ionopticks

TECHNICAL NOTE 15 cm x 150 µm

Aurora® Elite™ capillary flow chromatography column for rapid and reproducible peptide analysis

The Aurora® Elite™ 15 cm x 150 µm column is perfect for faster separation, at higher flowrates, whilst maintaining reproducible and high resolution peptide separation.

Peak characteristics

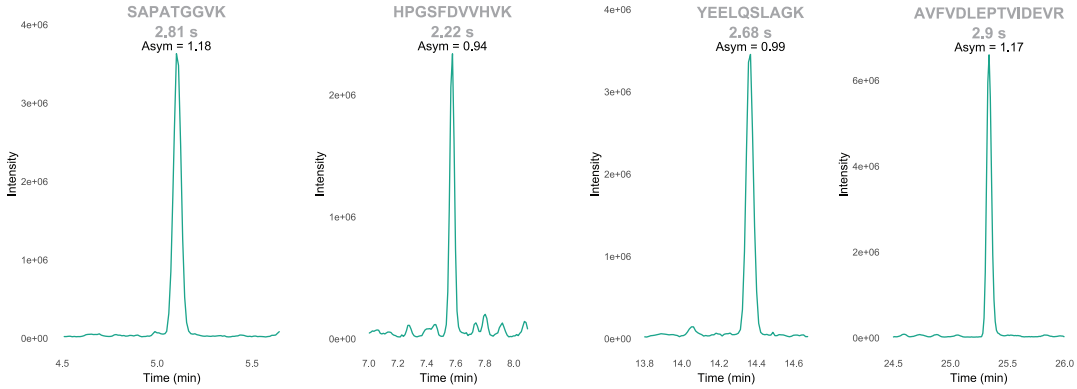

Figure 1: Example peaks were chosen across the 1.5µl/min 30 min gradient. All peaks show excellent FWHM and symmetry through the entire gradient.

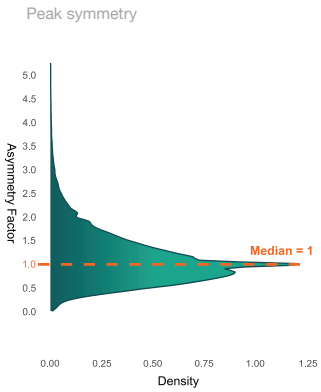

Figure 2: Asymmetry factors were calculated for all identified peptides, and plotted on a density plot. The Median asymmetry was equal the 1, indicating that a majority of peaks show a Gaussian distribution.

Reproducibility

CV by gradient and flow rate

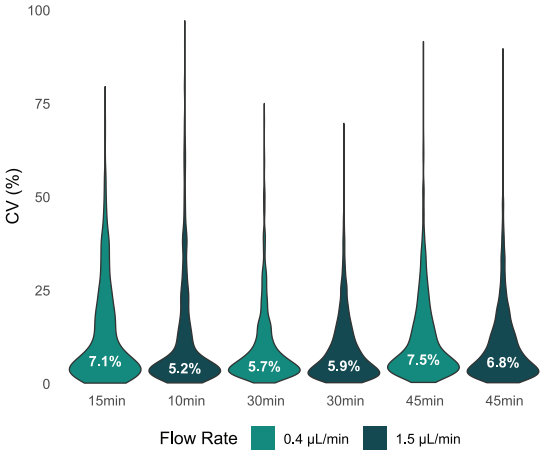

Figure 3: HeLa tryptic digest was run on an Aurora Elite 15 cm x 150 µm column. Gradients 10min, 15min, 30min and 45min were run at flowrates 0.4 ul/min and 1.5 ul/min (4 replicates). Coefficient of variations of protein intensities were calculated across runs within each condition. Resulting calculations show sub 8% median CV across all samples.

Resolution

FWHM by gradient and flow rate

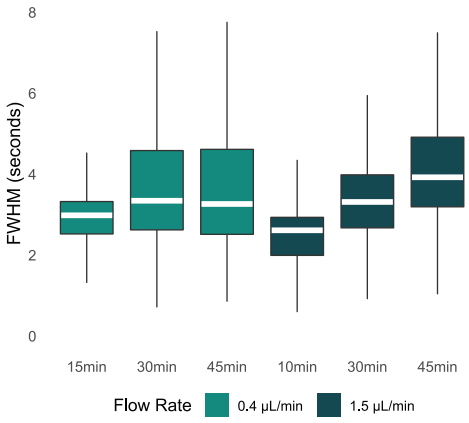

Figure 4: HeLa tryptic digest was run on an Aurora Elite 15 cm x 150 µm column at four different gradients and two flow rates. 10min, 15min, 30min and 45min, at both 0.4 and 1.5ul/min. Across all runs, the average FWHM is below 4 secs.

METHODS

100ng of HeLa tryptic digest was introduced on an NCP3200 Ultimate 3000 LC, separated on an Aurora® Elite™ 15 cm x 150 µm column and Bruker Impact II Mass Spectrometer. Solvents were 0.1% formic acid as solvent A and 99.9% Acetonitrile as solvent B. Capillary voltage was set to 1800V, m/z range 200-2000. With AutoMS/MS on, and cycle time 0.5sec.

READING

For futher resources and technical support, visit our Help Centre at **helpcentre.ionopticks.com**. To view other application notes, read the latest publications featuring Aurora Series columns, or view the full range of IonOpticks products, visit our website at **www.ionopticks.com**

<4 secs median FWHM at 0.4µl/min

<4 secs median FWHM at 1.5µl/min

<7.5% CVs Across replicates within each sample condition

Median asymmetry factor of 1 across all samples