

NEWS *from* NEOGEN



FOR THE SEAFOOD INDUSTRY

NEOGEN CORPORATION
a Leader in Food and Animal Safety Solutions

Updated FDA guidelines released for seafood industry

Neogen has solutions to help you comply

The FDA issued an update to its guidelines that aid processors of fish in developing their food safety practices. The guidelines focus on creating Hazard Analysis Critical Control Point (HACCP) plans.

The information in the guidelines include:

- Time and temperature recommendations for preventing histamine formation
- Information on regulations and tolerance levels of seafood toxins
- Hazard information on species of seafood new to the U.S. market
- Recommendations about sensory testing for histamine, with recommended testing if sensory critical limits are not met
- Testing recommendations for raw material, in-process ingredients and finished products for banned aquaculture drugs and sulfiting agents when reviewing suppliers' labeling



Neogen's Veratox® for Chloramphenicol



Neogen offers solutions to help you comply with these guidelines, including tests for foodborne pathogens, sulfites, histamine, domoic acid and chloramphenicol. For more information, contact your Neogen representative.

The FDA's hazards and controls guide for the seafood industry can be read here:

[www.fda.gov/downloads/Food/
GuidanceComplianceRegulatoryInformation/
GuidanceDocuments/Seafood/UCM251970.pdf](http://www.fda.gov/downloads/Food/GuidanceComplianceRegulatoryInformation/GuidanceDocuments/Seafood/UCM251970.pdf)



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Enhanced rapid test for *Listeria* receives AOAC approval

Neogen's enhanced rapid test for *Listeria* has received approval from AOAC International.

Neogen's improved test kit, Reveal® 2.0 for *Listeria*, provides the food industry a quick, accurate and easy method for detecting this pathogen without compromising sensitivity or specificity. The AOAC's process validated the accuracy of the Reveal 2.0 for *Listeria* system when testing a variety of food and environmental samples.

Neogen had earlier received approval from AOAC International for its Reveal 2.0 enhanced rapid systems for the detection of *Salmonella* and *E. coli* O157:H7.

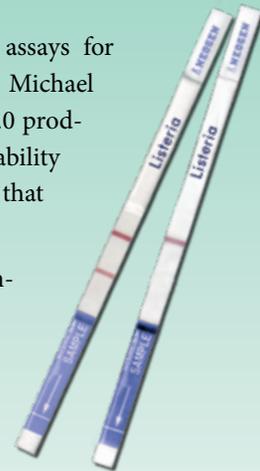
"We're very pleased that AOAC has validated the quality of our enhanced *Listeria* test system, which completes its validation of



our line of optimized, user-friendly assays for foodborne pathogens," said Neogen's Michael Wendorf. "The success of the Reveal 2.0 product line is complemented by Neogen's ability to offer premeasured media—a feature that decreases touch time."

Results of the internal and independent laboratory validation studies showed that the Reveal 2.0 for *Listeria* method is an effective procedure for detection of *Listeria* spp. in a variety of foods and environmental samples. Use of Neogen's LESS (*Listeria* enrichment single step) broth enrichment procedure, in conjunction with the Reveal 2.0 assay, provides results in 27-30 hours with minimal labor.

In the AOAC study, Reveal 2.0 for *Listeria* was shown to be comparable to the following reference methods for the indicated matrices: US FDA (2003) Bacteriological Analytical Manual, Chapter 10: pasteurized liquid egg, vanilla ice cream, Parmesan cheese, 2% liquid milk, pasteurized crab meat, and smoked salmon; and USDA-FSIS (2009) Microbiology Laboratory Guidebook, Chapter 8.07: deli turkey, hot dogs, frozen hamburgers, pepperoni, ceramic tile, stainless steel, plastic, and sealed concrete.



Neogen launches test for gliadin

Neogen has introduced a screening version of its new rapid test for gliadin (gluten) that was developed to better fit the needs of the international testing community.

Alert® for Gliadin R5 is based on the technology behind Neogen's quantitative Veratox® for Gliadin R5 assay, which was developed to conform to the influential Codex Alimentarius, the global reference point for consumers, food producers and processors, national food control agencies and the international food trade. The new test versions use the Codex Alimentarius recommended "R5" gliadin antibody — the critical test element that "captures" any possible gliadin proteins in a test sample.

Other features include:

- Qualitative analysis of in-process ingredients, clean-in-place solutions, environmental surfaces and finished products for the presence of gliadin
- New proprietary gliadin renaturing cocktail extraction solution that provides consistent results, and does not require the use of a fume hood

"Neogen offers the Alert versions of our food allergen test kits for those who wish to screen only a few samples at a time against a

single control level," said Neogen's Jennifer Baker. "In validation testing, our new Alert for Gliadin R5 test kit performed comparably to our existing screening test for gliadin, but employs the gliadin antibody recommended by the Codex Alimentarius."

Gliadin is a protein found in wheat that belongs to a group of alcohol-soluble proteins called prolamins. Gliadin and other prolamins have been identified as major causal agents in a number of disorders, including wheat allergy and gluten intolerance (celiac disease). Wheat allergy is a specific immune response to a number of wheat proteins, including gliadin, albumin, globulin, and glutenin. Celiac disease is a chronic reaction to gluten proteins that results in the poor absorption of nutrients in the small intestine.

Those with celiac disease must avoid gluten, and rely upon the correct labeling of food to make appropriate, safe food choices. Testing for the presence of gluten components ensures food manufacturers that an unlabeled—and potentially dangerous—ingredient did not make its way into a food product.



Neogen provides solutions for food safety during summer

A quick chat with Travis Powers, Technical Services Manager for Microbiology



Powers

Summertime means grilling out for many customers. Does this pose unique food safety challenges for producers?

I think one of the biggest challenges for producers is assuring that storage conditions for raw meats are maintained from the time it leaves the producer's site to the product's final location. Spoilage organisms will readily increase in concentration in unsafe temperatures.

Also, some studies show that pathogen levels increase during the warmer months, increasing food safety risks from other times of the year. This, coupled with an increasing demand for grilling-type foods (meats, vegetables, etc.), poses a challenge for producers during the summer months to maintain high-quality products while meeting consumer demands.

Are there any special considerations for raw fish?

Fish, along with poultry, ground beef, and other raw meats are at a high risk for housing pathogenic bacteria like *Salmonella*. When it comes to grilling, it is wise for consumers to monitor temperature gauges or use food thermometers. Typically, *Salmonella* is killed at 150°F. A lot of people like to "slow roast" on the grill, but be sure temperatures reach this temperature to avoid the risk of unpleasant stomach pains and a possible trip to the hospital. This is especially important for individuals with compromised immune systems, the elderly, or children.

What are some of the most common food safety rules forgotten during the grilling season?

When transporting foods, especially meats, in a cooler to be cooked elsewhere, be sure to store meats and other raw foods in tightly-sealed containers in the bottom of the cooler. This reduces the risk of potentially spreading harmful bacteria. Also, you can never have too much ice. If possible, store raw meat in a separate cooler from items that will not be cooked, especially beverages.



What solutions does Neogen offer to help protect customers during the summer barbecuing season?

Neogen products are front line screening tools for food producers. Incorporating Neogen products into food production processes alert producers of potential contamination hours or even days before traditional methodologies allow. This knowledge allows for safe release of products and quicker turnaround to meet increasing demands, and the ability to take action on Day 2 vs. Day 5 or 7 when issues arise. Recalls are expensive financially and they can hurt a company's reputation.



'The Birds' may have been based on real shellfish incident

Researchers now believe that the frightening bird attack that inspired Alfred Hitchcock's movie *The Birds* may have been caused by the naturally-occurring toxin domoic acid.

Hitchcock included newspaper articles about a 1961 attack by hundreds of crazed birds in Capitola, California in his proposal to studio executives for *The Birds*, according to the Washington Department of Fish & Wildlife.

During the historic incident, the birds cried like babies, dove into street lamps, crashed through windows and attacked people. Normally the species of bird, sooty shearwaters, are non-aggressive, but researchers believe domoic acid toxin was responsible for the bizarre and frightening behavior, according to the department.

In Hitchcock's fictionalized version of the attack, the birds turned into malicious murdering menaces, meanly pecking out eyeballs, chasing innocent schoolchildren, and forcing people to board up their homes for safety.

Domoic Acid causes Amnesic Shellfish Poisoning (ASP), and has been found in shellfish on the west coast and in Europe. The toxin is produced in microscopic algae that is eaten by the shellfish, which can then be transmitted to humans, birds and other animals by consuming the affected shellfish. It cannot be destroyed by cooking or freezing.

Neogen now offers the most reliable lateral flow assay in North America for the detection of domoic acid in less than 20 minutes. Neogen's Reveal for ASP is intended for the qualitative screening at 10 ppm for domoic acid in mussels, scallops, oysters and clams. Neogen also offers fast and reliable tests for histamine and sulfites.



Our Sales Team

Neogen's Meat, Poultry and Seafood sales group is backed by unparalleled teams of experienced technical support and research and development personnel, and we offer the most comprehensive line of food, feed and animal safety and quality testing products.

Please feel free to contact us at any time about anything that you may read in this publication, or about any safety and quality testing issue.

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Upcoming Trade Shows

Institute of Food Technologies Annual Meeting and Food Expo

June 12-14 • New Orleans, LA

Booth #3810

International Association for Food Protection Annual Meeting

July 31-Aug. 3 • Milwaukee, WI

Booth #807, 809



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