Workshop Title: Validating Pasteurization Processes for Low-Moisture Products

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Organizers
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Type: 1 day

Note: We will be constrained to offering this workshop on Friday (rather than Saturday), due to a required USDA-NIFA Project Directors meeting on Saturday, which will involve most of the workshop team. We would be interested in discussing these logistics with the IAFP staff, if this proposal is selected to move forward. We have been in communication with another team submitting a workshop proposal along the lines of “Drying Technologies – Risk Mitigation Strategies,” which could be a very nice Fri-Sat complementary pairing with this proposal, if that works in the larger schedule.

Workshop Description:
FSMA Preventive Controls Rules ultimately will require all food processors to validate processes for the reduction of Salmonella in low-moisture food ingredients/products. However, very few programs educate, train, or prepare individuals to deal with the unique challenges associated with pasteurizing low-moisture products, such as dynamic water activity during processing, and the resulting impact on Salmonella heat resistance. Individuals being assigned these responsibilities in the industry typically have educational backgrounds that include training in traditional thermal processing (e.g., in low-acid canned foods). However, such training/background has significant gaps, relative to unique attributes of low-moisture foods, in terms of both engineering and microbiological principles.

This workshop is designed to fill that gap, at a very critical time for the industry. Experts from industry, academia, and government will lead participants through a systematic approach to preparing for, designing, and carrying out a low-moisture process validation. The workshop will include interactive case studies and hands-on participation. Upon completion of this workshop, participants should be able to: describe regulatory expectations for process validations, explain critical factors affecting Salmonella resistance to lethal treatments, outline a general process for conducting a low-moisture pasteurization validation, identify key variables to measure/control/report, and evaluate process efficacy based on the use of non-pathogenic surrogate data and/or inactivation models applied to product time-temperature-moisture data.

This is an updated version of a very successful, fully-enrolled workshop that this team led at IAFP 2014. The ongoing phasing-in of the Preventive Controls Rules, important new research on Salmonella inactivation in low-moisture products, and continuing technology developments should make another offering of this workshop timely and in high demand. The workshop organizers/team will work with a variety of other stakeholder groups in the low-moisture sectors, to promote this workshop for IAFP.
**Intended Audience:** Any professional responsible for pasteurization processes for low-moisture products, including process authorities, food processors, food scientists, regulators, equipment suppliers, academic researchers, and university students.

**Maximum number of participants:** 80

1. 8:30-8:45  Introductions  
2. 8:45-9:15  Validation considerations and regulatory requirements: FDA perspective (Nathan Anderson, FDA)  
3. 9:15-9:35  Preparation of inoculum for process validation (Elizabeth Grasso-Kelley, IIT/IFSH)  
4. 9:35-10:00  Factors affecting low-moisture inactivation data suitability and validity for process validations (Susanne Keller, FDA)  
5. 10:00-10:15  Break  
6. 10:15-11:15  Guidelines for conducting a low-moisture pasteurization validation (David Anderson, GMA)  
7. 11:15-12:00  What level of statistical certainty is needed in process validations? (Bradley Marks, Michigan State University)  
8. 12:00-1:00  Lunch  
9. 1:00-1:30  Interactive (hands-on) case studies: Is this validation sufficient? (Nathan Anderson, FDA and David Anderson, GMA)  
10. 1:30-2:15  Special considerations for using a non-pathogenic surrogate – experimental approaches and surrogate validity (Elizabeth Grasso-Kelley)  
11. 2:15-3:00  Special considerations for using lethality models – model validity and utilization (Bradley Marks, Michigan State University)  
12. 3:00-3:15  Break  
13. 3:15-4:45  Interactive (hands-on) case studies: (1) Using surrogate data, and (2) Applying inactivation models to dynamic process data (Elizabeth Grasso-Kelley, Bradley Marks)  
14. 4:45-5:00  Wrap-up and workshop evaluations (Harshavardhan Thippareddi, UGA; Bradley Marks)