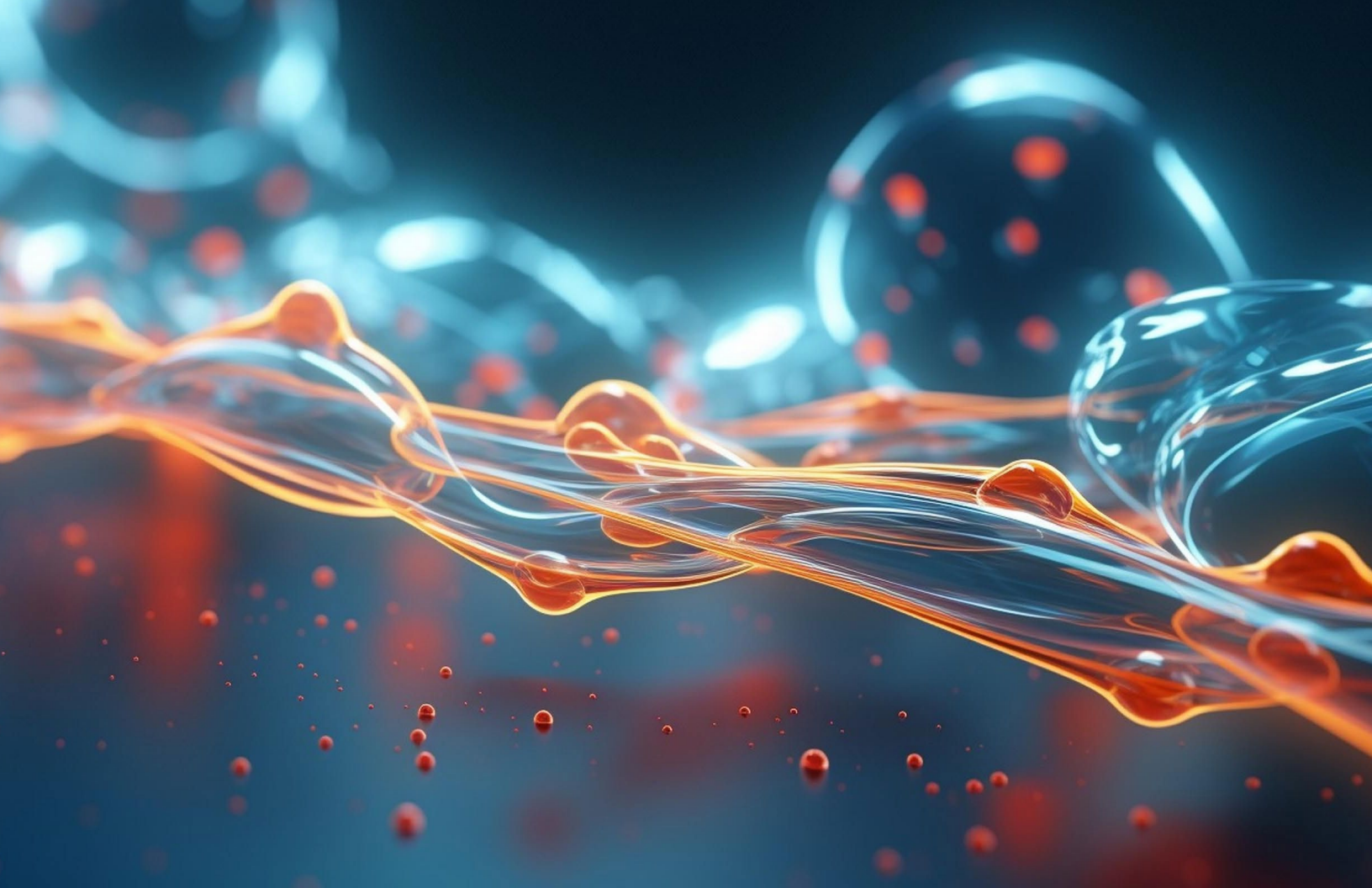




Waters™

Liquid Chromatography (LC) Detectors

Clarity without compromise

Ensure you get the answers to the questions you are asking

Every lab works towards a different set of goals and faces a unique set of challenges. To successfully meet these challenges, it is important to have the right tools available in your toolbox.

Liquid chromatography (LC) is one of the most important tools in an analytical laboratory; it is often referred to as the gold standard for quantification. Whether you are developing new methods or performing routine analyses, Waters™ and Wyatt™ LC detectors are designed to meet a variety of application needs. Our wide range of detectors will reliably generate the data you need to support your business decisions and scientific goals.

- Optical, electrochemical, conductivity, light scattering, charged aerosol, mass detectors, and viscometer
- Optional flow cells to match the scale of your LC needs
- Compatibility with Empower™ and MassLynx™ Software
- Dedicated HPLC and UPLC™ detector models for optimized performance

Flexibility and compatibility to meet all your LC detection needs

Detector options to meet your needs

Waters and Wyatt offer more than 15 detectors for HPLC and UPLC systems, providing the versatility needed to meet the needs of every laboratory.

Advanced compound identification features

Waters detectors combined with Empower Software offer advanced peak purity, spectral contrast, and library matching features, for sophisticated compound identification.

Fully integrated Waters and Wyatt solution

Single software control when coupling Wyatt detectors with Waters LC Systems provides a seamless workflow experience.

Innovative technology ensures reliability

Waters detectors feature innovative technologies that minimize baseline drift, detector-to-detector variability, and increase data reproducibility, collectively enhancing data accuracy and operational efficiency.

Complementary information from mass detection

Waters mass detectors provide complementary information to optical detectors. The ACQUITY™ QDa™ II Mass Detector ensures confidence in your LC analysis by providing mass confirmation of all peaks in your separation.



Waters and Wyatt Detectors

Type	HPLC	UPLC	Description	Analysis Type	Destructive
Ultraviolet/ Visible (UV/Vis)	2489 UV/Vis Arc™ Premier 2489 UV/Vis	ACQUITY TUV ACQUITY Premier TUV	Reliable, easy-to-use detector providing sensitive single or dual-wavelength detection for chromophoric compounds, ideal for routine quantitation.	Analytes with chromophores that absorb UV/Vis light between 190 – 700 nm	No
Photodiode Array (PDA)	2998 PDA Arc Premier 2998 PDA	ACQUITY UPLC PDA ACQUITY UPLC PDA eLambda ACQUITY Premier PDA eLambda	Simultaneously collect full UV/Vis spectra across a range of wavelengths for compound identification, quantification, and peak purity analysis.	Analytes with chromophores that absorb UV/Vis light between 190 – 700 nm	No
Fluorescence (FLR)	2475 FLR Arc Premier 2475 FLR	ACQUITY UPLC FLR ACQUITY Premier FLR	Highly sensitive and selective detector for fluorescent or derivatized analytes at trace levels, with spectral scanning capability to support method development. <i>Common uses: amino acids, aflatoxins, vitamins, polyaromatics</i>	Analytes that are naturally fluorescent or can be derivatized with a fluorescent tag	No
Refractive Index Detector (RID)	2414 RID	ACQUITY UPLC RI	Universal detector for low- or non-chromophoric analytes in isocratic separations, measuring changes in refractive index. The Optilab and microOptilab dRI Detectors also have the unique capability of measuring both absolute and differential RI. <i>Common uses: sugars, polymers, fatty acids (2414 and ACQUITY RID); macromolecules, polymers (Optilab and microOptilab dRI)</i>	Non-volatile analytes lacking chromophores	No
Evaporative Light Scattering (ELS)	2424 ELS	ACQUITY UPLC ELS	Near-universal detector for non-volatile and semi-volatile analytes lacking UV/Vis response, typically more sensitive than RI and compatible with isocratic and gradient separations. <i>Common uses: triglycerides, lipids, natural products, sugars, oils</i>	Non-volatile or semi-volatile analytes, including those without chromophores	Yes
Mass Detector		ACQUITY QDa II	Compact, easy-to-use mass detector providing complementary mass confirmation and improved selectivity in combination with optical detectors.	Volatile and semi-volatile ionizable analytes	Yes
		SQ Detector 2	Versatile benchtop mass detector offering broad mass range and flexible ionization for diverse analytical applications.		
Charged Aerosol Detector (CAD)	Charged Aerosol Detector		Sensitive, near-universal detector with wide dynamic range for consistent quantitation of low-level, non-UV-active analytes.	Non-volatile and semi-volatile analytes	Yes
Conductivity Detector	2432 Conductivity Detector	NA	Robust detector for ions and charged species, commonly used for quantitative ion chromatography applications. <i>Common uses: organic acids, bases, salts</i>	Ions or charged compounds	Yes
Electrochemical (EC) Detector	3465 EC Detector	NA	Sensitive and selective detector for electroactive analytes based on oxidation-reduction properties. <i>Common uses: aminoglycosides, catecholamines, carbohydrates, phenols</i>	Electroactive compounds that can undergo oxidation or reduction reactions	No
Multi-Angle Light Scattering (MALS)		DAWN™ miniDAWN™ omniDAWN™ microDAWN™	Precise detector for characterization of molar mass, size, and concentration for macromolecules and nanoparticles in solution. <i>Common uses: proteins, polymers, nanoparticles, nucleic acids</i>	Analytes with 200 Da - 1 GDa molar mass or 0.5 nm radius	No
Intrinsic Viscometer		ViscoStar™ IV microViscoStar™ IV	A highly sensitive intrinsic viscometer typically used in conjunction with a concentration detector such as the dRI detector and a MALS detector to determine the intrinsic viscosity, size and molecular conformation. <i>Common uses: polymers, carbohydrates, proteins, nanoparticles</i>	Biopolymers and synthetic polymers, including strongly fluorescent polymers and polymers with weak light scattering signals and low dn/dc values	No

Sensitivity and selectivity

Ultraviolet/Visible (UV/Vis) Detectors

Analysis Type: Analytes with chromophores that absorb UV/Vis light between 190 – 700 nm

Destructive: No

The [2489 UV/Visible \(UV/Vis\)](#), [Arc Premier 2489 UV/Vis Detectors](#), [ACQUITY UPLC](#) and [ACQUITY Premier Tunable UV \(TUV\) Detectors](#) are ultraviolet/visible detectors that provide superior sensitivity and linear dynamic range, which are needed for the detection of the lowest-level impurities. The design for the most sensitive and versatile dual wavelength absorbance detectors combines a high energy Deuterium source, a precise optical design, and low noise, high speed electronics to ensure performance, reliability and usability. The ACQUITY UPLC and ACQUITY Premier TUV Detectors' innovative light guided flow cell coupled with the UPLC systems' low dispersion fluidic eliminates the need to remove the detector or to split the flow between two detectors in order to maintain optical resolution.

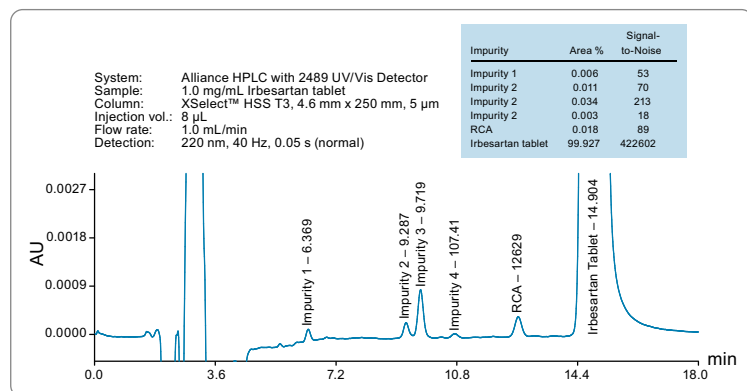


Figure 1. The 2489 UV/Vis Detector provides excellent signal-to-noise response for methods which require low levels of sensitivity, as demonstrated by this example of Irbesartan and its related impurities.

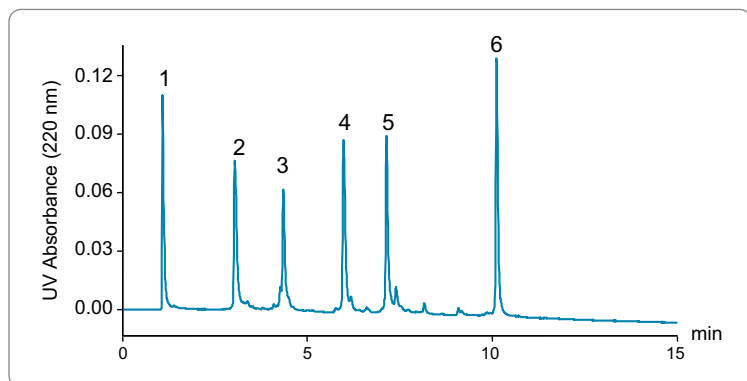


Figure 2. Separation of six proteins using a Protein-Pak™ Hi Res HIC Column. The sensitivity of an ACQUITY UPLC TUV Detector allows for detection of samples at low levels. The proteins are 1) cytochrome C, 2) myoglobin, 3) ribonuclease A, 4) lysozyme, 5) enolase, and 6) alpha-chymotrypsinogen A.



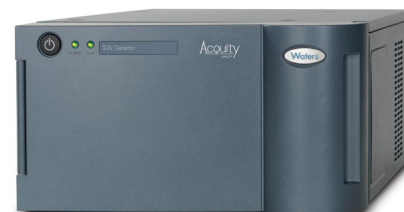
2489 UV/VIS Detector

Specifications available at [Waters.com](#)
Search: [720004518](#)



Arc Premier 2489 UV/Vis Detector

Specifications available at [Waters.com](#)
Search: [720007252](#)



ACQUITY UPLC TUV Detector

Specifications available at [Waters.com](#)
Search: [720001322](#)



ACQUITY Premier TUV Detector

Specifications available at [Waters.com](#)
Search: [720007057](#)

Fluorescence (FLR) Detectors

Analysis Type: Analytes that are naturally fluorescent or can be derivatized with a fluorescent tag

Destructive: No

The [2475 Fluorescence \(FLR\)](#), [Arc Premier 2475 FLR Detectors](#), [The ACQUITY UPLC Detector](#), and [ACQUITY Premier FLR Detector](#) are multi-channel fluorescence detectors designed to deliver exceptional sensitivity and selectivity. Featuring Waters' innovative axially illuminated flow cell, these systems precisely focus excitation energy to maximize light throughput while minimizing unwanted light scatter and dispersion compared to traditional cubic flow cells, resulting in superior signal to noise performance. In addition, a unique photomultiplier tube calibration procedure, combined with the ability to report detector response in emission units (EU), helps reduce variability between instruments and ensures consistent, reliable results across laboratories.

The complementary nature of our LC Detectors provides you with all the tools needed to ensure the right answers to your analysis.

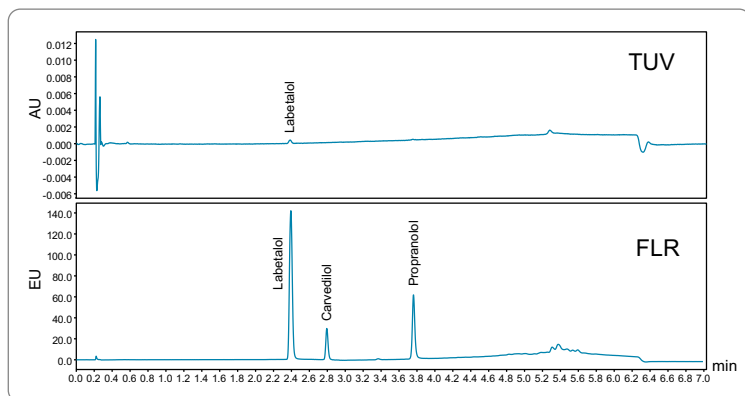


Figure 3. The 2475 FLR Detector improves selectivity and sensitivity for analytes with low or no UV response, such as the beta blockers shown here, making the 2475 the perfect detector choice for analysis of the sample.

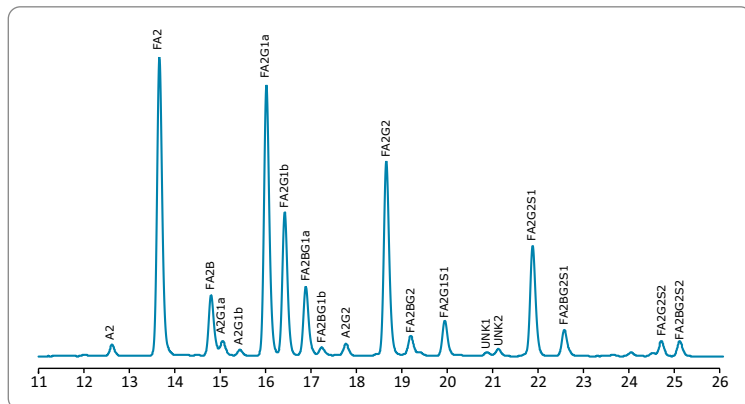


Figure 4. ACQUITY UPLC FLR detection of N-glycans using GlycoWorks™ RapiFluor-MS™ N-Glycan Kit.



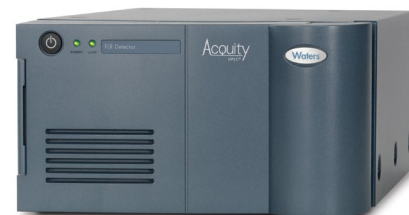
2475 FLR Detector

Specifications available at [Waters.com](#)
Search: [720004517](#)



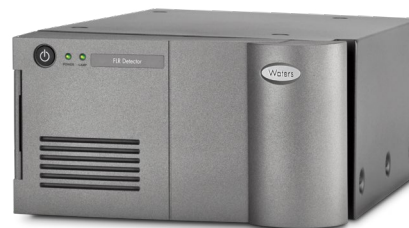
ARC Premier 2475 Detector

Specifications available at [Waters.com](#)
Search: [720007254](#)



ACQUITY UPLC FLR Detector

Specifications available at [Waters.com](#)
Search: [720001985](#)



ACQUITY Premier FLR Detector

Specifications available at [Waters.com](#)
Search: [720007064](#)

Enhanced sample characterization

Photodiode Array (PDA) Detectors

Analysis Type: Analytes with chromophores that absorb UV/Vis light between 190 – 700 nm

Destructive: No

The [2998 Photodiode Array \(PDA\)](#), [Arc Premier 2998 PDA Detectors](#), [ACQUITY UPLC PDA Detector](#), and [ACQUITY UPLC and ACQUITY Premier PDA eLambda Detectors](#) uniquely integrate software and optics innovation to deliver no-compromise chromatographic and spectral sensitivity. The exceptional signal-to-noise ratios, high-sensitivity library matching, and high optical and digital resolution enable the 2998 PDA Detectors to map low level compounds, detecting and quantifying trace levels of impurities co-eluting within a chromatographic peak. Additionally, these detectors have a wide linear dynamic range that allows for simultaneous quantification of high- and low-level components within a single chromatographic separation.

While most commercially available PDA detectors can only distinguish between compounds possessing relatively large spectral differences, Waters PDA and PDA eLambda detectors can differentiate between the spectra of very closely related compounds. The spectral contrast analysis algorithm within the Empower Software determines whether a chromatographic peak is comprised of a single component or is spectrally homogenous by comparing spectra from each data point across the entire peak against the reference spectrum at the apex. Changes in UV spectra across the peak indicate potential coelution with other components.

Ideal for routine analyses, Waters PDA and PDA eLambda detectors are reliable, easy-to-use, and have enhanced software control to provide flexibility for simultaneous 2D and 3D operation within the Empower Software.



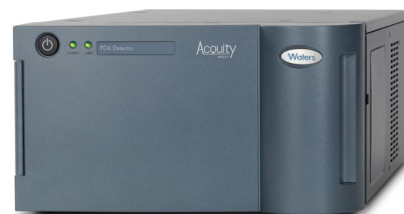
2998 PDA Detector

 Specifications available at [Waters.com](https://www.waters.com)
Search: [720004519](#)



Arc Premier 2998 PDA Detector

 Specifications available at [Waters.com](https://www.waters.com)
Search: [720007253](#)



ACQUITY UPLC PDA Detector

 Specifications available at [Waters.com](https://www.waters.com)
Search: [720001318](#)

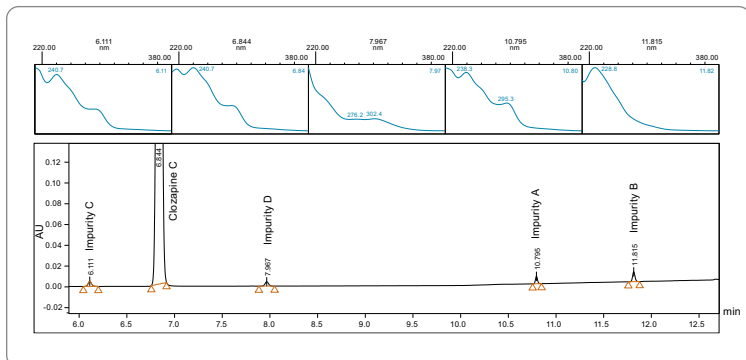
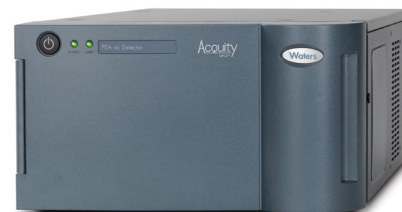


Figure 5. Spectral analysis algorithms can distinguish closely related compounds, as shown in this Clozapine and related impurities example, providing reliable library matching.



ACQUITY UPLC PDA eLambda Detector

Specifications available at [Waters.com](https://www.waters.com)
Search: [720002426](https://www.waters.com)

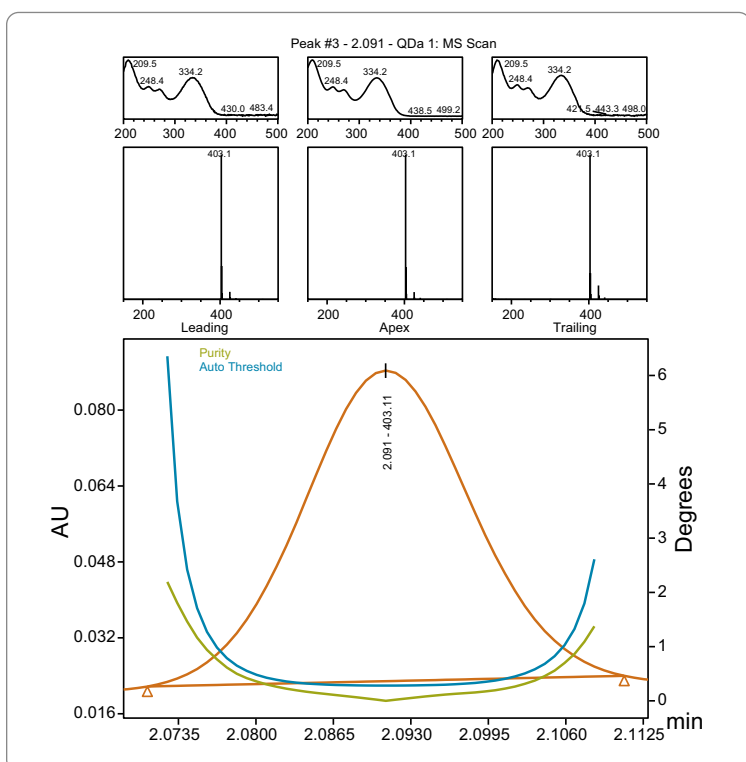


Figure 6. Using the ACQUITY UPLC PDA Detector along with the ACQUITY QDa Mass Detector provides users with more detailed information of their samples and ensures confidence in the analysis.



ACQUITY Premier PDA eLambda Detector

Specifications available at [Waters.com](https://www.waters.com)
Search: [720007055](https://www.waters.com)

Arc Premier and ACQUITY Premier Detectors

Dedicated detectors designed to pair seamlessly with the Arc Premier and ACQUITY Premier LC Systems which feature innovative MaxPeak High Performance Surfaces (HPS) Technology that effectively minimizes non-specific adsorption due to metal interactions. These detectors help ensure exceptional sensitivity and deliver clear, unambiguous results for even the most challenging analyses.



Arc Premier 2489 UV/Vis Detector

Specifications available at [Waters.com](https://www.waters.com)
Search: [720007252](#)



ARC Premier 2475 FLR Detector

Specifications available at [Waters.com](https://www.waters.com)
Search: [720007254](#)



Arc Premier 2998 PDA Detector

Specifications available at [Waters.com](https://www.waters.com)
Search: [720007253](#)



ACQUITY Premier TUV Detector

Specifications available at [Waters.com](https://www.waters.com)
Search: [720007254](#)



ACQUITY Premier FLR Detector

Specifications available at [Waters.com](https://www.waters.com)
Search: [720007064](#)



ACQUITY Premier PDA eLambda Detector

Specifications available at [Waters.com](https://www.waters.com)
Search: [720002426](#)

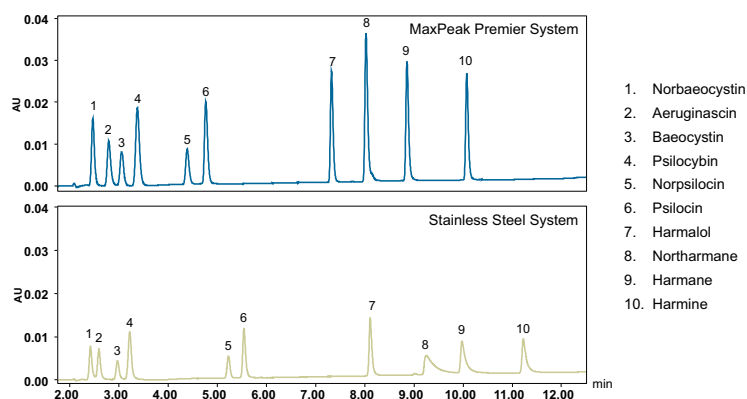


Figure 7. The Arc Premier System with 2998 PDA Detector provides substantial improvements in peak shape and sensitivity compared to the ACQUITY Arc System with 2998 PDA Detector in stainless steel hardware.

Key Benefits

- Improved analyte recovery
- Better peak shape
- Increased sensitivity
- Consistent reproducibility

MaxPeak Premier Solutions

Read the Whitepaper at [Waters.com](https://www.waters.com)
Search: [720008054](#)

Complementary mass information

Mass Detectors

Analysis Type: Volatile and semi-volatile ionizable analytes

Destructive: Yes

Co-eluting components with no or low chromophore may not be identified through the peak purity tool. Complementary information, such as mass spectra from the ACQUITY QDa II Mass Detector or the SQ Detector 2, proves invaluable in the identification of unexpected co-eluting components, allowing for cross-verification and more confident identification.

The [ACQUITY QDa II Mass Detector](#) is purposefully designed for analytical scientists who need mass spectral data without the complexity of a mass spectrometer, to confirm compound identity and quantify compounds with no UV response or at levels not accessible by optical detection. Operating as intuitively as an optical detector, its simplicity not only streamlines the analytical process but also instills confidence in the certainty of your results during routine testing.

The [SQ Detector 2](#) is a simple, robust, and versatile single quadrupole mass detector compatible with the broadest range of chromatography platforms and ionization modes covering the widest range of analytes. With a mass range of 3000 m/z , the SQ Detector 2 makes mass confirmation of large molecules easier.

The addition of a mass detector to your workflows provides information-rich mass spectral data to complement your current Waters UV/Vis, PDA, ELS, and Conductivity Detectors and give you a more complete separation.

Data Type	ACQUITY QDa II Mass Detector	SQ Detector 2
Mass Range	30-1500 m/z	2-3072 m/z
Scan Speed	12,500 Da/sec	15,000 Da/sec
Ionisation Mode	ESI	ESI, APCI, ESI, ASAP
Size	Stackable	Bench top
Software	MassLynx/Empower	MassLynx/Empower
Compliance-Ready Solution	Yes	Yes



ACQUITY QDa II Mass Detector

Specifications available at Waters.com
Search: [720008344](#)



SQ Detector 2

Specifications available at Waters.com
Search: [720006796](#)

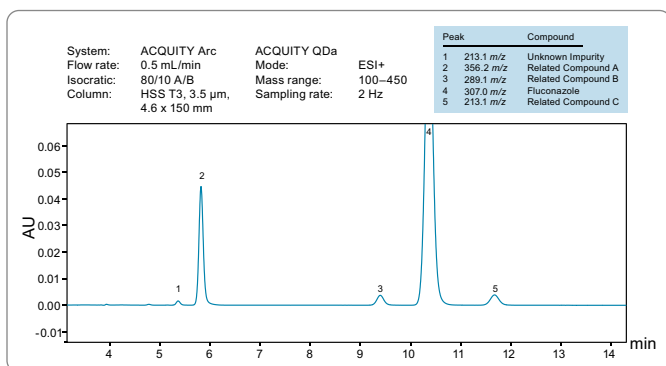


Figure 8. Use of the 2998 PDA Detector with the ACQUITY QDa Mass Detector allows for confidence in information about your sample, by providing mass confirmation of each peak, in example: Fluconazole USP Method.

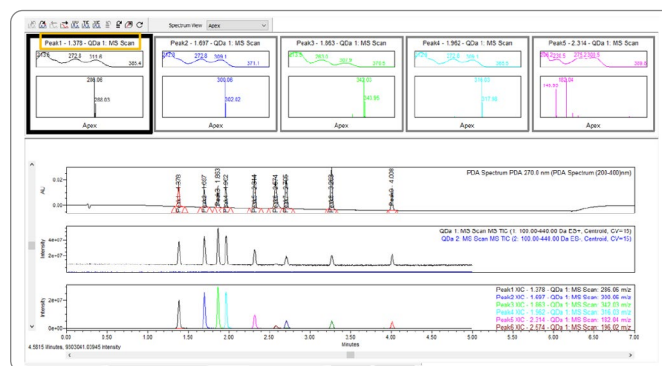


Figure 9: Empower Software takes the Apex spectra (both UV and MS) from the retention times of the peaks in the UV chromatogram (Top). MS Scan data from 100-440 Da at ESI+ and ESI- modes (middle). MS extracted ion chromatograms at different m/z (bottom).

The right tool for the right job

Achieving accurate and reliable detection of analytes with poor or no chromophores demands the right detector. Waters offers a range of detectors designed for these challenging analytes, providing robust analysis of compounds that lack a UV/Vis response or are not easily ionized for mass detection and ensuring dependable results across a wide range of applications.

Refractive Index (RI) Detectors

Analysis Type: Non-volatile analytes lacking chromophores

Destructive: No

The [2414 RI Detector](#) and [ACQUITY RI Detector](#) feature an innovative flow cell design that delivers high sensitivity, stability, and reproducibility across a wide range of analytes. Waters unique counter current heat exchanger rapidly equilibrates temperature differences between the solvent entering and exiting the flow cell, minimizing fluctuations in viscosity and refractive index to enable consistent, repeatable measurements, even at low concentrations. Paired with a high-energy LED that provides exceptional light transmittance through the flow cell, the detectors achieve maximum sensitivity while maintaining excellent peak shape. In addition, the integrated solvent valves enable automatic reference cell purging, supporting optimal baseline performance and allowing solvent recycling to reduce consumption.



2414 RI Detector

 Specifications available at [Waters.com](https://www.waters.com)
Search: [720004516](#)



ACQUITY RI Detector

 Specifications available at [Waters.com](https://www.waters.com)
Search: [720004633](#)

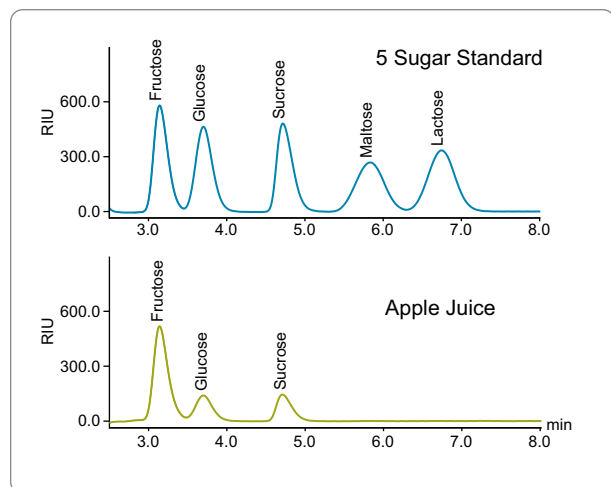


Figure 10. The five key food sugars analyzed using an XBridge™ Amide XP Column on the Alliance HPLC System with the 2414 RI Detector.

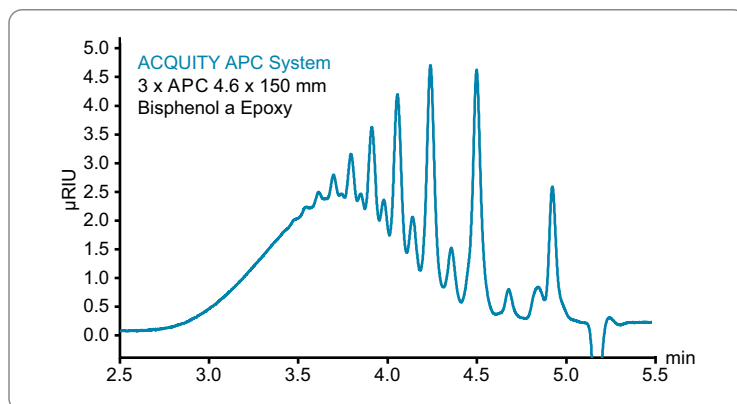


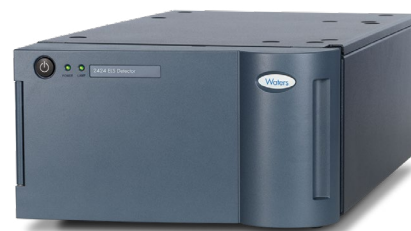
Figure 11. Faster analysis times and better resolution of a Bisphenol a Epoxy using the ACQUITY APC™ System and the ACQUITY UPLC RI Detector.

Evaporative Light Scattering (ELS) Detectors

Analysis Type: Non-volatile or semi-volatile analytes, including those without chromophores

Destructive: Yes

The [2424 ELS](#) and [ACQUITY UPLC ELS](#) Detectors provide precise temperature control during nebulization and desolvation, enabling highly reproducible quantification of semi-volatile components without introducing significant dispersion to LC separations. An integrated auto-optimization gain function automatically maximizes method performance, ensuring consistent and reliable results. Designed for ease of use and maintenance, the detectors feature a snap-in, self-aligning lamp and nebulizer for simplified serviceability. In addition, full compatibility with gradient analysis expands the separation range, allowing greater flexibility for complex sample analyses.



2424 ELS Detector

 Specifications available at [Waters.com](https://www.waters.com)
Search: [720004515](#)



ACQUITY UPLC ELS Detector

 Specifications available at [Waters.com](https://www.waters.com)
Search: [720001320](#)

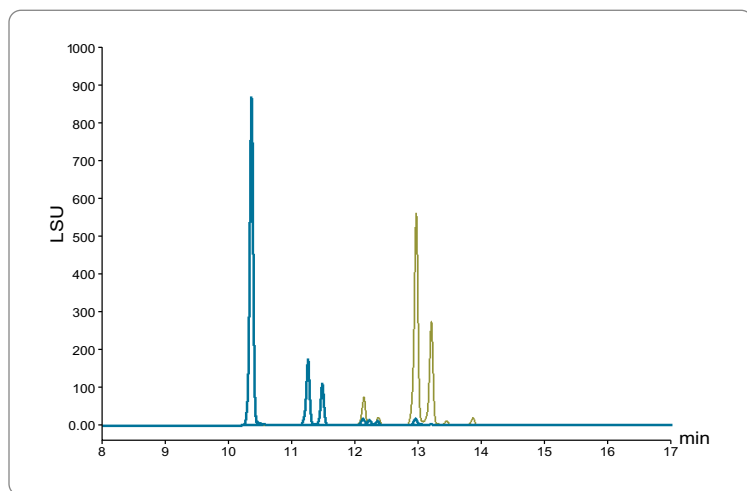


Figure 12. The gradient analysis of triglycerides in edible oils using the 2424 ELS Detector, showing safflower oil (blue) and olive oil (green) overlaid on the same chromatogram.

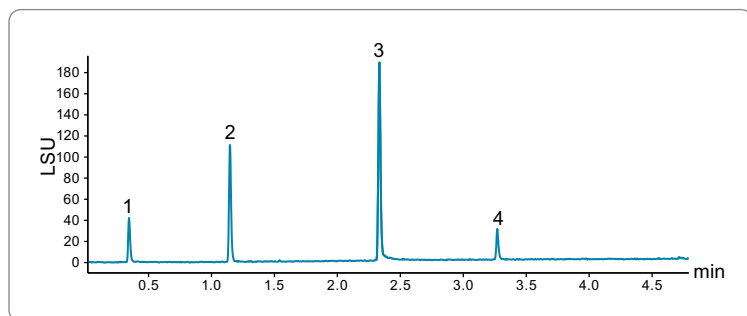


Figure 13. Analysis of 1) flavone, 2) caffeine, 3) thymine, and 4) prednisone using the ACQUITY UPLC H-Class PLUS System and the ACQUITY UPLC ELS Detector.

Charged Aerosol Detector (CAD)

Analysis Type: Non-volatile and semi-volatile analytes

Destructive: Yes

The [Charged Aerosol Detector \(CAD\)](#) provides near-universal, structure-independent detection with a dynamic range spanning more than four orders of magnitude, ideal for quantifying low-level, non-UV active compounds such as excipients, lipids, sugars and polymers. Purpose-built for Empower Software and Waters chromatography systems, the CAD facilitates seamless method transfer from existing charged aerosol solutions, reducing revalidation risks and productivity loss. Designed for usability, it features tool-free maintenance, automated flow diversion on error, and enhanced leak detection, making it an accessible and supportable CAD solution for LC applications.



Charged Aerosol Detector

Specifications available at [Waters.com](https://www.waters.com)
Search: [720008998](#)

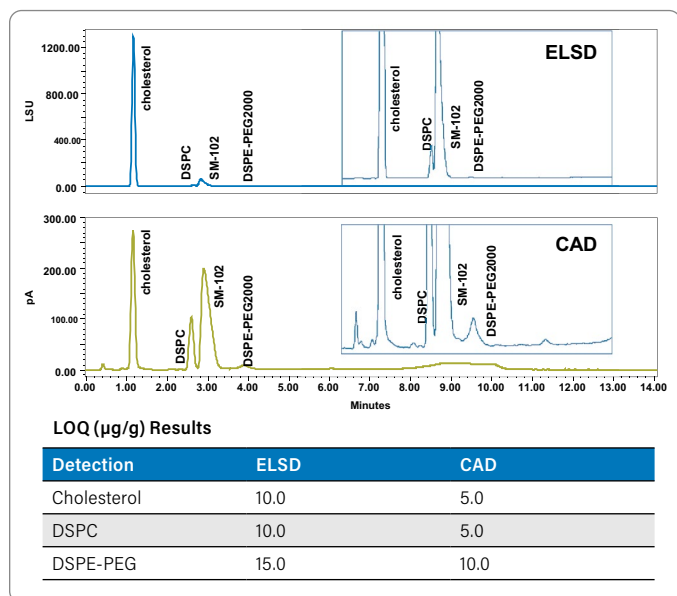


Figure 14. Comparative ELSD and CAD chromatograms on ACQUITY Premier UPLC System show improved response for lipid components including cholesterol, DSPC, SM-102, and DSPE-PEG using CAD, delivering lower limit of quantitation (LOQ) and increased confidence for compounds with limited or no UV absorbance.

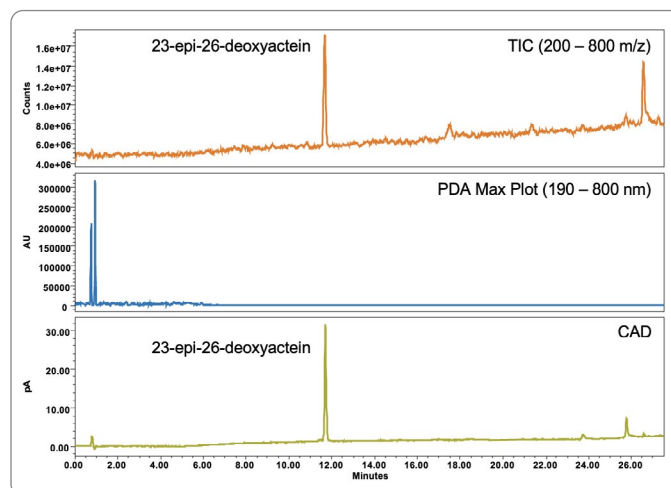


Figure 15. Simultaneous MS, PDA, and CAD detection on ACQUITY Arc System shows that 23-epi-26-deoxyactein is clearly detected by MS and CAD while exhibiting minimal UV response, demonstrating how CAD complements optical detection to ensure comprehensive analyte coverage in a single run.

For your most challenging separations

Conductivity Detectors

Analysis Type: Ions or charged compounds

Destructive: No

The [2432 Conductivity Detector](#) features exceptional sensitivity and stability for single-column or suppressor-based ion chromatography. The 2432 cell design diminishes apparent void volume disturbances for more reliable peak quantitation. With the combination of the 2432 Conductivity Detector's temperature control and autozero capabilities you can be assured of maintained baseline stability during your analysis.



2432 Conductivity Detector

 Specifications available at [Waters.com](https://www.waters.com)
Search: [720005582](#)

Electrochemical (EC) Detectors

Analysis Type: Electroactive compounds that can undergo oxidation or reduction reactions

Destructive: No

The [3465 Electrochemical \(EC\) Detector](#) offers sensitivity for ultra-trace analysis, reliability, and simplicity for superior electrochemical detection. It is available in two configurations: one that supports a single flow cell and another that accommodates up to two flow cells, each independently controlled. The detector is compatible with three types of flow cell and provides a wide selection of working and reference electrodes, all within a temperature-controlled environment. It supports multiple detection modes, including direct current, pulsed amperometric and scanning, delivering a fully automated, reliable electrochemical system with detection sensitivity suitable for a broad variety of application needs.



3465 EC Detector

 Specifications available at [Waters.com](https://www.waters.com)
Search: [720007688](#)

Absolute macromolecular characterization

Wyatt Technology is a pioneer in commercial light scattering instruments that incorporate lasers as a light source, specializing in detectors commonly used to analyze the properties of novel therapeutics, including nano-drug carriers, vaccines, biopolymers, and proteins, as well as synthetic polymers and nanoparticles.

Multi-Angle Light Scattering (MALS) Photometers

Analysis Type: Analytes with 200 Da - 1 GDa molar mass or 0.5 nm radius

Destructive: No

The [DAWN, miniDAWN, omniDAWN, and microDAWN Multi-Angle Light Scattering \(MALS\) Photometers](#) provide accurate determination of molar mass, size, conformation, and conjugation of peptides, proteins, nucleic acids, polymers, vesicles, and nanoparticles, without the need for column calibration. These detectors enable non-destructive, in-solution measurement without solvent or buffer limitations, making them ideal for measuring oligomerization, complex formations, and aggregation studies. Each of these detectors is designed for different molar mass range and column dimensions, allowing you to achieve optimal results.



DAWN, miniDAWN, omniDAWN, and microDAWN Photometers

 Specifications available at Wyatt.com
Go to [Products/Instruments](#) and choose [Multi-Angle Light Scattering \(MALS\)](#)

Differential Refractive Index (dRI) Detectors

Analysis Type: Non-volatile analytes lacking chromophores

Destructive: No

The [Optilab and microOptilab differential Refractive Index \(dRI\) Detectors](#) provide excellent sensitivity, a wide dynamic range, and low detection limits for accurate concentration measurements of proteins, polymers, peptides, oligonucleotides, and other macromolecules, making them a valuable addition to any MALS setup. Uniquely, the Optilab and microOptilab detectors measure the absolute refractive index of a solution, setting them apart from conventional detectors. In addition, they can measure the dn/dc of a solvent at the same wavelength as the MALS instrument, and their replaceable light source supports measurements at various wavelengths.



Optilab and microOptilab dRI Detectors

 Specifications available at Wyatt.com
Go to [Products/Instruments](#) and choose [Refractometers](#)

Intrinsic Viscometers (IV)

Analysis Type: Biopolymers and synthetic polymers, including strongly fluorescent polymers and polymers with weak light scattering signals and low dn/dc values

Destructive: No

The [ViscoStar and microViscoStar Intrinsic Viscometers](#) are designed to provide highly sensitive measurements of intrinsic viscosity of macromolecules such as biopolymers and synthetic polymers, and even proteins and peptides. When coupled with size-exclusion chromatography, an RI or UV concentration detector and a MALS photometer, they enable comprehensive characterization of hydrodynamic radius, conformation, and branching ratio of a macromolecule in solution.



ViscoStar and microViscoStar Intrinsic Viscometers

 Specifications available at Wyatt.com
Go to [Products/Instruments](#) and choose [Viscometers](#)

Wyatt's detectors are digitally integrated with Waters LC systems, enabling seamless data acquisition and processing. Controlled through ASTRA™ Software via HPLC CONNECT™, this integration provides the most powerful and advanced light scattering analysis of complex macromolecules. For regulated environments and quality control, the Empower CDS enterprise-wide integration and robust automation features provide best-in-class compliance and traceability.

LC Systems and Software Compatibility

Detector	HPLC System				UPLC System		Software		
	Arc Premier	ACQUITY Arc	Arc HPLC	Alliance HPLC	ACQUITY Premier	ACQUITY UPLC H- / I- Class PLUS	Empower	MassLynx	HPLC CONNECT with ASTRA
2489 UV/Vis		√	√	√			√	√ ⁵	√ ¹
Arc Premier 2489 UV/Vis	√						√	√	√
ACQUITY UPLC TUV						√	√	√	
ACQUITY Premier TUV					√		√	√	√ ²
2475 FLR		√	√	√			√	√ ⁵	√ ³
Arc Premier 2475 FLR	√						√	√	√ ³
ACQUITY UPLC FLR						√	√	√	
ACQUITY Premier FLR					√		√	√	√ ³
2998 PDA		√	√	√			√	√ ⁵	√ ¹
Arc Premier 2998 PDA	√						√	√	√
ACQUITY UPLC PDA/ PDA eLambda						√	√	√	
ACQUITY Premier PDA eLambda					√		√	√	√
2414 RI		√	√	√			√	√ ⁵	√
Optilab dRI, microOptilab RI	√	Contact closure	√	Contact closure	√	Contact closure ⁴	√		√
ACQUITY UPLC RI						√	√	√	
2424 ELS		√	√	√			√	√ ⁵	
ACQUITY QDa II Mass Detector		√	√	√			√	√ ⁵	
SQ Detector 2	√	√	√	√	√	√	√	√ ⁵	
CAD	√	√	√	√	√	√	√	√ ⁵	
2432 Conductivity		√	√	√			√	√ ⁵	
3465 EC		√	√	√			√		
DAWN, miniDAWN, omniDAWN, microDAWN, MALS	√	Contact closure	√	Contact closure	√	Contact closure ⁴	√		√
ViscoStar IV, microViscoStar IV	√	Contact closure	√	Contact closure	√	Contact closure ⁴			√

√ Full (2-way) software compatibility

¹When connected with the Arc Premier or Arc HPLC Systems in ASTRA Software

²TUV detectors are not supported in dual wavelength mode for both analog and digital modes

³Data can be acquired but not processed in ASTRA Software

⁴Contact closure connection for the ACQUITY UPLC H-Class PLUS System only

⁵The Alliance HPLC System is excluded. MassLynx Software does not control the Alliance HPLC System.

waters.com/Detectors

For your local sales
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