

# KNAMAX™

## Carcass Decontamination Food Safety Consumer Protection

### New Study Reveals KNAMAX™ unrivalled.

The Effect of spray washing carcasses with KNAMAX™ was studied under specific circumstances including inoculation with caecal paste.

No bacteria were recovered from whole carcasses after rinse with the mineral sanitizing composition from all that were examined. Carcasses skin layers were inoculated with antibiotic-resistant strains of *E. Coli*, *Salmonella Typhimurium* and *Campylobacter C.*



- Chlorine Free\*
- Up to 99,9% Pathogen Kill
- TBC/APC Reduction
- High Purity Natural Ingredients
- Reduce Safety Recalls
- No Special Devices/Simple Use
- No Residues/By-products
- No pH Changes/No Colour Impact

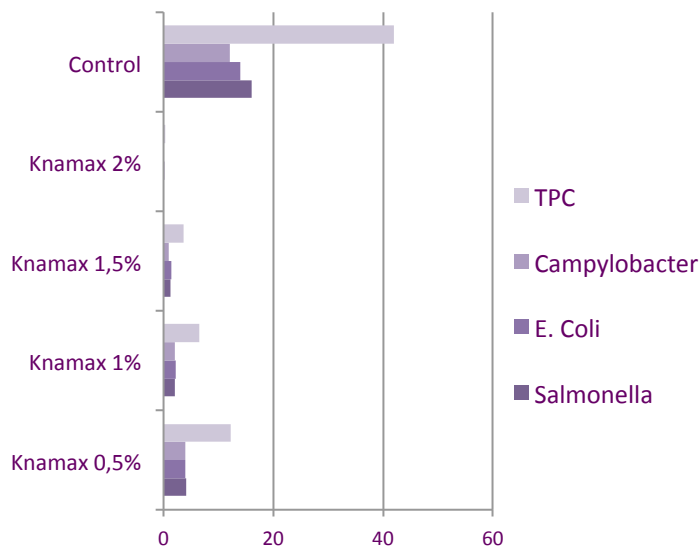
Industry and Consumers demand safe meat products. Microbiological control is a major concern worldwide as meat surface is susceptible of contamination from different sources and microorganisms. KNAMAX™ is a 100% Natural Mineral Salts and Substances Composition providing a treatment solution for producers and industry adding extra protection within the processing line and up-standard quality to produce safer and better fresh meat products at all.

# Knamax™

100% Mineral Solution for Food Safety

### Knamax™ Study Control 2015

EFFICACY STUDY OF WHOLE CARCASS DECONTAMINATION THROUGHOUT BACTERIA RECOVERY FROM CARCASSES WASHED IN A SPRAY CABINET WITH A FOOD-GRADE MINERAL COMPOSITION (KNAMAX™). Printed Matter



The first trial examined effects of washing carcasses with water, 0.1% KNAMAX™, 0.2% KNAMAX™, 0.5% KNAMAX™, 1%, 1,5% and 2% of KNAMAX™ at 80 psi for 15 sec.

Findings indicated that significantly fewer Total Plate Count (TPC) bacteria, *E. Coli* and *Salmonella Typhimurium* were recovered from carcasses washed with 2% KNAMAX™ than from carcasses washed with water. No *Campylobacter* were recovered from carcasses washed with 2% KNAMAX™.

Another trial examined effects of washing carcasses at 60, 100, or 150 psi of pressure with 2% KNAMAX™ for 15 sec. Findings indicated that significantly fewer TPC bacteria were recovered from rinses of carcasses washed with 100 psi than from carcasses washed with 60 or 150 psi.

Finally, a trial was conducted to examine effects of washing carcasses for 0, 5, 15, or 30 sec with 2% KNAMAX™ at 100 psi. Results indicated that significantly fewer bacteria were recovered from carcasses washed for 5 sec than from unwashed carcasses. Furthermore, significantly fewer TPC bacteria and *Salmonella Typhimurium* were recovered from carcasses washed for 15 sec than for 5 sec and no *Campylobacter* were recovered from carcasses washed for 15 or 30 sec.

Findings indicate that spray washing carcasses with KNAMAX™ can affect the number of bacteria recovered from WCR. These studies also provide data that may be useful in designing applications for using KANAMAX™ as microbial killer mineral substances as surfactants in meat processing operations.



\*According EU Standards and most recent research, chlorine-processed meat is being related with the possible formation of meat- surface carcinogen substances that may impact on human health. KNAMAX™ composition ingredients are Food-Grade Certified Mineral Salts and Substances from natural origin included within the Annex II of Regulation EC 1925/2006. Used as in such technological function, labelling is not mandatory in accordance with the Regulation EC 1169/2011.

KNAMAX™ is a concentrated product. Thus far 1L of KNAMAX™ (at an average dose of 2%) may let producers to form 50 litres of final product (ready-to-use). Performance calculated on average percentile basis for regular meat industry wash.