

PRESS RELEASE

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NEW PRODUCT

Reliable removal of aphids from salad leaves: AphidWash complements the industrial washing process

The innovative new processing aid AphidWash supports fresh-cut and salad processors in physically removing aphids from salad leaves and leafy vegetables during washing. The combination of improved wetting, controlled water movement, filtration, and final rinsing with drinking water plays a key role in achieving reliable results.

Aphids can be found deep inside heads of lettuce, along leaf veins, or in leaf axils that are hard to reach. Their water-repellent surface additionally makes them difficult to wet with wash water. With AphidWash, KRONEN GmbH offers an innovative processing aid that supports the mechanical removal of the insects in the industrial washing process.

The product, which is based on non-ionic surfactants, reduces the surface tension of the wash water. As a result, it is easier for the water to reach in between the leaf and the aphid and to weaken the adhesion of the aphid to the product surface. The removed aphids are then discharged with the wash water flow and extracted from the process water using a suitable filtration system.

A challenge for fresh-cut and salad processors

Visible aphids in the packaged final product can lead to complaints from retailers, increased manual monitoring requirements, or the rejection of batches. At the same time, the severity of the outbreak and the position of the aphids can vary depending on the raw produce, type of salad, and harvesting conditions.

Processors therefore face the challenge of processing even contaminated raw produce as reliably as possible and achieving consistent product quality. The washing process needs to do more than just release the aphids from the product. It also needs to remove them from the process water both rapidly and continuously so that they do not come into contact with the salad leaves again.

Physical removal instead of insecticide treatment

The surface of aphids has a wax-like, water-repellent surface. When washing products with pure water, this may cause a thin layer of air to remain on the body of the aphid. The water then only reaches the surface of the insect to a limited extent, and it is difficult for the water to get in between the leaf and the aphid.

AphidWash changes the wetting properties of the wash water. The reduced surface tension ruptures the layer of air around the aphid. As a result, the water is able to reach the contact area more successfully, the adhesion of the aphids is weakened, and the water movement can physically remove the aphids from the plant tissue.

The mechanism of action is therefore solely physical. AphidWash is neither a pesticide, insecticide, nor disinfectant. The product does not kill any insects and has no antimicrobial function. After being used for its designed purpose and rinsed off with drinking water, it plays no technological role in the final product.

Up to 85 to 90 percent fewer aphids

Washing with AphidWash can reduce the number of aphids by 85 to 90 percent. These results were achieved with a washing time of 30 to 60 seconds and a process temperature of 7 °C in combination with water filtration and subsequent rinsing.

The actual removal rate depends on a number of different factors, for example the type of salad leaf, severity of the outbreak, dosage, treatment duration, water temperature, mechanical washing intensity, and the system layout. KRONEN GmbH supports processors in designing and testing a washing process to suit their respective application where needed.

A three-stage process of washing, filtration, and subsequent rinsing

AphidWash is designed for use in the wash tank of a suitable industrial washing system. The process is simple and comprises three coordinated stages:

1. **Preparing the washing solution:** Dilute AphidWash with clean, warm water. The recommended dosage is 0.2 to max. 0.5 milliliters per liter of water. The concrete dosage should be chosen based on the product, severity of the outbreak, process, and production system.
2. **Washing the salad leaves and filtering out the aphids:** Salad leaves, salad mixes, or leafy vegetables should be treated for a recommended application time of 30 to 180 seconds. The improved wetting makes it easier to mechanically remove the aphids. The aphids are then discharged with the wash water flow and filtered out of the process water.
3. **Subsequent rinsing with drinking water:** The final rinsing stage removes the washing solution and any remaining released deposits. The product can then be dried, mixed, further processed, or packaged.

High-performance filtration plays an important role in the process. If any removed aphids remain in the water circulation, they can come into contact with the product again or attach themselves to other leaves.

AphidWash can generally be used flexibly in many industrial salad and vegetable washing machines. The concrete machine set-up and filtration should be chosen based on the product, the throughput, and the existing processing line.

Industrial use on salad leaves, baby-leaf products, and leafy vegetables

AphidWash is primarily designed for use on fresh-cut salads and loose salad leaves, for example iceberg lettuce, romaine lettuce, and lollo rosso. AphidWash is also suitable for baby-leaf products, salad mixes, and other leafy vegetables.

In addition to aphids, the processing aid can make it easier to remove sticky deposits, such as honeydew and associated sticky deposits, from leaf surfaces during the washing process.

AphidWash is made from food-safe non-animal ingredients. The product is odorless and tasteless and is suitable for processing vegan and vegetarian products. It is designed for professional use in food processing facilities. In combination with the KRONEN filter system, AphidWash is also a suitable option for halal and kosher production.

About KRONEN GmbH

KRONEN is a family-managed, globally operating producer and supplier of stand-alone machines, special-purpose machines, and high-tech processing facilities for the fresh-cut industry. The product program of KRONEN and its partners covers fruit, vegetable, and salad processing: from preparing, cutting, washing, drying, dewatering, peeling and sterilizing right through to packaging.

KRONEN also offers machines for the processing of meat and fish, special vegan products, baked goods, and pet food.

The company, which is based in Kehl am Rhein, Germany, and has a second production site in the nearby city of Achern, currently employs more than 130 members of staff, has representatives in over 80 countries worldwide, and supplies its products to more than 120 nations all over the globe.

With more than 45 years of experience in food technology, KRONEN prides itself on its quality awareness and constantly strives to achieve the best possible solutions in its day-to-day work. The machine manufacturer focuses on taking a sustainable, holistic approach toward the hygienic, reliable, and resource-friendly production of fresh foods. KRONEN considers itself to be a think tank that provides innovative solutions to benefit its customers and meet all their needs. It guarantees top-quality advice and planning expertise in close cooperation with the industry and research establishments.

For more information, please visit: www.kronen.eu

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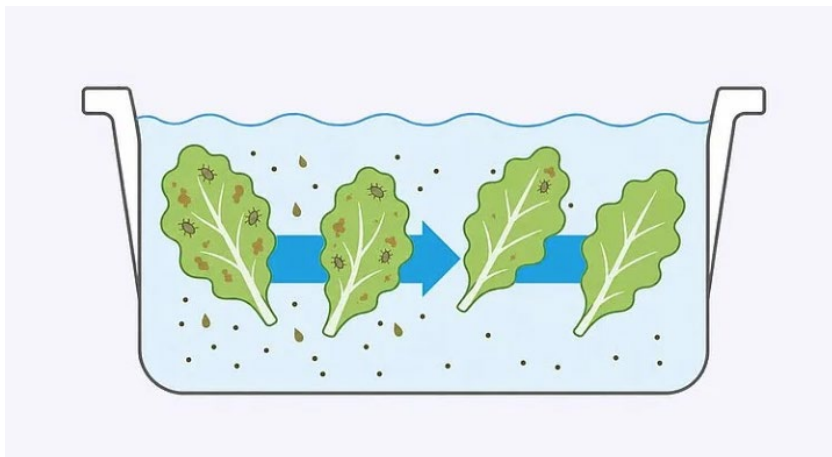
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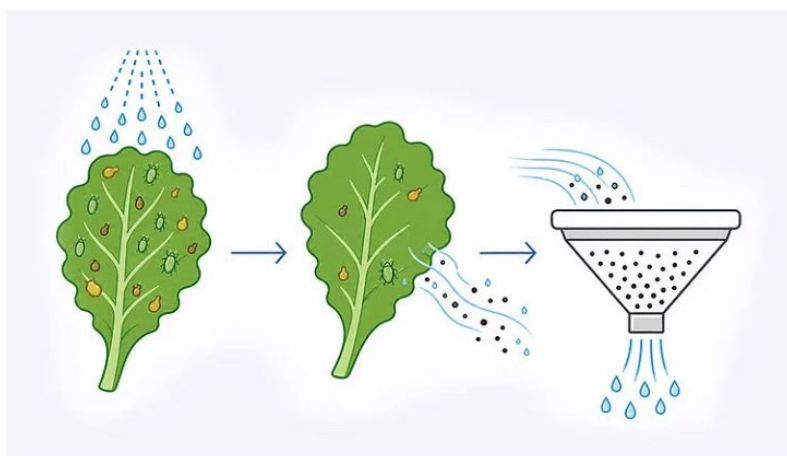
KRONEN GmbH photo material:



An innovative processing aid for a high-performance washing process: AphidWash makes it easier to mechanically remove aphids and sticky contaminants from salad leaves and leafy vegetables.



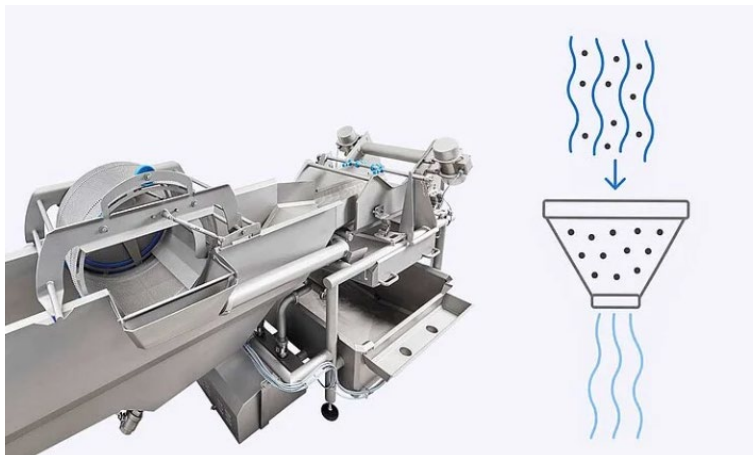
Washing salad leaves and leafy vegetables with AphidWash can reduce the number of aphids by 85 to 90 %.



AphidWash changes the wetting properties of the wash water so that aphids are much easier to remove from the leaf and transport away from the product with the wash water flow.



Clean product: The aphids are effectively removed from salad leaves, salad mixes, and leafy vegetables thanks to AphidWash.



The combination of surface wetting, controlled detachment, and filtration is essential for an optimal washing result.



AphidWash can be used in many industrial lettuce and vegetable washing machines. (Image: KRONEN HEWA 3800V)