

# Raise Your Analysis to a New Level

Agilent 6530 Q-TOF LC/MS system



# Let the Agilent 6530 Show You What Your Lab Has Been Missing

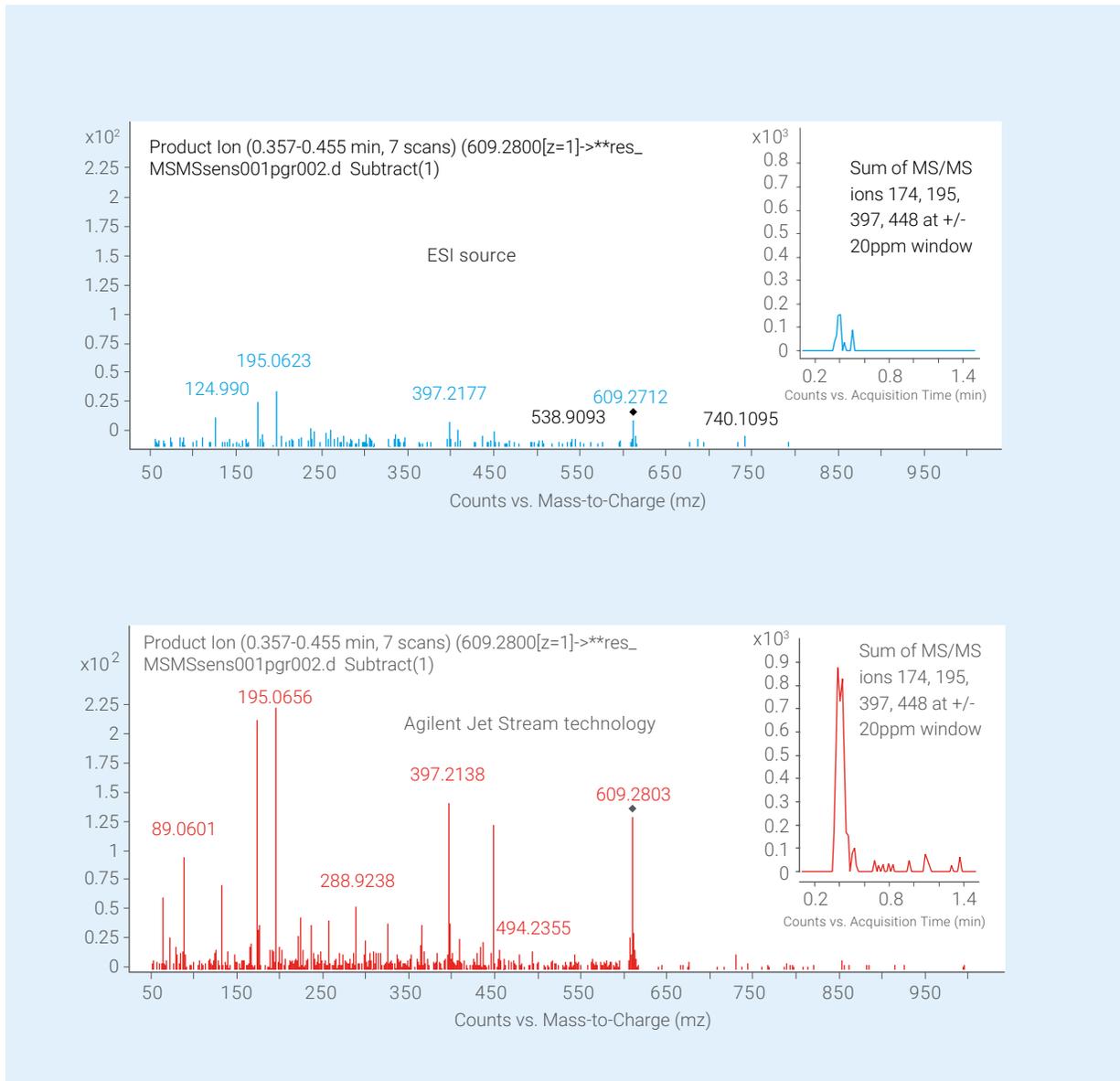
The rich information gathered with a high-resolution instrument is only useful if you can actually detect both your targets and unknowns. The Agilent 6530 Q-TOF LC/MS system will light up your analysis with excellent mass accuracy and reliable isotopic fidelity.

Say goodbye to false negatives due to low analytical sensitivity or poor dynamic range. Say hello to blazing fast acquisition speeds.



# Full Spectrum Sensitivity

Whether working with small or large molecules, analytical sensitivity matters. Specifically, great detection limits when performing untargeted analysis opens up the door to truly comprehensive screening and profiling.



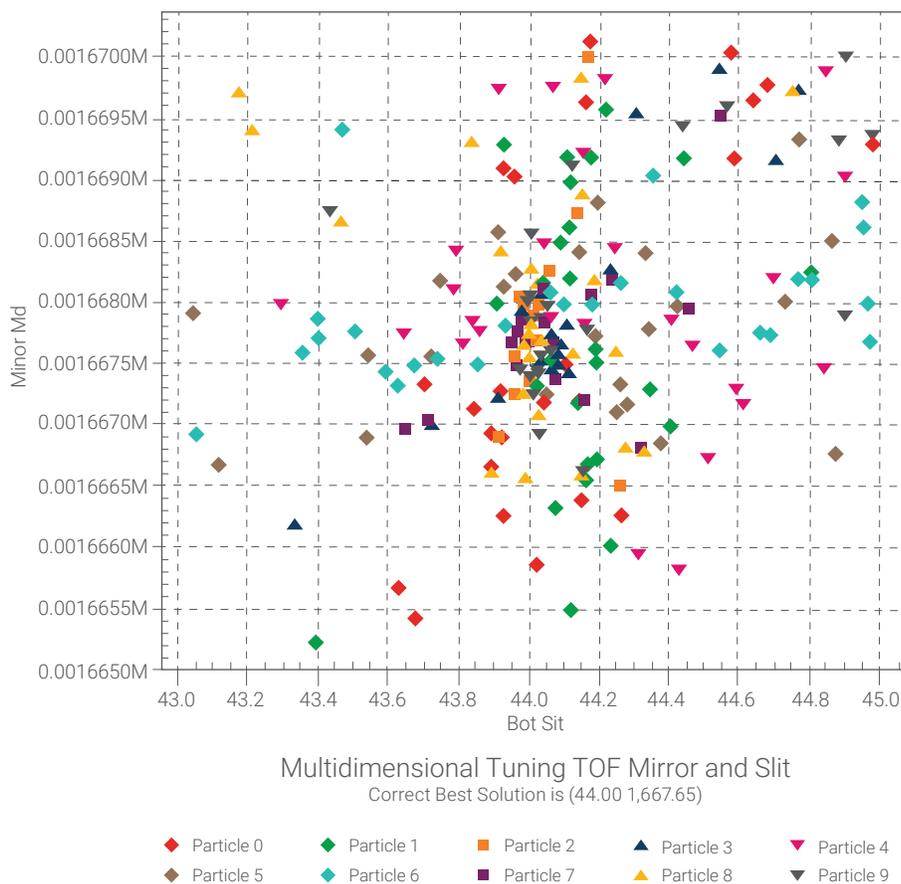
**Figure 1.** With excellent ionization efficiency, the Agilent Jet Stream ion source provides a fivefold increase in sensitivity, so you can uncover low-level components.

# The Right Software to Do It All

With the Agilent MassHunter software suite, the 6530 provides all the capabilities you need to identify, quantify, profile, and characterize compounds in complex mixtures via high-definition MS and MS/MS.

## Multidimensional tuning

Easily optimize the 6530 for your application with Agilent SWARM autotune—a feature that streamlines the tuning process, enabling you to get expert results, every time.



**Figure 2.** Agilent SWARM autotune quickly searches across a wide parameter space, converging on the optimal settings to ensure the best results from your LC/Q-TOF. By using machine learning to direct the tuning process, the end results enable the highest instrument performance, and more consistency.

# Identify and Quantitate with Higher Confidence

Whatever the focus of your lab—food safety, environmental testing, forensic toxicology—our All Ions MS/MS technology is a great solution for untargeted screening and quantitation.



The 6530 enables easy method setup—even for multicomponent screening. Or, if you need to quickly develop a quantitation method, the system will automatically select high-quality product ions for each compound.

What's more, the system verifies hits with a unique co-elution score of diagnostic fragment ions. Easily add new targets to the PCDL to continually expand the scope of screening over time—knowing that All Ions MS/MS always collects the full spectrum of molecular ions (plus their major fragments), so you can easily re-interrogate data from earlier tests.

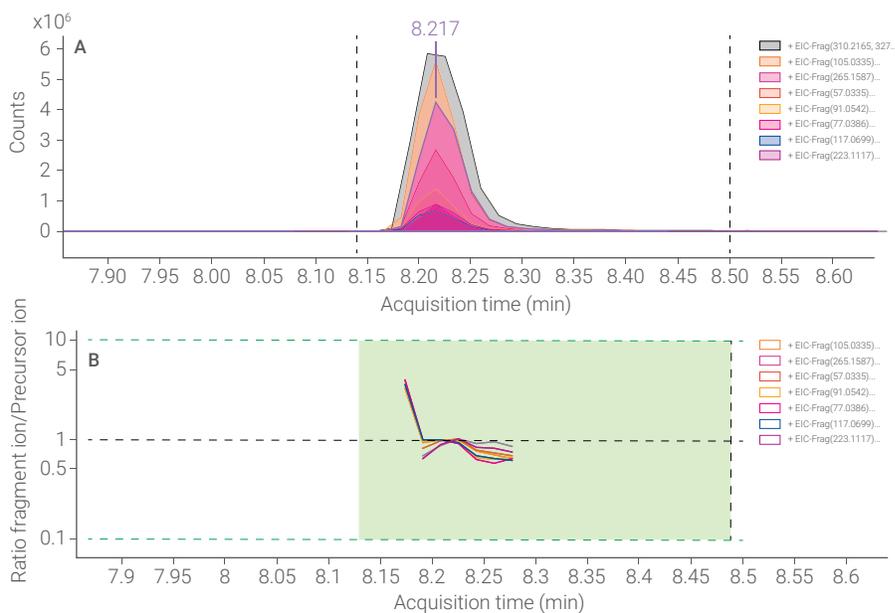
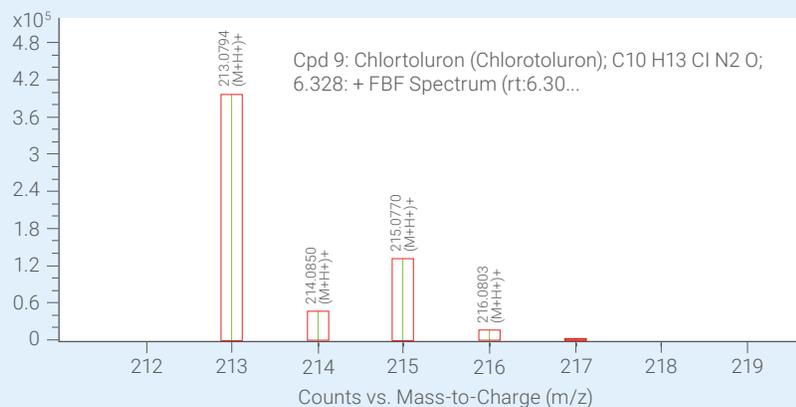


Figure 3. Overlaid ion chromatograms (A), calculated coelution plot (B).

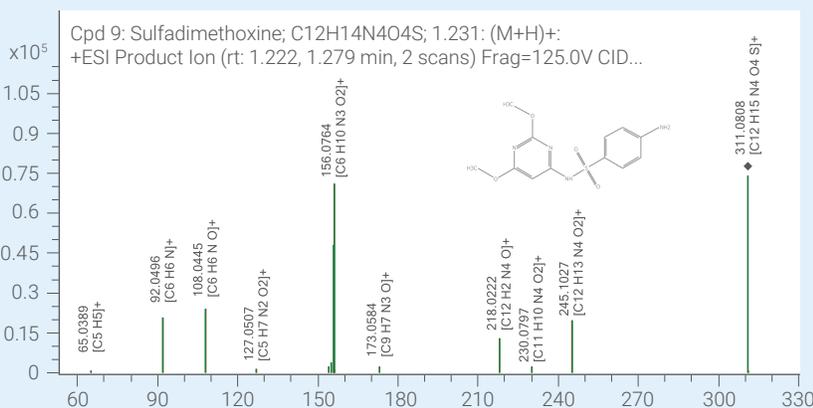
# Unlock the Full Power of High-resolution Data

Use every last bit of information gathered from your samples to your advantage, with the MassHunter suite of data analysis tools.



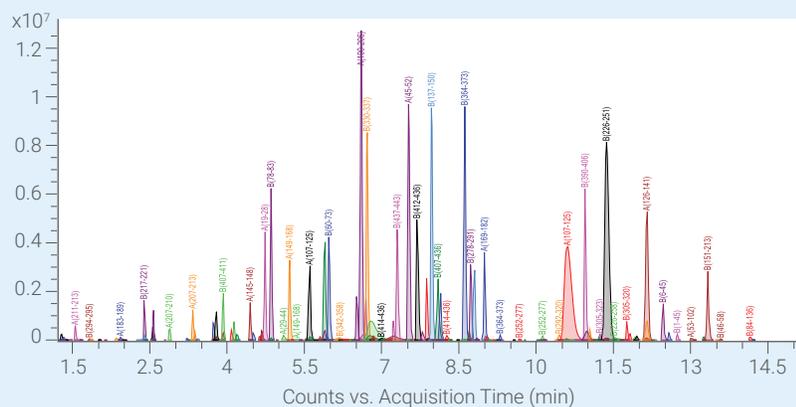
## Know what you are looking for?

Find compounds directly by formula, and match not just the accurate mass, but the isotopic spacing and ratios for the theoretical formula.



## Have a long list of possible suspects?

Use one of our many curated MS/MS libraries, or build your own with the powerful PCDL Manager.



## Need to profile everything, and identify unknowns?

Molecular Feature Extractor carefully identifies coeluting ions to create a single entity to track, even when multiple ion species are present. Identify with a library, or generate proposed structures based on fragmentation profile.

## Research Ready

Your team's research can take you on many paths. Having an instrument with the performance and flexibility to cover changing needs, and the reliability to be ready for a challenge every day allows you to focus on the data, not your lab equipment.



*"The Q-TOF is a pretty versatile instrument. It can do everything from proteomics to metabolomics to glycomics. So really, if you're trying to understand what kind of compounds you have, you want to start off with a Q-TOF. Once you know the structures and their behavior is when we would transfer to a QQQ or a profiling TOF."*

– **Professor Carlito Lebrilla,**  
University of California, Davis

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