

# RETAIL FOOD SYSTEMS RESEARCH CONFERENCE

PRESENTED BY THE INSTITUTE OF FOOD TECHNOLOGISTS FOODSERVICE DIVISION  
with support from the Institute of Food Technologists and the International Association for Food  
Protection Retail Food Safety and Quality Professional Development Group

For: Retail Chefs and Operators, Quality Assurance Personnel,  
Retail Food Scientists, Educators, Regulatory Officials

JANUARY 7-10, 2008

Peppermill Resort\*Spa\*Casino \* 2707 South Virginia Street \* Reno, Nevada 89502 USA

ATTEND ALL OR PORTIONS OF THIS CONFERENCE!  
Session and event SPONSORS and EXHIBITORS welcome!

**CONFERENCE VISION:** To develop the foundation for a strategic HACCP process research program. This program aims to aid and facilitate new retail processes and product innovation by cooks and operators in the U.S. and worldwide. The conference will establish the standards for how retail operators can implement HACCP and validate their own process standards, in lieu of the Food Code's "safe harbors."

## PRE-CONFERENCE COURSES

### Monday, January 7

- Applying Temperature Control for Safety (TCS) in the safety assessment of food processes and products (4 contact hours)
- How to do cook-chill and sous vide processes / demonstration of the Peppermill cook-chill system (3.75 contact hours)

## RETAIL FOOD SYSTEMS RESEARCH CONFERENCE

### Tuesday, January 8 **New Retail Products and Processes (7.25 contact hours)**

- The FDA perspective on research for new process and product development in retail
- The scientific basis for retail process and product development
- Writing a HACCP-based Food Safety Management System (FSMS) operations manual
- How will retail operation hazards and risks change in the next 20 years?
- New retail food menu item trends
- Ingredient technology / functionality and new retail product development
- How a chef develops new menu items and products such as cook-chill and sous vide

**Special event:** *New technology gourmet banquet buffet*

### Wednesday, January 9 **Developing a New Product–Process Retail HACCP Plan (7.5 contact hours)**

- Doing food safety validation studies for new processes
- Laboratory instruments for the chef to use in the kitchen for measuring and controlling, and verifying the control of processes
- Getting a HACCP FSMS program approved
- New processes and equipment for retail operations
- Continuous Quality Control: Sampling and controlling the process in a system so that process deviations do not become process defects
- Initiating a HACCP-based process and product R&D program for retail food operations / discussion, questions and answers

## POST-CONFERENCE WORKSHOP: BECOME A TRAINER AND PROCESS AUTHORITY

### Thursday, January 10 (7.5 contact hours)

- FSMS / HACCP process development application course for regulators and industry: How to write and approve a HACCP FSMS

SEE PAGE 5 FOR REGISTRATION FORM. FOR FURTHER CONFERENCE INFORMATION:  
Contact O. Peter Snyder, Jr., Ph.D.; [osnyder@hi-tm.com](mailto:osnyder@hi-tm.com); TEL 651 646 7077; FAX 651 646 5984

## ADDITIONAL INFORMATION

### Event sponsors and exhibitors welcome!

#### Sponsors

If you or your company would like to be associated with this program for new retail process and product innovation, here is your opportunity to sponsor events, sessions, and/or speakers. Sponsors include equipment companies, food laboratories, food suppliers, cleaning chemical suppliers, and exhibitors. Events that can be sponsored are:

- Reception, January 7
- New product technology dinner, January 8
- Continental breakfasts, January 8 and/or 9
- Mid-morning breaks, January 7, 8, 9, and/or 10
- Lunch buffets, January 7, 8, 9, and/or 10
- Mid-afternoon breaks, January 7, 8, 9, and/or 10
- A speaker

*Please contact O. Peter Snyder, Jr., Ph.D. (651 646 7077; osnyder@hi-tm.com) if you or your company would like to become a sponsor.*

#### Exhibitors

Foodservice equipment companies, food laboratories, regulatory establishments, food and functional ingredient suppliers, packaging companies, cleaning chemical suppliers, audit companies, and book companies are welcome. Fee is \$500 for a tabletop exhibit.

*Please contact O. Peter Snyder, Jr., Ph.D. (651 646 7077; osnyder@hi-tm.com) for information about becoming an exhibitor.*

### The Goal of the Conference

In keeping with the Conference's vision, the Conference's goal is that selected food scientists, technologists, and chefs will facilitate the identification of research to explore and develop new and improved processes and products in retail food operations.

At the heart of a successful retail food operation is innovation by the chef of new processes and products (e.g., sous vide, cook chill, shelf-stabilized products). It is not the responsibility of the FDA, USDA, and regulatory agencies to develop process controls and performance standards for new, innovative retail processes and products. Providing process controls and performance standards for new processes is the responsibility of cooks / chefs and food scientists using the skills of food science and technology. However, restaurants are not currently trained to do this.

The new and improved processes and products in retail food operations that this research program will explore and develop include:

- Minimal process / cook-chill / sous vide / cook-package / package-cook / stabilized foods (shelf stable)
- Equipment that automates kitchen processes such as cooking and holding food at a consistent temperature and time without cook intervention (e.g., toaster with a timer; microwave oven with a steam sensor).

#### How this program will be managed

1. A Board of Directors will be set up. Initial members will be drawn from a selected group of food scientists, technologists, and chefs.
2. This Board of Directors will review research proposals and prioritize research tasks so that chefs / cooks have a wide spectrum of retail process control with which to work.
3. The Board will solicit financial gifts from processors, suppliers, manufacturers, and retail operators to support the research program. The Board will award grants to accomplish research objectives.

### What this Conference can do for you

Be at the forefront of this important effort to begin research for new and innovative processes and products for the retail food industry. Use your knowledge to identify hazards and controls in new processes. Have access to future research findings to continue your involvement in innovation.

### Conference facilitator

O. Peter Snyder, Jr., Ph.D., President of the Hospitality Institute of Technology and Management in St. Paul, Minnesota, is the conference facilitator. Dr. Snyder has been a long-standing, active member of IFT and has been an Executive Board member of the Foodservice Division, serving as newsletter editor. As a member of IAFFP, he is an active member of the Retail Food Safety and Quality Professional Development Group. His other memberships include the National Restaurant Association and the Research Chefs Association.

As facilitator, Dr. Snyder will receive registration payments. All funds will be given to the IFT Foodservice Division to pay for conference expenses. Any profits from this conference will be used to fund the ongoing research program to develop new and improved processes and products for retail food operations.

## CONFERENCE SCHEDULE

**Lunch (Noon-1:00 PM) and mid-morning and mid-afternoon break snacks will be provided each day.**

<b>PRE-CONFERENCE COURSES, Monday, January 7<sup>th</sup></b>	
8:00 AM- Noon	<p><b>Applying Temperature Control for Safety (TCS) in the safety assessment of food processes and products (Dr. Donald Schaffner, Rutgers)</b></p> <p>This is a pilot course to train chefs, inspectors, and process authorities in the science of how to use TCS to evaluate the safety of retail processes and food products according to the technology for the FDA Food Code definition of foods requiring Temperature Control for Safety. Dr. Schaffner was a member of the IFT committee that helped write the TCS report for FDA and is highly qualified to explain how to use the rule.</p>
1:00-4:45 PM	<p><b>How to do cook-chill and sous vide processes (Dr. O. Peter Snyder, Jr., Hospitality Institute of Technology and Management)</b></p> <p>Cook-chill and sous vide are two excellent retail processes that allow food banking, kitchen labor savings, and increased efficiency in retail kitchens. The Peppermill has an extensive cook-chill system. In the first part of this course, Dr. Snyder, with the help of the chefs from the Peppermill, will discuss the operating technology of these processes and how to write a HACCP Plan and HACCP'd recipe for assured safety. In the second part of this course, the Peppermill will provide a tour of the cook-chill production facility, demonstrate the equipment, and discuss the management and quality control of the system.</p>
5:30-7:00 PM	<i>Welcoming reception</i>

<b>RETAIL FOOD SYSTEMS RESEARCH CONFERENCE, Tuesday, January 8<sup>th</sup></b> <b>New retail products and processes</b>	
7:30-8:30 AM	CONTINENTAL BREAKFAST
8:30-9:15 M	<b>Topic 1: The FDA perspective on research for new process and product development in retail</b> ( <i>Shirley Bohm, FDA</i> ) While the FDA does not do new process and product research for retail operations, the FDA retail Food Code does allow retail operators to develop new products and processes, using any federal performance standard, providing they develop a validated HACCP plan. Ms. Bohm will explain this provision.
9:15-10:00 AM	<b>Topic 2: The scientific basis for retail process and product development</b> ( <i>Dr. O. Peter Snyder, Jr., HITM</i> ) The safety of new processes and products must be based on sound scientific principles. The principles are best found in the ICMSF publications and food research publications. The starting point for a new process safe design is the description and flow chart of the retail food system and processes (HACCP). The hazards associated with the prerequisite and food processes are identified and, for each hazard, it is determined whether it is significant or a tolerable risk. If significant, the initial level of the hazard ( $H_0$ ), or input, must be identified, and the Food Safety Objective (FSO), or output, is established. Then, the process performance criteria to reduce the hazard to an appropriate level of protection are developed and validated. This is represented by the equation, $H_0 + \Sigma I - \Sigma R \leq FSO^*$ . The hazards in the processes of the current retail food system will be presented.  * $\Sigma R$ = Total cumulative reduction of the hazard ( $\log_{10}$ ) $\Sigma I$ = Total cumulative increase of the hazard ( $\log_{10}$ )
10:00-10:30 AM	BREAK, SNACK
10:30 AM- 12:00 Noon	<b>Topic 3: Writing a HACCP-based Food Safety Management System (FSMS) operations manual</b> ( <i>Dr. O. Peter Snyder, Jr., HITM</i> ) The NACMCF and ISO22000 identify that there will be four sections to an FSMS HACCP-based operations manual: 1) System Description; 2) Management Processes; 3) Prerequisite Processes; and 4) Food Product HACCP Processes. The session will outline a method of documenting the FSMS that uses HACCP as the foundation for control of new product and process research and development, and to assure uniformity in documenting new processes and products production and enforcement of controls in a HACCP-based retail food system.
12:00 Noon- 1:00 PM	LUNCH BUFFET
1:00-1:45 PM	<b>Topic 4: How will retail operation hazards and risks change in the next 20 years?</b> ( <i>Dr. Ann Marie McNamara, Silliker, Inc. Research Center</i> ) Cooks use kitchen tools and equipment to control and reduce the hazards ( $H_0$ ) in the food to meet an FSO. When retail food operations are established, the kitchens where the hazards are controlled must not only control today's hazards but also new hazards as uncovered in the future. For example, we did not learn about <i>Listeria</i> or STEC <i>E. coli</i> until about 20 years ago. The design of kitchens and equipment must anticipate emerging hazards so that these hazards can be controlled by equipment installed today. This includes deciding on appropriate cold storage temperature for food, cooking (pasteurization) times and temperatures, hot holding temperatures, cooling temperatures and rates for cooked food, and cold holding times and temperatures. Dr. McNamara will discuss the expected changes in the biological, chemical, and physical hazards in the next 20 years as they could effect the design of kitchens and control of processes.
1:45-2:30 PM	<b>Topic 5: New retail food menu item trends</b> ( <i>TBA</i> ) This presentation will look at trends in menu items from the standpoint of needs for hazard control. As the U.S. becomes increasingly multicultural, the favorite food of people from around the world becomes a part of the retail food systems of the U.S. The retail world also likes to recapture the foods of our ancestors, such as home canning, fermentation, sausage, and other homemade recipes. As populations age, they change their eating habits and become more focused on eating for pleasure and health. Our presenter will give an overview of trends in what foods will be prepared in the kitchens and what research we need in order to develop new, safe processes to meet consumer demand for retail process and product innovation.
2:30-2:45 PM	BREAK, SNACK
2:45-3:45 PM	<b>Topic 6: Ingredient technology / functionality and new retail product development</b> ( <i>Dr. Stephen Williams, Kraft Ingredients Corp.</i> ) The U.S. is blessed with a wide range of flavor and functional ingredients that the cook can use to enhance, change the flavor of menu items, extend shelf life, make items more nutritious, and create new products. Dr. Williams has an extensive background in food ingredient technology and will discuss ingredients available to the chef, and how the chef / product developer can source ingredients to create new menu items or make a menu item safer.
3:45-4:45 PM	<b>Topic 7: How a chef develops new menu items and products such as cook-chill and sous vide</b> ( <i>TBA</i> ) Ultimately, it is the job of the chef to conceptualize, choose ingredients and processing procedures, and create new menu items. Our presenter will discuss the process that chefs go through to develop a new product for any type of foodservice operation. While assuring that customer satisfaction is measured by repeat customer sales, chefs must also consider food costs, production complexity, kitchen equipment, and other factors unique to their kitchens. The research chef must also use HACCP when writing the recipe HACCP plan. Chefs must train the cooks to follow the plan so that each can exactly duplicate the newly created product.
7:00-9:00 PM	<b>Special event: New technology gourmet banquet buffet</b> A display and sampling of a wide range of minimally processed foods, extended shelf life refrigerated foods from the Peppermill and food manufacturers and processors nationwide.

<b>RETAIL FOOD SYSTEMS RESEARCH CONFERENCE, Wednesday, January 9<sup>th</sup></b> <b>Developing a new product-process retail HACCP plan</b>	
7:30-8:30 AM	CONTINENTAL BREAKFAST
8:30-10:00 AM	<p><b>Topic 8: Doing food safety validation studies for new processes</b> (<i>Dr. Ann Marie McNamara, Silliker, Inc. Research Center</i>)</p> <p>It is essential that a new process be validated for safety. It must provide an Appropriate level of Protection (ALOP) for the consumer. This means that the hazards in the ingredients (H<sub>0</sub>) have been controlled to meet a desired performance objective such as less than 100 <i>Listeria</i> per gram or <i>Salmonella</i> undetectable in 25 grams. Sometimes when developing a new process, a government-specified control measure, called "safe harbors," can be used (e.g., Cook the ground beef to a center temperature of 150°F and hold it at that temperature for 1 minute for a 5-log reduction of <i>Salmonella</i>). This rule assumes that the ground beef is raw hamburger with no additives. However, a safe harbors government rule may not be appropriate to a new product or process for many reasons. In that case, a process validation study must be done. A very common government retail process performance objective is a 5-log reduction of <i>Salmonella</i>. Dr. McNamara will discuss how validation studies are conducted, normally in labs where pathogens can be used in the test, but sometimes using surrogate microorganisms. She will discuss writing the test plan, selecting the pathogens to be tested, and agreeing to the desired outcomes of the study. She will focus on testing shelf life and the cook-chill and sous vide process and finding the critical limits.</p>
10:00-10:30 AM	BREAK, SNACK
10:30-11:30 AM	<p><b>Topic 9: Laboratory instruments for the chef to use in the kitchen for measuring and controlling, and verifying the control of processes</b> (<i>Dr. Erdogan Ceylan, Silliker, Inc., Research Center</i>)</p> <p>The chef and process authority must validate and verify a new process. This is done using laboratory instruments that can be taken into the kitchen to measure the exact control measures that exist in the process, to include microbiological field test kits, pH meters, titration kits, water activity meters, ORP meters, salt and sugar refractometers, temperature-measuring data loggers, and calibration meters. Dr. Ceylan will review sources for instruments, how they are calibrated, how they are used, and how to be sure that they are measuring a process control parameter accurately.</p>
11:30-12:00 Noon	<p><b>Topic 10: Getting a HACCP FSMS program approved</b> (<i>Dr. John Marcy, University of Arkansas; Carl Custer</i>)</p> <p>How do we get a HACCP FSMS program approved? Who will verify the safe operation of an FSMS? Dr. Marcy and Carl Custer will discuss an approval process for new, innovative validated processes. The FDA code currently says that the local regulatory authority will review and approve HACCP plans. However, most local regulatory authorities do not want to do this, because they do not have the food science training to know if the validation study truly does or does not represent the safety of the product. It will not be feasible to train all local regulators to be qualified process authorities who design and do the studies. As an alternative, the qualifications of the persons doing validation studies can be identified and, if they meet national qualifications, auditors and regulators should be satisfied. After the presentation, people in the audience will be asked for their suggestions and solutions to the process approval process.</p>
12:00 Noon- 1:00 PM	LUNCH BUFFET
1:00-1:45 PM	<p><b>Topic 11: New processes and equipment for retail operations</b> (<i>Dr. Phil Minerich, Director of R&amp;D, Hormel Foods Corp.</i>)</p> <p>The food processing industry and food scientists pioneer the development of new cook-then-package and package-then-cook process technology. Dr. Phil Minerich has an extensive background in commercial process innovation. He will discuss new pasteurized food process technology such as UV, high pressure, modified atmosphere packaging, and pulsed light that could be applied to large and small retail processes.</p>
1:45-2:30 PM	<p><b>Topic 12: Continuous Quality Control: Sampling, and controlling the process in a system so that process deviations do not become process defects</b> (<i>Dr. John Surak, Surak and Associates</i>)</p> <p>The kitchen must keep a record of its operation for both liability protection and also to look for opportunities to improve processes and products. Part of the FSMS is the QA/QC process. Dr. Surak will discuss the process-product records that should be kept in a kitchen to guide the cook and the HACCP team in a process of continuous quality improvement.</p>
2:30-3:00 PM	BREAK, SNACK
3:00-5:00 PM	<p><b>Topic 13: Initiating a HACCP-based process and product research and development program for retail food operations; Discussion and questions and answers</b> (<i>Carl Custer, Mike Starnes, Denny's Corp.; Dr. Alejandro Mazzotta, McDonald's Corp.</i>)</p> <p>Carl Custer, Mike Starnes, and Dr. Mazzotta will lead a discussion of how to organize a national research program. The documentation of an FSMS is quite well defined by NACMCF, ICMSF, and ISO. A validation study is a standard scientific procedure documented in a standard published research report (i.e., Introduction, Methods, Results, Discussion, Conclusion).</p>

<b>POST-CONFERENCE WORKSHOP, Thursday, January 10<sup>th</sup></b> <b>Become a Trainer and Process Authority</b>	
8:30 AM- 12:00 Noon	FSMS / HACCP process development application course for regulators and industry: How to write and approve a HACCP FSMS (Part 1) ( <i>Dr. O. Peter Snyder, Jr., HITM</i> )
12:00 Noon- 1:00 PM	LUNCH BUFFET
1:30-4:30 PM	FSMS / HACCP process development application course for regulators and industry: How to write and approve a HACCP FSMS (Part 2) ( <i>Dr. O. Peter Snyder, Jr., HITM</i> )

## REGISTRATION FORM

Plan ahead! Register and pay by **December 14, 2007** in order to use the Early Bird rates.

Please check the events that you wish to attend			Early Bird	Standard
___	January 7: Temperature Control for Safety (TCS)	(4 contact hours)	\$100.00	\$120.00
___	January 7: Cook-chill / sous vide workshop	(3.75 contact hours)	\$50.00	\$60.00
___	January 8 and 9: Retail Foods Research Conference	(7.25 + 7.5 contact hours)	\$200.00	\$240.00
___	January 8: Gourmet banquet		\$50.00	\$60.00
___	January 10: FSMS / HACCP process development for regulators and industry	(7.5 contact hours)	\$150.00	\$180.00
___	ALL of the above events (save \$50 if you register for all events)		\$500.00	\$610.00
<b>TOTAL PAYMENT (in USA funds)</b>			\$ _____.__	\$ _____.__

Name \_\_\_\_\_  
 Title / Profession \_\_\_\_\_  
 Organization \_\_\_\_\_  
 Address \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_  
 Country and Postal Code (other than USA) \_\_\_\_\_  
 TEL \_\_\_\_\_ FAX \_\_\_\_\_ E-mail \_\_\_\_\_

- \_\_\_ I have enclosed my \$ \_\_\_\_\_ registration for the events listed above. (Check payment method below.)  
 \_\_\_ Check (PAYABLE TO IFT / Foodservice Division)  
 \_\_\_ International bank draft in USA funds (PAYABLE TO IFT / Foodservice Division)  
 \_\_\_ VISA / MC credit card (# \_\_\_\_\_; Expiry date \_\_\_\_\_)

**Mail your registration with payment to:**  
 Hospitality Institute of Technology and Management  
 670 Transfer Road, Suite 21A  
 St. Paul, Minnesota 55114 USA

- Your registration is guaranteed upon receipt of full payment.
- Notice of cancellation must be received by **December 14, 2007** in order to receive refund minus \$40.00.
- No refund for cancellation will be given after **December 14, 2007**. To cancel, please phone the Hospitality Institute of Technology and Management at: 651 646 7077.



### GUEST RESERVATION AT THE PEPPERMILL

To get the conference room rate, the Peppermill must receive your reservation before **December 7, 2007 (CODE: GHITM08)**

<p>If you would like lodging at the Peppermill, please contact the Peppermill directly at.</p> <p style="text-align: center;"><a href="http://www.peppermillreno.com/reservations">http://www.peppermillreno.com/reservations</a> (800) 282-2444</p> <p style="text-align: center;"><b>***MENTION REFERENCE CODE: GHITM08***</b></p> <p>A limited block of rooms has been set aside for this conference.        (\$99 Peppermill Tower; \$159 Tuscany Tower        12% tax and fees not included)</p> <p><b>Make reservations before December 7, 2007</b> to guarantee room rate.        Reservation requests require first night room deposit        (one night charge will go on credit card).        Cancellation requires 24-hour notice prior to arrival date for refund.</p> <p>The Peppermill is Reno's premier hotel-casino resort, where you will be treated to the most luxurious accommodations offered in any Reno hotel and casino. The <b>Peppermill</b> is one of the Top 10 Casino Hotels in America chosen by the editors of MSN with CitySearch. The Reno <b>Peppermill</b> has elegantly appointed tower rooms and luxurious suites.</p>	 <p style="text-align: center;"><b>Peppermill Resort*Spa*Casino</b>        2707 South Virginia Street        Reno, Nevada 89502</p>
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