

Food testing

The Thermo Scientific™ SureTect™ PCR System – OMIC USA's choice for reliable, robust foodborne pathogen testing

Case Study

OMIC USA Inc. Headquarters in Portland, Oregon (above)



Peter Kahn, Group Leader of the Bioanalytical Department at OMIC USA.

OMIC USA Inc. is an independent analytical testing lab located in Portland, Oregon. Established in 1992, the business originally focused on grain inspection services and chemical-residue testing for pesticides.

Over 30 years later and OMIC has expanded their offering to provide a wide range of services, including food & beverage and environmental molecular testing. With such a diverse offering, the team needed a PCR System that ensures reproducible, right first-time results without compromising on speed or throughput.

After reviewing several PCR solutions for foodborne pathogen testing, OMIC selected the Thermo Scientific™ SureTect™ PCR System, favoring its robust, efficient workflow, compatibility with a wide range of matrices, and strong performance during validation.

What testing do you undertake at OMIC USA and who are your customers?

We serve a wide range of clients across different markets; everyone from food and beverage manufacturers to export service firms and organic certification providers. We never know exactly what will come through the door. Specifically, we focus a lot on food and beverage, supplement, nutritional and environmental testing.

Being in the Northwest, we do a lot of fresh and frozen produce testing. We're also an approved lab for Asian export food testing, specifically Japan and Korea, we will provide inspection and analytical testing services for those markets.

Why did you decide to evaluate different PCR methods for food safety testing?

When we first were looking at implementing a new PCR system, one of the things that we really needed to improve was our overall efficiency in the lab. At the time, we were using several different PCR workflows for our foodborne pathogen testing.

Sometimes these methods would take multiple PCR runs to get the right result. This meant that on many occasions we were having to really push to get the results out by the end of the day. Many of our customers' results are incredibly time sensitive so this presented a potential problem.

Why did you select the SureTect PCR System specifically?

When we were evaluating different PCR workflows, one thing we were really drawn to with the SureTect PCR System was the streamlined workflow. The simple, fast lysis step and easy PCR run means it only takes a little over an hour for us to obtain a result. We can also run multiple SureTect PCR Assays for different targets on a single run; this made it a really-strong option for us from an efficiency standpoint.

Then, once we got the method in-house, we performed our own internal validation and verification inline with our quality management system. We receive a wide array of sample types for pathogen testing, so we needed to make sure that our chosen PCR method was compatible with these. During the validation studies, the SureTect PCR System performed very well in this aspect.

- The simple workflow has made staff training and onboarding fast and simple, even as new Assays are added
- OMIC uses a wide range of SureTect PCR Assays, offering a diverse menu of pathogen testing solutions to customers
- Color-coded plates make it easy for OMIC to keep track of multiple Assays within a single run



How has the SureTect PCR System helped with the daily efficiency of your lab operations?

One thing that our lab staff really like about the SureTect PCR System is that it's very easy to use and reliable, which makes both daily use and training new employees simple and quick. It also has very few indeterminate results or inhibition results, so the number of reruns required is very low.

Something that is also of huge benefit to us is that the PCR instrument itself (Applied BioSystems™ QuantStudio™ 5 Food Safety Real-Time PCR System) can be utilized for other purposes as it's not a closed system. We offer other types of PCR testing such as GMO and virus testing and can utilize the same instrument for this, meaning no additional costs for other instrumentation.

We also find the capping tool really handy. It reduces the risk of cross contamination whilst also making the overall process a lot faster from lysis to the PCR plate.

How did Thermo Fisher Scientific help you during initial review of the SureTect PCR System and what support have you received since then?

During initial evaluation the materials that Thermo Fisher supplied, such as the product brochures and videos, helped us to understand the workflow in detail. We were also provided with comprehensive external validation data through AOAC which clearly showcased the robustness and integrity of the system.

In the period since, Thermo Fisher has been a great resource for us to continue to grow our services, including the pathogen testing that we conduct with the SureTect PCR System. They are continually releasing new Assays that we can add to our testing menu, whilst still adhering to the same workflow steps, which is very useful as a high throughput lab. They also continue to help us with some of our other testing needs, such as food species screening and identification using Next Generation Sequencing which we run using the Thermo Scientific™ Food Authenticity Workflow.

Overall, the technical support teams continue to show great help with any questions or additional queries that we reach out with.



Whether your laboratory is looking to introduce PCR technology for the first time, or you want to expand the PCR testing services you offer, we can help you find the right solution.

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