

April 2017 Training And Education Newsletter

Editor's Note

I love having conversations with foreigners; they always have an interesting way of looking at things. One of my favorite foreigners is my friend Naomi who is from the English countryside. She is my favorite to converse with, mostly because I feel like I'm in a scene from Harry Potter, but also because she is very insightful.

Our conversation had stemmed from the concept of leadership, and how a good leader knows how to delegate their duties. Note: spotting someone who is delegating from one who is just lazy and pawning off their own duties is very important. This delegation skill is especially true for a person who has spent a very, very, very long time perfecting their skills/knowledge and wants to explore another aspect of their career. In this case, it would be detrimental to them if they were the only one who can do what they do; they would be unable to move if they wanted because they are, as Beyoncé notes, *irreplaceable*.

Bah! What do the Brits know anyways? They're probably loopy from all the tea they drink and wizarding wands they wield
☺ Or maybe they are onto something.

-Virginia

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A. Pacific Fisheries Technologists (PFT) Conference

At this year's PFT conference in Vancouver, BC Canada, the topic of ethics rang strong. The conference began with Dr. Mark Selman providing historical information on the First Nation tribes' land, and the long term consequences of Western civilization. The conference hosted several wonderful speakers but I have only provided a snippet of the many topics below.

Food Fraud in Real Life

Before describing some historical food fraud cases, I am glad presenter Clare Winkel took a moment to distinguish between food fraud ("I want to make more money"), food defense (referring to someone wanting to hurt others), food

security (site security, not food security), and food safety (HACCP).

Although Clare mentioned foodfraud.org as a valuable source for information, a site subscription to access costing \$1,200/year seemed a bit steep for me. But do not worry – SPA has a subscription to the website! So if you need us to look something specific up for you, just let us know what the product is.

A few of the highlights for food fraud cases included:

- Rat meat that was rolled to look like mutton (Shanghai, 2013).
- Chinese fraudsters filling walnut shells with rocks and cement, re-sealing them, and selling as fresh walnuts (China, 2013)... seriously, who has time for this?!
- Cumin spice filled with peanut shells (Ongoing, 2015).
- Romanian had correctly labeled and sold horsemeat but it was later relabeled and sold as beef by French meat processing company, À la Table de Spanghero in the 2013 horsemeat scandal. Oh la vache (“Holy Cow”)! ... ce n’est pas la vache!
- Three hundred tons of expired Fonterra milk powder was relabeled with new expiration dates (China, 2016).

Ways to combat food fraud is to have a reputable, trackable supply chain, examine paperwork for product

authenticity, and to question unexplained price mark-downs in suppliers.

Vacuum Microwave Drying (VMD) Technology

During the Technology Updates section of the program, Gary Sandberg introduced us to a drying system that is the reason for the Moon Cheese snacks you may have seen at the stores. The VMD technology uses non-ionizing, electromagnetic energy to uniformly dehydrate a product whilst in a vacuum. The technology is similar to freeze drying except that the controller can program the specific moisture content within the chamber. And although no heat energy is directly emitted onto the product, the interaction within the chamber and its product causes steam and air bubbles inside the material to expand from the inside out, as the molecules attempt to escape, thus creating a “puffing” in the food.

The speaker did not mention any challenge studies, but did say that there is no need to test for microbes as long as specific parameters (i.e.: water activity) are met.

Nonetheless, several attendees went to the stores to purchase and sample the Moon Cheese that very evening. There were no negative comments about the product, but samplers did say they miss the texture that makes cheese, well, cheese.

Utilization of Nano-scale Fish Bone for Gel Enhancement of Alaska Pollock Surimi

Kaitlin Junes from Oregon State University Seafood Lab, presented on her research of the alternative usage for fish bones, which account for approximately 10-15% of the fish's weight and has about 38% calcium content. Kaitlin processed the fish bone into a nano-scale form (NFB) and added it into Alaska pollock surimi. Calcium salt added during the chopping stage is able to activate transglutaminase which in turn provides a good gelatin texture. If calcium salt were to be added right before freezing, then proteins would prematurely denature and result in unsatisfactory texture.

The surimi with 0.6% and 1.2% NFB exhibited significantly higher breaking force values, penetration distance values, and water retention ability than controls when stored frozen up to 6 months. Compared to previous research, nano-bone has higher functionality than micro-bone.

Nutritional Analysis of Transgenic Salmon

In a controversial presentation, Erin Friesen discussed research that compared genetically engineered (GE; aka: transgenic; aka: Frankenfish) salmon to farmed and wild salmon. The DNA used on the recently FDA-approved (but banned for selling until guidance comes out) GE salmon is from the Chinook salmon and has been altered to include a growth hormone gene. The average time it takes for a non-GE salmon to mature is

approximately 3 years, which has been cut in half with the GE salmon since 1) nutrients are being absorbed quicker, 2) protein utilization is improved, 3) carbohydrates are used up more than lipids, 4) amino acids are taken up better, and 5) there is a higher consumption rate. Because of this, researchers wanted to know if the nutritional content differed amongst all of these types of salmon (farmed, transgenic, wild).

The study found that all salmon types were rich in eicosapentaenoic acid (EPA; lowers risk of heart disease) and docosahexaenoic acid (DHA; maintains healthy brains), and that the largest differences in nutritional content lied between farmed and wild salmon. Farmed salmon had more muscle lipid levels than their wild salmon cousins. Interestingly, transgenic salmon showed more aggressiveness, but did not have the muscle strength to fight their wild Coho salmon counterparts when they were raised together in a 350,000 L tank.

B. Control of Lm Guidance Webinar with Jenny Scott, Mickey Parish, and Maile Hermida

Nowadays I love webinars that are 10% presentation and 90% question/answer session. And that is exactly what I got from this Alliance for Listeriosis Prevention (ALP) hosted webinar that discussed the recently released *Lm* Draft Guidance (DG).

Jenny Scott focused her discussion mostly around sampling and testing

procedures. She noted specifically to collect and test follow-up samples to a positive environmental site of testing. This intensified testing should include the previously positive site and at least 3 surrounding sites (Food Contact Surfaces and/or non-FCS) in close proximity to the positive site.

Maile Hermida from Hogan Lovells had a more elaborate presentation which included top takeaways (according to Hogan Lovells) from the *Lm* DG to include:

- Recommended control measures for controlling *Lm* is more goal-based and flexible
- FDA wants a “seek and destroy” mentality
- Facilities have “one free pass” (which is a term that confused EVERYONE on the call; and is a term that, when used, made Jenny Scott groan/sigh with dislike ... so do not use it around FDA)
- No tolerance of 100 CFU/g *Lm* in foods that do not support growth
- DG continues to distinguish between foods that do and do not support *Lm* growth and their corrective actions.

Now, Question and Answer time (to include only the ones I felt relevant) between the attendees (Q) and the three presenters (A). However, I did not write down who answered what questions ☺

Q1. Guidance applies to animal food?
A1. No.

Q2. Are Zone 1 and Zone 2 considered FCS?

A2. Zone 1 = FCSs; Zone 2 = non-FCSs.

Q3. How much sampling should be done?

A3. There is no algorithm. It is determined through risk-based analysis, and should consider production, production line, amount of food, etc.

Q4. Will there be a Guidance for *Salmonella* control?

A4. A *Salmonella* DG is on the radar, but FDA needs to finalize other DGs.

Q5. Are there other extrinsic factors that prevent *Lm* growth?

A5. There are some suggestions in the *Lm* DG, but firm must look into it on their own. Comments on this are more than welcome.

Q6. “Free pass” to *Listeria* spp. or *Lm*?

A6. It refers to *Listeria* spp. *Lm* positives on FCSs need immediate corrective actions.

Q7. Describe views on compositing samples on hold and test products vs. environmental monitoring samples.

A7. Hold and test foods are recommended to be tested individually, but can composite as long as sensitivity is not lost and you end up missing a positive. Environmental samples can be composited as long as original location can be found.

Q8. Do I need to inform FDA of product that is positive for *Lm* as long as company has control?

A8. No.

Q9. Should I test the supplier's raw materials?

A9. If you are controlling pathogens, then you do not need to test supplier's raw materials.

Q10. Explain the "free pass".

A10. When you are testing FCSs and non-FCSs, and find that a FCS is positive for *Listeria spp.*, then the firm can continue production as long as proper corrective actions are taken. For instance, one or two more cleaning/sanitization procedures may have resolved any transients (and don't forget to document it). There is no defined number of positive samples, because you have to look at it holistically.

Q11. If you have Zone 3 and Zone 4 positives, are you required to recall?

A11. Probably not. It is important to remember that if you have *Lm* or *Listeria spp.* in Zone 3, the pathogen may be able to travel to Zone 2 and then to Zone 1. So it is incumbent on you to take actions.

Q12. Is there data on lethality? For instance, is a 3-log reduction appropriate?

A12. A risk assessment is needed on how 3-log is appropriate.

Q13. Is a presumptive equal to a confirmed positive?

A13. A presumptive positive for *Listeria spp.* may have *Lm*. A presumptive positive for *Lm* is positive for *Listeria spp.*

Q14. Is a listericidal step a Critical Control Point or Preventive Control?

A14. This goes back to the Hazard Analysis, and whether this is something that is required to control a hazard.

C. Who is Getting FDA Form 483s?

Recent Issues You Can Learn From

This was such a good presentation by Shawn K. Stevens of Food Industry Counsel LLC. And unlike the other presentations that I have summarized here and in the past, this webinar is available online! So check out this presentation and download these slides, because if you know what FDA has been citing firms on in the past, you will know what they are looking for when they come for a visit. Enjoy the webinar [here!](#)

D. Save the Dates

3 -Day Basic Seafood HACCP Course

When: April 11-13, 2017

Location: SPA Office

Cost: \$385 (members); \$480 (non-members)

Register [here!](#)

Better Process Control School

When: April 25-27, 2017

Location: SPA Office

Cost: \$450 (members); \$500 (non-members)

Register [here!](#)

E. Subscriptions

If you would like to subscribe/ unsubscribe to this newsletter, please do so by sending an email to vng@spa-food.org

*Nationwide Courses on Food Safety
and Regulatory Affairs*

Course

Roe School

When: April 27 - 28, 2017

Location: UAF Kodiak Seafood and Marine Science Center, 118 Trident Way, Kodiak, AL

Cost: \$270/person

More information found [here](#).

Course

Sanitation Skills

When: May 5, 2017; 8AM - 12PM

Location: Seattle, WA

Cost: \$250 (non-members); \$150 (NWFPA members)

More information found [here](#).

Course

Seafood HACCP Segment 2

When: May 8, 2017; 9AM - 5PM

Location: Food Safety Summit Conference, Rosemont, IL

More information found [here](#).

Course

FSPCA Foreign Supplier Verification Programs Training

When: May 8 - 9, 2017; 9AM - 5PM

Location: Food Safety Summit Conference, Rosemont, IL

More information found [here](#).

Course

Valid Sampling Plans for Food Processors

When: May 16 - 17, 2017; 7:30AM - 5PM

Location: Hyatt Regency O'Hare, 9300 W. Bryn Mawr Ave., Rosemont, IL 60018

Cost: \$795/person

More information found [here](#).

Course

Implementing SQF Systems

When: May 18 - 19, 2017; 8:30AM - 5PM

Location: Embassy Suites Sea-Tac Airport, 15920 W. Valley Hwy., Seattle, WA 98188

Cost: \$795/person

More information found [here](#).

Event

Fishermen's Safety Fair

When: May 19, 2017; 9AM - 3PM

Location: Fishermen's Terminal - Dock 9, 3919 18th Ave. W., Seattle, WA 98119

More information found [here](#) and [here](#).

Webinar (FREE)

The Buzz on FDA's Definition of Added Sugars

When: May 30, 2017; 11AM - 11:45AM (PDT)

Registration found [here](#).

Course

Preventive Controls for Animal Food PCQI Training

When: June 5 - 6, 2017; 8AM - 5PM (PST)

Location: Farmers Loft, 3307 Monte Villa Parkway #100, Bothell, WA 98021

Cost: \$850/person

More information found [here](#).

*Course information that is being sent to you via this newsletter may not necessarily be hosted by Seafood Products Association (SPA). Nor is SPA endorsing any of the companies supplying this information.