



Improving dispensing of a nanoparticulate formulation in manufacturing

Dispensing

Biotech Fluidics reports on the successful development and implementation of a pioneering combined **micro flowmeter** and **degasser set-up** to **improve dispensing** of a **nanoparticulate formulation** for a leading medical technology company.



Image caption: Microflowmeter / Degasser set-up used in pharmaceutical formulation dispensing application

To ensure the accuracy of spray coating

of the pharmaceutical formulation onto a medical device the CMO turned to Biotech Fluidics because of their experience in creating turnkey fluidics systems and expertise in degassing.

Optimized to operate

over the 100 nl to 80 μ L/minute flow range, with an unmatched high resolution of 1 nl / minute, Biotech Fluidics Micro Flow Meter is the perfect tool for monitoring the accuracy and consistency of low volume liquid dispensing.

Biotech Fluidics project manager Robin Oz

commented “Flowmeters are available for monitoring lab scale processes but are not optimized for monitoring



micro and nanoscale liquid volumes. As a non-invasive monitoring device, offering real time flow data, our Micro Flow Meter was the perfect choice for ensuring the accuracy of spray coating the valuable pharmaceutical formulation with high precision. While our Micro Flow Meter is calibrated as standard for aqueous solutions, we collaborated with our customer to develop a robust flowmeter calibration in acetone – the solvent used to spray coat the pharmaceutical formulation in the manufacturing process.”

Dr. Oz added

“Formation of microbubbles, compromising the dosing precision, was an issue for the process. This was addressed by introducing a high-performance degasser into the process line. With an internal volume of only 25µl – our DEGASi® Plus Nano inline degasser is optimized for degassing fluid flows in the range up to 100 µL/minute making it an ideal tool for the job”.

He concluded

“Having developed and demonstrated the reliable operation and monitoring accuracy of the microflowmeter / degasser set-up for use in this pharmaceutical formulation dispensing application our client has now placed an order for 32 systems”.

For further information on the technology behind this development please visit www.biotechfluidics.com/products-sensors-flowmeter/ and www.biotechfluidics.com/products/degassing-debubbling/degasi/degasi-plus-nano/. To discuss development of a liquid dispensing monitoring system please contact Biotech Fluidics on + 46 300 56 91 80 / + 1-612-703-5718 / info@biotechfluidics.com.

Biotech Fluidics

is a leading supplier of fluidic system solutions, liquid transfer components, degassing systems, and innovative laboratory technology to instrument developers, manufacturers, and distributors all around the world. The company’s mission is to empower its customers by designing and assembling unique products, being a reliable partner, offering first-class service, in-depth knowledge, and offering advanced technical support for all the items it provides. More information - www.biotechfluidics.com

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