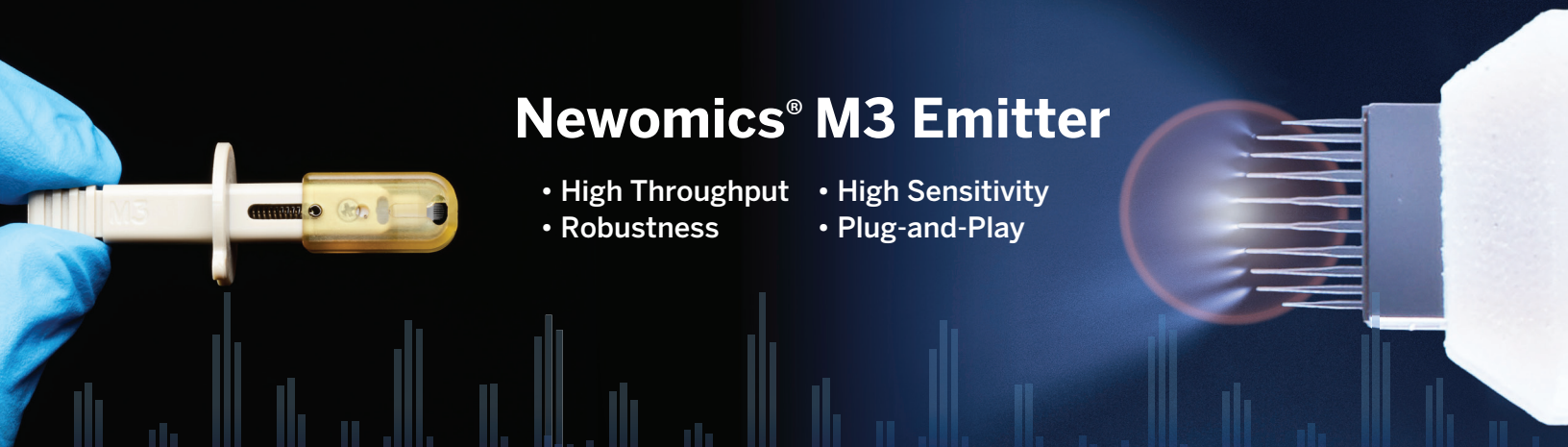


Multiply Your Mass Spectrometry Performance

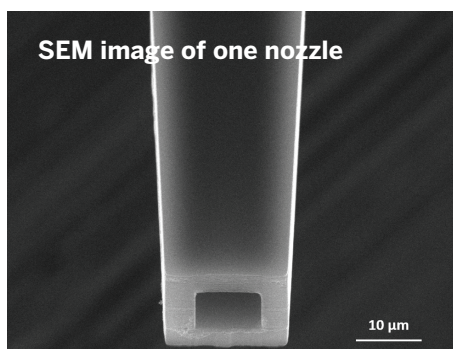
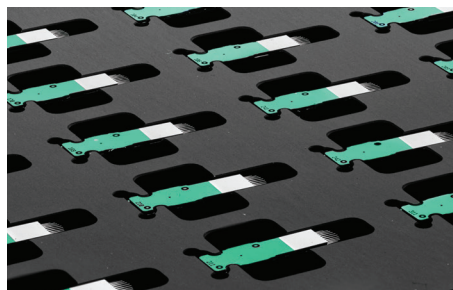


Newomics® M3 Emitter

- High Throughput
- High Sensitivity
- Robustness
- Plug-and-Play

Microflow LC - Nanospray MS

Award-winning multinozzle emitter technology empowers mass spectrometry through integration and miniaturization. The M3 emitter has multiple nozzles working together to split a single microflow stream evenly into multiple nanoflows, thereby dramatically enhancing the ionization efficiency to achieve unprecedented sensitivity, robustness, and throughput.

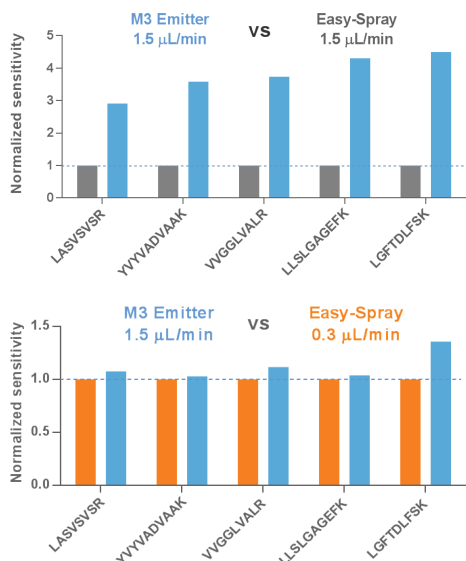


Catalog #	Product
SKIT-T01	Newomics® Starter Kit for Thermo Fisher Nanospray Flex Ion Sources
E8N10MU01	Newomics® M3 Emitters, 10 µm I.D. – 8 nozzles
Nozzle Number	8
Inner Diameter (ID) of Nozzle	10 µm
Outer Diameter (OD) of Nozzle	20 µm
Internal Swept Volume	10 nL
Flow Rate	1 – 10 µL/min
Connection Fittings	Face seal, fingertight 10-32 threaded (Nanoviper / MarvelX / MarvelXACT / ZenFit / SecurityLink / VICI Cheminert C360IZR1)

Application Note 1: Microflow LC - Nanospray MS for Bottom-up Proteomics

M3 EMITTER AT MICROFLOW DELIVERS NANOFLOW SENSITIVITY

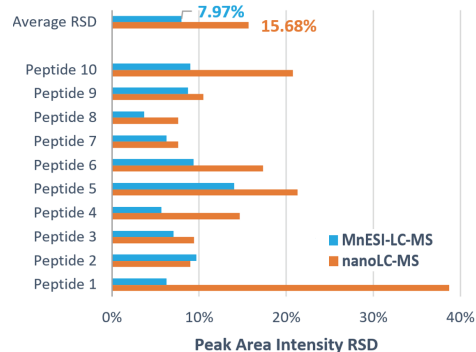
Operating with 150 μm I.D. column at 1.5 $\mu\text{L}/\text{min}$, M3 emitter achieves ~3-5-fold sensitivity increase compared to a conventional single nozzle emitter (Easy-Spray) operating with the same column and flow rate. Moreover, M3 emitter at microflow rate demonstrates similar sensitivity to a conventional emitter operating with a nanoflow column (75 μm I.D.) at 0.3 $\mu\text{L}/\text{min}$.



Sensitivity comparison of different LC-MS platforms by performing PRM analysis of Promega peptide mixtures spiked in 200 ng HeLa digest on Lumos MS.

M3 EMITTER WITH MNESI-LC-MS DELIVERS BETTER ROBUSTNESS AND REPRODUCIBILITY OVER NANOFLOW LC-MS

25 injections of 1 μg human plasma digests are used to assess the robustness. Compared to nanoflow LC-MS, the average RSDs achieved by MnESI-LC-MS are around 50% smaller. Especially for those peptides eluted at low organic mobile phase (retention time < 20 min), MnESI-LC-MS achieves much lower RSD values than nanoflow LC-MS.

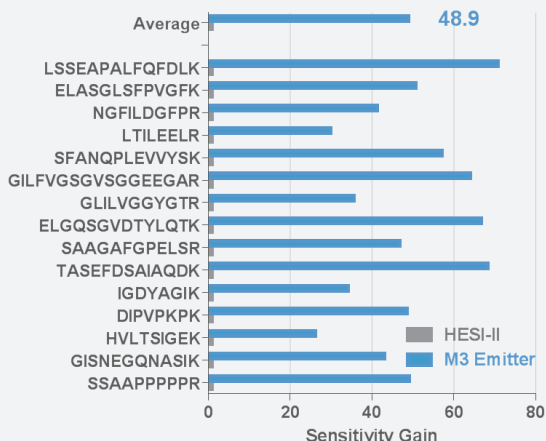


DDA analysis of 1 μg human plasma digests to compare peak area intensity stability between MnESI-LC-MS with M3 emitter and 150 μm I.D. column at 1.5 $\mu\text{L}/\text{min}$ versus nanoflow LC-MS with stainless steel emitter and 75 μm I.D. column at 0.3 $\mu\text{L}/\text{min}$.

Application Note 2: Microflow LC - Nanospray MS for Targeted Proteomics

M3 EMITTER ENABLES > 40X SENSITIVITY GAIN OVER HIGH-FLOW LC-MS

Microflow LC-Nanospray MS with M3 emitter delivers more than a 40-fold sensitivity increase when compared to conventional highflow LC-MS.



MNESI-LC-MS WITH M3 EMITTER ENABLES HIGH-FLOW ROBUSTNESS

300 injections of human plasma digests are performed to test robustness. MnESI-LC-MS with M3 emitter achieves the average peak area intensity RSD of 5%, without using an internal standard to correct for MS signal variability. In contrast, the peak area intensity RSD for the high-flow LC-MS is about 6% on average.

