

# PLANT MANAGER'S GUIDE TO FOOD SAFETY INTERVENTION STRATEGY

*Learn How Intervention Services Can Minimize Risk, Protect Your Brand and Help Your Business Grow as Part of a Total Protection Food Safety Approach*

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# INTRODUCTION

Managing food safety programs and compliance inside processing facilities is an increasingly difficult job for plant managers. The evolving and everchanging regulatory landscape is becoming stricter and more complex every year. It puts significant pressure on plant managers and internal FSQA teams to keep up with the equipment, resources and processes needed to stay ahead of customer demands and compliance.

The USDA Food Safety and Inspection Service (FSIS) pathogen reduction performance standards are not only broadening across pork and beef but tightening within poultry. This includes a particularly aggressive approach when it comes to the agency's national target of a 25 percent reduction in Salmonella illnesses. On October 19, 2021, the USDA announced that FSIS "would be mobilizing a stronger and more comprehensive effort to reduce Salmonella illnesses associated with poultry products". This includes stricter standards and possibly a focus on certain Salmonella strains known to cause human illness, which could have a significant impact across the entire industry. Proposed standards on Campylobacter related to poultry parts and ground product would also impact processors when it comes to managing and meeting regulatory standards.

Documentation is also a strong area of focus for both FSIS and the FDA. Both agencies have significantly improved their process for not only identifying outbreaks, but for investigating and communicating findings. Detailed documentation has become an essential piece of their investigation to fully understand where outbreaks originated. The increasingly public communication about investigation findings could be damaging for a brand's reputation with its customers and ultimately end consumers.

As a result, many plant managers are finding that even the most rigorous sanitation programs simply aren't enough to meet new regulatory requirements. Which is why including intervention services as part of a more comprehensive, multi-discipline food safety approach can be extremely valuable.

This report will specifically dive into intervention services and the value they can add to managing microbial concerns, meeting regulatory requirements, and much more.

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**CDC estimates that each year roughly 1 in 6 Americans (or 48 million people) get sick, 128,000 are hospitalized, and 3,000 die of foodborne diseases.**

(SOURCE: CDC.GOV)

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**TOP 5 PATHOGENS CONTRIBUTING TO DOMESTICALLY ACQUIRED FOODBORNE ILLNESS:**

*Norovirus*  
*Salmonella*  
*Clostridium perfringens*  
*Campylobacter spp.*  
*Staphylococcus aureus*

(SOURCE: CDC.GOV)





# WHAT IS INTERVENTION?

When it comes to food safety, the term ‘intervention’ is typically used when talking about pathogen control. It is a practice of ‘intervening’ in a process by adding additional control measures to reduce and eliminate food safety risks.

Intervention services can vary by facility, food type and the specific needs of a processor, but typically include various types of dosing equipment and processing aids. These are installed to compliment the efficacy of third shift sanitation and to kill dangerous foodborne bacteria during processing that can pose a threat to consumers. Intervention begins when product arrives at the facility and continues, using a multi-hurdle approach, until that product is packaged and ready for distribution.

When implemented in conjunction with other food safety measures, intervention significantly enhances performance and adds an even deeper layer of protection to ensure your facility is clean and products are always safe and audit-ready.





# HOW IT WORKS

Different from third shift sanitation, intervention services are built in as part of the real-time processing and production of meat, poultry, and produce products.

A team of processing, microbiology, data, and equipment specialists work together with plant managers to discuss specific challenges and observe the specific function of a facility to determine the right combination of chemical and non-chemical interventions to achieve key objectives related to food safety, quality, and yield. Since each facility is unique, expertise is critical to properly analyze data, improve process control, select concentration targets, and create the ideal sequence of interventions.



## DIAGNOSE

- Discuss objectives
- Analyze process
- Identify symptoms



## PRESCRIBE

- Recommend solutions
- Implement plan
- Establish control



## OPTIMIZE















- Collect and share data
- Evaluate results
- Refine strategy



# QUALITY PRODUCTS

In addition to more than 325 cleaning, sanitizing and specialty chemicals, Safe Foods has access to more than nine proprietary processing aids. These include both chemical and non-chemical solutions with different modes of kill and products that are approved for organic processing. They are approved for use in USDA and FDA facilities.

## PROCESSING AIDS

TECHNOLOGY	DESCRIPTION	MODE OF KILL	APPROVED FOOD TYPES
	Peracetic acid (PAA), available in 17% or 24% blends Organic approved	OXIDATION	
	Proprietary cetylpyridinium chloride (CPC) blend	MEMBRANE DISRUPTION	
	Proprietary GRAS acid blend	PH ADJUSTMENT	
	Acidified sodium chlorite (ASC), available in organic and conventional blends Organic approved	OXIDATION PH ADJUSTMENT	
	Sulfuric acid blend	PH ADJUSTMENT	
	Sodium hydroxide (caustic soda) pH adjuster, available in 32% or 50% blends Organic approved	---	
	Potassium hydroxide (potash) pH adjuster Organic approved	---	



# INNOVATIVE EQUIPMENT & ENGINEERING SUPPORT

Smart dosing equipment and engineering expertise is one of the most important differentiators in Intervention. Over the last two decades, Safe Foods has pioneered innovative equipment solutions that have truly changed the future of food safety while improving worker safety. Areas of a facility that had previously been incredibly difficult and risky to clean, now have an automated cleaning mechanism to deliver an overall better, safer result.

## PRECISION APPLICATION AND DOSING SYSTEMS



### **GENIV™ Spray Cabinet System**

The GenIV system is used in combination with the Waterfall™ cabinet to provide a full-coverage drench solution for intervention application. Each GenIV system also recaptures and filters process water to reduce intervention waste.



### **Helyx™ Auger Dip System**

Helyx is ideal for intervention application in further processing. The unique auger design ensures the entire surface area of food product is treated with antimicrobial interventions.



### **Entro™ Fluid Dosing System**

The Entro dosing system is the most accurate intervention dosing system on the market today. It is consistent, precise, and reliable. Entro is compatible with an array of processing aids and tracks important metrics to provide the data required for optimization and quality control.



## SUSTAINABILITY TECHNOLOGY



### Cyclean™ Water Reuse System

Cyclean is a water reuse system designed for high-volume applications like an IOBW. It filters and treats water with an intervention prior to reuse. The result is up to 80% water reuse efficiency that can help processors save hundreds of thousands of gallons of water daily.



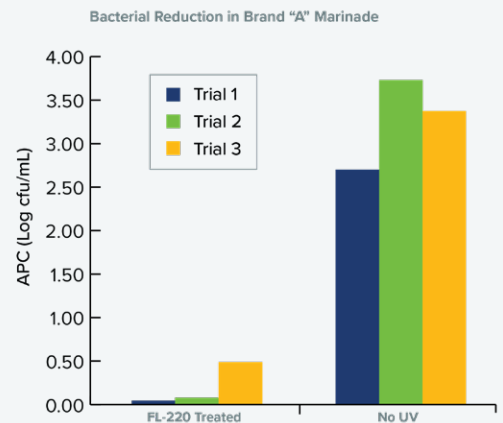
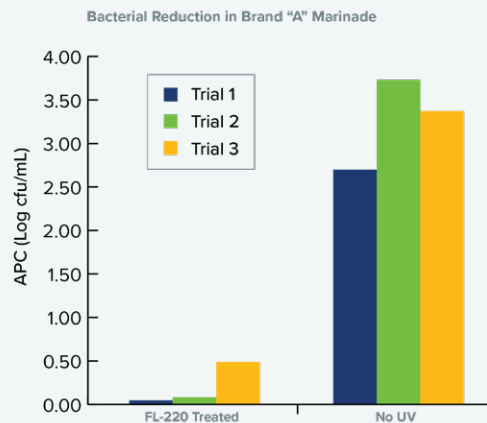
### Vorclone™ Water Filtration Technology

Vorclone is a non-chemical intervention system that removes dirt, fecal material and other contaminants from the scalding tank to reduce microbial load on carcasses. Each Vorclone can filter up to 150 gpm, drastically reducing the amount of sediment in each scalding tank.



### FreshLight™ Liquid Disinfection Technology

FreshLight utilizes advanced ultraviolet technology to continuously disinfect brines, marinades, process water and other liquids. It reduces spoilage organisms, extending the shelf life of those products without compromising food safety.



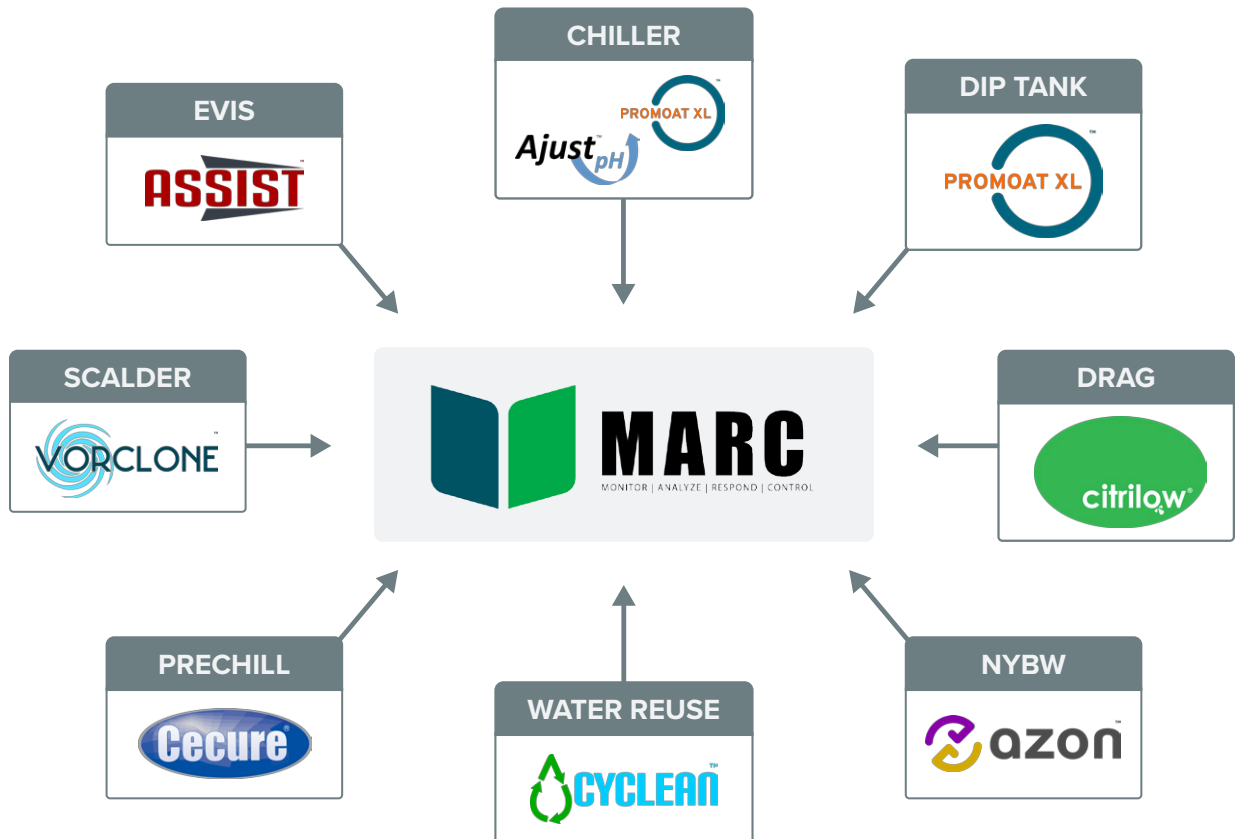


MARC's simple and secure interface allows users to remotely view all their food safety systems in real-time, with customized dashboards and reports.



# COMPREHENSIVE ANALYTICS SOFTWARE & REPORTING

Finally, and most importantly, is the tracking and analytics behind the intervention services to help management understand the effectiveness of the executed process and receive supporting documentation. Safe Foods uses their proprietary software called MARC™ (Monitor Analyze Respond Control) to provide in-depth tracking and reporting. MARC™ provides real-time data used to monitor specific KPI's that influence the overall effectiveness during production so that teams can respond and adjust the needs to meet food safety goals. Rather than relying on subjective intuition, MARC™ equips team members with objective data that improves decision-making.





# SUPPORTIVE TEAM

Having a committed, integrated team that understands the processor's goals is an essential element of managing a multi-discipline food safety approach. A fragmented approach to sanitation and intervention often results in miscommunication, finger-pointing, and additional time needed for managing multiple providers. Within the integrated solution portfolio, the Safe Foods intervention specialists work hand-in-hand with sanitation and chemical representatives to make sure everyone is aligned, and that the food safety program is executed effectively with no downtime or disruption. This results in a cohesive partnership between Safe Foods and each customer that builds trust and performs at a high level to produce meaningful results.

## FRAGMENTED APPROACH



## SAFE FOODS SOLUTIONS





# KEY BENEFITS

While the primary focus of Intervention Services is on microbial and pathogen reduction, there are several other benefits that support additional business growth opportunities and cost savings as well.

- **Reduce microbial contamination**  
Kills dangerous bacteria and pathogens that pose risk to food safety during production and protects efficacy of 3rd shift sanitation efforts.
- **Helps processors meet regulatory guidelines**  
Better microbial management leads to consistency in meeting USDA and FDA standards in addition to performing well on customer audits with robust documentation .
- **Increases worker safety**  
Sophisticated engineering and technology solutions are designed to be ergonomic and reduce exposure to hazardous materials.
- **Improves product quality**  
High-quality processing aids help to keep products safer for a longer period of time, extending shelf life.
- **Supports enhanced sustainability**  
Innovative new technology helps cut down on water usage.

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**Safe Foods outperformed the industry average in USDA *Salmonella* performance category status, including a 15% higher pass rate on whole bird.**

(Based on reporting period December 25, 2020, December 25, 2021 USDA-FSIS website)

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**Savings of more than 422,622,000 gallons per year of water with Cycleclean™ reuse system.**

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**Average 4% reduction in spend and 19% reduction in Peracetic Acid (PAA) usage when using Cecure®.**

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# CONCLUSION

The famous quote “work smarter, not harder” coined by industrial engineer Allen F. Morgenstern in the 1930s applies well to the future of food safety. Plant managers need to explore new product technology and innovative engineering solutions to enhance food safety management, especially with regulatory audit guidelines becoming tighter.

Intervention Solutions can be incredibly effective in managing microbial risk and pathogen reduction but work best when aligned as part of an integrated approach with other food safety solutions.

The key is finding a partner that has the experience and solutions available to help bridge the gap across multiple disciplines including sanitation, intervention, and chemical management. Leaving it to the experts is also part of ‘working smarter, not harder’ when it comes to food safety management and the future of your business. Simplifying the complexity of a multi-disciplined approach will not only give you better piece of mind, but result in more effective, consistent results.



Safe Foods, a division of Fortrex, offers superior chemical solutions, intervention processing aids, innovative equipment, and real-time analytics software to food processing partners around the world.

Fortrex is the first line of defense in food safety. The company is a leading provider of sanitation solutions in North America, offering tech-forward innovation to drive growth by helping our customers identify and avoid preventable issues while delivering real-time results. We offer cost-effective solutions to our customers, while providing the highest-level of contaminant defense. Fortrex’s team of skilled food sanitors, microbiologists, technical experts and engineers are committed to keeping USDA, FDA, and CFIA processing facilities clean, safe, and audit-ready.

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For more information or to schedule a free plant sanitation assessment visit [www.FortrexSolutions.com](http://www.FortrexSolutions.com).

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