



Evolution Triple Quadrupole GC-MS/MS

Transforming the best GC-MS system into something even better.

CHROMTECH EVOLUTION

TRIPLE QUADRUPOLE GC-MS/MS

Transforming the best GC-MS system into something even better.

The CHROMTECH Evolution GC-MS/MS system is built upon the market-leading GC-MS system, the Agilent 5975 series MSD.

This marriage was made in heaven since the outstanding robustness and sensitivity of this GC-MS/MS system is the result of combining the famous Agilent ion source with CHROMTECH's patented IonRail technology collision cell design. User friendly system control and broad data analysis capabilities are key components of the instrument, making analysis of samples containing dirty matrices more reliable and easier than ever.



The CHROMTECH Evolution GC-MS/MS system offers both excellent sensitivity and unsurpassed reliability.

Sensitivity and reliability at its best.

Quantifying low level pesticides in food, identifying drugs and illicit compounds in biological matrices, as well as specifying biomarkers in geological samples can be challenging due to the complex matrix involved. The CHROMTECH Evolution Triple Quadrupole GC-MS/MS system performs all these tasks and more with ease.

The unrivaled selectivity of the MS/MS process in combination with Agilent's leading rugged inert ion source, true hyperbolic quartz Q1 and CHROMTECH's proprietary IonRail collision cell geometry result in the following:

- Ultimate sensitivity in the femtogram range.
- Superb selectivity without cross-talk.
- Extremely low noise detection.
- Fast data acquisition.
- Smallest bench space of any GC-QqQ system.
- Fully compatible with Agilent MassHunter software.
- Easy-to-use high performance Autotune.

Upgrade your existing Agilent 5973/5975 MSD

It is possible to upgrade your existing Agilent 5973/5975 series MSD to an Evolution QqQ system, offering all the possibilities of a state-of-the-art GC-MS/MS system.



IonRail collision cell

CHROMTECH's proprietary collision cell design reduces neutral noise and eliminates cross-talk, enabling ultra-fast SRM transitions



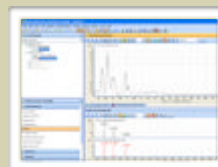
Smallest bench-space

Due to the curved, 90° collision cell geometry, the footprint for the GC-MS/MS system is minimized. Bench space is comparable to a single quadrupole GC-MS system.



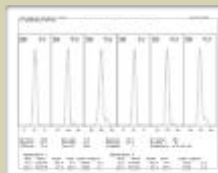
State of the art electronics

Using the latest electronic PCB design and high-end components, reliability and performance are taken to a new level



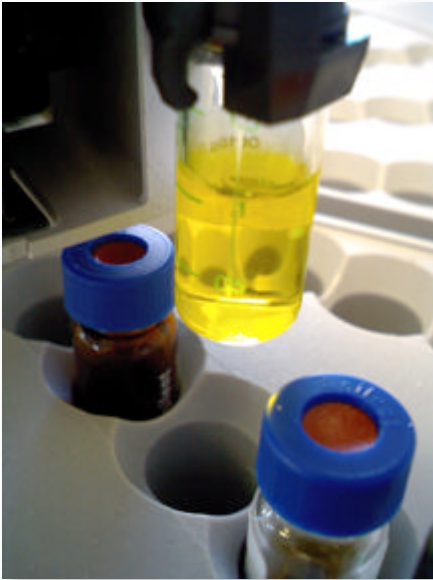
Agilent MassHunter Workstation compatible

The CHROMTECH Evolution QqQ is fully compatible with the Agilent MassHunter Workstation, the next generation of MS/MS data handling software.



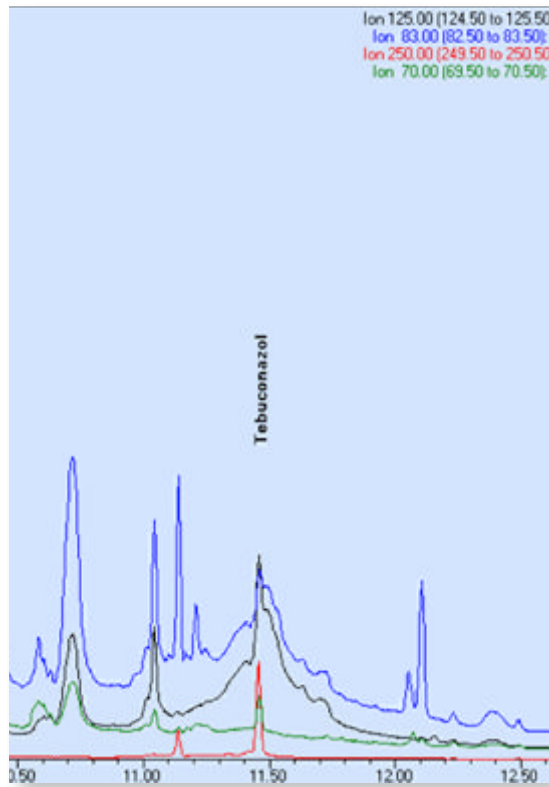
Fully automated Autotune

Easy-to-use Autotune enables high sensitivity and reliable analysis results, run by run. Manual tune can be done as well for special applications.

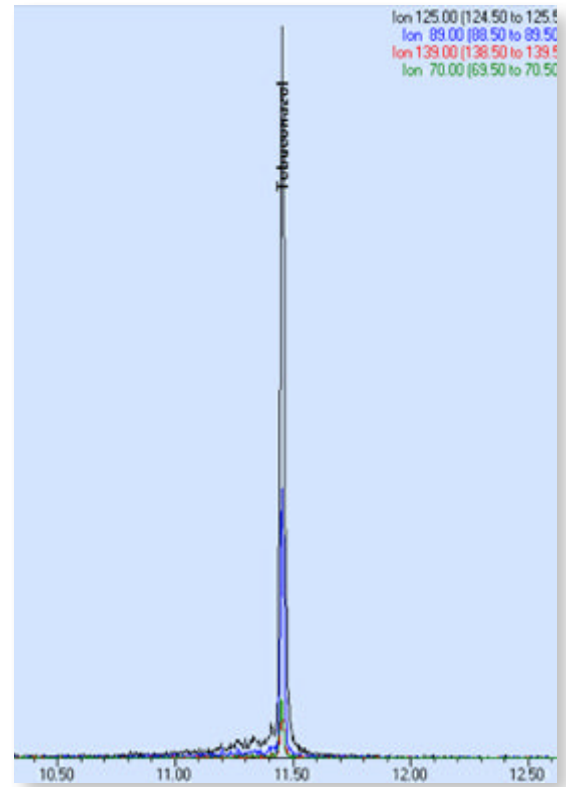


Don't let the matrix steer you wrong!

Analyzing low amounts of pesticide residues in vegetables and fruits is an exceedingly difficult task due to the complex matrix involved. Even working in SIM mode won't let you eliminate the interfering matrix effects. In order to overcome these matrix-related problems, the use of the MS/MS technique is the gold standard. Offering unsurpassed selectivity and sensitivity, the CHROMTECH Evolution Triple Quadrupole GC-MS/MS helps you to unambiguously identify and further quantify your target compounds in the most demanding matrix.

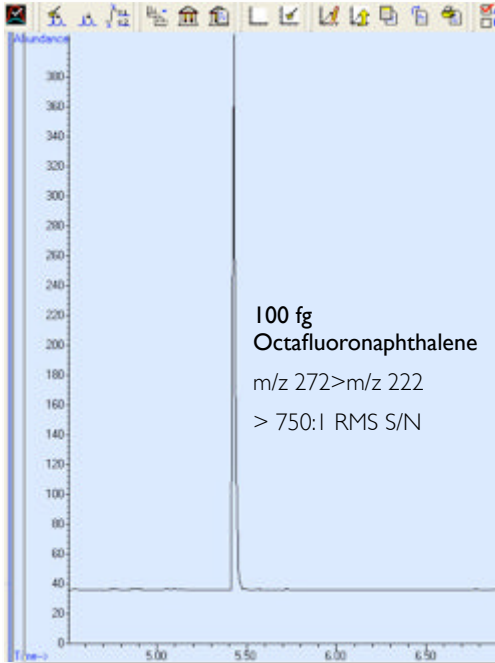


Tebuconazol, SIM mode
 1 Group containing 4 SIM ions:
 m/z 250, 125, 83, 70



Tebuconazol, SRM mode
 1 Group containing 4 SRM transitions:
 m/z 250>125, 125>89, 250>139, 250>70

Superior performance, day after day!



Signal to Noise Report

Data Path : C:\Dokumente und Einstellungen\VR\Desktop\OFN Files\
 Data File : OFN_MRM_09.D
 Acq On : 21 Sep 2009 14:20
 Operator :
 Sample : 100 fg OFN
 Misc : m/z 272>222 CID gas: Argon 0.8 bar
 ALS Vial : 1 Sample Multiplier: 1

Integration File: events.e

Method : C:\msdchem\1\DATA\Basil Spiked-1.D\AcqData\MRM Extract Pestic
 Title :
 Last Update :

Signal Used: Mass 222; data.ms

Signal region: 5.42 to 5.44 min; height: 409
 Noise region : 4.57 to 5.29 min; Max noise 37.0, Min noise 36.0

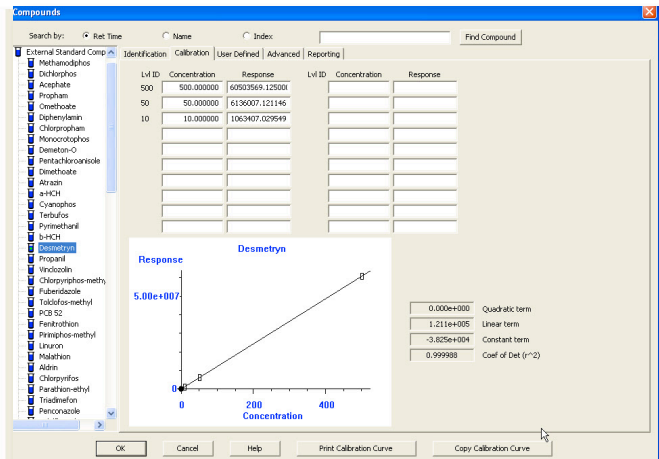
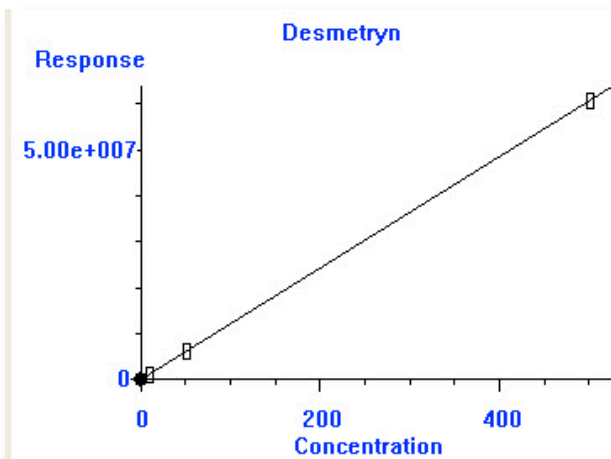
Calculations

Calculation	Value
Noise Points used	166
Average noise = (sum of noise)/points	36.2
Corrected Signal = height/Average noise	372.8
Pk-pk noise = Max noise/Min noise	1.0
Pk-pk S/N = Corrected signal/Pk-pk noise	372.8
RMS noise = SQRT(sum(square(noise-avg noise))/points)	37.0
RMS S/N = Corrected signal/RMS noise	879.2

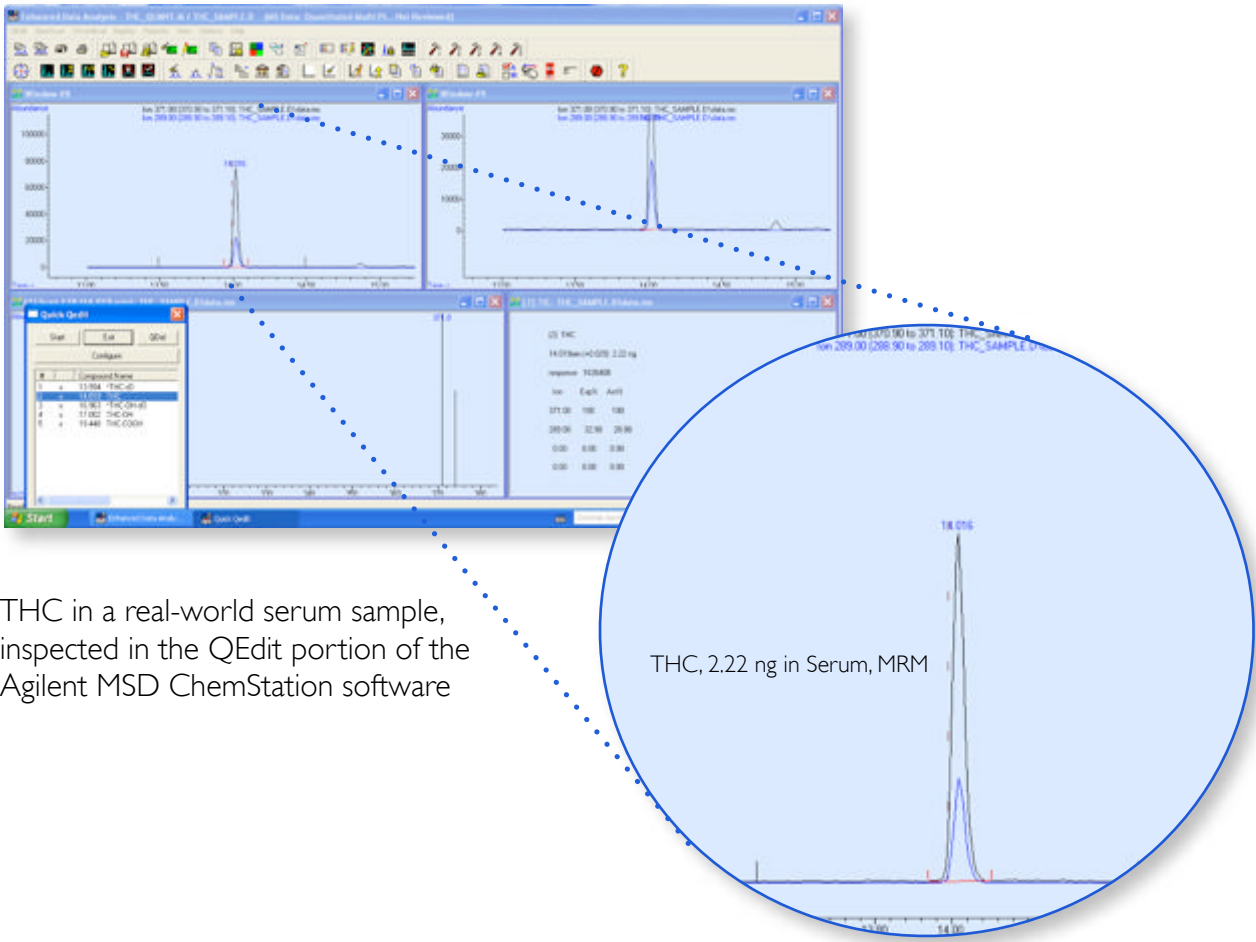
MRM Extract Pesticide.M Tue Jan 05 16:02:52 2010

Analysis of 100 femtograms of OFN: Signal to Noise >750:1

This EI SRM specification will be demonstrated on-site at installation using Autotune conditions



Calibration plot showing excellent linearity over a broad concentration range from 10 to 100 ppb for Desmetryn in Agilent MSD ChemStation Data Analysis software



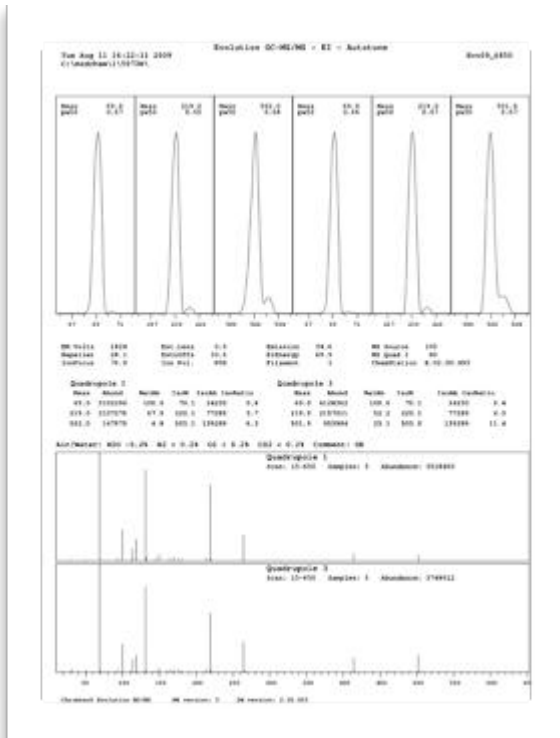
THC in a real-world serum sample, inspected in the QEdit portion of the Agilent MSD ChemStation software

THC, 2.22 ng in Serum, MRM



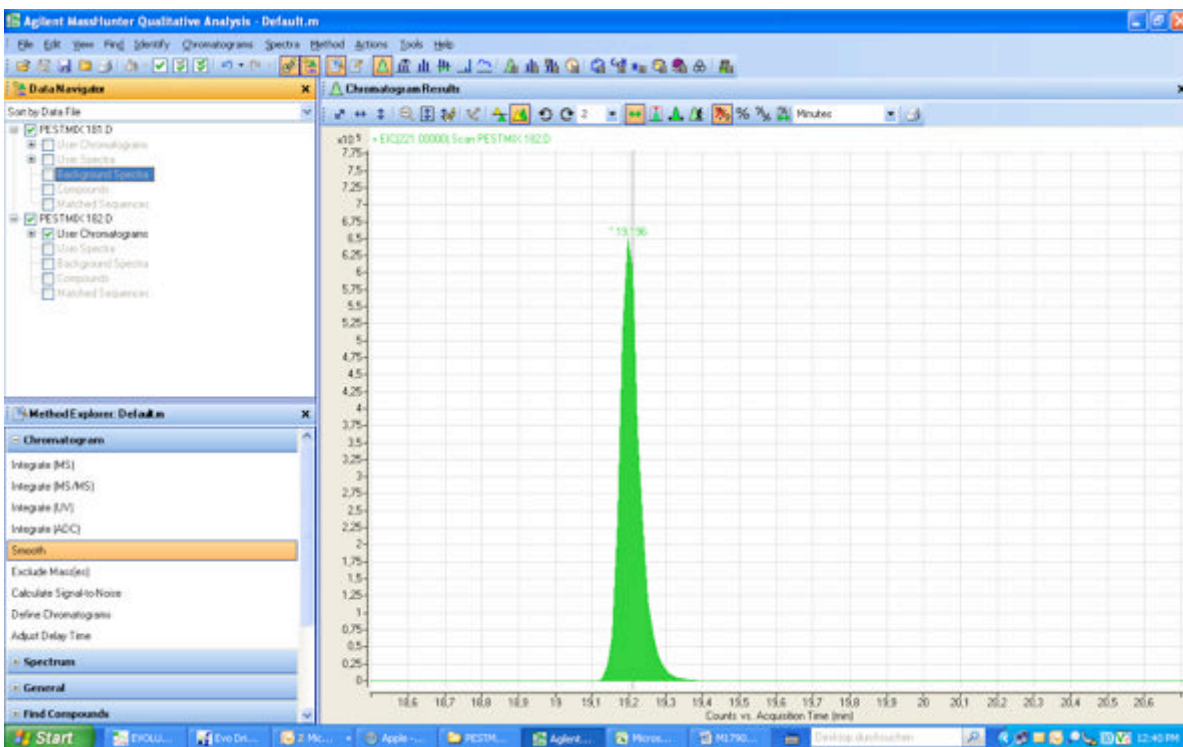
Agilent MSD ChemStation Data Analysis custom report used for analysis of banned substances or its metabolites in urine.

Analyte concentrations in this working standard vary between 20 pg and 200 pg on column.



CHROMTECH Evolution QqQ Autotune report being generated and automatically printed with a single push of a button in MSD ChemStation software.

Autotune includes Air & Water Check for easy maintenance, as well as lots of other useful information on one page.



Agilent MassHunter Workstation Qualitative Analysis window showing acquired CHROMTECH Evolution QqQ data file.

New features include fully customizable report generation, parameter-less integration, new spectral library search routines, compound-centric data navigation, batch processing and more.



**Innovative laboratory technology –
it's the right solution that counts!**

CHROMTECH offers innovative chromatography for customer solutions within the range of chemical analysis instrumentation.



For more information

Learn more:

www.chromtech.de

**Find a CHROMTECH distributor in your
country: Look for Global Sales under**

www.chromtech.de

U.S. and Canada

1-877-865-7712

info@chromsys.com

Europe

info@chromtech.de

Asia Pacific

info@chromtech.de

Research use only. Informations, descriptions and specifications in this publication are subject to change without notice. CHROMTECH shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material.

© CHROMTECH GmbH, 2010
Printed in Germany January 5, 2009
CT-EVOBRO109EN