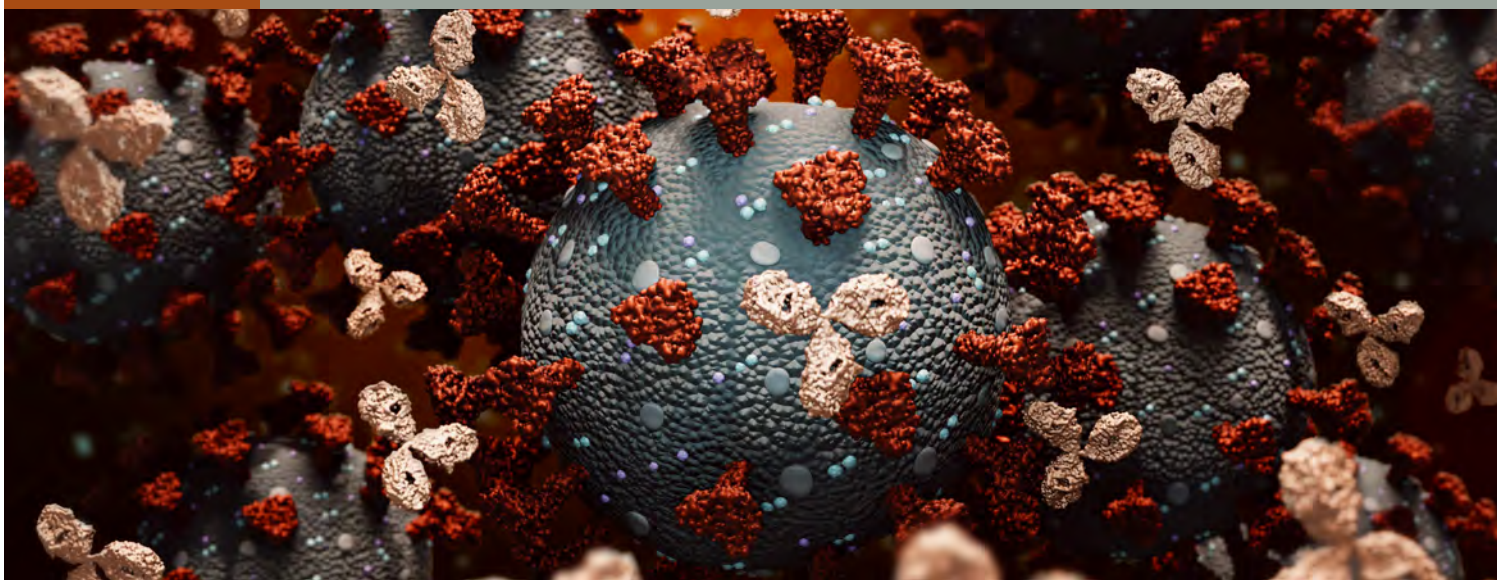
ARTICLE

# How Can Your Pathogen Detection Kits Save You Money and Time?



Unlike other method developers, we have the technical expertise to provide enhanced enrichment media that perfectly complements the Solus Pathogen System. By leveraging unique formulations, our selective media ensures highly specific pathogen recovery, even from the most challenging matrices. As an integral part of the highly developed Solus One pathogen detection system, Solus One enrichment media provides exceptional results. The complete Solus One system provides:

- The latest enrichment and detection technology
- High-quality results through enrichment specificity and assay sensitivity
- Easy-to-use, optimized workflows
- Cost-effective materials and automated solutions for flexibility and traceability
- Service and support that ensures customer confidence
- A trusted global relationship and compliance with AOAC, and AFNOR to ISO 16140

Food processors tasked with bringing food safety to consumers require a food pathogen detection system that delivers robust results in an effective, efficient, and rapid time-dependent manner. These detection systems are a package reliant on effective media enrichment protocols, sensitive and specific assays, and ideally an automated instrumentation platform that delivers high throughput of up to 196 samples in a single automation providing. On average, Solus can process double the amount of samples compared to other molecular methods, and in some cases even triple the amount of samples in the same time frame.

With the complexity of protocols for different food categories and environmental samples, food processors can be overwhelmed by this diversity and formerly could have resorted to a technology and platform system that required multiple enrichment medias to detect specific food borne pathogens from a plethora of food matrixes requested by their end users.

However, if a food pathogen detection system offers a processor not only simplest of use but the ability to utilize a small media range that covers the main food borne pathogens – *Salmonella spp., E. coli* O157:H7, and *Listeria spp*. – then there is the potential for customers to save money on media.

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*For the Better*

The Solus One range offers a very simple workflow in the requirement of only a single enrichment step instead of dual enrichment steps; and a range of three medias that covers the following pathogens and matrixes:

- Buffered Peptone Water (BPW) supplemented with our proprietary Solus One supplement covering raw beef trim, raw salmon fillet, pasteurized liquid egg, Romaine lettuce, Brie pasteurized cheese, raw beef trim, non-fat dry milk powder, sponges with stainless steel and swabs with plastic environmental surfaces: for ***Salmonella spp***. BPW supplemented with our proprietary Solus One supplement covering raw ground beef and raw beef trim; for E. coli O157:H7.
- Modified BPW (mBPW) supplemented with our proprietary Solus One supplement covering spices, herbs, flavourings and confectionery products: for Salmonella spp. Through the development of mBPW, processors also can utilise lower dilution schemes for high toxicity matrices such as cinnamon which again can lead to cost savings.
- SOLO+ covering sponges with stainless steel and swabs with plastic environmental surfaces; for ***Listeria spp.***

Therefore, with such a limited range of medias for the Solus One range, processors can save money through bulk purchasing of media. In addition, with Solus dehydrated culture medias at the correct formulations that are simple and robust to make-up, there is the likelihood of fewer mistakes, which downstream can lead to improved facility performance through lower revenue and productivity losses.

## Automation Impact

Automation In recent decades has revolutionized many human activities including the way we work. As regulations tighten, cost pressures increase and a shortage of skilled personnel emerges, the scientific sectors are looking to automation. Environmental and food laboratories can incorporate automation into the workflow during sample processing, sample preparation and environmental testing. For example, barcode reading can be used to identify and track samples through the sample's journey. Transferring this data to a system such as LIMS can create opportunities for productivity improvement for you and your organization.

Automation technology is becoming more affordable for most food and environmental laboratories. Human errors produced by repetitive tasks and differences in data analysis due to staff discrepancies are decreased by automation, resulting in increased efficiency, output, productivity and reproducibility.

With a single DS2 unit, one lab technician can up to three units in a single working day. The DS2 is an open system that allows the user to use the instrument for other testing purposes for not only pathogens but for drug residue or mycotoxin detection. In a single automation run, the DS2 can process two 96-well plates with the capability to run two sample protocols simultaneously. Therefore, the lab technician can process up to 576 samples in a single working day which can only multiply depending on the number of automated units involved. Combined with on screen visual ques, setting up and starting the process is easy and efficient.

## How Does Automation Impact Me and My Media Choices as Part of My Food Safety Plan?

To have a workflow that offers simplicity from purchasing media to gaining results. Solus One media has transferable products that can be used in conjunction with other Solus One Assays giving more reasons to bulk buy and save money. When in combination with automation, you are saving valuable time in obtaining the result that leads to lowering the cost per test. Generally, time is wasted by either doing the tests manually or by having lower throughput in your automation solution. With the Solus One Pathogen System you can regain that time by having two assays running simultaneously, that both use the same media and be able to walk away during the automation to undertake other lab work requirements. Also, with a consolidated media portfolio it can help reduce human error. This combination has a common goal of doing more with less.

- Having a simple process that leads into maximizing efficiency.
- Take away the pains of buying multiple media solutions.
- Maximize your daily sample throughput with automation
- Use a system that makes sense and benefits your lab with time and money.

**To find out more, Email us at solus.info@perkinelmer.com or visit our Food safety page here.**
**www.perkinelmer.com/category/microbiology-pathogen-analysis**

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