EVOSEP

Whisper Zoom

Whisper™ Zoom drives scalable workflows

The methods are specifically designed for standardized and high-sensitivity applications, leveraging the unique properties of the Evotip Pure to facilitate efficient sample introduction and sensitive storage in preparation for LC-MS. The Whisper Zoom methods deliver cutting-edge performance while adressing the accelerating requirement for scalability with the introduction of the new Whisper Zoom 120 SPD method. This combined with the easy-to-use and robust Evosep technology have commoditized high-end LC-MS performance and made it available to all types of research areas.

Whisper Zoom is a combination of an optimized flow strategy and flow path, necessitating replumbing of two connections on the loop valve. Additionally, the analytical flow during the gradient has been increased from 100 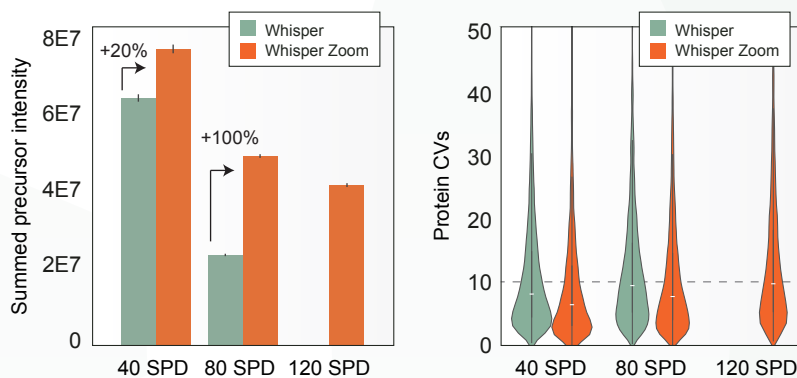nl/min to 200 nl/min to improve spray stability. These advancements have significantly improved the general performance and instrument-to-instrument stability, while also allowing for increased throughput. Whisper Zoom is available as 120 SPD, 80 SPD, 40 SPD and 20 SPD methods, and the performance is optimized for method-specific columns.

Highlights

120	80	40	20
New!	100% improvement	20% improvement	10% improvement

Significantly improved performance with Whisper Zoom

The refined flow strategy offers a more precise and confined sample delivery, which significantly improves the speed of sample delivery and overall sample recovery, to collectively improve the sensitivity. The performance of the new Whisper Zoom 40 SPD method exhibits a 20% improvement compared to the legacy method, alongside better precision in the data and a lower median coefficient of variation (CV). The new Whisper Zoom 80 SPD method gives a 100% gain based on the summed intensity of all identified precursors. The new and faster Whisper Zoom 120 SPD method yields a summed intensity even higher than the legacy Whisper 80 SPD method, albeit at a much faster throughput. Importantly, the high precision is maintained with median CVs below 10% making it a powerful method for sensitive and scalable analysis.
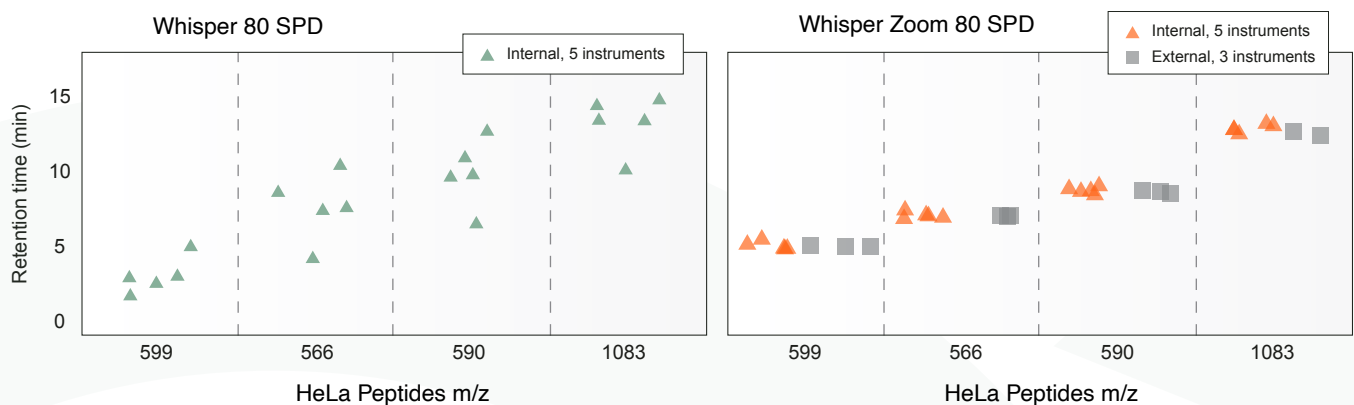

Figure 1: Comparison of the Whisper Zoom methods compared to legacy Whisper methods based on the summed precursor intensities and protein CVs from 5 ng loads. Samples were analyzed on a timsTOF Pro 2 (n=4).

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Unmatched robustness and reproducibility

The new Whisper Zoom methods set a new standard for enabling high-end technology for non-experts with few samples and sporadic use to ambitious analysis of large cohorts. This ensures that research-ers with all levels of expertise will benefit from the robustness and ease-of-use to achieve reproducibil-ity in high-end LC-MS proteomics.

While high performance and run-to-run reproducibility is a hard requirement for all types of experi-ments the additional complexity of setting up and maintaining multiple LC-MS instruments with decent inter-instrument reproducibility is challenging - even for experts. The Evosep One technology has solved this with a standardized offering, that combined with the new Whisper Zoom methods provides cutting-edge performance with unprecedented instrument-to-instrument reproducibility – even for non-experts. It is now possible to easily setup and maintain multiple instruments in the same lab as well as external labs to either share or compare data within or across projects.

The reproducibility was evaluated with Whisper Zoom 80 SPD on eight different instruments, five internally and three from external sites. While the intra-instrument reproducibility is 4.6 seconds, the inter-instrument reproducibility is 15.9 seconds which is an improvement of 85% compared to the legacy Whisper methods.

Figure 2: Improvement in inter-instrument retention time (RT) reproducibility of Whisper Zoom 80 SPD, internally (n=5) and externally (n=3). RT from four peptides were monitored from 5 ng injections (n=4).

Whisper Zoom availability

Whisper Zoom is available free-of-charge as a supplement to existing methods on the Evosep One. The plugin with the methods can be downloaded online through *www.evosep.com/support*

The Aurora Elite column (IonOpticks) is specified to use with the Whisper Zoom 40 and 20 SPD methods.
The Aurora Rapid75 column (IonOpticks) is specified to use with the for the Whisper Zoom 120 and 80 SPD methods.

Learn more about Whisper Zoom and discover how customers have utilized the benefits such as increased robustness, sensitivity and performance to scale their research.

The Evosep One instrument is for Research Use Only.