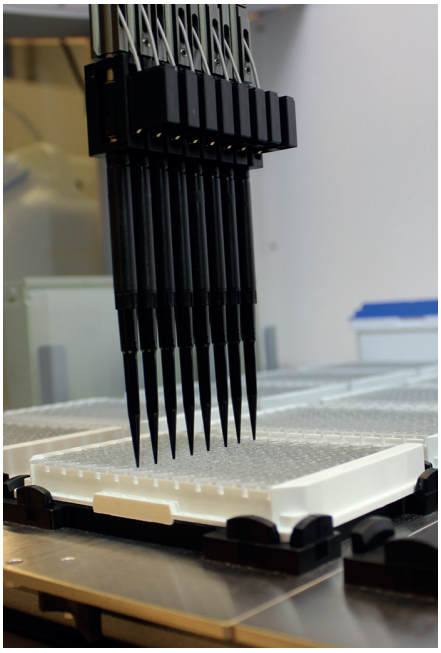
Faster food testing

The Institute for Product Quality, based in Berlin, has grown into a service laboratory that provides virtually any and every test required by the food market, from microbiology to pesticide testing. Using its expertise in food analytics and kit development, and with new, state-of-the-art equipment and facilities in the Berlin-Adlershof science park, ifp provides testing services and kits to the industry and public alike.

> “... ideal for food manufacturers who fortify their products with nutrients...”

The Institute for Product Quality (ifp) is an independent laboratory offering a complete range of services and testing products for the food, feed, water and pharmaceutical industries. Founded in 2004 and now employing 230 staff in its purpose-built facilities in Berlin, Germany, ifp provides comprehensive analysis of allergens, vitamins, genetically modified organisms, pathogenic agents, mold toxins and pesticide residues to food producers and caterers worldwide, as well as sterility testing and other microbiological services for the pharmaceutical industry. In 2013, ifp hit the headlines after detecting non-declared horse meat in frozen ready meals, provoking a media response that boosted its profile in the public eye. Today, householders are also turning to ifp to test the quality of drinking water.

Alongside its extensive service portfolio, ifp also develops and manufactures test kits for many food-related analytes, based on techniques such as real-time PCR, immunoassays, enzymatic assays and microbiological tests. The production facility naturally relies on automation to ensure both high throughput and reliability for its kit manufacturing processes, and has used Tecan liquid handling systems since operations began. Tobias Hein, head of marketing and sales at ifp, said: "We are producing large quantities of kits per lot, and automation is always the better option than having to produce thousands of kits manually. Reproducibility is very important for us and for our customers; significant differences, either within or between kit lots, would be a serious issue, and automation helps us to prevent this."



Reliable and reproducible liquid handling is vital for consistent assay kit manufacture

ifp has a suite of Tecan equipment on different production lines, including a HydroSpeed™ that washes microplates as part of the plate coating process involved in the production of the AgraQuant® Plus test kits for food allergens. Genesis™, Freedom EVO® and Fluent™ workstations are used to pipette reagents and controls as part of the manufacturing process of various kits. The most recent addition, a Fluent laboratory automation solution, was chosen to increase production of ifp's VitaFast® microbiological kits, as Victoria Bode, VitaFast production and R&D specialist, explained: "VitaFast is a ready-to-use test kit devised for the microbiological detection of all water-soluble vitamins and selected amino acids. The test kit contains all the required reagents – standards, media, and a microplate containing specific micro-organisms – making it remarkably easy to use. As it is microplate-based, this fast microbiological method can be easily automated, and is ideal for food manufacturers who fortify their products with nutrients and need a precise method for performing batch controls."

"We chose the Fluent system for the production of VitaFast kits because we wanted to be able to increase our batch size. The high on-deck capacity of the platform – up to 47 microplates with our current configuration – means that we have been able to more than double the number of plates per run. It is also very quick and intuitive to use; new operators find it incredibly easy to learn, and we were able to use it in production just a day after it was installed!"

From left to right, Nicole Menzel, Victoria Bode and Wiebke Hammers

"Thanks to the workstation's rapid liquid handling capabilities, we can now dispense small volumes of bacterial solutions into each well of the test microplates much faster than was previously possible, saving up to 20 minutes per run. As it does not need to be monitored during operation, staff are also free to walk away while it is running. This allows them to perform other work sooner than would otherwise be possible, further increasing productivity."

To find out more about Tecan's automation solutions, visit www.tecan.com/fluent

To learn more about the Institute for Product Quality, go to www.produktqualitaet.com