Acquity UPLC® I-Class PLUS

ACQUITY UPLC I-Class PLUS

WHAT SEPARATES YOU FROM EVERYONE ELSE

Waters

THE SCIENCE OF WHAT'S POSSIBLE.™

COMPLEX CHALLENGES SOLVED

Looking for answers to the most complex scientific challenges is what you do. Your research could lead to ground-breaking medicines, cleaner drinking water, or safer food. The scientific tools you deploy, and the information it provides, can make all the difference.

With industry-leading separations performance, the ACQUITY™ UPLC™ I-Class PLUS System provides new possibilities of maximizing the resolution and sensitivity of your methods; enhancing the characterization of your samples, while improving productivity to advance the science of your laboratory.

AMPLIFY YOUR RESEARCH

- Highly efficient, rapid separations are facilitated by industry-leading ultra-low dispersion and delay volume.
- Ultra-efficient, narrow peaks enhance the sensitivity of any mass spectrometer to simplify the characterization of the most complex samples.

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LOW DISPERSION FOR ULTRA PERFORMANCE

Ultra-low system dispersion

True UPLC performance with band spread as low as 4 µL.

Wide range of detection capabilities

UPLC-optimized detectors to match your application needs, including photodiode array, UV/Vis, fluorescence, refractive index, evaporative light scattering, and mass spectrometry.

Versatile column management

Support for analytical LC column dimensions up to 150 mm in length with automated selection between two columns with the optional column manager. Equipped with independently controlled temperature zones, active solvent pre-heating, and eCord™ Intelligent Chip Technology for each column.

Binary solvent manager

Delivers precise and accurate binary solvent blending at pressures up to 18,000 psi. Two integrated solvent select valves provides access to a total of four solvents. Automated solvent compressibility, integrated solvent degassing, and programmable seal wash maximize flow accuracy, precision, and reliability.

Versatile autosampler options

Choose between two low dispersion flow-through-needle injectors (SM-FTN-H or SM-FTN-I) with a volume range of 0.1 to 1000 µL. Alternatively, a fixed loop injector (SM-FL-I) is available with a volume range of 0.1 to 250 µL.

Flexible sample support

Accepts either vials or ANSI well plate formats. Extend capacity for high throughput and open access environments with the optional Sample Organizer.

Gradient SmartStart

Easily adjust for system volume differences when transferring methods from an alternative LC system without alteration to the method table.

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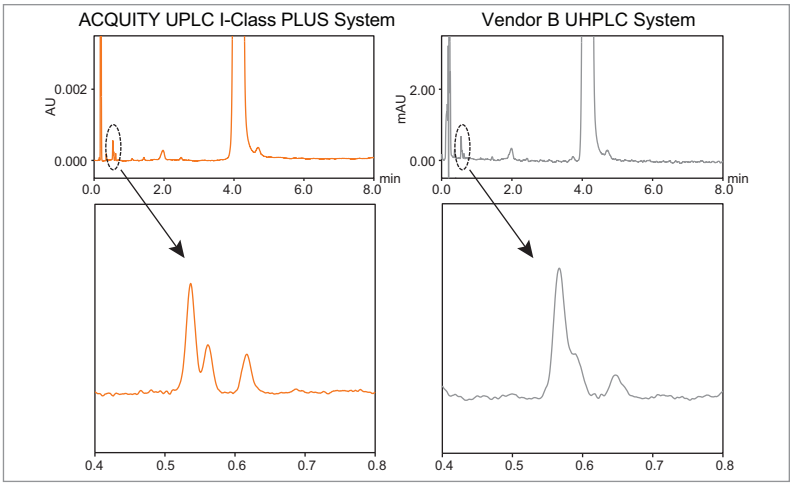
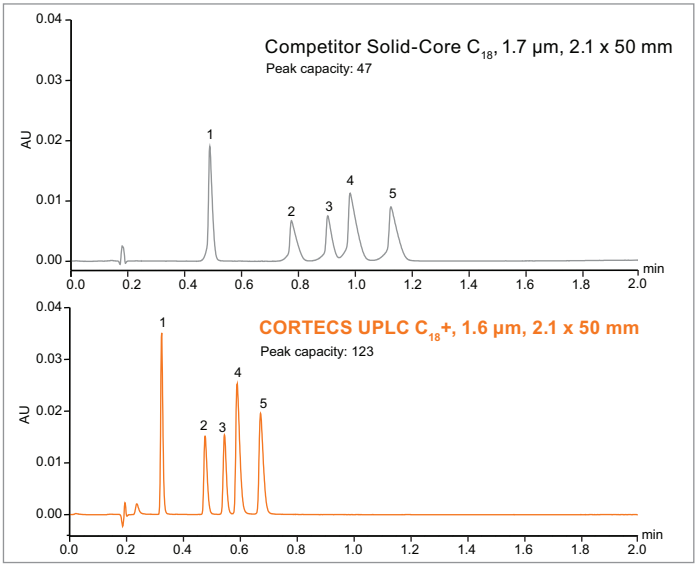
DISPERSION MATTERS

The pursuit of improved chromatographic performance has been made for decades, leading to the creation of novel particle technology, and the size of those particles, reduced. The potential of those particles, no matter how efficient they have become, are limited by the system in which they are run on. System band spread plays a key role, yet is often overlooked.

The ACQUITY UPLC I-Class PLUS System stands out, providing a clear view on what lies within the sample. When paired with CORTECS™ UPLC 1.6 µm solid-core Columns, scientists can achieve new levels of resolution and sensitivity that brings chromatographic performance to a new level.



In this example, the impurity analysis of tetracaine was run under the same conditions on the ACQUITY UPLC I-Class PLUS System (system band spread of 4 µL) and a UHPLC system (system band spread of 20 µL). Although the UHPLC system was optimized for lowest possible dispersion and system volume, the impact of system dispersion is clearly evident. Significantly better resolution was achieved with the ACQUITY UPLC I-Class PLUS System.



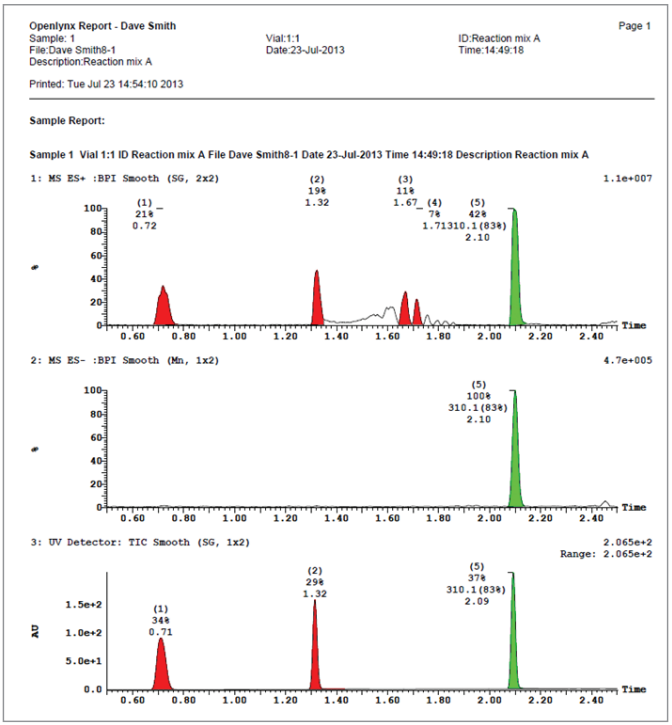
By pairing the ultra-low dispersion ACQUITY UPLC I-Class PLUS System with high-efficiency CORTECS Columns, you'll achieve new levels of UPLC performance. These 1.6 µm columns deliver exceptional levels of efficiency, performance, and throughput, resulting in narrower peaks and higher peak capacity.

THE IDEAL INLET TO MASS SPECTROMETRY

The ACQUITY UPLC I-Class PLUS System is designed specifically for the rapid pace of laboratories on the cutting edge of research where LC-MS plays a critical role:

- Narrow peak widths not only provide enhanced resolution, but also more efficient ionization, enhancing mass spectrometry sensitivity
- Ultra low delay volume results in exceptionally fast analysis times
- Sensitivity is enhanced through industry-leading carryover performance
- Multidimensional UPLC configurations lead to improved sample characterization through selective isolation

The ACQUITY UPLC I-Class PLUS System is designed to be the ideal inlet to mass spectrometry, maximizing the analytical value of each and every analysis. With the ability to achieve high resolution and high sensitivity methods rapidly, the answer you seek is not only obtained very quickly, but with new levels of clarity to enhance the characterization of even the most complex samples.



Typical MassLynx™-based Open Access report for a medicinal chemist using the ACQUITY UPLC I-Class PLUS System with ACQUITY QDa™ Mass Detector. The highlighted area shows how the ACQUITY QDa Mass Detector confirms that the required product (310 Da) has been successfully synthesized while the purity is determined from the ACQUITY UPLC PDA Detector.

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