BIOANALYSIS EXPERTISE

The Toxicology Department just added two high-end UHPLC/MS-MS
to its numerous analytical systems in order to assist
its constantly developing activities

Waters Xevo TQ-S

Waters ACQUITY UPLC I-Class System
This is a logical evolution which works with a higher pressure than standard UPLC system. The I-Class rating brings a great enhancement in terms of peak capacity, a lowered carryover, and an extended MS linear dynamic range. The chromatographic separation is accelerated without compromising the low dispersion and high fidelity which characterize UPLC systems.

Class leading sensitivity and robustness
The innovative StepWave ion guide delivers the highest levels of sensitivity and robustness. To do so, StepWave eliminates the neutrals and non-desired ions (based on their polarity) from the samples. The LOQ is therefore sensibly decreased.

Better spectral data from tandem quadrupole MS
ScanWave technology allows ions within the collision cell to be accumulated and separated according to their mass-to-charge ratio (m/z). Synchronizing theses ions with the scanning of the second quadrupole, significantly enhances product ion spectra, enabling you to confirm more easily the identities and structures of your products of interest.

Demonstration of these enhancements in studies:

MRM ES+
748.36 > 158.14

X 24

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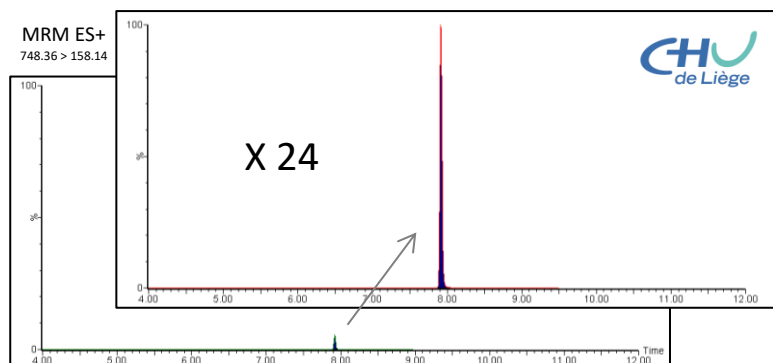
UPLC I-Class + XEVO TQ-S vs. UPLC + Quattro Premier XE

The same sample of clarithromycin was injected on both systems, in the same chromatographic conditions:

The area response is increased by 24-fold.

The new Waters Xevo TQ-S clearly proves its superiority in terms of sensibility.

QuanTof Technology
QuanTof combines both innovative high field pusher and dual stage reflectron design together with a novel ion detection system in an optimised Tof geometry.
This allows a totally new level of high resolution, exact mass and quantitative performance, consistently achievable at UPLC acquisition rates.

UPLC/MS^E and UPLC/Fast DDA
UPLC/MS^E is a simple, patented method of data acquisition that allows the simultaneously acquisition of precursor ions and fragment ions data. Thus only one injection is now necessary to have complete product's information.
UPLC/Fast DDA includes algorithms that intelligently select ions for MS/MS acquisitions in real time, during the elution of samples from the chromatographic system.
Thanks to these two technologies, the identification and characterization of known or unknown compounds are therefore noticeably quicker and easier in comparison with our previous Waters QTof 2.

MetaboLynx^{TM} XS: MassFragment^{TM} and IsoCount
MetaboLynx^{TM} XS is the new versions of Waters software suite that can help to rapidly identify the metabolites of any known or unknown molecule. MassFragment^{TM} is a powerful structural elucidation tool and IsoCount helps in the interpretation of metabolite spectra.

Waters Xevo G2 QTof

Demonstration of these enhancements in studies:

TOF-MS ES+ Clarithromycin (m/z 748.4850)

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