



▼ REAL-WORLD EXPERTISE FOR INDUSTRY

NCFST offers a comprehensive processing and packaging research and pilot plant program to assist food industry members in ensuring the safety and quality of their products. Current projects in this area include development of science-based recommendations on the use of new risk management concepts such as Food Safety Objectives (FSOs) to determine commercial sterility and extend the shelf-life of refrigerated foods, and the development of the Enhanced HPP Consortium, a collaborative workgroup that will study the synergy between high pressure and mild heat to ensure the safety and quality of long-life chilled and low-acid products.

NCFST's ongoing projects also include an initiative to validate and provide data for proof-of-concept of microwave pasteurization of shell eggs, and another to quantify the effects of sanitizers combined with high powered ultrasonic processing on viruses and *E. coli* O157:H7 for use as a fresh produce intervention measure.

NCFST is a long-time recognized leader in all aspects of packaging migration, food/packaging interaction, active packaging development and assessment and seal integrity. Recent research centers on the development of a model and agreed approach for assessing migration of contaminants through packaging in collaboration with FDA's Office of Food Additive Safety.



▼ OUR CAPABILITIES

- >> Expertise in a wide range of processing technologies and applications, including microwave pasteurization, high-pressure processing, aseptic processing, ultraviolet light irradiation and cold plasma surface treatment
- >> Provides innovative solutions to packaging related issues, examines new food packaging innovations and assists in obtaining regulatory approval for new applications
- >> Entrée to state-of-the-art processing/preservation technology and biocontainment pilot plants

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NATIONAL CENTER FOR FOOD SAFETY AND TECHNOLOGY
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The National Center for Food Safety and Technology (NCFST), founded in 1988, is a unique research consortium of the U.S. Food and Drug Administration (FDA) Center for Food Safety and Applied Nutrition (CFSAN) Division of Food Processing Science and Technology, Illinois Institute of Technology (IIT) and the food industry. The NCFST is the only center where industry can work collaboratively with FDA scientists on food safety, nutrition and technology research.

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FOOD PROCESSING AND PACKAGING PLATFORM



Convenience, novelty, product line diversity, improved quality, shelf life, and safety are all driving forces to incorporate process and packaging technology in the manufacture of food products. The challenge is to meet marketing, operating, safety, and quality goals while maintaining an economical process.

When it comes to safety, there are a wide range of technologies that food manufacturers now have at their disposal to meet the twin goals of safe product and production efficiency. NCFST's expertise in novel thermal and nonthermal processing technologies is unrivaled, from ultraviolet light irradiation to microwave pasteurization to cold plasma treatment and high pressure processing.



NCFST evaluates the safety of such processes for its members to ensure its effectiveness as impacted by the process control parameters and packaging materials. This allows the food manufacturer to target other important economical aspects of the process while maintaining the necessary level of safety all the way through production to the finished product.

▼ PROCESSING AND PACKAGING PLATFORM MISSION

NCFST's Food Processing and Packaging Platform investigates the effects that processing and packaging steps have on the potential public health impact of foods in terms of food safety, quality, and nutrition. When working with NCFST, industry members receive usable scientific expertise and research data on the following focus areas:

> BREAKTHROUGH SCIENCE

> INNOVATIVE TECHNOLOGY

> CUTTING-EDGE NUTRITION

- >> Validates novel technologies for sterilization, pasteurization and decontamination of dried ingredients and minimal processing of fresh produce
- >> Use of Food Safety Objectives (FSOs) to facilitate regulatory approval and equivalency of novel processes
- >> New technologies and tools for validating package integrity
- >> Models for predicting migration of contaminants through packaging