Copan
innovating together

Optimizing lab workload & resources with lab automation

Dr. Jérémy Bayette's experience

Dr. Jérémy Bayette,

Medical biologist at the INOVIE Labosud clinical laboratory in Montpellier

To kick off the second stage of *The Journey* campaign, we traveled to the south of France to interview Dr. Jérémy Bayette, medical biologist at the INOVIE Labosud clinical laboratory in Montpellier. Labosud is a consortium of medical biology laboratories established in 2009 with the aim of better meeting the needs of patients and healthcare professionals in the region. Part of the INOVIE group – which brings together over 550 French clinical laboratories – Labosud is positioned as one of the leading multi-site laboratories in France: what better location to explore the impact of automation in a microbiology laboratory?

Dr. Bayette, could you please give a short presentation on your lab?

The microbiology lab is located at Labosud headquarters and operates 24/7, 365 days a year. The team consists of over forty full-time technicians and three medical biologists dedicated to bacteriology, virology, parasitology, and mycology.

This massive organization underlies a high volume of samples processed every day. What numbers and what kind of samples are we talking about?

Yes, the volumes are quite impressive. We process samples coming from the Occitanie region and, for molecular biology, from the whole of France: from classic microbiology and urine to molecular biology, we reach approximately 4000 samples a day.

What made you consider automation?

Years ago, we encountered the challenge of upholding result quality and delivering the best service to patients while handling increasing volumes. Therefore, it was essential to automate high-volume routine samples to guarantee effective management of priority samples.

Which types of samples did you automate, and which didn't? Why? Are you planning to convert other samples?

Our automation priorities were the samples with the highest volumes – urine cultures and multi-resistant bacteria. Today, we automate more than 95% of our samples.

Which Copan instruments did you implement in your lab? When did the installation start, and how long did it take to complete?

In 2017, we equipped two WASPLab® lines with four incubators. In 2018, we upgraded by adding the PhenoMATRIX™ module for colony growth reading and interpretation algorithms. In 2019, we implemented Colibrì™ automated picking. Finally, in 2021 and 2022, we added two WASP® standalone lines.

WASP® at Labosud INOVIE

Was the transition from manual smooth?

Like any change, it initially generated a little anxiety and stres, as expected. However, the Copan teams provided excellent support throughout the design, implementation, and configuration of the automation. Subsequently, they also helped validate the lab protocols. Even after the installation, their experts helped train and support the staff, making the transition to routine seamless. Overall, the implementation went very well.

WASP® automated plate streaking

Why did you choose Copan?

In previous years, we visited several WASP®-equipped laboratories in Europe and France, and each time we visited one, it was exactly what we wanted and had imagined for our future. The partnership with Copan was just the cherry on top.

What's the automation impact on the quality of your data, such as standardization and reproducibility?

First of all, standardization significantly improved through automated streaking and processing, which limited the risk of human error; notably, standardization remained top-level even despite the increase in sample volumes. Also, traceability improved greatly, thanks to the bidirectional connection with the lab LIS.

A lab technician working on WASP®

What advantages did you discover with the implementation of automation? For example, how did it impact Turnaround Time, workflow optimization, better time, and human resource management?

Despite experiencing an increase in sample volumes, we have managed to reduce our time to result, which is very crucial for providing better service to our patients. Additionally, with a consistent workforce, we are now able to handle sudden increases in volume while maintaining the quality of our results. Despite the increased volumes, our team of biologists and technicians have demonstrated a heightened level of focus and efficiency in their work. This has also led to improved safety, as there has been a significant reduction in plate handling, lowering the risk of technicians contracting processing-related diseases. Furthermore, we have noticed a positive impact on the ergonomics of our work environment, with more space on the workbenches and a more organized layout in the lab.