Mitigating Listeria In Value Added Meats

EARLEE PRODUCTS

Better food outcomes, every time

Presented by Brett McMullen[1]

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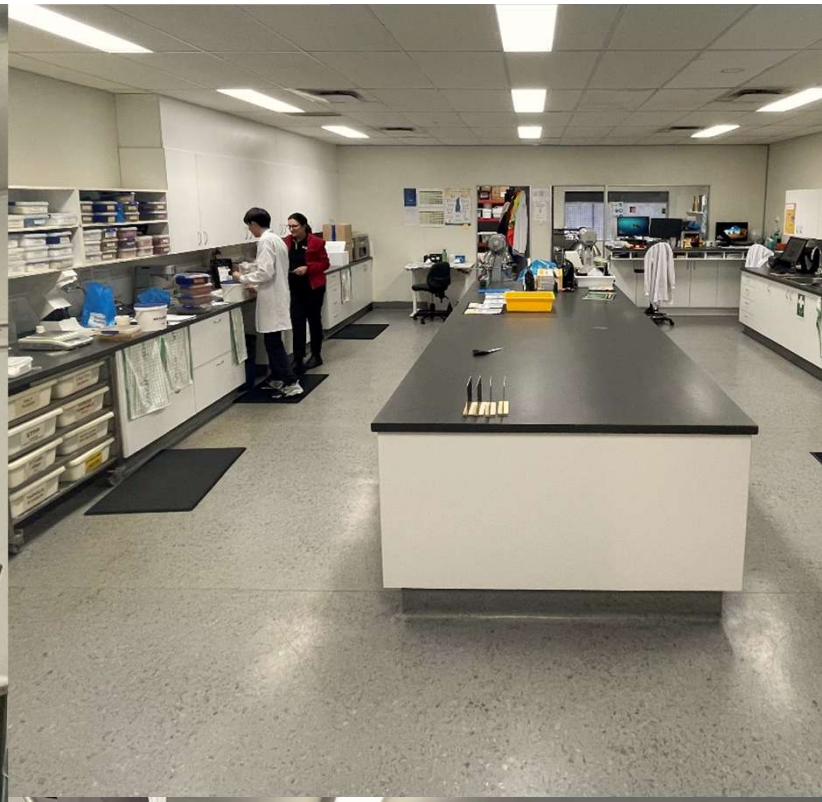
*Better food outcomes, **every time***



Our R&D Facilities

Baconvenience & Schinkentec®

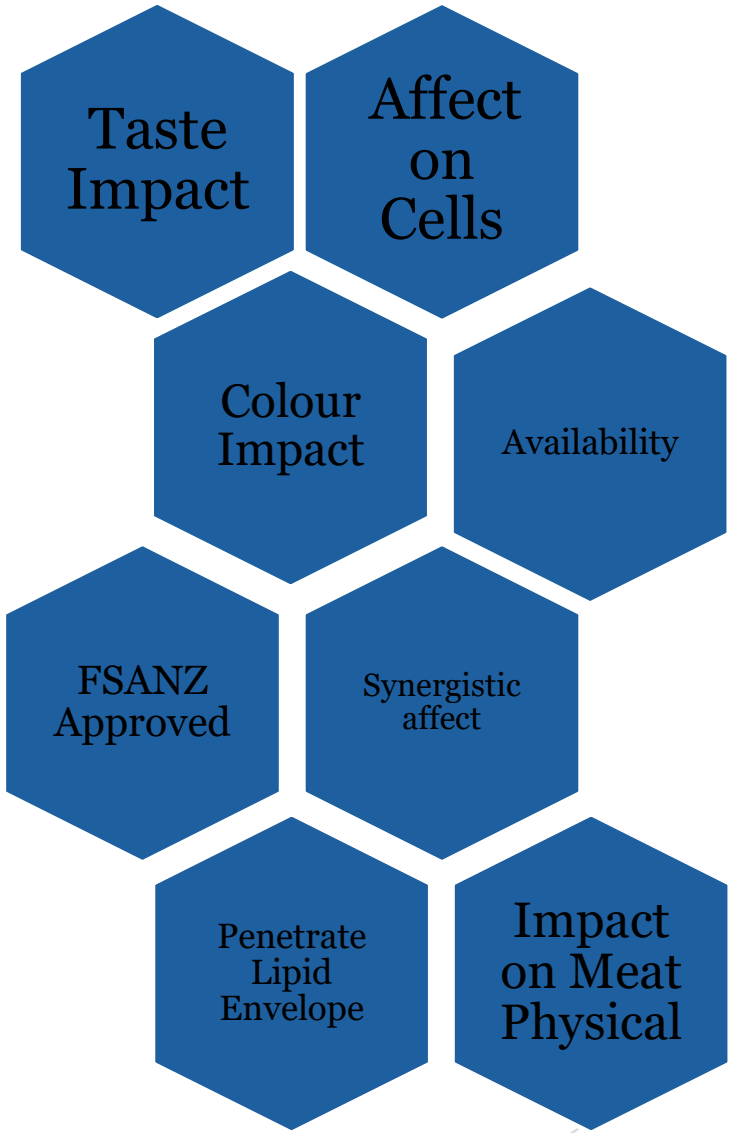
SCHINKENTEC™

PROTECTED BY HURDLE TECHNOLOGY

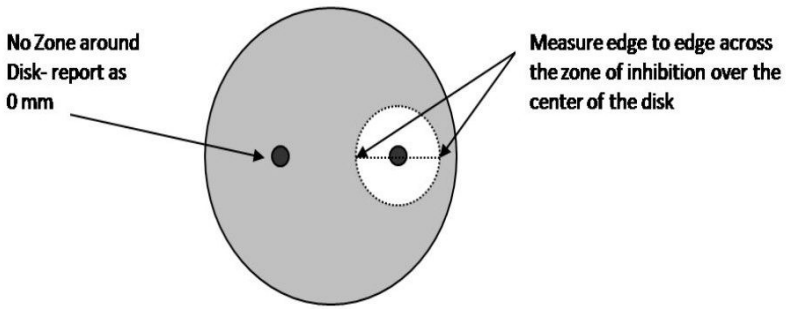
Know your enemy – Listeria

- Ubiquitous
- Facultative anaerobe
- Can grow under refrigerated conditions down as far as -1°c
- Forms biofilms that help protect it from cleaning on solid surfaces even apparently smooth ones.
- Can grow down to Aw of 0.90
- Can grow pH of 4.0
- 15 seconds at 71c

Desirable Characteristics in Potential Ingredients.



Screening of Potential Listeriacidal Food Ingredients



- Plant Extracts that contain polyphenols including Naringenin and Charlconaringenin from Citrus
- Phenolic compounds from Wood Smoke like Syringol and Guaiacol
- Organic food acids vinegar (Acetic), Citric, Lactic.

Challenge testing separately and combined

Zone of Inhibition

Niche Food Microbiology Pty Ltd
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final report

Project code: Earlee Products – Baconvenience™ Listeria Challenge

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Date submitted: October 2013

Baconvenience™ Challenge trials - Listeria

This publication is published by Niche Food Microbiology Pty Ltd ABN 50 162 339 380 (NICHE).

Challenge Test Listeria – RTE Status

Introducing Earlee Control clean & safe anti-microbial solutions

Our **proprietary formulation** uniquely combines a selection of approved and well-established natural food ingredients

- **Clean label food application**
- **Protects product integrity and safety**
- **Completely natural, anti-microbial, allergen-free and free from sodium**
- **Infusions of plant extracts – naturally occurring bioflavonoids and polyphenols**
- **Formulated to prevent the growth of gram-positive pathogenic and spoilage bacteria, yeasts and moulds**

Mitigates risk for your customers, business and reputation

The result is an innovative, safe, clean and clear label solution that prevents growth of foodborne pathogens in food products

Anti-microbial hurdle innovation for food surface application

Food protecting food

A safe, clean label dipping solution that delivers full anti-microbial protection in a single process

Process for **cooked poultry**

- Product is sprayed with or dipped in **FLAV®FRESH** prior to slicing or dicing - bagged and vacuum sealed or MAP packed into retail unit.
- Important for residual of **FLAV®FRESH** to be present prior to packing, expect up to 0.5% pick up
- With the presence of residual there is need for residence time the **FLAV®FRESH** will continue it's protection through the sell through life of the product
- Minimal impact on sensory
- Minimal impact on production

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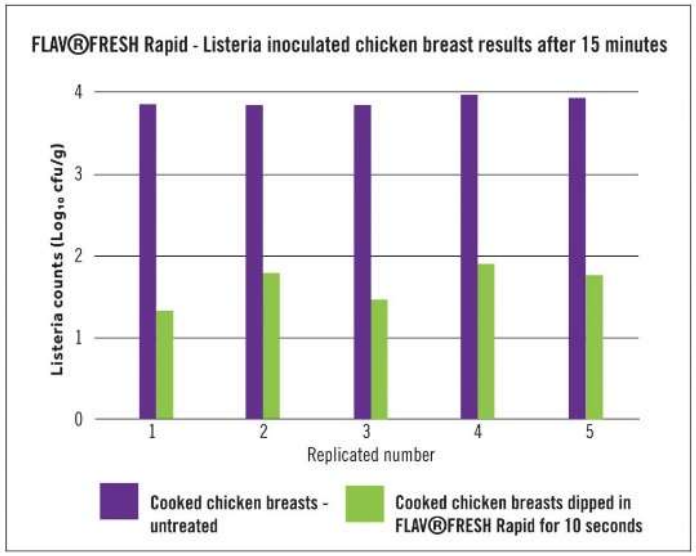
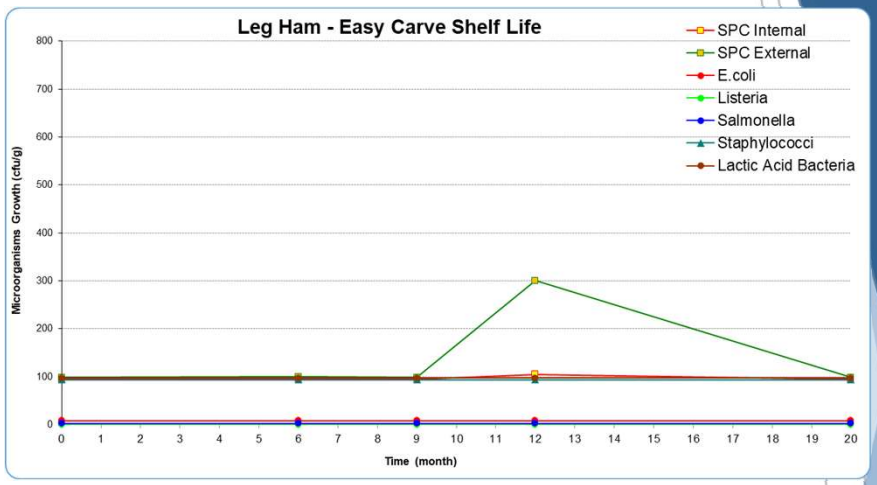


To optimise the performance of **F**acidity using titratable acidity at regular intervals throughout prolonged processing periods. It is a simple as just topping up.

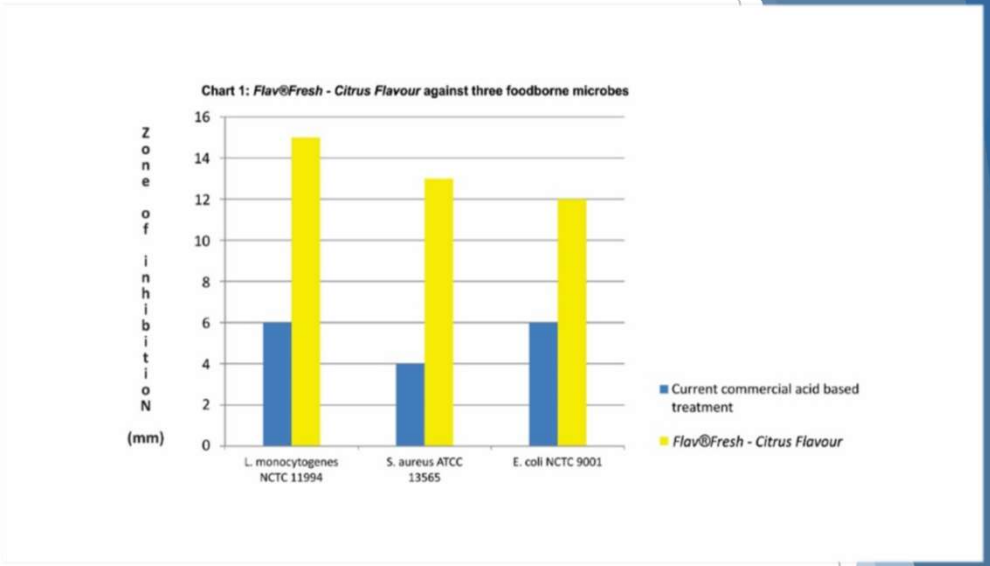


Shelf life validation* for ham dipped in **FLAV®FRESH**

***Analytical reports are available on enquiry**

An excellent all-rounder, easy to apply, easy to use

- **FLAV®FRESH** is formulated to prevent the growth of gram-positive pathogenic and spoilage bacteria, yeasts and moulds.
- **FLAV®FRESH** can be declared as a processing aid or natural flavour depending on company policy and desired residual amount
- **FLAV®FRESH** can be used as a sanitiser on slicing and post cook equipment, however it is not a substitute for cleaning
- **FLAV®FRESH** has a greater half-life than most acid based sanitisers and complements bacteriocin containing cultures especially for sliced products.
- **FLAV®FRESH** increases shelf life of sliced small goods reducing sell-through returns and ultimately cost.



FLAV®FRESH is available in ready to use and concentrated form. Citrus and smoke flavour are available in both formats.

We're here to help. Our local expert technical support is available to assist with your application development

Earlee | Control
Clean & safe. Naturally clever.

Contact us for a consultation or more information: +61 7 3393 9755 | earlee@earlee.com.au

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Listerbloc Decontamination Cream

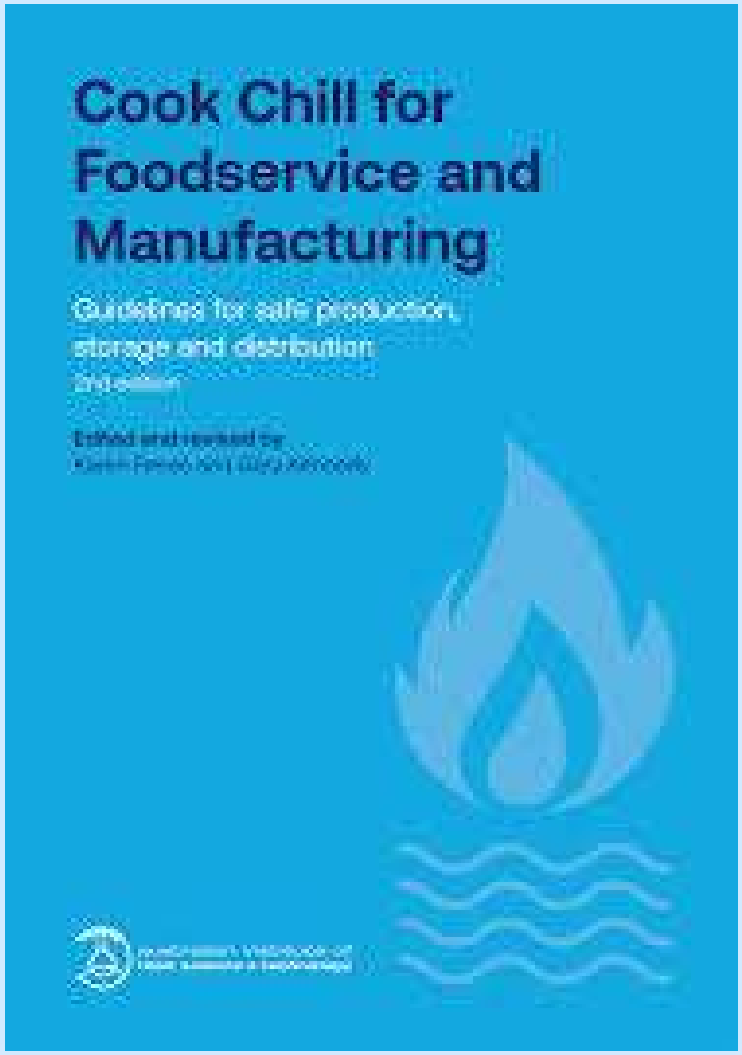
- A vegetable-oil based, neutral pH lotion for direct application to food equipment such as slicers and dicers as a *Listeria*-targeted sanitizer and to prevent adhesion to the metal surface.

Oreginal POWDER

- Oreginal POWDER for fresh meat. This new natural ingredient confers 21 days shelf-life and maintains the fresh red meat colour on fresh sausages, rissoles and patties. The plant extract (containing a blend of polyphenols) is colourless and flavourless in the meat at its low usage level of less than 1%.

The product consists of three key lipidpeptides: Surfactin, Iturin and Fengycin, with surfactin being the most powerful and prolific, bacteria in spore plus a naturally derived surfactant

The Cook Chill Bible



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WE MAKE GOOD FOOD...*GREAT*

Thank you