Leica
MICROSYSTEMS

Going Green with a Next Generation Tissue Processor

By SOFIE KJÆRSGAARD HANSEN

The Leica PELORIS

The Leica PELORIS entered St. Antoine Hospital, France, at the beginning of 2010. A reduction in toxic fumes, and statements like "successful xylene-free processing" and "continuous, lean workflow is the biggest win for us" brought me in front of Professor Jean-François Flejou, Head of Pathology, St. Antoine Hospital, in Paris, France. The decision to purchase the Leica PELORIS started as a need for new equipment, preferably a fast, next generation tissue processor with a green profile. Three vendors were asked to present their solution. I asked Professor Flejou what made them choose the Leica PELORIS.

"We wanted a fast, next generation instrument that would allow us to introduce new techniques and processes. We chose the Leica PELORIS because it offers versatility and flexibility and has a green profile."

"We wanted a fast, next generation instrument that would allow us to introduce new techniques and processes. We chose the Leica PELORIS because it offers versatility and flexibility and has a green profile. With this instrument we are able to process our workload in small batches, incorporating all sizes and types of tissue, consecutively or at the same time."

Health Concerns

With a strong emphasis on creating a healthier environment in the laboratory, Professor Flejou is convinced that the Leica PELORIS is a step in the right direction: "One of the major problems in pathology is that we use many toxic chemicals. The biggest problem is formalin, for which we unfortunately do not have a replacement yet. The second biggest problems are xylene and toluene. Both chemicals can cause various health problems, so when I was presented with a new technology that did not use either of these two chemicals, it would have been a mistake not to try it," the Professor at one of Paris' largest hospitals explained.

New Technique, Without Compromising Quality

Before purchasing the Leica PELORIS, the team at St. Antoine had the opportunity to test the instrument. But switching to an entirely new process, completely xylene-free and toluene-free, was a big change and generated some concerns. Professor Flejou elaborated: "We were a bit anxious about using the new technology without xylene and toluene. Would we get the same quality? Would the process be as fast? We really needed a standardized process and consistent results."

The first months did present some hiccups, which had to be addressed. "Not that unusual, when introducing a new process," the professor stated and continued: "Today, we have a successful xylene-free and toluene-free process with good and consistent quality."

Managing an Increasing Workload

The team at the laboratory perceives the new tissue processor as faster and they have fewer re-runs. When it comes to urgent biopsy specimens, the turnaround time has been reduced by 50%. Today, the result is available within one hour. The laboratory processes around 500 tissue blocks per day and this number is steadily increasing: "We don't use the full capacity of the Leica PELORIS, so we can manage the increased workload. No doubt, that instrument has made the process more efficient; we can process more blocks per day, using less 'hands-on' time of the technicians. The time that is freed up is used for many other activities in the lab."

Continuous Workflow

But what are the Leica PELORIS' biggest advantages, I asked Professor Flejou: "Continuous workflow is the biggest win for us. It has provided us with a more lean process. The second win is the reduction of the toxic chemicals and the third is the reduction of turnaround time on the biopsy specimens. Another advantage is that we didn't have to change our grossing procedures. The Leica PELORIS does not require a specific size or type of specimen. I think the instrument works really well – I'm very pleased with it."

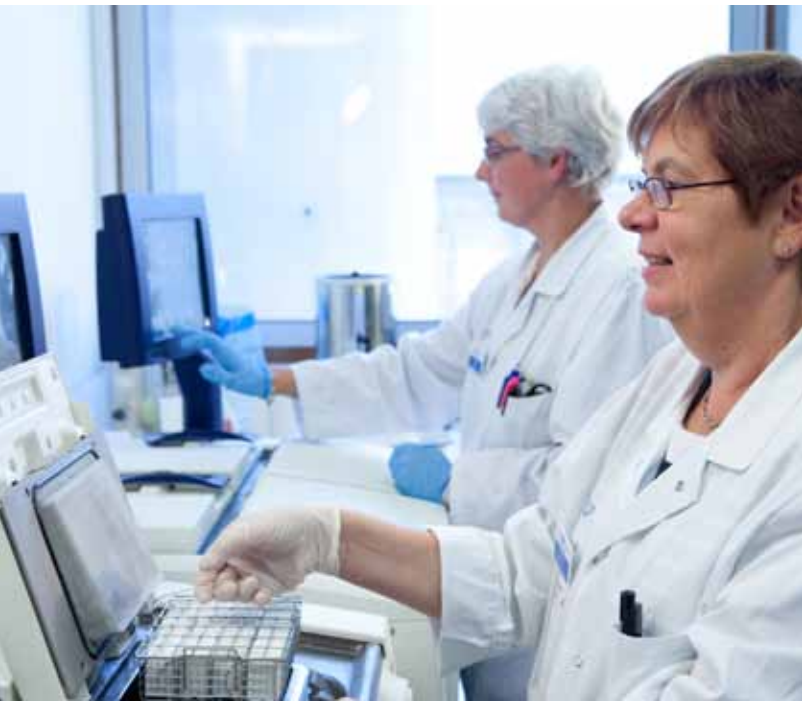
The Users of the Next Generation Tissue Processor

Nathalie van Acker, laboratory technician and Martine Leviere, laboratory technician.

What do you think about the user-interface on the Leica PELORIS?

"The interface is very user-friendly and the touch screens are easy to use. The software is available in French and that is a big plus, since many of the technicians here do not understand English. On the screens you can follow the process closely and thereby know exactly what stage it is up to."

www.leica-microsystems.com



Could you start using the instrument right away?

"Yes, for example to fill and re-fill the reagents is very easy to manage. The remote fill and drain system with a hose makes it odourless and fume-free."

Has the flexibility of the instrument influenced the way you work?

"A lot. Now, it's possible to run many different protocols at the same time meaning a smoother work flow."

If you compare your previous instrument with the Leica PELORIS, what would you highlight?

"There is a world of difference between the two. It's hard to compare because the Leica PELORIS has new technology – it's the next generation of tissue processor. The Leica PELORIS is much faster, more flexible and easy to use. Because of the speed and flexibility we now have many results in just one day. For example, if we have started one run and an emergency specimen comes into the lab, we are able to start a new run and have the results for both runs on the same day."

The Hospital St. Antoine is a part of the AP-HP group consisting of 23 hospitals in Paris. St. Antoine is a large size hospital with 762 beds.

The pathology laboratory has a staff of 10 full-time and 5 part-time pathologists, 1 lab manager and 13 technicians. Professor Jean-François Flejou is head of pathology.

The laboratory processes around 500 blocks a day and rely on two Leica PELORIS tissue processors from Leica Microsystems.