example- apple wedges as well. Processed fruits, however, have a shorter shelf life than whole fruits, as they are much more sensitive to microbial attack. And the decisive quality criterion for fresh-cut products is their microbiological safety from the point of view of the consumer.



Managing Director Stephan Zillgith at the booth at Anuga Food Tec. In the background the new centrifuge system K650.

An important component in fruit salads is, for example, the apple. These are washed and diced, and processed unpeeled. Careful removal of the microorganisms adhering to the peel is therefore a prerequisite.

This is the starting point for a project in which KRONEN GmbH is currently working together with its partner ATB Leibnitz Institute for Agricultural Engineering and Bioeconomy. The aim of the project, named DEKONWA, is not only to wash the apples, but also to sanitize them as gently as possible and without the use of chemicals. For this, the development of a new plant and a new process is planned. By means of a temperature-controlled process, microbial spoilage pathogens and human pathogens are to be reduced as much as possible. This will help reduce the spoilage rate and increase consumer safety. Due to its insulation, the new system is optimized for the fresh-cut area and can be easily used in refrigerated rooms.

Laboratory-based hot water treatments of fresh fruits showed a high level of effectiveness against most pathogens. The optimal condition for longer exposure times was a water temperature of approx. 50 to 52° C. Shorter exposure times at 55 to 60° C were also successful. At the present time, the main effect of hot water treatment is believed to be due to a heat shock induced antimicrobial response. Since this thermal process does not require any chemical additives, it can also be used for certified organic fruit salads.



Even on the first day of the Anuga Food Tec fair, the Kronen company was met with much enthusiasm by trade visitors.

"KRONEN relies on a holistic approach: We plan and advise in close cooperation with our partners from industry and research. Our goal is to deliver innovative, tailor-made solutions for the benefit of our customers," explains Eric Lefebvre, CTO at KRONEN. "The DEKONWA project is an example of how we want to meet the requirements of the fresh-cut industry in terms of optimal sterilization and food safety without the use of additives. The system should be flexible and easy to integrate into existing process lines. The aim is then to transfer the process to other products, such as sliced salads. "

At Anuga FoodTec, this topic will be discussed in a presentation titled "Fresh fruit and vegetable decontamination by an innovative moderate heat treatment" on March 22 from 2:00 pm to 4:00 pm in the "Technology of Fresh-cut products" forum of the International Union of Food Science and Technology (IUFoST). Eric Lefebvre will speak with Bertram Schmidt from the Department of Horticultural Engineering at the ATB Potsdam. The presentation language will be English. Afterwards the two speakers will be available for questions.

Live machine presentations at Anuga FoodTec

Once again this year, KRONEN will present a series of innovations at its stand, which will be demonstrated in live demos:

- An exhibit, which will be on display at the trade fair, is already addressing disinfection without additives: The GEWA 3800B PLUS washing machine has been equipped with a new, integrated UVC water sterilization system. Thus, the water is constantly being sterilized and returned as germ-free processing water. The proven UV components of the company Sterileir® from Weinfelden in Switzerland are used here. The use of the UVC reactor primarily serves to prevent cross-contamination, ensures greater process reliability and allows a reduction in the amount of water used.

- With the K650 drying system, KRONEN GmbH is expanding its portfolio, presenting an effective, user-friendly system that, in industrial applications, dries a wide variety of lettuce and vegetable products as well as sliced fruit in a continuous process. Depending on the consistency, shape, size and quantity of the processed product and depending on the desired degree of drying, spin times and speeds can be regulated via a touch screen. This allows for an effective, gentle and short drying cycle. Depending on the product, the capacity of the K650 drying system ranges from 400 to 2800 kg/h. Some parameters are automated, eg the speed of the buffer and discharge belt, so that the operation is clear and simple. Optionally, volume control can be used. When without a product, the machine automatically switches to energy-saving mode. At the end of the drying cycle, the product is gently transferred to a discharge belt, which ensures the most consistent product flow possible for subsequent processes.

In this short video you can see the dry-spinning of lettuce, babyleaf, carrots and paprika.

- A new trend for the convenience and fresh-cut market is vegetable rice; broccoli and cauliflower stems, or even carrots, all sliced up very small. This trendy vegetable rice product can be produced in exact sizes with the KUJ V dicing and cutting machine. This can also be seen on the stand.

In the short video you can see how quickly and easily the production of broccoli and/or cauliflower rice works.

- The demand for tried-and-tested solutions such as the SPIRELLLO 150 vegetable spiral cutting machine for a wide variety of product types and sizes has continued unabated. Accordingly, they too will be on the stand.

In addition to the live machine presentations, there will be time to celebrate the family business's 40th anniversary in 2018. Among other things, the products are brought "fresh from the field to the table" during daily "live cooking". Visitors to the stand can be inspired by the refined dishes of chefs Wolfgang Blum and Andreas Eigner, for example cooking variations on vegetable noodles and vegetable rice.

Visit the company at Anuga FoodTec: Hall 10.1, Booth F-8

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