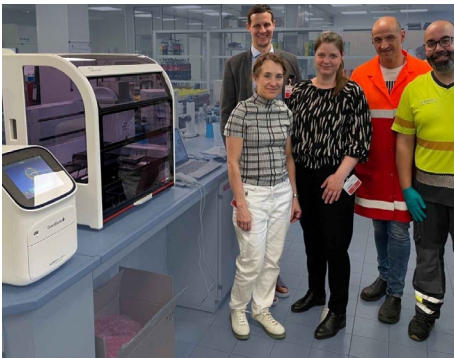




Food testing

Case Study: Bringing the benefits of PCR and automation to high-throughput beverage testing, with the SureTect Automation Platform



The Coca Cola Europacific Partners team on the right, with the Thermo Fisher Scientific R&D team, alongside the SureTect PCR System and SureTect Automation Platform

Raul Mesa is the Quality and Food Safety Manager for Coca Cola Europacific Partners. With a technical background in microbiology, he is responsible for finding, selecting, and implementing workflows for the organization's microbiology labs across 31 countries.

After working with Thermo Fisher Scientific in 2023 to develop a PCR assay for the rapid detection of spoilage contamination in the production environment, the team required a scalable workflow solution to match their throughput.

Speaking to [SuperMicrobiologists](#), Raul discussed the process of integrating the Thermo Scientific™ SureTect™ Automation Workflow:

Raul: *When we first implemented the SureTect PCR Workflow we started with the manual protocol. Our previous experience with PCR was quite laborious, but the SureTect PCR protocol is straightforward.*

While our routine analysis could be done manually, the number of samples increases substantially during contamination events, making manual handling challenging. Automation allows us to smoothly handle a sudden increase in tests.

Additionally, we're working with Thermo Fisher to implement other PCR assays, so the use of automation greatly reduces our workload in the long run.

The team introduced the Thermo Scientific™ SureTect™ Automation Workflow using the CyBio™ FeliX, to reduce the hands-on demand of the upfront sample preparation:

Raul: *The instrument is really easy to use. We prepare our samples, reagents, and consumables the same way as for the manual protocol. We load them onto the instrument and start the run. The instrument uses a robotic head and dual platform to prepare the samples just like a lab technician would, following the same sequence and volumes. At the end of the run, we simply take the samples from the instrument and place them in the thermocycler for PCR.*

I would like to add that it has a small footprint, which could be an important criteria of choice since some of our labs have limited space.

Introducing the new Platform to the lab and providing training were also key considerations to ensure a seamless workflow transition:

Raul: *One of the most challenging steps is getting lab technicians on board with the project. They need to be involved in selecting the technology. Then, give them time and confidence in the technology. It's never a plug-and-play solution; it takes time to become confident. Allow people to make mistakes, experience cross-contaminations, and have false-positives. Like any technology, there's a learning curve, so training is key. Our collaboration with Thermo Fisher was great in this regard.*

After the initial training, we had weekly calls and refresher training sessions. This type of collaboration is crucial for the success of such a project.

After implementing the Platform, Raul and the team subjected the workflow to rigorous testing:

Raul: *Our main concern was cross-contamination between samples, so we really challenged the system in that perspective. It passed all our tests successfully.*

We also ran accuracy tests comparing the automated process to manual handling, and the results were better with automation, which wasn't surprising. Reducing human error leads to more consistent results when testing.



About the SureTect Automation Platform

With the SureTect Automation Workflow, you can take your testing to the next level with automated lysis and PCR setup.

Utilizing the CyBio FeliX instrument, the automated workflow allows you to reduce hands-on time and the risk of human error whilst increasing the accuracy and repeatability of your testing.

Fully validated by AFNOR (according to ISO 16140-2:2016) and the AOAC for use with all SureTect Pathogen PCR assays, the Instrument's flexible programs and rapid yet precise setup ensure maximum efficiency and reproducibility in your workflow.

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.

Learn more at thermofisher.com/suretect

thermo scientific