



PRESS RELEASE

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Strategies for the optimization of water use in the Fresh-cut processing industry

KRONEN and the Spanish company CITROSOL are collaborating with the Spanish technological centre CNTA in the prototyping of a new industrial washing process. With the project aqUAFRESH the partners want to improve the food safety of processed fresh fruit and vegetables and to reduce water consumption during processing.

The horticultural and Fresh-cut industry needs to react to the growing demands for food safety, competitiveness and its environmental impact. Washing with fresh water is the main post-harvest process carried out by this industry to eliminate dirt and reduce the microbial load of fruit and vegetables.

The ambitious goal of the so-called aqUAFRESH project is destined to be a watershed in the operation of the Fresh-cut industry: cutting, washing and packaging of ready-to-eat fruit and vegetables. The aim of which is to reformulate the current working system of the industry reducing both water and energy use during washing and disinfection, mitigating the environmental impact, and improving the food safety for the end consumer. The new washing system is supposed to provide the Fresh-cut industry with an alternative to traditional chlorine-based disinfection systems whilst continuing to guarantee food safety.

The aqUAFRESH project follows a holistic approach studying the integration of all the essential parameters in the process chain, such as the effectiveness of the wash, the microorganisms load, the use of chemical agents, the water use and its reuse with the consequent reduction in water consumption, the monitoring of the disinfection process plus the preservation of the quality of freshly cut produce.

The aqUAFRESH solution

The international consortium of aqUAFRESH is made up of the two project partners, KRONEN from Kehl at the Rhine in Germany and CITROSOL from Valencia, as well as the CNTA (National Centre of Technology and Food Safety) located in Navarra in Spain.

CITROSOL is focused on improvements related to the hygienic washing and disinfection process. The company has developed a new formulation within its range of Citrocide[®] products that will be applied in a fully automated way at an industrial level. This system is able to accurately manage the most relevant washing process parameters and to log the necessary data.

The CNTA, under CITROSOL's supervision, will evaluate the antimicrobial efficacy of the new formula in the wash water over different Fresh-cut products at an industrial level. CNTA is to study the impact of disinfecting within wash water on product quality and food safety.

KRONEN is working on the development of a revolutionary washing machine that will be the benchmark for a new generation of more efficient and sustainable washing machines for the Fresh-cut industry. It guarantees an effective cleansing of the produce with a rational use of resources, whilst, at the same time, meeting both the hygienic requirements and the principles of good hygienic design established by the different directives, both European and worldwide.

Saving, reusing and recycling of water leads to an efficient use of this resource. In addition, it reduces wasteful discharges and thus the impact of the same on the environment. aqUAFRESH is striving to develop a new technologically feasible and economically competitive system for the washing and disinfection of Fresh-cut fruit and vegetables without using chemical additives.

The global result of this project is to provide the Fresh-cut industry with a comprehensive, sustainable solution, which is anticipated to revolutionize a segment in constant growth as is the Fresh-cut sector. aqUAFRESH results will be carefully considered by the European Food Safety Authority as a valuable data when assessing the ready-to-eat fruit and vegetable produce sector. The project started in June 2017 and will last for two years. It is funded by Eurostars, a joint program between EUREKA and the European Commission, co-financed by the Union Member States through Horizon 2020, to the tune of almost 665,000 euros.

More about aqUAFRESH: www.aquafreshproject.eu

More information about current research projects at KRONEN:
www.kronen.eu/projects-development

About KRONEN GmbH

KRONEN develops and manufactures stand alone and special machines as well as complete processing lines according to the customers' requirements – high-duty machinery for washing, cutting, dividing, peeling, de-watering, drying, and packaging food.

Today, KRONEN has 100 employees and is a globally operating supplier of machines and systems for the catering, specialty food and food industry with representations in over 80 countries and is selling its solutions in over 100 countries worldwide.

Due to the close co-operation with our customers and international partners, we consider it our commitment to keep traditional values such as quality awareness but also to react creatively and actively to the challenges of the global market.

Wherever crisp salads, fine vegetables and appetizing fresh fruit are beautifully prepared in quantity – KRONEN machinery is there, around the world.

In 2018 the company celebrates a 'double' anniversary: 40 years of KRONEN and 20 years of Zillgith/KRONEN. In 1978 KRONEN GmbH was founded and in

1998 KRONEN was taken over by Rudolf Hans Zillgith as the Managing Director.
More information: www.kronen.eu

About CITROSOL

CITROSOL is a Valencian company with more than 50 years' experience dedicated to the implementation of technology and post-harvest treatments efficiency solutions and socially responsible, in the maintenance of the quality of fresh fruit and vegetables. CITROSOL started its journey researching post-harvest solutions for citrus products, and this is truly reflected in the treatment of more than five million tons of fruit every year. However, over the last decade the company has also been developing new post-harvest alternatives for other types of fruit and vegetable, both whole and fresh-cut. Examples of these are the Citrocide[®] Systems developed by CITROSOL for the hygienic washing of tomatoes, peppers and avocados, which represent a radical improvement in the washing of these products, guaranteeing food safety to the end consumer and reducing water consumption by 70%. Furthermore, this system is also authorized for use in the organic farming of peppers and tomatoes.

Their great ability to adapt to market circumstances makes CITROSOL a partner their clients can rely on, enhancing quality internally and respecting the environment in the manufacture of their products. The company has numerous representations and subsidiaries, such as CITROSOL South Africa PTY or international representatives such as in Greece, Croatia, Brazil, Turkey, China, Peru and Egypt. The company applies the latest technology in all its products, developing some very innovative products such as natural and vegetable waxes and new custom formulas to meet the specific needs of individual clients.

More information: www.citrosol.com

About CNTF

The National Centre for Technology and Food Safety – CNTA (Centro Nacional de Tecnología y Seguridad Alimentaria) located in San Adrian (Navarra, Spain), is the Research and Technological collaborator within the aQUAFRESH project. CNTA is a non-profit organization, created in 1981 on the initiative of the Industrial Association of Vegetables Preserves of the Ebro Valley, Spain, with the aim of contributing to the development and innovation of food companies and by extension to enhance the competitiveness of the sector. CNTA is a centre of reference in the fresh-cut industry in Spain and within Europe, and has participated in very relevant initiatives, such as the EU Resfood project, in addition to providing continuous service to companies in the sector throughout Spain.

More information: www.cnta.es

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