

A complete solution for ELISA processing

MLM Medical Labs is taking advantage of the Freedom EVOlyzer® workstation's optimized ELISA processing to help meet the complex laboratory support needs of clinical trials, increasing throughput and improving process security.

mlm medical labs®



MLM Medical Labs is a specialized company with a global reach

MLM Medical Labs, based in Moenchengladbach, Germany, is an ISO15189:2007-accredited, GLP-certified and CLIA-registered laboratory providing analytical services and biomarker analysis for pharmaceutical companies and contract research organizations (CROs) performing clinical studies. The Company offers the entire portfolio of service elements necessary for the laboratory support of clinical trials, as Professor Dr Stephan Wnendt, CEO of MLM, explained: "We are a central and speciality laboratory focusing entirely on the medical diagnostics that are necessary for safety analysis in clinical trials, including clinical chemistry, blood counts, serology and urine analysis. During a clinical study it is essential to closely monitor the safety of the individuals involved, to check that the patient meets the general inclusion criteria for the study, and then, during the study, to monitor how the drug affects their general health status."

"Our clients are renowned CROs, biotech companies and global pharmaceutical

manufacturers in Europe, Asia and the USA, and we work across a broad range of therapeutic areas, including cancers, cardiac disease, high blood pressure and diabetes. We use biomarkers to study the efficacy and side effects of candidate drugs, and many of these markers are analyzed by ELISA. Although we have been successfully using Tecan instruments – including a Sunrise™ microplate reader and a HydroFlex™ plate washer – as part of our manual ELISA protocols for many years, we wanted to fully automate the workflow to increase throughput, particularly for large-scale studies."

"We looked at the various solutions on the market, and most offered a modular approach, with one system for plate set-up, another for running the ELISA, and a separate detection instrument. What impressed us about the Freedom EVOlyzer was the fact that all the functions we needed were brought together in a single instrument, controlled by one software program. This gave us a virtually ready-to-use, validated system that still had



The MLM team



the flexibility to be customized according to our exact needs. We were very happy with our existing Tecan instruments, so we were confident that the Freedom EVOLyzer would provide the quality we needed."

"We bought our Freedom EVOLyzer in 2010, and immediately saw the benefits in terms of both throughput and reducing the number of pipetting and sample handling errors. We are able to process far more samples in a day, and you don't have to worry about misplacement of samples in wells or incorrect pipetting volumes. We also use disposable tips to avoid the risk of cross-contamination, which is obviously a key consideration for clinical trial samples."

"Process security is further improved by the use of barcoded samples. The system has a direct link to our LIMS database, enabling each sample that is loaded onto the platform to be identified from its barcode, meaning everything is traceable from the moment it comes into the laboratory. In a way, the Freedom EVOLyzer is not a standalone instrument, it is connected to the IT backbone of our Company, and we can retrieve the data at any time through the LIMS. Similarly, the integrated Sunrise reader has a direct input into our LIMS; the data is automatically pushed through to our server, and we can prepare the results reports from the LIMS system, which simplifies analysis and reporting."

"We have one technician who is a specialist on the Tecan instrument and Freedom EVOLution™ software, with another who acts as their deputy. Once you are familiar with the software, it is easy to use, but the support we have had from Tecan's applications team has also been very good. An application specialist from Tecan helped our technicians to set up the initial assays, and creating protocols for

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new ELISA tests has been very straightforward. Having a ready-to-go solution has been an advantage in this respect, and I think we would have lost that opportunity to some extent if we had chosen a more modular approach."

"Automation of our ELISA processing with the Freedom EVOLyzer has been extremely helpful in meeting our customers' needs and expectations, particularly for large-scale projects. For example, we had a study running last year where we had to analyze 8,500 samples for a certain insulin derivative. Although it would have been possible to do



The Freedom EVOLyzer represents a validated solution for ELISA processing

this manually, we would have been concerned about higher rates of errors and deviations, and the turnaround times would also have been much longer. Using the Freedom EVOLyzer we were able to analyze 300 to 400 samples a day – up to 3,500 samples a week – which simply would not have been possible previously."

To learn more about the Freedom EVOLyzer, visit www.tecan.com/freedomevolyzer

To find out more about MLM Labs, go to www.mlm-labs.com



Use of disposable tips virtually eliminates the risk of cross-contamination