

Food Safety

INSIDER



3 QUESTIONS WITH ANA MARIA LOZANO: ENVIRONMENTAL MONITORING TRENDS

We sat down with Ana Maria Lozano, *Field Technical Services Representative*, who shared her insights into current environmental monitoring trends in our food safety industry.

MEET OUR EXPERTS

Get to know some of our Neogen product and technical services experts that are here to answer your product and software questions.

ENHANCE YOUR ALLERGEN CONTROL PLAN

Introducing Veratox® VIP ELISA Food Allergen Kits. Learn about our new allergen testing solution along with our comprehensive solutions that can help your facility.

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Welcome.

Welcome to the inaugural issue of *Food Safety Insider*. We are here to share latest news and trends in the food safety industry.

In this issue we focus on our comprehensive product portfolio, best practices for your facility, and conversations with our product experts.



What time works for you?

Flexible food safety education by Neogen.



Introducing two new ways to access educational webinars and training resources from industry and product application experts!

On-Demand Educational Video Library

Hear from industry leaders on best practices in the food safety industry, such as environmental monitoring and using data to improve processes. Learn on your own time with these previously recorded webinars and educational courses.

Neogen Academy

Increase your knowledge of Neogen food safety products and best practices with our range of courses. These courses are packed with insights from Neogen specialists and industry experts. Contact your local Neogen representative to receive access.



Explore the different ways to learn with Neogen.
info.neogen.com/LearnNow



Food Safety Solutions That Are Made to Do More

You're on the front lines of food safety and you need an ally that has your back. With industry expertise and products that give you the confidence you need, Neogen is that ally. Our mission is to enhance food security with improved food safety and quality. We're here to help you overcome the food safety challenges the world faces today and into the future.

With the addition of 3M's Food Safety business, Neogen is now a global leader in food security offering comprehensive solutions, expanded capabilities, and dedicated experts. Our enhanced geographic footprint, digitization capabilities, and innovative product offerings make us the ideal partner for addressing food safety, sustainability, and supply chain integrity.

We've expanded what we can do — and now you can too!



Products That Let You Do More

With the addition of more innovative products and food safety expertise, we have the food safety sampling and testing solutions that can help optimize your operation.



The Expertise and Support You Deserve

Neogen offers a wide variety of sales and support teams to answer your product or process questions, software and product troubleshooting, and more. Reach out to these dedicated support roles; On-site & Virtual Account Support, Technical Product Specialists, Software Install & Support, Reference Lab Services, Customer Service & eCommerce, and Corporate Account Coordination.



Trusted Solutions From a Global Leader

Neogen carries many third party and regulatory approvals and validations, including from AFNOR, AOAC, the U.S. EPA, USDA, and Health Canada. We understand that, in some cases, internal validations may be needed. Our Technical Services team can help accomplish this.



Your Partner for Success

Our industry expertise, products, and educational resources help you develop your skills and support improvements in your operations through a wide range of online courses available on-demand.

Your comprehensive partner for all your food safety testing needs.

Explore our food safety solutions.



Indicator Organism Testing

Streamline your testing with ready-to-use plates that require no prep. Quickly and accurately enumerate plates in six seconds or less.



Microbial Detection

Get fast and reliable detection of microorganisms including TVC, yeasts and molds, *Enterobacteriaceae*, *E. coli*, coliforms, and many others.



Hygiene Monitoring

Our handheld hygiene monitoring solutions let you quickly verify cleaning effectiveness and capture, store, and manage data.



Allergen Testing

These qualitative and quantitative testing solutions are designed to detect allergens in a wide variety of sample types and be used as part of your allergen control plan.



Sample Collection

Better testing begins with better samples. Choose intuitive and easy-to-use sample collection products that help streamline processes from start to finish.



Pathogen Detection

Pathogen detection tests are designed to fit a variety of testing needs. Food safety and contract labs can get confident answers quickly, with same-day or next-day results.



Natural Toxin Testing

Test for natural toxins with solutions designed to deliver fast and accurate results.



Food Quality Analysis

Enhance your food quality assessments with Megazyme advanced enzymatic solutions.



Neogen Analytics

Streamline and help optimize product testing, environmental sampling, and sanitation workflows while transforming your data into actionable information.

Q&A: Petrifilm 101

Common Petrifilm questions answered by our Neogen experts, Taylor Lecy and Grant Hedblom, PhD

1 Do I need to pH adjust my samples before plating onto Petrifilm? How do I complete this?

Yes, it's important to verify that the pH of your sample is within the pH range listed for the plate. The range for each plate type can be found in the product instructions. There are a few reasons why the pH is important for testing.

The first is that most of the organisms the plates are trying to recover prefer a neutral pH range to grow. If the pH is too low or too high, they may not recover within the validated incubation conditions because it's too stressful for them.

Additionally, the pH of the sample can trigger the indicator dyes in the Petrifilm plate, which could impact ease of interpretation.



You should be testing the pH of the diluted sample and not just the sample itself. For example, if you are testing a juice that has a pH of 5 but after performing a 1:10 dilution in Butterfield's buffer, the pH is now 7, no further pH adjustment is needed. However, if it is outside of the pH range for the plate, then the diluted sample should be adjusted using HCl (if more acidic) or NaOH (if more basic) to be within the pH window. Typically, 1N solutions are used but if more than 1 mL of HCl or NaOH is being added to adjust the pH of the sample, then users can try using 5N or 10N instead.

The newer Rapid Petrifilm Plates do have some advanced buffer capabilities compared to the standard plates so this could help eliminate some pH-adjusting steps.

2 What dilutions should I plate for my samples?

There are a few factors that will determine what dilutions should be plated on the Petrifilm for different samples:

- **The flora in the sample:** Depending on the amount of organisms present, the sample requires dilution so it is within the countable range of the Petrifilm plates.
- **The method being used:** Some methods require specific dilutions for the sample types.
- **Regulatory requirements:** There are some industries that have specific dilutions that are suggested based on the sample type. For example, dairy users typically follow dilutions called out in the *Standard Method for Examination of Dairy Products*.
- **Properties of the sample:** Some samples have some inhibitory components that need to be diluted out to get better recovery of the organisms present. For example, spice samples typically need to be diluted further out to help reduce the inhibitory components present.

The most common dilution to start with for food testing is a 1:10 dilution, and then perform serial dilutions after that if further dilutions are needed for reasons outlined above.

3 What is the dilution factor when testing a sponge or swab?

The dilution factor for a sponge or swab sample will be the total amount of media used to hydrate the sponge. For example, if you are testing a sponge that contains 10 mL of media inside, the dilution factor is 1:10.

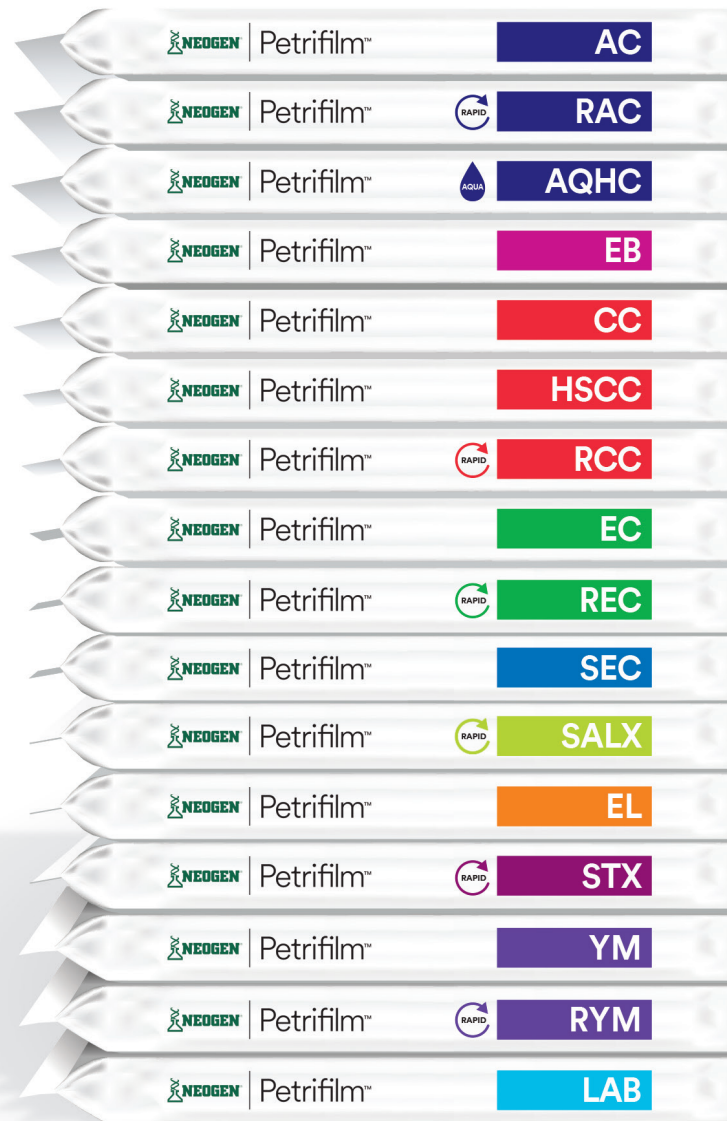
Any counts on the plate would be multiplied by 10 to report calculated counts. So, if there are 50 cells on a swab or sponge and 10 mL is added, the 50 cells are diluted 10 X to create a concentration of five cells per mL.

4 What are the plating techniques if I am plating onto Petrifilm with and without a barrier?

To prevent gas bubbles getting trapped in Petrifilm plates it is important that you are plating your samples correctly. When using Petrifilm plates with a foam barrier like our *E. coli* Coliform Count Petrifilm Plates, you will start by lifting the top film of the Petrifilm plate. Pipette 1 mL of your sample directly to the middle of the plating area, then slowly roll down the top film, and use the appropriate spreader to encourage the sample to fill the area. This chases out gas bubbles that may have been left by pipetting technique. When using Petrifilm plates without a foam barrier, such as our Aerobic Count Petrifilm, you will follow the same procedure listed above. You will drop the top film instead of rolling it back down to contain the sample within an area, making it easier to spread.

5 How do I dispose of the plates?

Petrifilm plates are designed to encourage the growth of microorganisms. Some of these organisms could potentially cause a biological safety risk if not handled appropriately. When you are done with a Petrifilm test, it is recommended that you dispose of the waste as a potential bio-hazard, using one of the following two methods. First would be utilizing an autoclave using a general protocol of 121°C/205°F and 15 pounds per square inch (psi) for 30 minutes. The other option is to contract a professional disposal service to collect and dispose of your biological waste off-site. Additionally, it is important to make sure you are compliant with your local waste management guidelines on disposal for bio-hazardous waste.



6 Can I perform air testing using Petrifilm plates?

Yes, it is very easy to use the Petrifilm plates for air testing! You simply hydrate the plate with an appropriate sterile diluent and let the plates solidify for at least 1 hour before use. Then, peel open the plate and expose it to the needed air for around 15 minutes. After, seal up the plate and incubate per the validated temperature/time that the plate type requires.



Learn more about our
Petrifilm family

Meet Our Experts

No matter what challenge you are facing, our team of food safety experts is here to help!



Luke Thevenet, *Director, U.S. and Canada Product Sales Specialists*

Luke has more than 17 years of experience in food safety. In his role, Luke oversees the U.S. and Canadian Product Sales Specialist Team. As a former corporate lab manager in the dairy industry, his expertise also extends into lab management. Luke holds a bachelor's degree in biopsychology from the University of California, Santa Barbara.

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Wilfredo Dominguez-Nunez, *U.S. Technical Services Manager*

With more than 20 years of experience in food science and technology, Wilfredo brings a deep knowledge of food microbiology and safety, food production and processing, and microbial analytical laboratory techniques to his team at Neogen. He works extensively with the 3M Molecular Detection System and other automated technologies. He has a bachelor's degree in Agriculture and Food Technology from Zamorano University, a master's degree in Food Microbiology and Biotechnology from Purdue University, as well as a Ph.D. in Food Microbiology and Biotechnology from the University of Minnesota.

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Taylor Lecy, *U.S. Technical Services Representative*

Taylor is a dedicated and experienced U.S. Technical Services Representative with a strong commitment to enhancing food safety through her extensive knowledge of microbiology, laboratory techniques, and test method implementation. Over the past seven years, she has been a driving force in assisting customers and organizations in their quest for safer, more reliable food testing practices. She holds a Bachelor of Science in Biology from the University of Wisconsin-Madison. Taylor's academic background has served as the foundation for her career in the field of food safety, enabling her to apply scientific principles to practical solutions.

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Gabriela Lopez Velasco, *Field Technical Services Specialist*

Gabriela is a Field Technical Service Specialist responsible for providing technical support in food safety and diagnostics. Her expertise includes food safety, food microbiology, allergen control and development, applications and implementation of methods for food testing. She holds a Bachelor of Science degree in Food Chemistry and a Master of Sciences degree in Biochemistry from the National Autonomous University of Mexico. She obtained her Ph.D. in Food Science and Technology from Virginia Polytechnic Institute and State University. Gabriela also worked at the Postharvest Research Center at UC Davis as a Postdoctoral Researcher. She is also active in various AOAC and ISO working groups providing input in allergen and pathogen detection methods.

Language Skills: English and Spanish

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Ana Maria Lozano, Technical Services Representative

Ana has over 18 years of experience working in the different food industries, including dairy, water, and condiments. She holds a Bachelor of Science degree in microbiology from the University of Los Andes and a Master of Sciences degree in food safety and quality assurance from the University of Guelph. Ana is also an internal auditor of ISO 9001 and a SQF practitioner with diverse expertise ranging from quality assurance, quality control, good manufacturing practices (GMPs), and the Hazard Analysis Critical Control Point (HACCP) system.

Language Skills: English, Spanish, and French

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Margaret Vieth, Pathogen Product Specialist

Margaret is a Pathogen Specialist with Neogen Food Safety. With more than seven years of experience in food safety, quality assurance, and customer technical service, Margaret uses her expertise to assist food processors with pathogen test method implementation and advanced food safety applications. She holds a Bachelor of Science degree in microbiology from the University of Minnesota.

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Grant Hedblom, PhD, Microbiology Product Specialist

Grant is a Microbiology Product Specialist for Neogen with a focus on Petrifilm Plates and the Soleris® Next Generation System. Grant uses his experience in microbiology, food science education, and curriculum development to assist food processors with applied food safety and test method development and implementation. Grant combines his experience with customers and his academic background to bridge the gaps between theory and practical applications of food safety concepts. He received a Bachelor of Science degree in biology and a Ph.D. in food science from the University of Minnesota, Twin Cities.

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STREAMLINING SUPPORT



Hardware

Request a hardware repair or calibration from our service center experts.



Software

Download software for the first time or troubleshoot your existing software.



Document

Search from user manuals to product inserts, get the product information you need.




Customer

Our team is on hand for any questions or requests. We look forward to hearing how we can help.



Learn more



Your technical
service partner
in your lab.

Value-added Benefits of Partnering with Neogen

Food and beverage companies all over the world rely on Neogen solutions to help safeguard their businesses, mitigate risk, and protect consumers. Partnering with Neogen is much more than just innovative products.

As a company of scientists, Neogen can be a true partner in your lab.

- Helping you educate and train your employees.
- Helping you set up and maintain your food safety systems and protocols.
- Providing the real-time answers you need to quickly make quality control decisions, helping you to protect consumers and your brand.

Technical Support and Services

When you need answers to technical questions, you can receive live support over the phone or via email from our Neogen subject matter experts.

- Need help with your Neogen equipment, testing procedures, or interpretation of your results? Call 1.800.234.5333.
- Ask your Neogen representative to connect you with your technical service specialist.

Neogen Product Installation and IT Support

- From walking you through installations to troubleshooting issues, Neogen technical and IT professionals can provide the support you need.
- Technical experts help make sure you're set up, trained, and ready to confidently test your products.

ISO 17025 Accredited Laboratory Services

We can help you meet all your testing needs with our laboratory services. This includes complete testing, result verification, and additional support and specialist help with samples. We have multiple accredited testing laboratories offering a range of services to support your needs worldwide.

Our A2LA and ISO 17025 accredited North American testing laboratory is based in Lansing, MI and offers a full range of testing options, including mycotoxin and allergen analysis.

MALDI-TOF organism identification and STEC confirmation services are also available.*

* Not under ISO 17025 Scope



Learn more

Cultivating a Strong Food Safety Culture

Over the past few years, the concept of food safety has changed for many organizations. It started out as a team of specialists responsible for food safety. However, it has now transformed into a concept known as “food safety culture.” This is the shared beliefs, attitudes, and behaviors of people and their actions. Apart from its literature definition, food safety culture can be thought of as an overall mindset for driving organizational beliefs and values around the importance of food safety and puts it into action with specific observable actions.

With all the available articles and publications on this topic, you may think it sounds simple to improve the mindset of an entire organization. However, implementing changes to enhance food safety culture remains a complex challenge. In order to start improving the food safety culture at your organization, many factors within the organization must change.

Let’s break it down into 5 key foundations:



1. Leadership & Equality

Initiating a change in an existing culture must start at the senior management level. Management can help the entire staff understand the “why” of food safety — why there are standard practices, protocols, and safety checks in place, and how each employee’s role contributes to safeguarding consumer lives. When management actively and positively champions changes to enhance food safety procedures, it sets the tone for employees to follow suit.



2. Accountability

The concept of “do the right thing even when no one is watching” can be applied to the food safety culture mindset. Organizations looking to strengthen their food safety culture must implement food safety protocols and procedures that will address potential risks if they arise. The biggest aspect to achieve strong culture is the employees. If they understand the “why” of food safety, they are empowered to take the right actions and report potential health hazards that could potentially jeopardize food safety.



3. Teamwork

The “why” of food safety needs to be a shared value between every team in the organization. It starts with the knowledge and overall belief that each team member’s tasks in the food safety process directly impact consumers. This belief should be taught to new employees to continue this culture mindset shift. In a work environment, team members are influenced by their department and coworkers. Therefore, when team members seek to understand how to strengthen and create a strong food safety culture, these values will pass to new employees.



4. Encouragement & Recognition

Employees that are using best practices and following regulations should be acknowledged and rewarded for continuously keeping food safety top of mind. Encouragement and engagement are essential for maintaining a strong food safety culture.



5. Continuous Training

It’s crucial to keep employees up to date with all regular training. Covering aspects such as food hygiene, basic elements, food safety behaviors, and updated federal compliance requirements allows for continuous personal improvement. It is also important to train employees to understand that their overall purpose is to ensure food safety best practices.



3 QUESTIONS WITH ANA LOZANO:

Environmental Monitoring Trends

We sat down with Ana Maria Lozano, Field Technical Services Representative for the United States and Canada Food Safety Division, who shared her insights into environmental monitoring trends in our food safety industry.

What are some regulatory requirements for environmental monitoring?

Before Food Safety Modernization Act (FSMA) and Safe Food for Canadians Regulations (SFCR), the mindset was not about preventing contamination but understanding what went wrong once something did. Now, under FSMA and the SFCR, the focus is more on prevention — something that the Global Food Safety Initiative (GFSI) contamination pushed before.

Today, you must implement preventive control programs or plans. Preventive control plans include activities a food manufacturer applies to prevent the product's physical, chemical, and biological contamination — from the reception of the raw material, to processing, to the product being packed and shipped. The manufacturers don't need to just implement these measures; they also have to prove that they work. It is here where the environmental monitoring program plays a crucial role. Let me give you an example.

The sanitation program is one of the mandatory programs. The sanitation program includes all the cleaning and sanitation activities of a plant — from cleaning procedures, to concentration of the chemical solutions, to time and temperatures needed to clean, to mention a few components. At the end of the cleaning process, manufacturers cannot just start production. They need to verify that the cleaning process was effective, and that the equipment is ready and safe to use. How? They can visually verify that it is clean, but that is not

enough. They must use tools to help them make that decision easier. Tests like ATP, ANSR® Listeria Right Now, and allergen rapid tests help them know if the equipment was well-cleaned so they can start production with confidence. Other tests, like indicator microorganisms and pathogen tests, also help them understand the effectiveness of their sanitation program to see if they should adjust their procedures. All the tests I mentioned are part of the environmental monitoring program — the sanitation program is just one of the mandatory preventive programs.

In addition to satisfying a regulatory requirement, the environmental monitoring results also support, validate, and verify that all the measures applied to prevent cross-contamination are working well.

I understand that implementing measures to prevent contamination of our products and keep our consumers safe is a big task. But if we only focus on product testing instead of prevention, it's easier to get product contamination and a possible recall. A recall is a terrible consequence, and it could have legal implications. Still, the mindset should shift from thinking, "I don't want a recall," to a more proactive food safety culture approach that cultivates the mindset, "I don't want to have an incident that can get a consumer sick."

What are some emerging trends in environmental monitoring for food safety?

1. Interpreting the Data

Data is a common theme we see from interaction with our customers. Yes, many questions are specifically product-related, but after working through the customer's initial question, it can uncover the more significant concern they are experiencing. In most cases it is how to interpret and use their results from all the tests — from raw materials, pre-ops, and environmental testing, to finished products.

Before the FSMA from the FDA and the SFCR from Health Canada were enacted, manufacturers used to test only the final product to verify the product was uncontaminated. Today, FSMA and SFCR look to eliminate contamination by implementing preventive measures.

Historically, food safety professionals have been scientists dedicated to caring for the HACCP or HAPCP programs' quality and food safety programs necessary to keep the plants running successfully. With more companies focusing on environmental monitoring to align with the new preventive approach, understanding how to use the data has become challenging. You have results from ATP, allergen testing, and pathogens and indicators testing, which produce significant data. However, putting all those results together and interpreting them is challenging for the industry. This kind of analysis is relatively new, and we are just starting to see companies investing in having systems and teams that specialize in analyzing the data. Being capable of digesting the data and understanding what the story is behind that data are what's most important right now.

More than emerging pathogens or new types of testing — I think that understanding how we manage and interpret the data is the most significant trend. Data analysis is the most critical challenge and should be the focus.

2. Limited Resources

A growing concern is helping those smaller companies with reduced resources compared to others. These companies should start managing their software from scratch to help them grow. I have worked in five different companies within the food industry. Each of them was constantly growing, as was the food industry. As a food safety professional, you realized that if you began with a company when they were first starting out, you continued to grow along with them. That is why it is crucial for those smaller companies to learn to manage an environmental monitoring program early on to ensure they have continued analysis of data to support the company when there are limited resources.

3. Food Safety Professional Shortage

In the food industry, particularly within the laboratory departments of food companies, the shortage of technically prepared personnel is an issue that's having a significant impact. We're facing a real challenge in finding individuals with the necessary technical expertise to meet the industry's rigorous standards for safety and quality. It's a crucial concern. However, the introduction of easy-to-use and robust technologies, combined with advanced analytical methods, has the potential to alleviate the personnel shortage by expediting the training process. By simplifying complex tasks and automating routine procedures, such as food testing and quality control, these technologies make it easier for us to quickly bring new employees up to speed. Additionally, they improve the efficiency and accuracy of our analytical processes, ensuring that the food industry can maintain its dedication to delivering safe and high-quality products to consumers.

How important is allergen testing as part of an environmental monitoring and control program?

The thing with allergens is that they can be deadly and have no cure. Consumers who don't have allergies could get food poisoning and have a good chance of recovering. But if a person allergic to sesame or peanuts, for example, consumes a product with that allergen, it could have greater consequences. They could even die due to an anaphylactic reaction. That's why regulatory entities focus so much on allergens. Companies should include allergen testing in their environmental monitoring and final product testing to be able to properly label their products so consumers have the necessary information to decide whether to consume or avoid a specific product.



Discover more food safety blogs

NEOGEN, A LEADER IN...

Mycotoxin Solutions

As your mycotoxin testing partner, we know your needs change with the seasons. We provide a wide range of qualitative and quantitative test kits to cover all your testing needs. We also offer full-service mycotoxin support, including remote training with LabLive, troubleshooting assistance, procedure pages, Proficiency Testing programs, 24/7 global customer assistance, and ISO-accredited labs — all to enhance your mycotoxin testing program.

Our Reveal® and Veratox lines offer both qualitative and quantitative test kits for:

Aflatoxin
DON

And, both lines also offer precise quantitative test kits for:

Aflatoxin M₁ T-2/HT-2
Ochratoxin Fumonisin
Zearalenone

LATERAL FLOW SOLUTIONS

We offer qualitative screening tests for fast visual results perfect for on-site detection of aflatoxin and aflatoxin M₁. Our quantitative tests, detailed below, provide exact levels for a wide range of toxins.

Our Reveal Q+ tests are simple, easy-to-use lateral flow tests that provide quantitative results in minutes. Perfect for use on site, the tests have unmatched accuracy and reproducibility, allowing for quick and convenient testing.

Why Use Our Reveal Q+ and Reveal Q+ MAX Tests?

Neogen's mycotoxin detection rapid tests are available in multiple formats. Neogen's Reveal and Reveal Mycotoxin Aqueous Extraction (MAX) tests are the easiest for those who require only a simple yes/no result, providing screening results in as little as two minutes.

Reveal Q+ lateral flow format utilizes solvent- and water-based extractions needed for analysis of complex commodities. The tests available include aflatoxin, DON, fumonisin, ochratoxin, zearalenone, and T2/HT2. The Reveal Q+ endpoint format is designed for use when increased workflow output is needed.

- **Quantitative.** Knowing the accurate level of toxins present allows you to evaluate and maintain compliance with regulatory levels.
- **Easy Data Management.** Protect the integrity of your data with the automated transfer of data from the system to your data program.
- **Provides Fast, Actionable Results.** The lateral flow format simplifies your work process and standardizes your testing protocols.
- **Easy to Use.** Minimal training and equipment required.



Learn more

Veratox quantitative ELISA microwell assays are perfect for those with laboratory setups, from food manufacturers to commercial and government laboratories. These tests provide accurate quantitative results in a wide range of levels, including lower levels with our high-sensitivity assays.

Why Use Our ELISA Tests?

- **Quantitative.** Get an exact concentration of any toxins present within your samples to determine the safety and regulatory compliance of your products.
- **Batch Testing.** Our ELISAs allow you to test up to 19 samples at a time against test controls.
- **Precise Results.** ELISA testing produces comparable results to analytical methods, such as HPLC.
- **Efficient Workflow.** With only minimal training required, the simple process means no wasted time or resources within your lab.

Our Veratox ELISA test kits are available for aflatoxin, DON, ochratoxin, zearalenone, T-2/HT-2 toxin, and fumonisin. ELISA assays can be read using the Awareness Statfax Reader or other microwell plate readers.

For analysis at lower contamination levels, we offer our high-sensitivity (HS) option for aflatoxin, DON, fumonisin, and ochratoxin. In addition, we have kits that utilize an aqueous extraction that includes Veratox MAX for Total Aflatoxin, Veratox MAX for Total Aflatoxin HS, and Veratox MAX for Zearalenone. Veratox MAX for Total Aflatoxin, Total Aflatoxin HS, and Zearalenone are the first microwell tests available utilizing an aqueous extraction.

Training and Support

Our in-depth product training can be delivered where and when you need it. Our talented team is on hand to provide comprehensive training and support needs tailored to your business, from customized sessions catered to all skill levels, to technical troubleshooting and guidance.

LabLive

Our interactive online tool, LabLive, offers support, training, and troubleshooting from the comfort of your own desktop or lab. Our free web service links you directly with technical experts for a personal experience, giving you instant access to support when you need it.

Proficiency Testing

We offer regular mycotoxin proficiency testing to help support compliance with customer demands, certifications, and regulatory requirements. As part of a ring trial, we can send spiked samples to blind-test and report results. We will assess your results against the known sample levels and produce a confidential report to validate the efficacy of your test procedure and results.

Mycotoxin Workshops

Throughout the year, we host free-to-attend, localized workshop events. Here, you can meet with our experts to test and calibrate equipment, ensure all software is up to date, and receive refresher training for you or your team.

Mycotoxin Reference Material

When looking to validate your in-house results, we can also provide naturally contaminated mycotoxin reference material (MRM) for testing. The samples will have varying levels of toxin present and can be used as part of training or internal certification to evaluate your sampling, extraction, and testing performance.



Enhance Your Allergen Control Plan

A recent review showed that more than 32 million people in the United States (about 9% of the population) are known to have a food allergy. Food manufacturers protect those with food allergies by clearly labeling their products with a list of ingredients. Testing for the presence of food allergens can help ensure that an unlabeled — and potentially dangerous — allergen does not make its way into food products. Neogen has a wide range of antibody-based assays that can help support this effort for detecting low levels of target allergen in a variety of food and environmental samples.

Our qualitative lateral flow tests are suitable for most operations. These assays can rapidly detect low levels of allergen in a variety of food and environmental samples, utilizing an easy-to-use methodology. Our quantitative ELISA tests provide numerical measurements and are validated for quantifying low levels of allergen in food and rinse samples. They can also provide qualitative results on environmental swabs. In addition, Neogen is your partner in establishing effective allergen control. We have been experts in this space for over 30 years, and we are happy to work with you on best practices, overcoming common challenges, and other support so you can confidently implement your allergen control plan.

Can I make my quantitative test more sensitive?

The detection limits of Neogen's quantitative tests have been carefully set based on the most practical levels as determined by the food industry, regulatory, and expert consultants. Methods can be adjusted to provide additional sensitivity; however, this can increase the opportunity for false positive responses due to matrix interferences.

Can testing environment cleanliness affect sample results?

Laboratory conditions can affect test results. Neogen tests are designed for on-site testing; however, they are sensitive and can unintentionally detect allergenic proteins that may exist in an environment. Therefore, it is recommended that you clean all instruments, the sample preparation areas, and the testing areas regularly. Furthermore, maintaining consistent conditions, including factors such as temperature, to a reasonable standard will reduce potential variance in results.

Where are the best locations to sample the environment with testing swabs?

Samples should be retrieved from areas outside of food contact surfaces to yield test results reflective of true environmental conditions. Samples should also be collected from corners, scarred work areas, screw heads, and any other areas where there is potential for buildup of food residues.

How long can sample extracts and swabs be stored before testing?

Swabs can be stored for up to 24 hours at 4°C after sample collection, provided they have not been extracted yet. Once extracted, samples from swabs should be evaluated within four hours. All other sample extracts should also be tested within four hours.

Why is ATP testing not effective for food allergen monitoring?

ATP (adenosine triphosphate) is a substance in all organic matter, living or dead, and is not specific enough for allergen verification. No matter how sensitive the ATP tests claim, there is no way to differentiate ATP from an allergenic food from that of all other sources of ATP. Also, many allergenic foods contain very low levels of measurable ATP, which would cause potential false-negative results if testing for a food allergen using an ATP method.

By comparison, general protein screening is being used more frequently in allergen control verification. This is a practice that is increasingly accepted by major auditors. However, a facility must carefully assess if general protein screening is suitable for their particular operation, as general protein testing isn't appropriate for every operation. Contact a Neogen representative for more details.

How does heat processing affect the recovery of food allergens on the Neogen tests?

Neogen has carefully designed its tests to detect allergenic protein across a variety of processed and unprocessed food products. In rare cases, highly refined proteins may not be detectable. Neogen's technical experts can assist with suggesting products that fit best for your facility.

Can I test a product on the Reveal® 3-D tests?

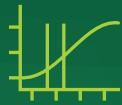
Neogen has solutions on our allergen lateral flow tests platforms validated for environmental and food samples.



Introducing Veratox VIP Elisa Food Allergen Kits

Can your allergen test stand the heat?

Veratox VIP is one of the most robust ELISA allergen testing kits on the market. It offers the same ease-of-use as standard Veratox allergen tests but with significantly enhanced sensitivity. This allows users to detect low levels of target allergens in many sample types, including heat-processed and complex samples — all with a 30-minute time-to-result. Best of all, Neogen provides matrix feasibility studies, so you don't have to do the preliminary work yourself.



Sensitivity

Our highly sensitive tests are quantifiable down to 0.15 ppm target protein and have shown no cross-reactivity on a wide variety of food matrices.



Time-to-Result

Results are ready in 30 minutes as compared to other kits, which can take up to 60 minutes or longer. What could you do with an extra half hour?



Heat-Processed Sample Detection

Veratox VIP is suitable for a wide range of foods, especially for samples that have been highly processed, heat-treated, or otherwise complex matrices.

When it comes to allergen testing, we never stop innovating. Our Veratox Improvement Platform (VIP) ELISA kits are the best in a long and proven line of successful ELISA allergen assays. See innovation in action with Veratox VIP.



Peanut	Veratox VIP	Veratox	Neogen Protein ELISA
Range	0.25-5 ppm	0.65-5 ppm	2-54 ppm
TTR	30 minutes	30 minutes	50 minutes
Consistent detection of processed foods	Yes	No	Yes



Walnut	Veratox VIP	Neogen Protein ELISA	Biokit
Range	0.15-3.75 ppm	2-54 ppm	0.4-20 ppm
TTR	30 minutes	30 minutes	75 minutes
Consistent detection of processed foods	Yes	No	No



Cashew	Veratox VIP	Neogen Protein ELISA
Range	0.2-5 ppm	0.9-24 ppm
TTR	30 minutes	50 minutes
Consistent detection of processed foods	Yes	No



Request your free matrix feasibility study today



LEADING THE WAY WITH MORE SOLUTIONS FOR FOOD SAFETY AND FOOD QUALITY.

We shared a mission. Now we share a name. Neogen.

For over 30 years, Megazyme has offered solutions to the food quality market with a range of high-quality analytical reagents. The Megazyme products and methods set new standards in accuracy, reliability and convenience for customers around the world. But you might not know that Megazyme is now part of Neogen, the first name in food safety and global food security. As a leader in dietary fiber analysis, we now offer you more solutions, more access, and more support at every step of the food chain — in every corner of the world.

Discover how our Megazyme range can help you with best-in-class food quality testing solutions, and coupled with our excellent technical support, we can be a partner you can trust for all your analytical needs.



Carbohydrate Research

Megazyme's innovative and exclusive offerings allow for the measurement of carbohydrates and the enzymes that act on them.



Nutritional Analysis

The Megazyme range includes assay kits and enzymes to measure key nutritional components, especially dietary fiber analysis.



Diagnostic & Research Enzymes

Enzymes are the most important components of diagnostic products and assay kits and have widespread use in diagnostic applications.



Education

Megazyme offers resources to help customers learn how to use products and stay up-to-date on industry best practices with live and on-demand webinars.



Enzyme Activity Analysis

Megazyme has unrivaled expertise in diagnostic solutions to measure enzymatic activity using sensitive and user-friendly methods.



Support

When you need help, Megazyme scientific experts are dedicated to solve your problem. Connect online or access our knowledge base.



Food Quality Control

Megazyme offers a wide range of assay kits and diagnostic enzymes to help food manufacturers control food quality parameters.



Explore Megazyme Solutions



Increase visibility of your food safety data to reduce risk, get insights faster, and become more preventive.

Neogen Analytics tracks and unifies the workflow and data generated within your environmental monitoring, product testing, and sanitation programs to improve quality and decrease risk while streamlining operations.

Product Testing

From in-process materials to finished products and COAs, Neogen Analytics' platform meets all product testing needs.

Environmental Monitoring

Schedule, run, and audit the environmental monitoring plan in one easy-to-use workflow system.

Sanitation

Manage and monitor the sanitation workflow and verify effectiveness within one interface.

Reporting & Analytics

Transform data into actionable information with reports that help focus on what is important now, and use analytics to see trends and issues before they cause problems.



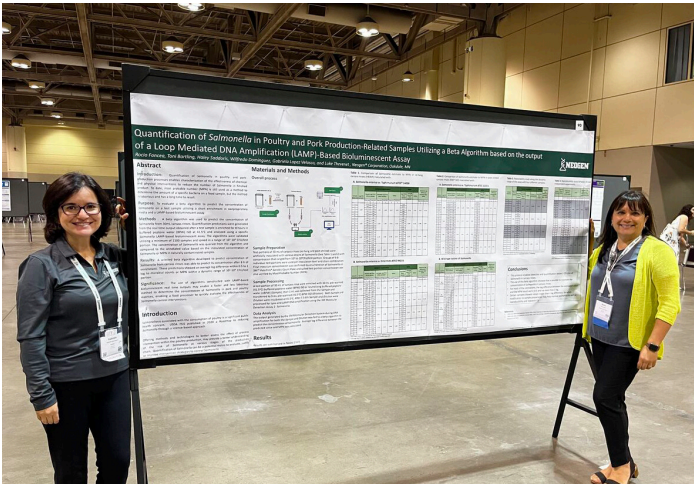
Learn how digital food safety automation can benefit your team.



The Enterprise Solution for Food Safety Automation

Introducing the only unified workflow, analytics, and data management solution available today for food safety, quality, and sanitation.

We loved connecting with you in 2023!



Where to find us in 2024!

Pet Food Forum 2024

April 29-May 1, Kansas City, Missouri

Food Safety Summit

May 6-9, Chicago, Illinois

International Association of Food Protection

July 14-17, Long Beach, California

Neogen Corporation, 620 Leshler Place, Lansing, MI 48912 USA.

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