Clear Safety™ *Listeria* for Environmental Monitoring

Clear Safety dramatically simplifies the technology requirements for environmental monitoring programs. Instead of relying on disparate solutions, Clear Safety seamlessly integrates *Listeria* screening, speciation, Similarity Analysis for persistence monitoring, and Environmental Mapping software.

Genus-Level Screening and Speciation

The Clear Safety *Listeria* screening test relies on targeted next-generation sequencing (NGS). Rather than reading the entire genome as whole-genome sequencing (WGS) does or choosing a couple of targets as PCR does, our screening test looks at numerous regions within the genome to determine if *Listeria* is present. Here are some of the benefits of our approach.

Superior Accuracy

With >99.9% accuracy for genus-level screening tests, Clear Safety sharply reduces false negatives and positives, curtailing recall risks, operational costs, holding time, and short-shipping penalties.

Live Cell Assurance

Our process ensures that the detected cells are alive and viable rather than dead.

Insights Faster than Ever Before

Quickly identify the source of *Listeria* contamination incidents and resolve them within hours rather than days or weeks.

Test for *Listeria* Species If Desired

Characterize any of seven *Listeria* species (*monocytogenes, grayi, innocua, ivanovii, marthii, seeligeri*, and *welshimeri*). Our tests can identify up to two species in an enriched sample.

Similarity Analysis

Without subtyping, food manufacturers will not know if the *Listeria* they've detected today is the same *Listeria* they detected last week in a different location of the manufacturing facility. Clear Safety makes subtyping easy.

The platform's Similarity Analysis catalogs the genetic "fingerprint" of each *Listeria* encountered by the system and compares it to the fingerprints that were encountered previously. Samples containing *Listeria* with matching DNA fingerprints are grouped accordingly along with sample metadata, including the location, date, and time. This allows the user to track the flow of a particular type of *Listeria* through a plant over time.

No Isolates Required = Faster Turnaround Time

Currently, many food manufacturers rely on rapid typing methods that require the creation of isolates, which takes time. Clear Safety performs a Similarity Analysis directly from enriched samples, saving you time.

Better Accuracy Than Rapid Typing Methods

Whereas rapid typing methods look at a few distinct regions of the genome, Similarity Analysis looks at numerous regions within the genome. Analyzing more regions of the genome means that we have more information about the genome, and more information means that we can identify and characterize a microorganism more accurately.

Easier to Interpret Than WGS

While WGS is the most accurate way to type a sample, this method comes with a higher cost, a slow turnaround time, and a high level of liability. Moreover, WGS requires special training to interpret the results. With Similarity Analysis, on the other hand, the software makes it easy to see which subtypes are matches.
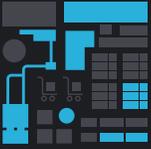
Perform a Secondary Analysis

Up to 72 hours after an initial screening test, you can extract additional information from test data without re-processing the sample. For example, after an initial genus-level positive, you could choose to subtype your positive samples through Similarity Analysis.

Environmental Mapping

Visualize your environmental test results so that you can better understand contamination incidents and take more informed corrective actions.

Create Floor Plans and Sample Sites

Easily upload floor plans and choose sample sites for routine environmental testing.

Visualize Contamination Incidents

See your test results on a map so that you can assess the state of your plant with one glance.

Trace the Flow of Pathogens over Time

Determine which pathogen subtypes have appeared in your facility before. Then, look at historical data to track the movement of a particular subtype through your facility.

Seamless Integration

Currently, screening and subtyping results do not seamlessly flow into legacy mapping technology. Clear Safety changes all that, making it easier to visualize your results and providing you with new insights.

Clear Labs

Want to Learn More?

Contact us at inquiries@clearlabs.com