

Salmonella Challenge Studies



BIOIONIX

a more perfect solution

Salmonella Challenge in Major Meat Producer's Raw Poultry Parts



Salmonella eliminated

Salmonella Challenge in BIOIONIX® Treated Water Immersion Bath



Prevents Cross-Contamination

CHALLENGE:

- Skinless turkey breast and skin-on turkey wings were delivered to BIOIONIX® Labs from Major Meat Producer
- Deibel Laboratories inoculated the turkey parts with an application of a *Salmonella* bolus comprised of *Salmonella* Hadar, *Salmonella* Arizonae, *Salmonella* Heidelberg, and *Salmonella* Schwarzengrund
- The turkey was placed in an immersion bath being actively treated with clean water or the BIOIONIX® system at varying doses of 3-3.5 FAC mg/ml or 30-40 FAC mg/ml for either 15 or 30 seconds
- The BIOIONIX® treated turkey parts saw a *Salmonella* reduction range of 6-log reduction.

RESULT:



The study confirms the ability of the BIOIONIX® system to eliminate significant quantities of *Salmonella* intentionally inoculated to raw poultry parts.

CHALLENGE:

- As a follow up from the *Salmonella* Challenge previously discussed, the *Salmonella* levels of the immersion bath in said study were measured to assess the plausibility of water reuse in this raw poultry application
- All study points at study start were measured for *Salmonella* levels, all being <10 cfu/ml.
- At study conclusion, the clean water immersion baths had accumulated 7,150 cfu/ml (wings) and 90,000 cfu/ml (breasts).
- All BIOIONIX treated immersion baths points maintained <10 cfu/ml.

RESULT:



Thus, the study confirms that the BIOIONIX® system can prevent contamination and cross-contamination in immersion baths for raw poultry inoculated with *Salmonella*.

FDA/USDA Approved

BIOIONIX® Makes the World's Food and Water Supply Safer!

Our proven, approved and patented technology uses non-chemical, natural SuperOxidants to disrupt and destroy the DNA and RNA of pathogens!



BIOIONIX® Benefits:

- ⚡ Meet Sustainability Initiatives: No chemicals added, reuse water
- ⚡ Save Money: Eliminate downtime, chemical costs, reduce brine disposal
- ⚡ Improve Food Quality: Increase shelf life, cleaner labels, improve taste
- ⚡ Peace of Mind: Continuous 24/7 monitoring

Cleaner
Safer
Healthier

Proven Technology and Knowledge:

- ⚡ Patented and proven, non-chemical systems are FDA and USDA approved as a chemical-free solution for disinfection in food manufacturing.
- ⚡ The BIOSAI^{F24/7} artificial intelligence software gives continual system monitoring, data collection and maintains performance.
- ⚡ BIOSAI^{F24/7} allows for remote commissioning, monitoring, configuring and installation!
- ⚡ More than technology! 24/7/365 Full-service support by a team of experts: engineers, food safety, chemists and animal health.


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