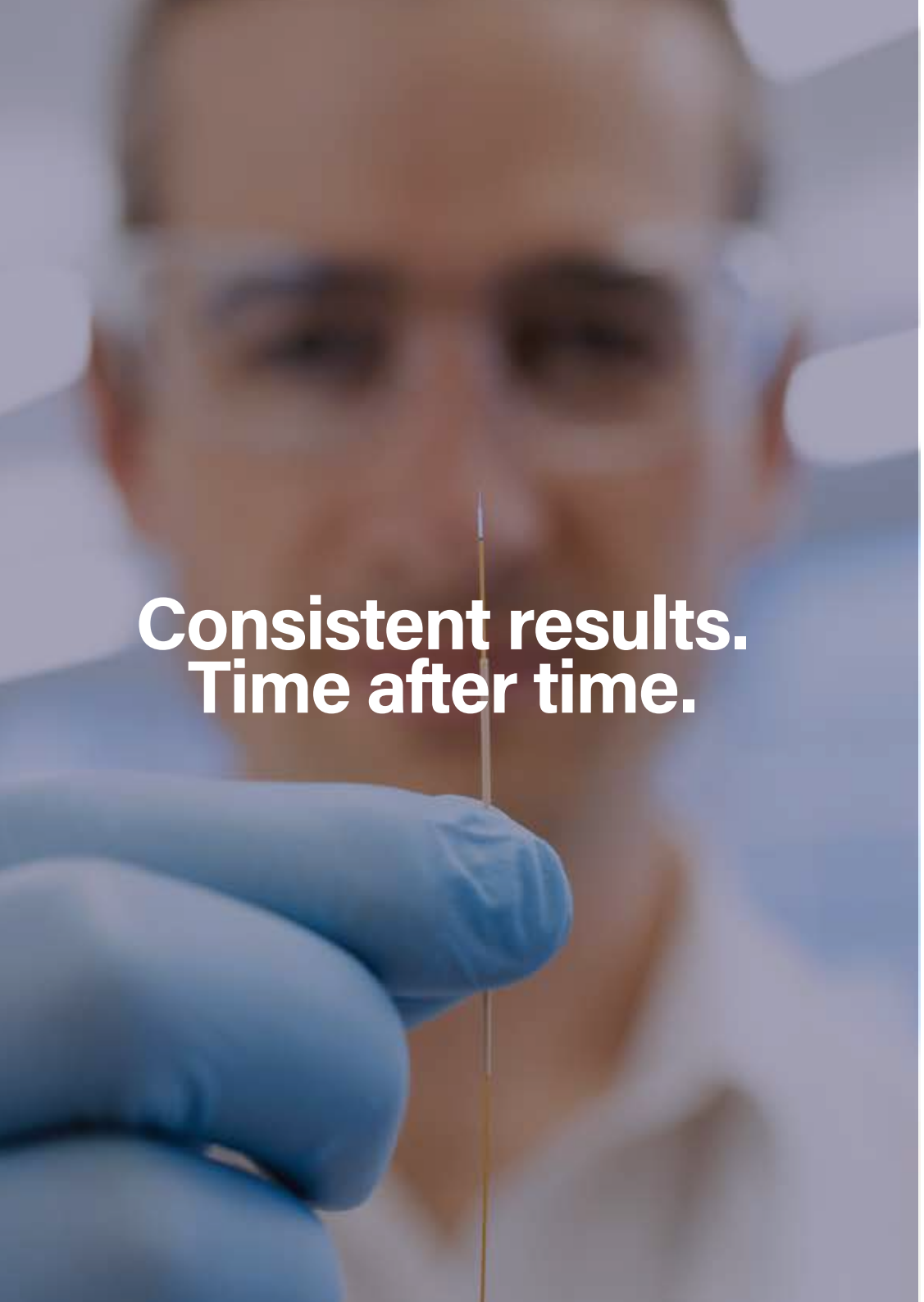
Maximum IDs.
Minimum peak widths.

Aurora Series
UHPLC Emitter Column

ionopticks

aurora SERIES



Consistent results. Time after time.

Introducing Aurora Series.

UHPLC columns.

Our revolutionary nano capillary columns utilise a novel manufacturing technique that is set to transform proteomics.

Developed at the Walter and Eliza Hall Institute (WEHI) and refined over several years of rigorous testing and iterative design, our columns are differentiated by two key technological advances: a unique column emitter design that enables maximum mobile phase velocity with no post-column dead volume; and our own nanoZero® technology that provides user friendly 'plug and play' connections with true zero pre-column dead volume.

Together, these features combine to maximise chromatographic efficiency and dramatically enhance performance, providing a best in class solution for peptide and metabolite LC-MS separations.

Aurora columns are currently available in 1.6µm C18, 150mm/250mm X 75µm and are compatible with a wide range of ion source configurations, including the Bruker CaptiveSpray source. The columns are supplied pre-packed with our high-resolution solid phase packing material and ready for use.

The most user-friendly columns on the market.

Aurora columns are designed and manufactured to remove all pre-column and post-column dead volumes, maximising the capacity of the chromatographic material to separate samples. These fittings eliminate the need for fiddly and time-consuming adapters, making Aurora columns the highest performing and most user friendly on the market.

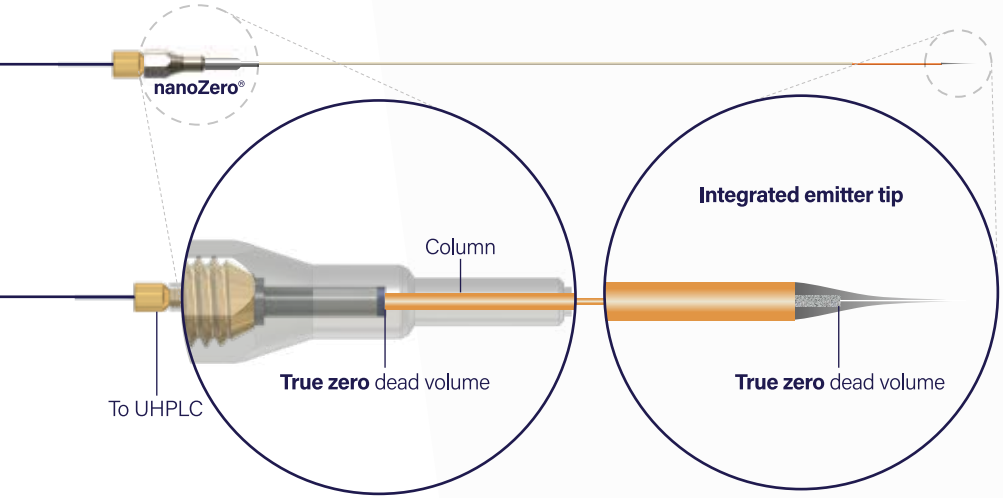


Figure 1 Aurora Series Emitter Column fitted with nanoZero®

More IDs from your sample

Increase your IDs while reducing your load and equilibration times

Get straight to the point.

Aurora series columns consistently deliver more identifications compared to longer columns from competitors.

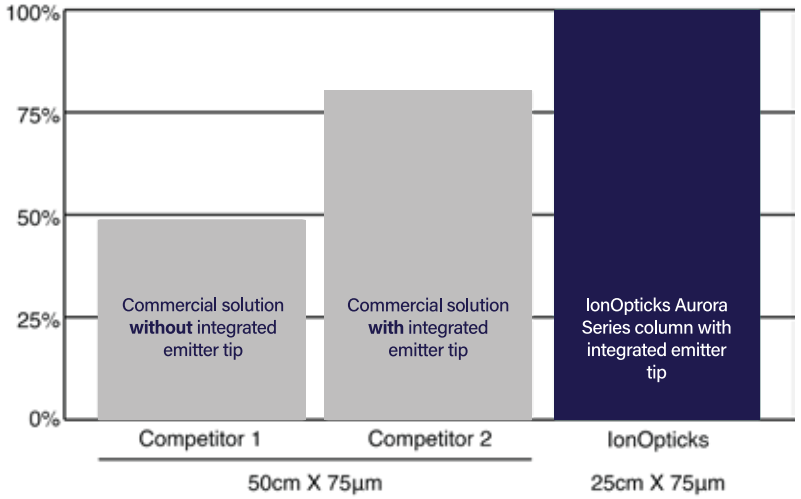


Figure 2 Results from a 1µg Hela cell tryptic digest using IonOpticks' Aurora series columns featuring an integrated emitter tip (25cm X 75µm) compared to currently available commercial columns either with or without an integrated emitter tip (50cm X 75µm). Samples were run on a Thermo Q-Exactive Plus.

Robust performance

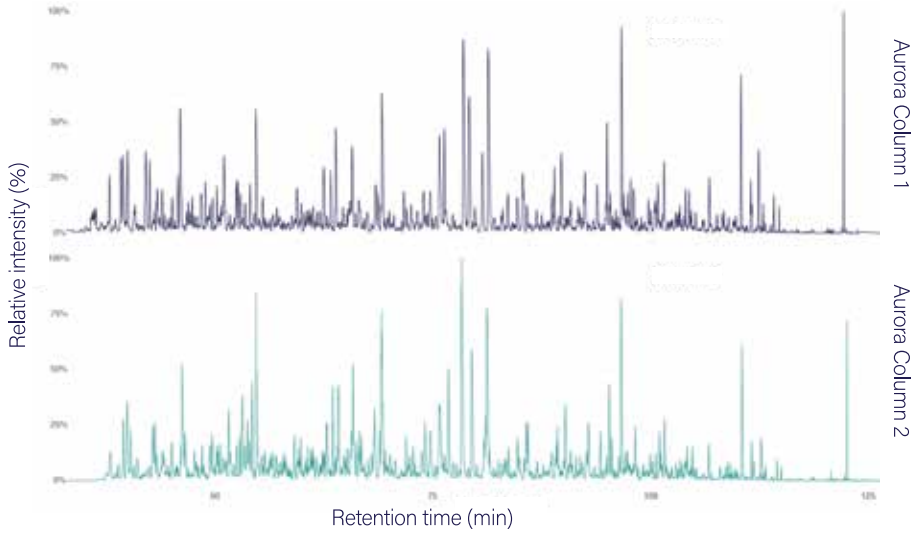


Figure 3 Base peak chromatograms of a 200ng Hela cell tryptic digest run on two separate 25cm columns from separate manufacturing batches. Samples were run on a 5% to 35%B 90min gradient at 400nl/min at 55°C, Thermo Q-Exactive. The results demonstrate consistent retention times and peak resolution between columns.

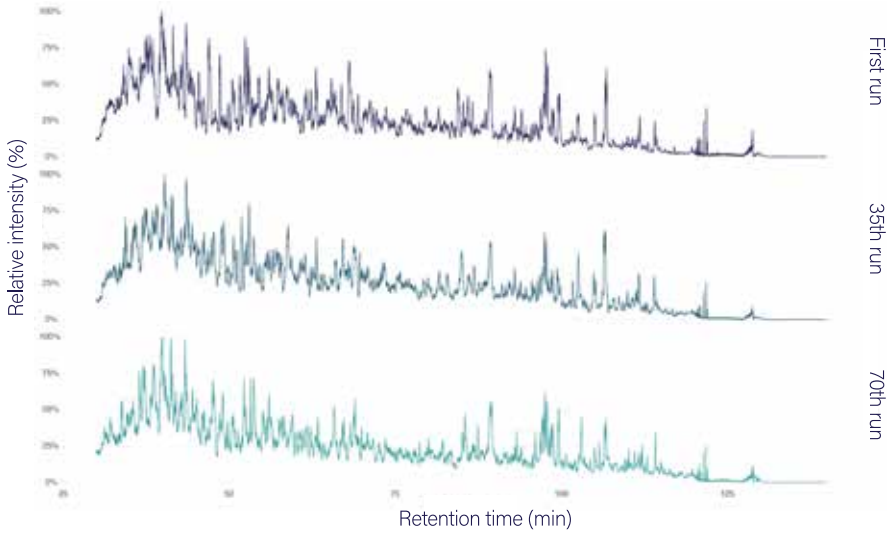
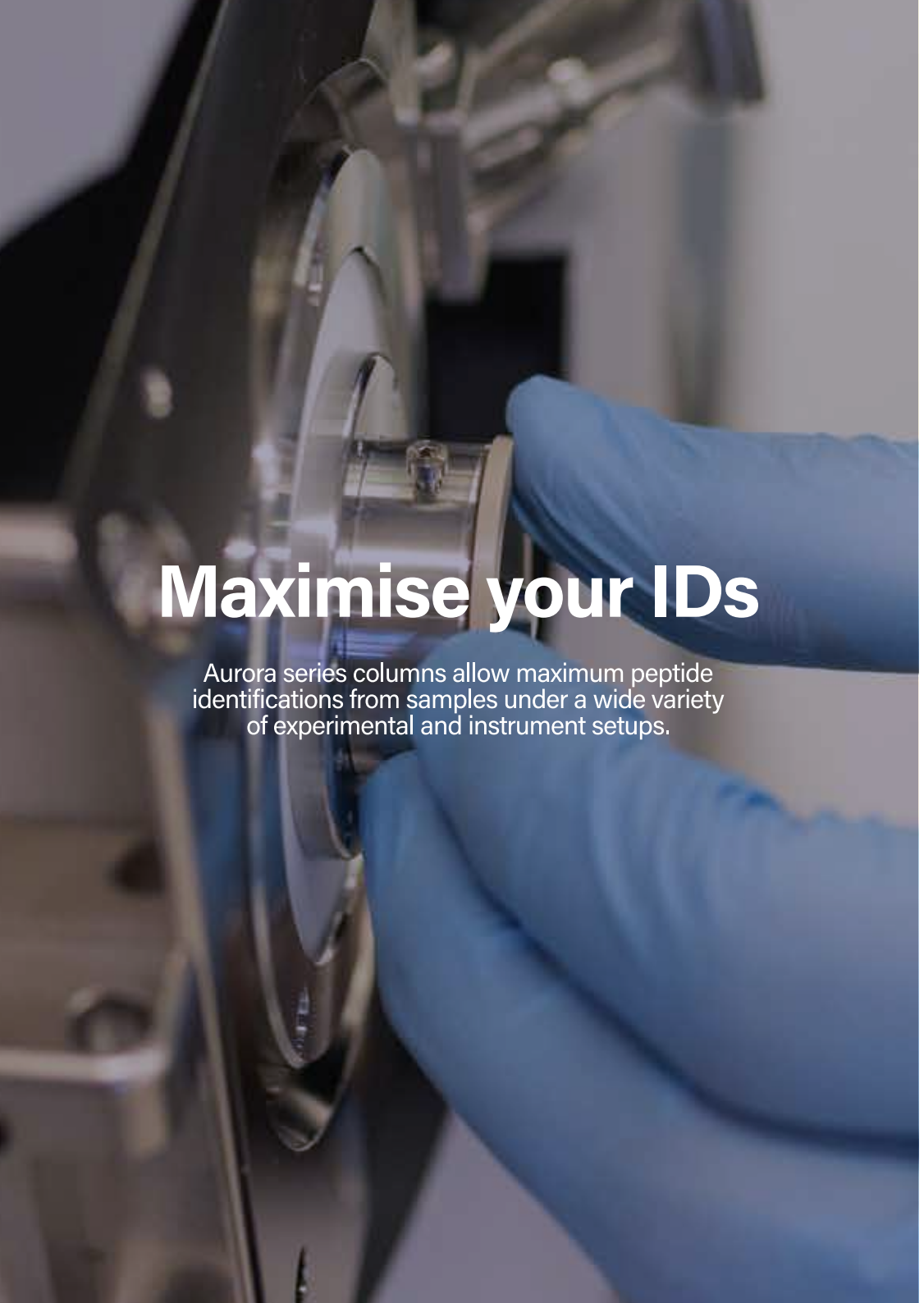


Figure 4 TIC of the first, 35th and 70th runs. 70 injections of 500ng phospho-peptide (TiO_2) enriched acute myeloid leukaemia cell tryptic digests were used to test the robustness and lifetime of the Aurora columns. Samples were run on a 25cm column, 5% to 35%B 90min gradient at 400nl/min at 55°C, Thermo Q-Exactive HF-X. The retention time and column resolution remained consistent across the course of the experiment.



Maximise your IDs

Aurora series columns allow maximum peptide identifications from samples under a wide variety of experimental and instrument setups.

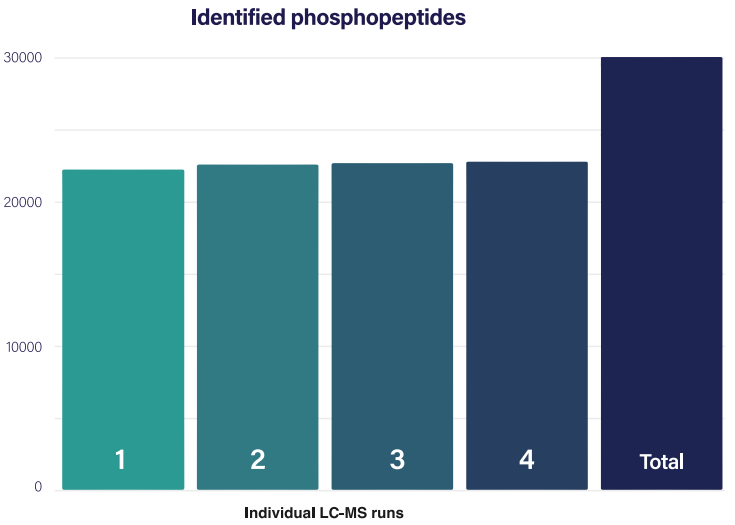


Figure 5A Identified phosphopeptides 500ng phospho-peptide (IMAC) enriched human acute monocytic leukaemia cell tryptic digests. Counts shown on the Y-axis represent the number of unique phosphorylated peptides identified across 4 replicate runs. Samples were run on a 25cm column using a 120min gradient at 400nl/min, Thermo Q-Exactive HF-X.

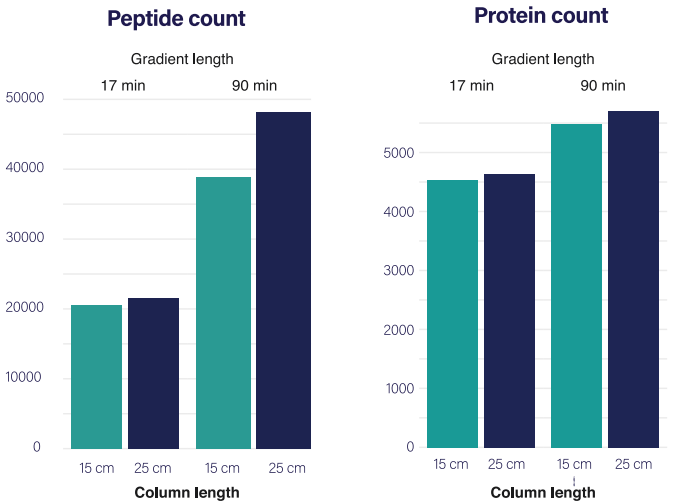


Figure 5B Identified proteins and peptides 200ng Hela tryptic digest was run using different gradient and column lengths. Counts shown on the Y-axis represent the number of unique peptides and proteins identified for each condition respectively, demonstrating a high number of IDs, even when using short gradients. Samples were run on a Bruker timsTOF Pro.

Lightning-fast peaks

A combination of our nanoZero® UHPLC fitting and packed emitter tip results in zero pre-column and post-column dead volume leading to minimum peak widths and maximum separation of samples.

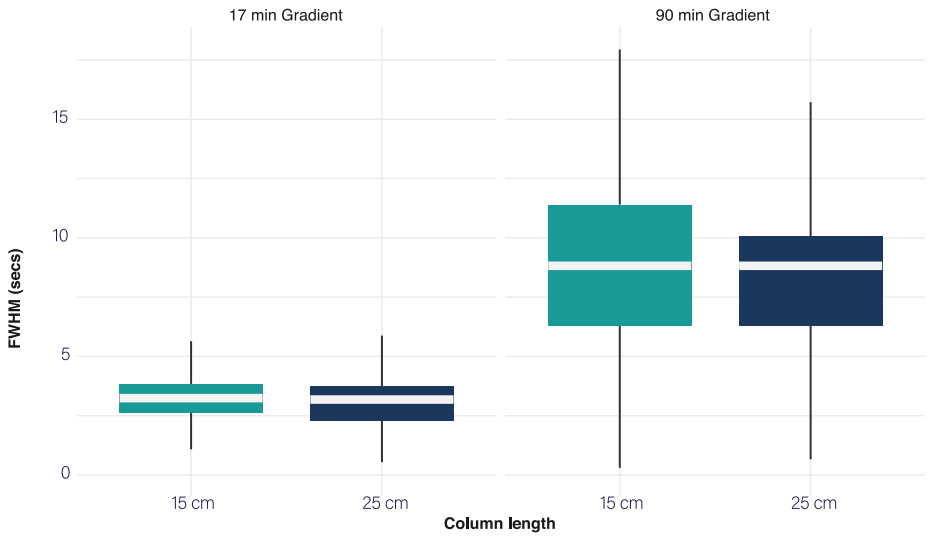


Figure 6A FWHM (seconds) boxplot from 200ng Hela tryptic digest using different gradient and column lengths. White line indicates median time.

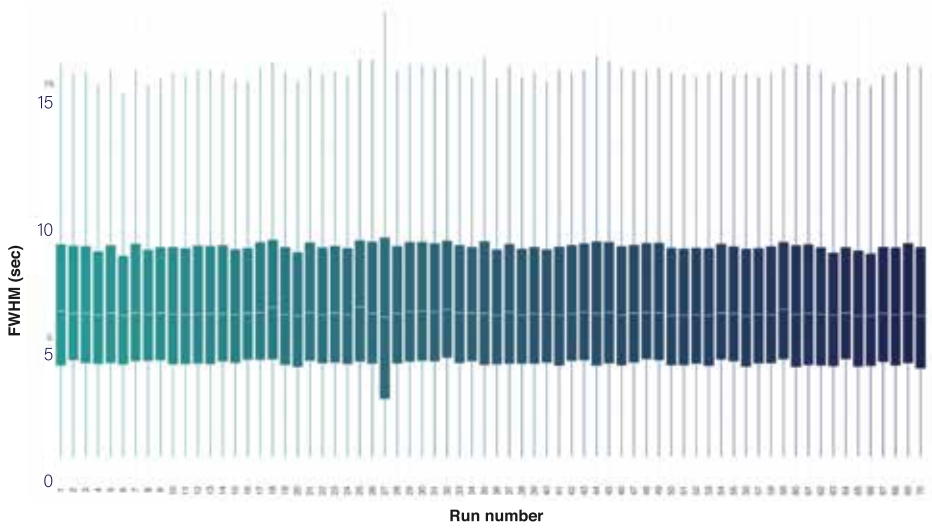
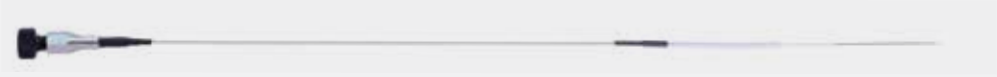


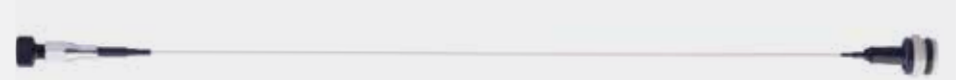
Figure 6B FWHM boxplot from 70 injections of 500ng phospho-peptide (TiO_) enriched samples on a 25cm column.

Aurora Series Products



Aurora UHPLC Emitter Column with nanoZero®

15cm (AUR2-15075C18A)
25cm (AUR2-25075C18A)



Aurora UHPLC Emitter Column with nanoZero® & Captive Spray Insert (CSI)

15cm (AUR2-15075C18A-CSI)
25cm (AUR2-25075C18A-CSI)

Product specifications

Column format	Analytical column
Column type	Reversed-phase
For use with	UHPLC
Length	150mm/250mm
Diameter	75µm
Pore Size	120Å
Max. pressure	1200 bar
Temp. limits	60°C (low pH)
Particle size	1.6µm
pH stability	1-8
Stationary phase	C18

Accessories

High-voltage connection cable
Compatible with Thermo Nanospray Flex ion source (HVCABLE01)

Earth cable
Compatible with Bruker CaptiveSpray ion source (HVCABLE02)

For user guides and application notes, please visit www.ionopticks.com/support

Gen 2 nanoZero® has arrived.

Our revolutionary plug & play fittings make connections a breeze.

High-performance packed emitter columns.

Innovative next-generation nano UHPLC columns that radically improve separation efficiency and sensitivity of mass spectrometry sample analysis.

Made in Melbourne,
Australia.

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