

### Bio-G-Active: An Innovative Solution for Extending Shelf Life and Enhancing Microbial Quality of Poultry

#### Introduction

Bio-G-Active is an innovative antimicrobial solution specifically designed for the effective and sustainable decontamination of poultry carcasses. Unlike traditional chemical agents like chlorine, Bio-G-Active combines powerful biological mechanisms to ensure food safety, enhance product quality, and support environmentally friendly practices. This presentation explains how Bio-G-Active works, its key benefits, and why it outperforms other methods.



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#### How Does Bio-G-Active Work?

##### Phase 1: pH Reduction

Bio-G-Active's natural organic acids, particularly lactic acid, lower the pH on the surface of poultry carcasses. This creates an environment that is hostile to harmful microorganisms such as Salmonella and E. coli, as they thrive in neutral or slightly basic conditions. By lowering the pH:

- **Bacterial growth is inhibited.**
- **Microorganisms become more vulnerable to destruction.**
- **Beneficial bacteria are supported**, promoting a stable microbiological environment on the surface.

##### Phase 2: Disruption of Microbial Cells

Bio-G-Active actively penetrates the cell membranes of harmful bacteria, destabilizing them and ultimately leading to their destruction. This effect is enhanced by a synergistic combination of:

- **Lactic Acid:** Lowers the pH and breaks down cell walls.
- **Phosphates:** Destabilize cell structures and enhance the effects of acids.
- **Ascorbic Acid:** Prevents oxidative stress, further weakening pathogens.

This comprehensive mechanism ensures the removal of dangerous pathogens like Salmonella, Campylobacter, and E. coli, even in the presence of organic material.

### Phase 3: Antioxidative Properties

In addition to antimicrobial action, Bio-G-Active provides significant antioxidative benefits that:

- **Preserve meat color:** Preventing the oxidation of myoglobin ensures the product remains visually appealing.
- **Enhance texture and taste:** The inhibition of oxidative processes maintains the meat's freshness and sensory qualities.
- **Extend shelf life:** Reduced oxidation delays spoilage, offering consumers fresher products.

### Phase 4: Complete Biodegradability

A key advantage of Bio-G-Active is its complete biodegradability. After application, the product decomposes into harmless by-products such as water and carbon dioxide, leaving no chemical residues on the meat. This makes Bio-G-Active:

- **Safe for consumers.**
- **Environmentally friendly.**
- **Globally compliant with regulatory standards.**

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## Key Advantages of Bio-G-Active

### Superior Performance Compared to Chlorine

Parameter	Bio-G-Active	Chlorine
Antimicrobial Action	Deep penetration of bacterial cells	Superficial action, easily inactivated
Oxidative Effects	Prevents oxidation of proteins	Does not prevent oxidation
Residue-Free	Yes	No, leaves harmful by-products
Environmental Impact	Fully biodegradable	Produces toxic compounds
Equipment Compatibility	Does not corrode steel devices	May cause corrosion
Worker Safety	Not harmful to health	Can pose health risks

### Enhanced Meat Quality

- **Improved sensory properties:** Bio-G-Active enhances the taste, texture, and appearance of poultry products.
- **Consumer safety:** No harmful residues mean safer meat for consumers.
- **Longer shelf life:** Freshness is preserved, reducing waste in the supply chain.

## **Sustainable and Compliant**

Bio-G-Active aligns with global sustainability goals by offering an environmentally friendly alternative to traditional disinfectants. It meets stringent food safety regulations, ensuring confidence for processors and consumers alike.

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## **Why Bio-G-Active Is the Future**

Bio-G-Active combines cutting-edge science with sustainability to provide a superior antimicrobial solution. Its ability to:

- Effectively reduce pathogens,
- Improve meat quality,
- Eliminate residues,
- And protect the environment,

makes it the ideal choice for poultry processors seeking reliable, safe, and sustainable solutions.

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## **Contact Us**

For more information about Bio-G-Active and how it can benefit your operations, please contact:

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### **BGA Dictum GmbH**

Mommensenstraße 7  
10629 Berlin / Germany  
+49 (0)30 8442891  
post@bga-dictum.com  
www.bga-dictum.com