

More than skin deep

Symrise is using an HP D300 Digital Dispenser to improve throughput and reproducibility in its cell and molecular biology laboratories, offering more reproducible results for cosmetic active ingredient testing.

Symrise AG, based in Holzminden, Germany, is the world's fourth largest manufacturer of fragrances and flavors. The Company's Scent and Care Division develops, produces and markets a wide range of fragrances and cosmetic active ingredients, specializing in innovative substances and technologies which confer efficiency or other additional benefits to its customers' products, such as skin toning, multifunctional antimicrobial activity and sun protection, as well as active botanicals and products for sensitive skin.

As part of the Company's rigorous testing and validation program, the Innovation Life Essentials group performs a broad spectrum of cell-based assays, using skin-derived keratinocytes, melanocytes, fibroblasts and adipocytes to identify the most effective and safe compounds for inclusion in cosmetic products. Imke Meyer, Manager Cell Biology, at Symrise, explained: "We are predominantly a flavor and fragrance company, but the activities of our Life Essentials team are well recognized as the major differentiator within our global industry. We work with a broad

range of cutaneous and subcutaneous cell types, developing cell-based assays to identify and characterize novel active ingredients for inclusion in our customers' cosmetic products, primarily relying on low or medium throughput 'intelligent' screening strategies, predominantly using manual techniques."

"We became interested in the HP D300 Digital Dispenser after seeing the system demonstrated at an exhibition in Hamburg. Frequently, the compounds involved in our screening trials are in limited supply, and we could clearly see the potential of this instrument to eliminate the need for the wasteful serial dilutions. Direct digital dispensing into the assay plate is also faster and more accurate than manual pipetting, helping to improve the reproducibility of results while improving our throughput."

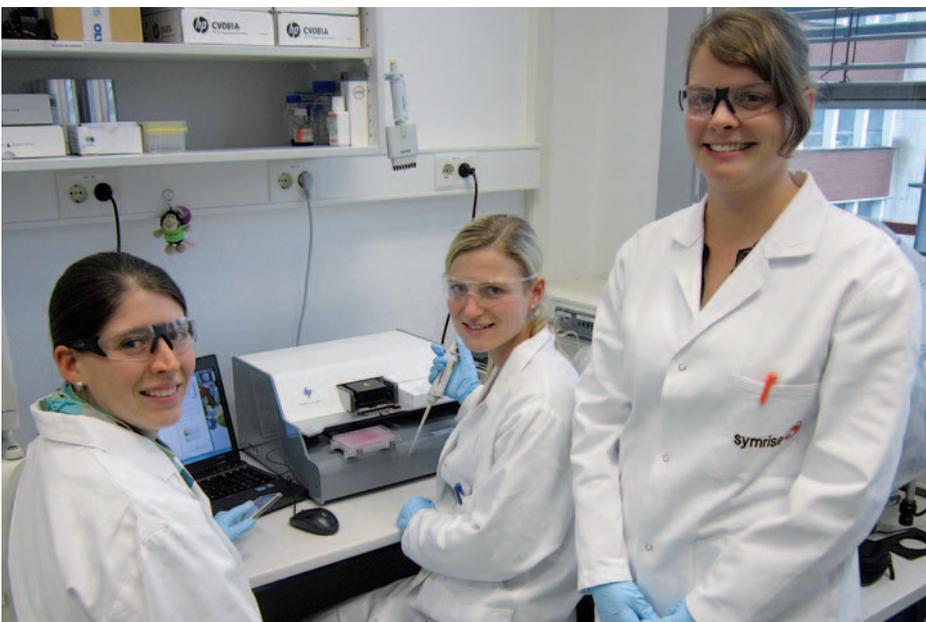
"We purchased our system in early 2012, and have already seen the benefits for a variety of assays. For example, in a recent cytotoxicity trial we were able to switch from performing an IC_{50} determination based on four different

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concentrations in triplicate, to a single series of measurements at eight different concentrations, thanks to the improved reproducibility offered by direct titration. This not only results in better data, allowing more accurate calculation of exact inhibitory concentrations, it also has significant cost benefits in terms of the quantity of cells, reagents and consumables required per assay. Similarly, we have been able to reduce the number of replicates required for several of our other assays, and the system's intuitive software is certainly encouraging us to use it wherever possible."

To find out more about the HP D300, visit www.tecan.com/digitaltitration

To learn more about Symrise, visit www.symrise.com



Left to right: Mirjam Knupfer, Julia Betke and Ann-Christin Weseloh using the HP D300 Digital Dispenser

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