Customer Story: DKMS LIFE SCIENCE LAB

"High-quality products and superb service make Analytik Jena an excellent partner for us."

Michael Brehm, Laboratory Technology and Automation
DKMS LIFE SCIENCE LAB, Dresden

Challenge

- Automation of new method for CMV analysis
- Processing of 6,000 samples per day
- Ensuring the processing of 1,000,000 samples per year

Solution

- Customized automation system
- The core element is a CyBio FeliX pipetting platform
- Tailored service and support

Benefits

- Flexible, precise, and scalable
- Ergonomic and efficient workflow
- Solution-oriented service and support

How DKMS LIFE SCIENCE LAB Supports the Fight Against Leukemia Using New Processes and Automation

DKMS LIFE SCIENCE LAB relies on a unique CMV testing method and flexible automation solutions in order to support the finding of the right stem cell donors for leukemia patients.

DKMS Life Science Lab

Working with DKMS LIFE SCIENCE LAB

DKMS LIFE SCIENCE LAB required an automated solution to determine the cytomegalovirus (CMV) status of 6,000 donor samples each day. Analytik Jena was commissioned to develop a tailor-made concept to meet these needs. The finished solution is an automated facility with systems from Analytik Jena, as well as other integrated third-party equipment. Its core component is the CyBio FeliX, a flexible, modular pipetting platform that was integrated in the CMV workflow in a 96-well version.

Ergonomic aspects were also included in the design; the layout of the systems, easy access for users and service technicians to all components, meticulously devised provision of liquids, and easy usage of the hardware and software were accordingly designed for long-term efficient operation. After the successful validation of the first automation solution, a second one was implemented in order to ensure the desired sample throughput of 1,000,000 samples per year.

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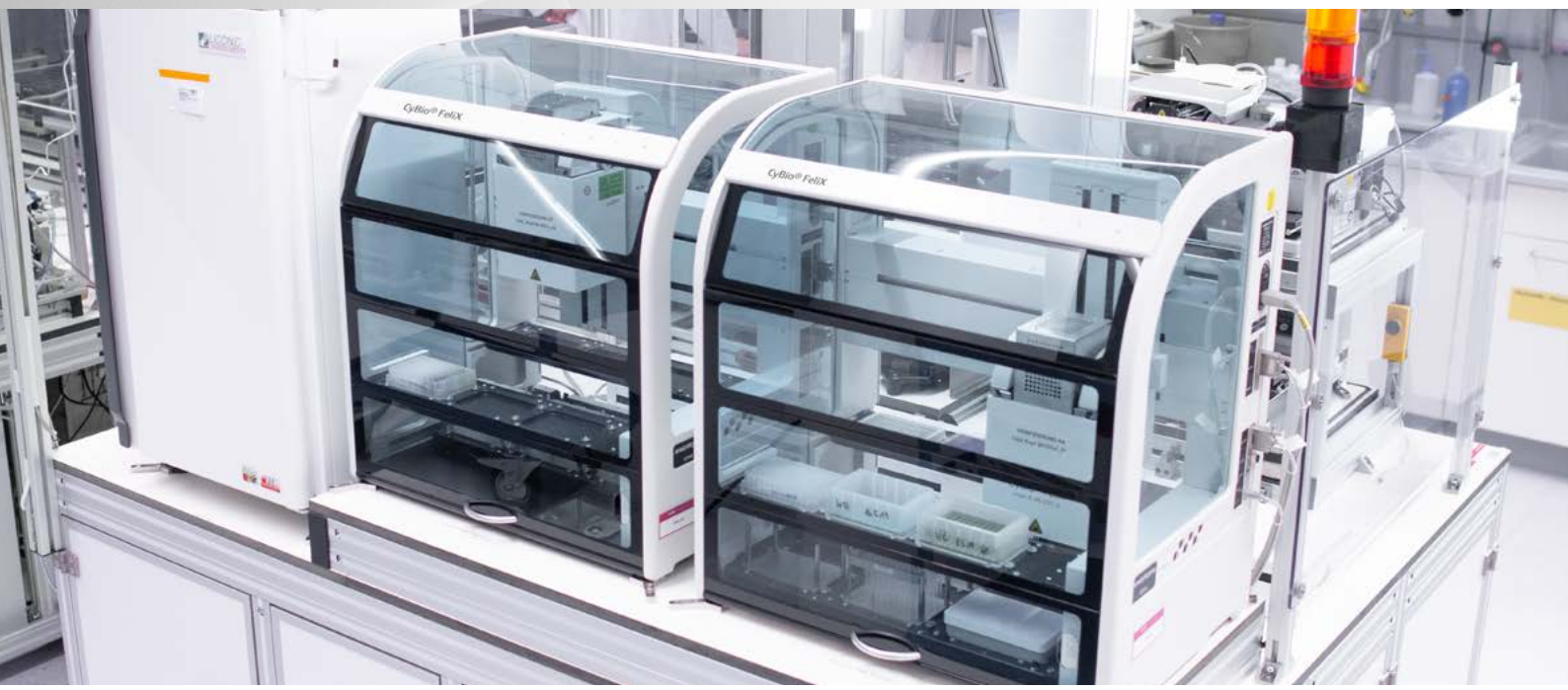
Liquid Handling & Lab Automation



Decision Factors

- High-performance automation solution, custom-fit to meet customer requirements
- Scalability for future increases in throughput
- System flexibility and ergonomics to ensure efficient operation
- Quick, solution-oriented service and support

The Story behind it

DKMS LIFE SCIENCE LAB developed a new method for determining the CMV status of a potential stem cell donor based on samples taken with buccal swabs inside the cheeks – a new benchmark in CMV identification, as this was previously only possible with blood samples. This resulted in a sharp increase in the number of CMV analyses being performed. It was necessary to adapt the existing automation systems to scale up from previous 15,000 samples per month to 100,000 per month and at the same time, ensure the highest level of quality – an enormous challenge.

Why Analytik Jena was selected

DKMS LIFE SCIENCE LAB plans the equipment for each process step in the analysis workflow redundantly and selects the optimum system for the respective purpose. This is important to ensure a smooth workflow and to be able to compensate for any malfunctions. The systems must also be flexible, i.e., they must be capable of being integrated into an existing systems environment and be easily operable and adjustable by the user. Not only is the performance capability and flexibility of the utilised equipment decisive for DKMS, but the service delivery of a manufacturer also plays a key role in the decision-making process. A high-throughput system, such as that of DKMS LIFE SCIENCE LAB, must operate continuously. If there is a malfunction or even a failure, the registration process is delayed. In the worst case, this would mean that not all parameters of potential stem cell donors that are relevant for the transplantation can be analysed. Quick response times from the manufacturer and solution-oriented service are therefore crucial. Analytik Jena was convincing in every way.

About DKMS LIFE SCIENCE LAB

DKMS LIFE SCIENCE LAB in Dresden genotypes thousands of samples from potential stem cell donors each day and creates detailed profiles of them for the DKMS global donor data base. The laboratory has set new standards in high-throughput genotyping and also offers its experience to other organisations in this field around the world.

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