

Analysis of Biomolecules with Fluorescence Spectroscopy in Solution

The German R&D innovator *fluIT Biosystems GmbH* has revolutionised the market with a niche product: *ConSense™*, an analyser for measuring and quantifying concentrations and interactions of biomolecules, is a breakthrough research tool for life science industry.

fluIT Biosystems GmbH originated as a spin-off from the Fraunhofer Institute in the German town of Sankt Augustin in 2006. Focussing the development of analysis systems and analytical services, the innovation-driven company has established itself as a

as Dr. Sebastian Giehring, Managing Director, tells us in our interview.

With ten highly qualified members of staff on its payroll, fluIT Biosystems has the necessary know-how and expertise to carry out in-depth research into



Leading the company to entrepreneurial success
Dr. Sebastian Giehring (left) and
Dr. Thomas Kirner

valuable partner to life science enterprises home and abroad. *“Our research and development work is carried out on the basis of advanced stochastic fluorescence spectroscopy,”*

this technology and supply reliable analysis systems with single-molecule sensitivity that surpass the competitors’ products. The *ConSense™* analyser, which is the flagship product,



has been specifically developed to measure concentrations, interactions and aggregation rates of biomolecules in solutions. Working on the basis of fluorescence labelling and containing a unique confocal reader unit for a high level of sensitivity, it ensures that detection limits in the sub-nanomolar

concentration range are achieved. The *ConSense™* analyser is capable of detecting and quantifying interactions of antibodies, proteins, peptides and small molecules in solutions regardless of the molecule dimensions; the only requirement is that one binding partner carries a fluorescence label. While traditional antibody and protein quantification is a time-consuming process, the *ConSense™* analyser generates results within a minute.

“Fluorescence spectroscopy is used, for example, in virus detection, where it is capable of measuring extremely low concentrations,” explains Dr. Giehring. In aggregate detection of biomolecules, for example when it comes to proteins and antibodies, the *ConSense™* is a reliable process control method. Providing easier sample



State-of-the-art stochastic fluorescence spectroscopy
The *ConSense™* analyser

handling and shorter development times for new test systems (assays) than traditional methods, fluiT Biosystems' analysis systems are mainly utilised for the precise characterisation of biomolecules and their interactions.

Manufactured in Germany, the ConSense™ is dispatched to customers worldwide through a distribution network. Moreover, fluiT Biosystems GmbH

provides comprehensive user training during installation. The company makes sure that by the time the systems are up and running, the system operators have the know-how necessary to handle them. Furthermore, the company supports customer with developing individual assays and consequently, helps them generate added value and boost their overall performance in the life science market.



fluiT Biosystems GmbH will soon be moving into new facilities at the high-tech cluster MikroFORUM in Wendelsheim



fluiT Biosystems GmbH at the Analytica 2008 trade fair in Munich

In a bid to strengthen its position in the market and provide a valuable contribution to the pharma industry worldwide, the company has already finalised its new round of financing. Moreover, fluiT Biosystems GmbH will

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