

# Quantitate With Absolute Power and eXtreme Robustness

XeVO™

TQ ABSOLUTE XR



Waters™



#### **ABSOLUTE CONFIDENCE**

Experience up to six times more robustness with the new StepWave™ XR ion guide, designed for superior resilience to contamination. The TQ Absolute XR Mass Spectrometer ensures consistent, reliable performance, even under the most challenging analytical conditions.

#### **ABSOLUTE PERFORMANCE**

Push quantitation limits further and meet stringent regulatory requirements with up to 15x greater sensitivity for difficult-to-ionize negative mode compounds, setting a new benchmark in high-performance quantitation.

#### **ABSOLUTE EFFICIENCY**

Minimize your lab's environmental footprint and operational costs with a mass spectrometer that consumes up to 50% less electricity and gas, while generating 50% less heat than other high-performance TQ instruments.

#### **ABSOLUTE PRODUCTIVITY**

Streamline data analysis with waters\_connect™ software, featuring Exception Focused Review (XFR) functionality to accelerate workflows, cutting data review time by up to 50% for more efficient, accurate results.

#### **ABSOLUTE VERSATILITY**

Choose from our differentiated range of source options to find the technology most suited to your applications including DESI XS, APGC and UniSpray™.

**XeVO™** | TQ ABSOLUTE XR

# Absolute Confidence for Powerful Decisions

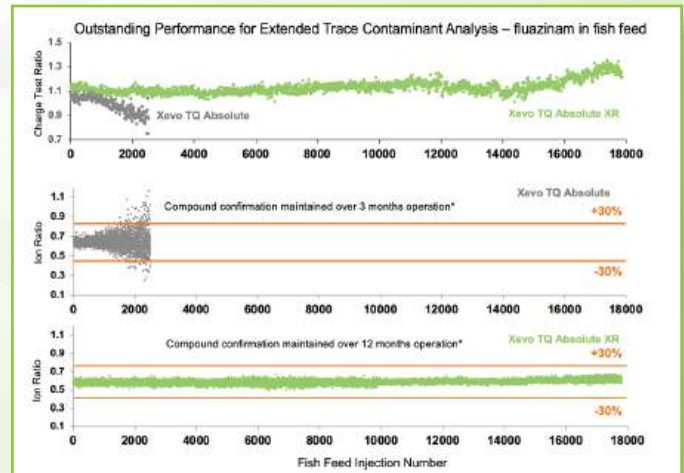
**The Xevo TQ Absolute XR Mass Spectrometer combines Absolute confidence, performance, efficiency and productivity to give you the power to quantitate your most challenging compounds.**

# Absolute Confidence

The Xevo TQ Absolute XR Mass Spectrometer analyzes up to six times more samples before service maintenance is required. Get the answer right first time and reduce unplanned downtime!

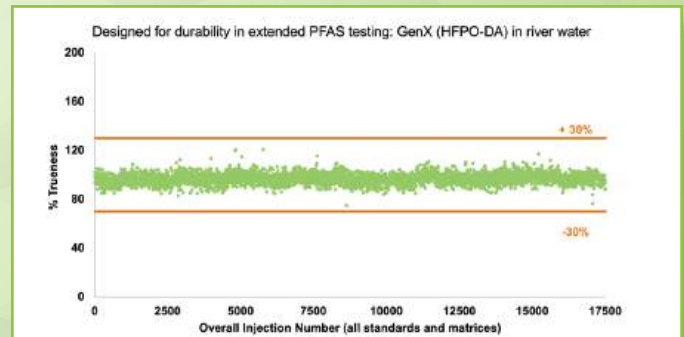
"We are well in excess of 30,000 injections of crashed human plasma continuously analysed on the Xevo TQ Absolute XR Mass Spectrometer combined with ACQUITY™ Premier UPLC™ System and waters\_connect Software, and our early experience is that it demonstrates new levels of reproducibility and accuracy, giving us ever more confidence as we are presented with increasingly challenging bioanalysis applications and new modalities."

Sally Hannam, Scientific Director at Synexa Life Sciences, a leading biomarker and bioanalytical services provider

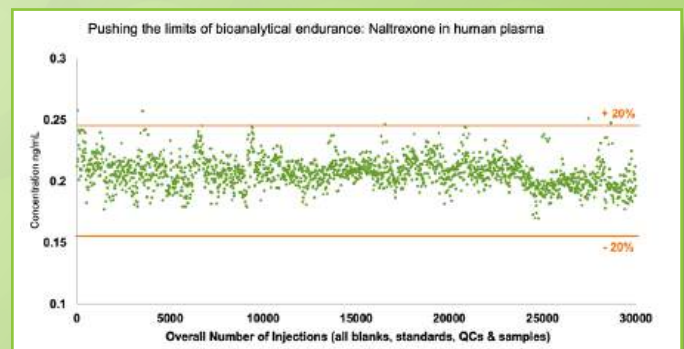


Fish feed, an example of a complex, challenging matrix, was tested using QuEChERS extraction without cleanup and without a divert-to-waste step. The Xevo TQ Absolute instrument demonstrated robust performance, operating effectively for approximately 1,500–2,000 injections (~3 months of continuous use<sup>1</sup>) before any signs of quadrupole charging appeared. The Xevo TQ Absolute XR mass spectrometer further extends this robustness, maintaining stable performance beyond 12,000 injections. Both instruments successfully handled over 400 MRMs in under 6 minutes, with no need for instrument venting for cleaning during the study.<sup>1</sup>

<sup>1</sup> Multiresidue Pesticides Application Note [720008820](#)



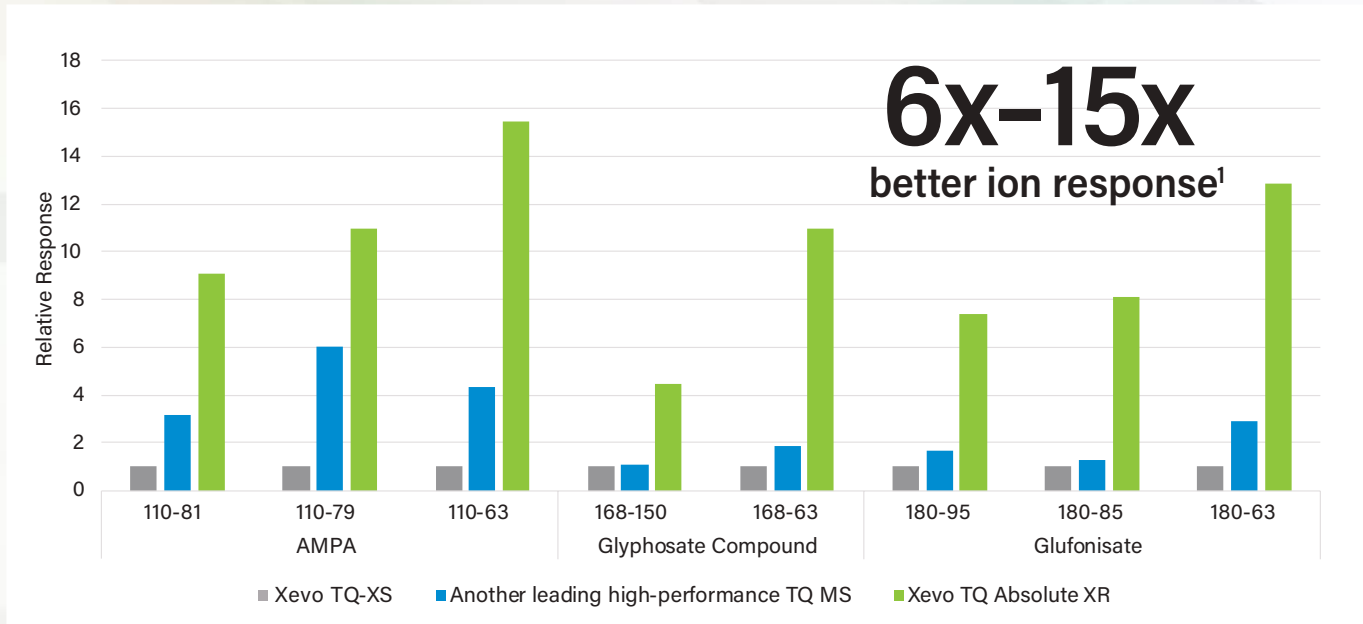
PFAS samples included river water, biosolid and landfill leachate. Extraction and SPE clean-up of 250 mL river water samples was performed in accordance with EPA 1633A methodology. Trueness was within the set tolerance for over 17,500 injections and 24 weeks analysis time, with no unscheduled downtime needed, demonstrating the overall reliability of the Xevo TQ Absolute XR Mass Spectrometer



Naltrexone and its metabolite 6b-Naltrexol were extracted from human plasma with a simple protein precipitation and analyzed on the Xevo TQ Absolute XR Mass Spectrometer. 30,000 injections within the calculated concentration limits of +/- 20% are indicated.

# Absolute Performance

Increased sensitivity with lower limits of quantitation



One of the largest challenges facing many labs is the need to achieve lower limits of quantitation and meet regulatory requirements, particularly for challenging negative ionizing compounds.

Ensure you have the confidence in your data to make decisions fast with an instrument that provides Absolute Performance. **The Xevo TQ Absolute XR Mass Spectrometer delivers up to 15x better sensitivity for challenging negative ionizing compounds** so you can make decisions quickly and efficiently.



<sup>1</sup> Xevo TQ Absolute XR Mass Spectrometer provides up to 15x better ion response as compared to the Xevo TQ-XS Mass Spectrometer and up to 6x better ion response than another leading high-performance LC-MS/MS instrument.

# Absolute Efficiency

Lower operational costs and improved sustainability



As a leading technology innovator in chromatography, mass spectrometry, and thermal analysis instruments and software, Waters shares a common mission with our customers: to leave the world a better place than we found it.

Many of our customers are actively working to address environmental sustainability in balance with the need to continually reduce operational costs. When operating the XeVO TQ Absolute XR Mass Spectrometer customers can be assured that they have an instrument with lower electricity consumption, gas consumption and BTU/hr output - reducing the burden for air conditioning while lowering costs.

The XeVO TQ Absolute XR Mass Spectrometer also provides more analytical capability per square foot of lab space by minimizing the LC-MS/MS footprint, enabling laboratory managers to fully optimize their facilities and increase efficiency.

Waters XeVO TQ Absolute XR	Average high-end MS/MS <sup>1</sup>	Highest consuming high-end MS/MS <sup>2</sup>
1460 W	3077 W	4550 W
Energy consumption		
4,980 Btu/h	10,500 Btu/h	15,525 Btu/h
Heat emission		
32%	67%	100%
Energy cost for MS and thermal load		
23 L/min	50 L/min	77 L/min
Gas consumption		
43 cm	79-84 cm	118 cm
Bench space (width)		

Data from published vendor site installation guides.

<sup>1</sup> "Average high-end MS/MS" refers to typical values for alternative high-end products to XeVO TQ Absolute XR Instrument.

<sup>2</sup> "Highest consuming high-end MS/MS" refers to highest values for alternative high-end products to the XeVO TQ Absolute XR Instrument.

# Absolute Productivity

## Achieve more with flexible software solutions

In an ever-changing environment, flexibility can help protect against future unknowns. The Xevo TQ Absolute XR Mass Spectrometer is available on both our waters\_connect and MassLynx™ Software platforms, providing the ultimate flexibility to choose a future-proof solution to meet your lab requirements.

### waters\_connect for Quantitation

Dominate your data and take command of your quantitative analysis by spending less time on difficult, manual processes and more time advancing your science. waters\_connect for Quantitation Software delivers efficiency and usability benefits, including the Exception Focused Review (XFR) functionality that can save up to 50% of your data review time, ensuring your lab is as productive as possible.

### MassLynx

Our tried and well-established MassLynx Software package delivers market-leading versatility and flexibility for all application areas.



The unique functionality of waters\_connect for Quantitation Software ensures Absolute productivity for your Xevo TQ Absolute XR Instrument.

# Absolute Versatility

Flexibility to optimise for your applications through Waters universal ion source architecture enabling you to choose the best possible ionization technique for your compounds. These quickly interchangeable sources include:

## UniSpray

Absolute potential, unlocked. Achieve unparalleled ionization efficiency with UniSpray, a single ionisation source, compatible with UHPLC chromatography systems, enabling your lab to improve process efficiency through potential gains in sensitivity, precision and reduced matrix effects, relative to the equivalent Electrospray ionization source option.<sup>1</sup>



## APGC

The next generation of GC is already here with Atmospheric Pressure Gas Chromatography offering labs Absolute power - a powerful alternative to electron ionization technology, enabling low limits of detection, confident compound identification and confirmation, while reducing lab costs from reduced GC system maintenance and the ability to use nitrogen as an alternative carrier gas.



## DESI XS

Mass spectrometry imaging (MSI) has been successfully used to localize a sample's molecular composition in-situ. However, due to sample complexity, the presence of salt, and other interferences, the detection of low-level analytes can be especially challenging. Tandem quadrupole mass spectrometers, on the other hand, are renowned for their sensitivity, speed, and quantitative robustness for targeted applications using Multiple Reaction Monitoring (MRM) modes of acquisition, and are widely adopted for drug quantitation. With a combination of the two technologies, a remarkable technique emerges to perform sensitive, fast, and quantitative MSI directly on sample surfaces.



<sup>1</sup> Open access paper  
<https://link.springer.com/article/10.1007/s00216-019-01886-z>

# Absolute Support

## Ensure your success with world-renowned services

Waters' Service and Support helps maintain system peak performance, minimize downtime, address scientific application challenges, and support stringent compliance requirements.

Waters award-winning consistent quality support and professional services ensure your success wherever your laboratory is located in the world. With Waters Service and Support offerings<sup>1</sup> for your Xevo TQ Absolute XR, you can:



### GET UP AND RUNNING QUICKLY

Access onsite training the onsite training and consultation you need to integrate the Xevo TQ Absolute XR into your laboratory. Options for assistance with data migration and method transfer are available through Waters Professional Services.



### MEET YOUR LAB'S UNIQUE REQUIREMENTS

Protect your high-performance instrument investment with the comprehensive portfolio of service plans from Waters FlexCHOICE, providing access to the most in-depth and up-to-date knowledge of the advanced science and technologies within Waters systems.



### BE COMPLIANCE-READY

Simplify the process of qualification, validation, and record-keeping so that your business can focus on delivering products to market with Waters Compliance Services - meet the regulations in your industry and in the countries where you conduct business.



### REDUCE TOTAL COST OF OWNERSHIP

With Waters FlexCAPITAL<sup>2</sup> program, you can get the flexibility you need to access the latest technology on a regular basis — all at a fixed cost for services, informatics, and chemistry, with no unexpected costs during the instrument's lifetime.



### LEVERAGE YOUR EXISTING TECHNOLOGY

With the FlexUP technology renewal program, you can upgrade your older mass spectrometry system to the Xevo TQ Absolute XR Instrument - improving performance, results, and productivity while controlling costs and mitigating compliance risk.



<sup>1</sup> Availability of offerings varies by country. Contact Waters or your local Waters representative for details.

<sup>2</sup> FlexCAPITAL payment plan options and availability may vary by country. Other restrictions may apply. Contact Waters or your local Waters representative for details. Subject to Credit Approval.



XeVO™ | TQ ABSOLUTE XR

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