

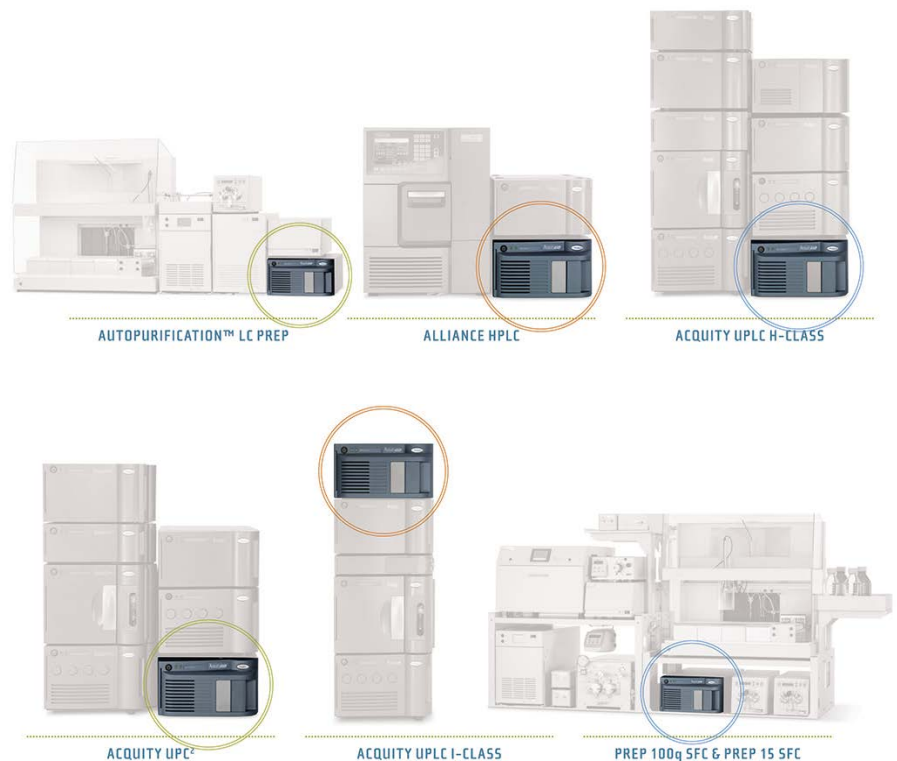
Product Background

The culmination of Waters' 30 years of experience in mass spectrometry, the ACQUITY® QDa™ Detector is a mass detector for separations science, including LC and SFC, providing an orthogonal, complementary technique to chromatographic optical detection. With **37 new patents and patents pending** that address size, ease of use and affordability, the ACQUITY QDa Detector brings the mass spectral data to analytical scientists worldwide, without the complexity of a mass spectrometer.

Mass detection is widely accepted as a reliable method to derive more meaningful information. By generating mass spectral data within existing chromatography workflows, labs are empowered to make better informed decisions for faster project completion, reduced costs and better utilization of resources. With mass spectrometry commonly perceived as complex, costly and consuming bench and floor space, the ACQUITY QDa Detector overcomes these barriers as **the only mass detector designed as a synergistic element of a chromatographic separations system.**

Robust, reliable and requiring no sample-specific adjustments, it just integrates with existing Waters LC, UPLC, UPC² and purification systems. It marks the start of new eras in both separations science and analytical scientist independence. Here's why:

- **Accessibility:** The industry's first "mass detector." For the first time, any analytical scientist can consistently generate the highest quality mass spectral data routinely through existing chromatography workflows—no special training or expertise required.
- **Plug and perform:** It is as intuitive as an optical detector, and robust for all analyses. Working in harmony with chromatography, it's pre-optimized to work with existing samples, without the sample-specific or user adjustments typical of traditional mass spectrometers.
- **Confidence:** The most information available from a separation for complete characterization. In synergy with optical detection, users can significantly reduce the chance that a sample component will go undetected.
- **Increased efficiency:** This is the only mass detector that integrates with and even fits on top of an instrument stack. Using less bench space and less energy than a traditional mass spectrometer, it fits easily within an existing laboratory set up as part of a regular workflow. Cleaning and routine maintenance are minimal, maximizing uptime.
- **Compatibility:** It is compatible with a range of Waters systems like those shown here.



Ease of Use: Automatic calibration, adjustment-free, push-button simplicity • *Easy Maintenance/Operation:* Disposable sample aperture for repeatability • *Ionization Source:* Pre-optimized electrospray (ES) ionization with positive ion/negative ion switching • *Mass Range:* 30 - 1,250 Da • *Scan Speed:* automated acquisition to 10,000 Da/s for UPLC compatibility • *Dynamic Range:* Up to four orders of linear dynamic range • *Software Control:* Waters Empower 2 FR5 to Empower 3 FR2 Chromatography Software, Waters MassLynx 4.1 Mass Spectrometry Software