

THERE'S A REAL APPETITE FOR CHICKEN

FEED IT

Consumers continue to demand lean protein options—such as chicken breasts—with clean labels.

At the same time, they want them to be plump, juicy and full of flavor.



CHICKEN CHECKS ALL THE BOXES

86% OF CONSUMERS
eat chicken (the most likely and frequently consumed protein)¹

TOP 3

Chicken hits the top food choice drivers: *taste, freshness, cost*¹

CONSUMERS WANT TO EAT CLEANER

21% SAY
they are practicing more **mindful eating**²

50% OF CONSUMERS
are **extremely or very interested** in clean label³

¹Super Protein, U.S., Mintel, December 2020

²Eating and Shopping During a Global Pandemic, International Food Information Council, September 2020

³Health Focus, 2019

THE GOAL

Lean and 'clean' poultry products with great taste and texture, a juicier bite—and better yield.

IMPROVE QUALITY AND YIELD

**WITHOUT RELYING ON
ARTIFICIAL INGREDIENTS**

Phosphates and other traditional yield enhancement products hold water during processing and storage. Phosphates have been used to help retain juiciness and flavor in leaner cuts of meat, but their use has declined due to the increase in clean label processing.



WHAT IS PROTEUS®?

An innovative functional protein from Kemin, Proteus® is a clean label alternative to phosphate. It utilizes a proprietary technology, creating ingredients that are applied by direct addition, tumble/marinade, or injection, similar to traditional brines.

It can be used to more naturally retain moisture and yield—and lower raw material costs—all without relying on artificial ingredients.

Proteus® improves moisture retention throughout the cooking process, leading to better texture and a juicier bite, so you can:

- meet in-demand label claims
- reduce input costs
- achieve greater yields

THE FRESHER, SAFER, LONGER (AND JUICIER) EXPERTS

PROVEN YIELD ENHANCEMENT:

THE PROOF IS IN PROTEUS®

To measure its potential, we put Proteus® to the test.

The objectives were to evaluate the Proteus® liquid technology—alone and in combination with phosphate—versus untreated and phosphate controls in cooked chicken sheet meat.

METHODOLOGY

Commodity boneless, skinless chicken breasts were macerated. Brine treatments (untreated, phosphate, Proteus®, Proteus® + phosphate) were homogenously dissolved and massaged under vacuum in a jacketed pilot scale massager.

Green weight and massaged weight were measured to track brine absorption.

Then, each treatment was sheeted on a ProGrill® at 475°F, leveled to ~1" thick and seared for one minute, followed by thermal processing in an impingement oven at 325°F to an internal temperature of 165°F.

CONCLUSION

Proteus® delivered a 17% 'yield to green' advantage over untreated sheet chicken.

The combination of Proteus® + phosphate gave a 15% advantage over phosphate alone and 5% over Proteus® alone.

When manufacturing chicken sheet meat to a target finished quantity, higher 'yield to green' results mean less raw material is needed to hit the production target.

BY THE NUMBERS:

Proteus® gives you the same label declaration as untreated, with

15% LESS MEAT NEEDED

Amount of raw material required to achieve 1,000 lb. target:

COOKED CHICKEN SHEET MEAT TREATMENT	AMOUNT OF RAW MATERIAL REQUIRED	AMOUNT OF RAW MATERIAL REQUIRED
Untreated	917 lb.	—
Proteus®	794 lb.	15% less vs untreated
Proteus® + phosphate	763 lb.	13% less vs phosphate

These results confirm that the clean label Proteus® liquid technology can be used to increase yield in cooked chicken sheet meat.

MEAT PROTECTION AND ENHANCEMENT SOLUTIONS AND SERVICES

Kemin understands proteins and how various processing techniques, ingredient interactions and packaging can impact consumer appeal and shelf life.

Our complete line of solutions provides color, flavor and microbial stability, as well as yield improvement. Let Kemin help extend your product's quality and shelf life, maximize its consumer appeal, and deliver cost savings.

Solutions

▶ YIELD ENHANCEMENT

Proteus®

▶ FOOD SAFETY

BactoCEASE®
Propionic acid

BactoCEASE® NV
Buffered vinegar

▶ FLAVOR

FORTIUM® R
Rosemary extract

FORTIUM® RGT
Rosemary and green tea extract

▶ FAT BLOCK

InnoBLQ™

▶ COLOR

FORTIUM® A
Acerola extract

FORTIUM® R
Rosemary extract

FORTIUM® RGT
Rosemary and green tea extract



SERVICES

Our **Customer Laboratory Services (CLS)** team specializes in trouble-shooting your challenges and conducting analytical tests to compare efficacy of different solutions, as well as sensory attributes.

KEMIN TEAM

With deep technical expertise and an ongoing commitment to innovation, our experienced technical team creates groundbreaking blends to give you the best food safety, shelf life and yield enhancement solutions.

Kemin Industries, Inc.

1900 Scott Avenue | Des Moines, Iowa USA 50317

Phone 1-800-777-8307 Email kftmarketing@kemin.com