



Produce wash

with Lactic Acid

Washing fresh(-cut) produce with naturally occurring lactic acid to reduce the load of pathogenic microorganisms on produce and in wash water without compensating on sensory and quality.

Benefits at a glance

Antibacterial activity

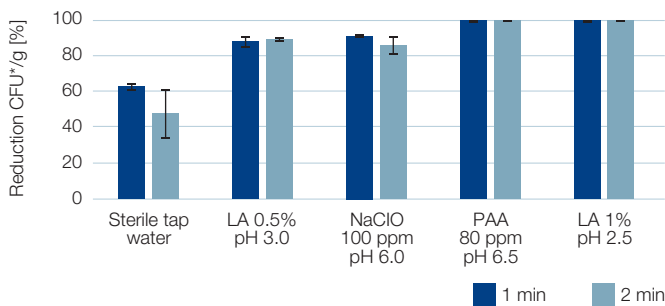
Enhanced food safety and extended shelf life of fresh-cut produce.

Positive sensory

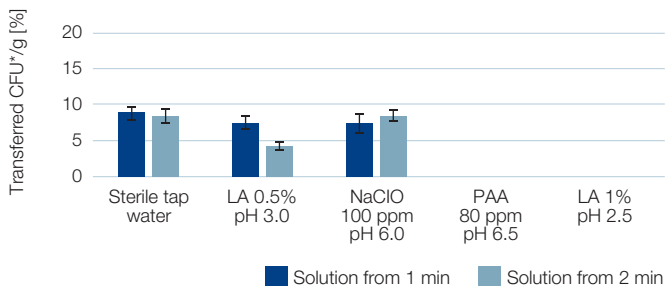
No impact on produce appearance and quality.
No residual odour or alteration of product taste.

Results of biocidal effect tests

Biocidal efficacy against *E.coli* on Romaine lettuce



Cross contamination with *E.coli* on Romaine lettuce



*CFU = Colony Forming Units
PAA = Peracetic Acid, LA = Lactic Acid

Results of sensory and shelf life tests



Water



Lactic Acid 2%

A sensory and shelf-life study was carried out on fresh-cut lettuce. Visual inspection of treated lettuce was carried out after 9 days. The treatment with lactic acid resulted in intact leaves with pleasant odour and without browning. The sugar content (Brix°) and pH value of the produce tissue after both treatments were comparable.

Lactic acid has proven antibacterial activity against *Escherichia coli* on fresh-cut lettuce. Cross contamination via the wash water is excluded. The performance of lactic acid is better than that of sodium hypochlorite and comparable to that of peracetic acid.



Jungbunzlauer ingredients

Name	Lactic Acid
Function	Active substance
Biodegradability ¹⁾	Readily biodegradable
CAS number	79-33-4
EC number	201-196-2
REACH number	01-2119474164-39-0004
Europe	Generally permitted as processing aid (check national regulations)
USA	Check EPA for fresh produce, FDA for fresh-cut produce and USDA for organic produce

¹⁾ Method: OECD test guideline 301

Value proposition

Antibacterial activity

- Enhancement of food safety and extension of shelf life
- Reduction of pathogenic micro-organism load on produce and in wash water
- Successfully tested for *E.coli* on lettuce

Positive sensory and appearance

- Intact lettuce leaves without browning
- No residual odour or alteration of product taste
- No impact on quality attributes, such as sugar content (Brix°) and pH value

Bio-based & biodegradable

- Market is ready to look for chlorine replacement caused by increasing health, regulatory alternative and environmental concerns
- Lactic acid is produced through non-GMO fermentation of corn-derived glucose syrup



The information contained herein is meant to demonstrate how our products can be used. This formulation has been subjected to limited stability tests and has been shown to perform well. The given data are suggestions without any guarantee aimed to support customers' development.

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