

INTRODUCING



POINT-OF-CARE TESTING

ALDEN

NEXT-GENERATION MICROBE TESTING

The breakthrough you've been waiting for has arrived. With the Alden point-of-care platform, microbial testing comes to you and delivers results in hours. This state-of-the-art detection and monitoring platform empowers businesses that depend on highly accurate food safety assurance to test onsite for operational continuity and regulatory compliance.

KEY FEATURES



Innovative Assay

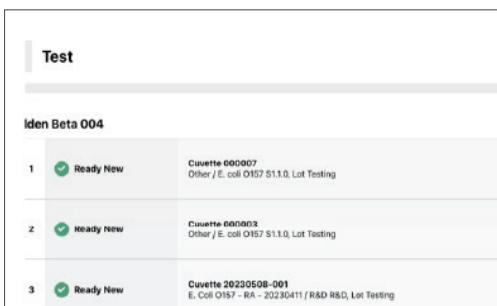
The Alden's novel suspended simultaneous sandwich assay (SSSA) eliminates wash steps, amplification, and other procedures for faster testing and reduced risks.

For demo purposes only. Excludes enriched meat, pathogens or bacteria.



Embedded Hardware

Alden 5 reads QR codes, connects sample IDs, determines settings, conducts analysis, and algorithmically processes raw data in less than six seconds per sample.



Intelligent Software

Alden's software interprets data autonomously, delivers results, tracks chain of custody, and aggregates data in real time – all on a convenient mobile app.

KEY BENEFITS



Fast

Microbial testing with results in hours instead of days to drive quick decisions and efficient operations.



Simple

Portable and affordable lab-grade testing with streamlined workflows and AOAC-certified results.



Accurate

Independently verified as equal to or better than PCR testing, with advanced data reporting.



Smart

All-in-one solution with built-in tracking, intuitive software, real-time reporting, and a mobile app.

PRODUCT APPLICATION & CERTIFICATION

- The AOAC Research Institute Performance Tested MethodsSM (PTM) Program certified Alden's S1 for E. coli O157 testing method for E. coli O157 (including H7) detection in ground beef (375 g and 25 g) and beef trim (375 g) (PTM #042401).
- Comparing the SSSA approach to the USDA/FSIS Microbiology Laboratory Guidebook (5C.03) and the ISO Technical Standard 13136:2012 PCR reference methods, the PTM program found "no statistically significant difference from the reference methods."
- Additional testing types – including listeria, salmonella, campylobacter, and others – are in the pipeline to receive AOAC validation in 2025.
- Alden's revolutionary technologies are validated by MRI Global and supported through grants from the United States Department of Agriculture (USDA) National Institute of Food and Agriculture (NIFA).



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A SMARTER, BETTER, AND SAFER WAY TO TEST

Alden's innovative bead-based architecture enables the simultaneous capture and quantification of one or multiple antigens, delivering exceptional speed and versatility. Modular design offers flexibility and adaptation to cater to the growing requirements of the food testing industry while eliminating cumbersome liquid handling and wash steps.

Advanced immunoassay principles contribute to exceptional sensitivity and specificity. We combine the sophistication, performance, and accuracy of PCR with the ease and affordability of lateral flow assays. With Alden, your path to reliable results is fast and easy – and it's the safest in the industry because no live pathogens are present (unlike legacy PCR testing methods).

PRODUCT COMPARISON: PCR vs. SSSA

With traditional testing methods, safety assurance comes with long turnaround times, costly inefficiencies, low visibility, and heightened risk of recalls and outbreaks. With Alden's innovative SSSA method and best-in-class technology, we're revolutionizing molecular diagnostic testing.

Testing Step	PCR Onsite Testing	Alden 5 Testing
Enrichment	18-72 hours	8-24 hours
Sample preparation	1 hour	30 minutes
Analysis	1-2 hours	15 seconds
Throughput per shift	384 samples	9,600 samples
Total steps	14 steps	4 steps
Total turnaround time	1-3 days	8-24 hours

ALL-IN-ONE SOLUTION



With the Alden platform, you'll spend less time analyzing results and more time taking action. Ensure rapid, accurate molecular diagnostic results to solve everyday challenges with simplicity you can trust.

Industry Challenge

Food recalls, outbreaks, and damage derivatives cost \$7 billion per year.

Onsite testing is not feasible for 75 percent of food and ingredient companies.

Slow offsite testing turnaround times of 3-7 days can significantly disrupt business operations and pose a risk to product quality.

Alden Solution

Alden accelerates turnaround time for testing food safety and quality by 50 percent or more, enabling you to exceed expectations for fast results.

Alden makes onsite pathogen testing accessible to a wider range of stakeholders through a simplified testing process, increased speed and accuracy, smart data management, and real-time access to data and reports.

With Alden's platform, results are routinely ready in under 24 hours.

PRODUCT SPECIFICATIONS

Size	The Alden 5 is a cube with 15 cm x 15 cm x 15 cm dimensions.
Lid	The floating lid slides clockwise to access the carousel. The lid has an infrared sensor to sense if the lid is open or closed.
Vents	The vent structure maximizes air flow and enables a fan-less design.
Camera	The camera is primarily used for QR imaging and uses computer vision and machine learning for cuvette detection.
Carousel	The carousel can hold up to five cartridges at once, and the analysis cycle for all five cartridges is approximately 15 seconds.
Spectrometer	The spectrometer measures emission from the sensor and produces data values for interpretation.
LED Array	The LED array includes multiple LEDs. LEDs can be added for expanded emission wavelengths.
Power	The device goes into sleep mode to reduce power consumption and wakes automatically for operation. No manual power cycling is required.
Computer	Single board computer.
Wi-Fi + Cellular + GPS	Alden can connect to Wi-Fi or cellular networks..
IoT Sensors	An array of IoT sensors including temperature and humidity.
Port	The port supports power and Ethernet connections.
Mobile app	Built for iPad, the mobile application tracks samples through the testing process, offers data analysis, and enables a review of historical test results.
Biosensor assay	Innovative, bead-based architecture for suspended simultaneous sandwich assay (SSSA) enables simultaneous capture and quantification of antigens.
Modular design	Offers flexibility and adaptation to cater to the growing requirements of the food testing industry.
Secure cloud infrastructure	The port supports power and Ethernet connections.

Contact Lumitron to learn more or place your order today:

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