

A RECIPE for success



Tecan and RECIPE have worked together to automate ClinMass® LC-MSMS Complete Kits* for the analysis of vitamin D and immunosuppressants on a Freedom EVO® platform, entering into a co-marketing agreement to help meet the demand for high throughput sample preparation for mass spectrometry.

RECIPE Chemicals and Instruments GmbH, based in Munich, Germany, was established in 1982 and has grown to become one of the leading producers of HPLC and LC-MSMS *in vitro* diagnostics (IVD) kits. With clinical laboratories increasingly turning to high throughput LC-MSMS analysis, there was a need for more rapid sample preparation techniques. Recognizing this, RECIPE sought to automate sample preparation for mass spectrometry, initially focusing on its immunosuppressant and vitamin D kits, as these are particularly high throughput assays in the clinical laboratory. Therapeutic drug monitoring of immunosuppressants is crucial for transplant patients, helping to ensure the long-term viability of a transplanted organ, while the incidence of vitamin D deficiency, which is associated with many chronic conditions such as rickets in children and osteomalacia in adults, is on the increase. Dr Johannes Engl, R&D specialist for the vitamin D assay, explained: "We developed the ClinMass LC-MSMS Complete Kit for 25-OH vitamin D2/ D3 in response to strong demand from clinical laboratories which were increasingly moving from HPLC to LC-MSMS. The assay is quite straightforward, involving the addition of either serum or plasma samples to a 96-well

microplate containing a precipitation reagent and control standards. After shaking and ambient temperature incubation, the samples are centrifuged and the supernatant analyzed by LC-MSMS. However, when performed manually, it is time consuming; automation was clearly the way forward."

Silvia Baecher, R&D specialist for the immunosuppressant assay, agreed. "Like vitamin D analysis, there has been an increase in the number of samples received by clinical laboratories for therapeutic drug monitoring of immunosuppressants. Throughput is important, but because you are monitoring treatment there is an even greater need to maintain chain of custody and process security than with vitamin D. The protocol for the immunosuppressant kit is almost identical to vitamin D – except that homogenized whole blood is analyzed rather than plasma or serum – and, with careful choice of mass transitions, cyclosporine A, tacrolimus, sirolimus and everolimus can be simultaneously monitored by LC-MSMS."

With such a clear need to move from manual to automated sample preparation, RECIPE chose a Freedom EVO equipped with an eight-channel Liquid Handling Arm. Johannes commented: "Transfer of our existing manual vitamin D and immunosuppressant assay protocols onto the Freedom EVO proved quite straightforward; minimal modifications were required. We received very good support from Tecan to help us become familiar with the system and discover its capabilities, learning to build our own protocols. Samples were analyzed both

manually and using the automated procedures, and the results compared really well. The big advantage of automating the assays on the Freedom EVO is speed; the automated protocols are about three times faster than the manual procedures, which allows significantly greater sample throughput. We also benefit from enhanced reproducibility and sample security. The potential for manual errors is removed, and the option to include a barcode reader offers traceability, which is crucial for the clinical environment. In addition, scientific staff are freed to perform more technical tasks in the laboratory."

Flexibility was another key issue, as RECIPE plans to automate more of its assay kits. Johannes continued: "We know that flexibility is important to our customers, and the Freedom EVO offers many possibilities. It is a very good instrument and you can integrate modules – centrifuge, plate readers – for almost anything you want to do. It also offers a choice of disposable or fixed tips, and we evaluated both with our assay kits. The results were very good, with no sample carry-over detected."

Dr Stefan Plank, Head of PR at RECIPE, concluded: "After just a few months, the automation project has been so successful that we have entered into a co-marketing agreement with Tecan. Our expertise in developing LC-MSMS assay kits will now be complemented by Tecan's years of experience in laboratory automation, allowing our customers to benefit from greater throughput, and improved reproducibility and process security."

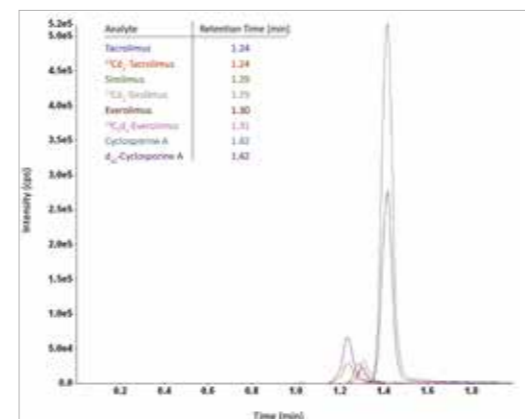
To find out more about Tecan's LC-MSMS sample preparation solutions, visit www.tecan.com/lcms

To find out more about RECIPE, visit www.recipe.de

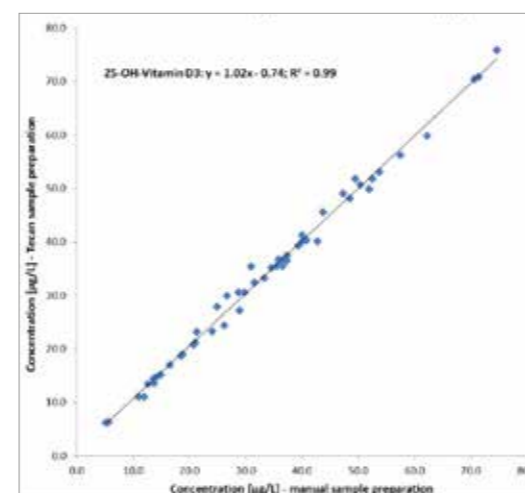
* Not for sale in USA



ClinCal® Calibrators and ClinChek® Controls offer reliable calibration and quality control



Chromatogram of an immunosuppressant analysis



Correlation between manual and automated preparation of vitamin D samples



Cornelia Kegele, Head of Group Branding and Marketing Communications

Leading the debate

How a company is perceived as a brand is a sum of all its actions; not just its products or services, but also how it interacts with individual customers and the wider scientific community. Your brand influences how you connect with others, becoming an important 'touch point' to drive communication with researchers and organizations across your markets.

Laboratories in the life science sector want to work with trusted partners who can help to 'shape their labs' by delivering the expertise and solutions they need. Scientists believe in results, proven data and their peer groups, and choose brands that reflect their own vision and goals. In order to build a brand effectively, customers need to be able to associate your company with values and a promise, which should be communicated in your own unique style. This differentiates you from your competitors, bringing additional value to the business and acting as a driver of future success.

Emotionally engaging messaging and exciting, relevant content – with a good balance of brand and product marketing – make for a healthy communications mix. In the future, companies will have to work harder to get the attention of their customers, but there's no shortcut to success. What kind of communication will make people stop and read? To stand out from the crowd, you need to nourish your brand by developing products and services that perform well, communicating your world in an interesting way, and letting your customers tell your story.

We hope you enjoy the new look Tecan Journal!

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