

# Metrohm-Agilent IC/(MS/)MS Lösungen für die Umweltanalytik

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Metrohm IC-Anwendertreffen 25.05.2023




# Zusammenarbeit Metrohm und Agilent für IC-MS/MS

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Agilent Technologies and **Metrohm** are pleased to announce that they have entered into a non-exclusive agreement that allows Metrohm to become a value-added reseller for Agilent single- and triple-quadrupole mass spectrometers as well as ICP-MS products, software and services in France, Spain, Switzerland, UK and Ireland.  
Find Out More: <https://bit.ly/3Mk32fR>  
#ICPMS #HPLC #AgilentEMEA

## Agilent Technologies and Metrohm Join Forces to Expand Product Offerings

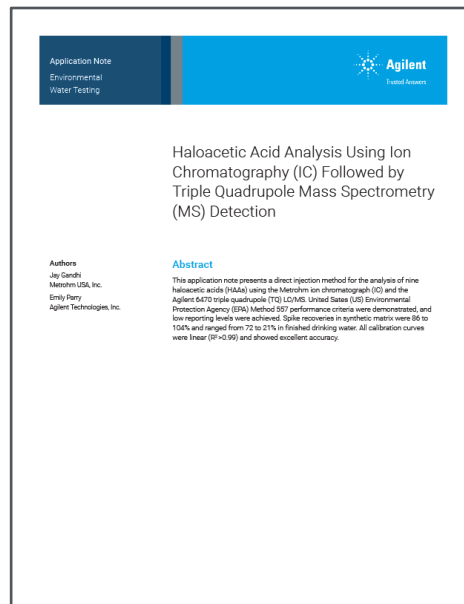


Agilent & Metrohm working together for you  
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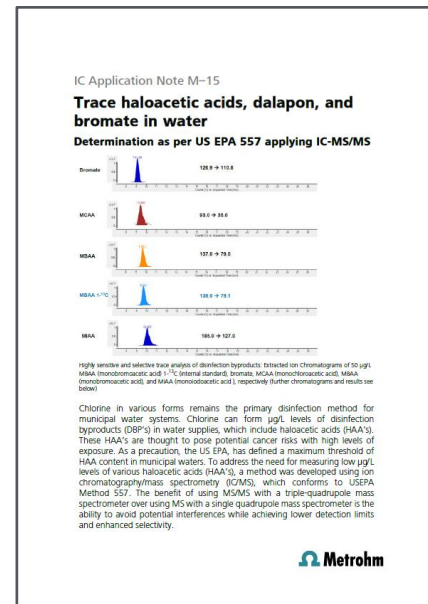
- Erweiterung der bereits bestehenden VAR-Vereinbarung für USA/CAN/AUS/NZL
- Methodenentwicklung wird durch ein Agilent 6475 Triple Quadrupole System am Standort Herisau unterstützt und ermöglicht
- Fokus auf regulierte Methoden im Bereich Lebensmittel- und Umweltanalytik
- Vorstellung der Lösung am Globalen User Meeting in Herisau im Juni 2023 inklusive Softwarelösung für IC-(SQ)MS

# Etablierte IC-MS/MS Anwendungen in der Umweltanalytik

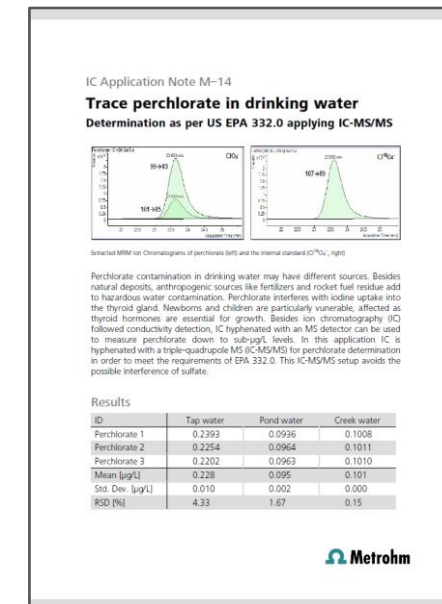
- Die United States (US) Environmental Protection Agency (EPA) empfiehlt die Verwendung von IC-MS/MS für die Bestimmung von Kontaminationen in Wasser für:
  - Halogenessigsäuren (halo acetic acids, HAAs) – EPA 557 und
  - Perchlorat – EPA 332.0
- Metrohm und Agilent haben gemeinsam AppNotes für diese Anwendungen entwickelt:



Agilent AppNote 5994-4875EN



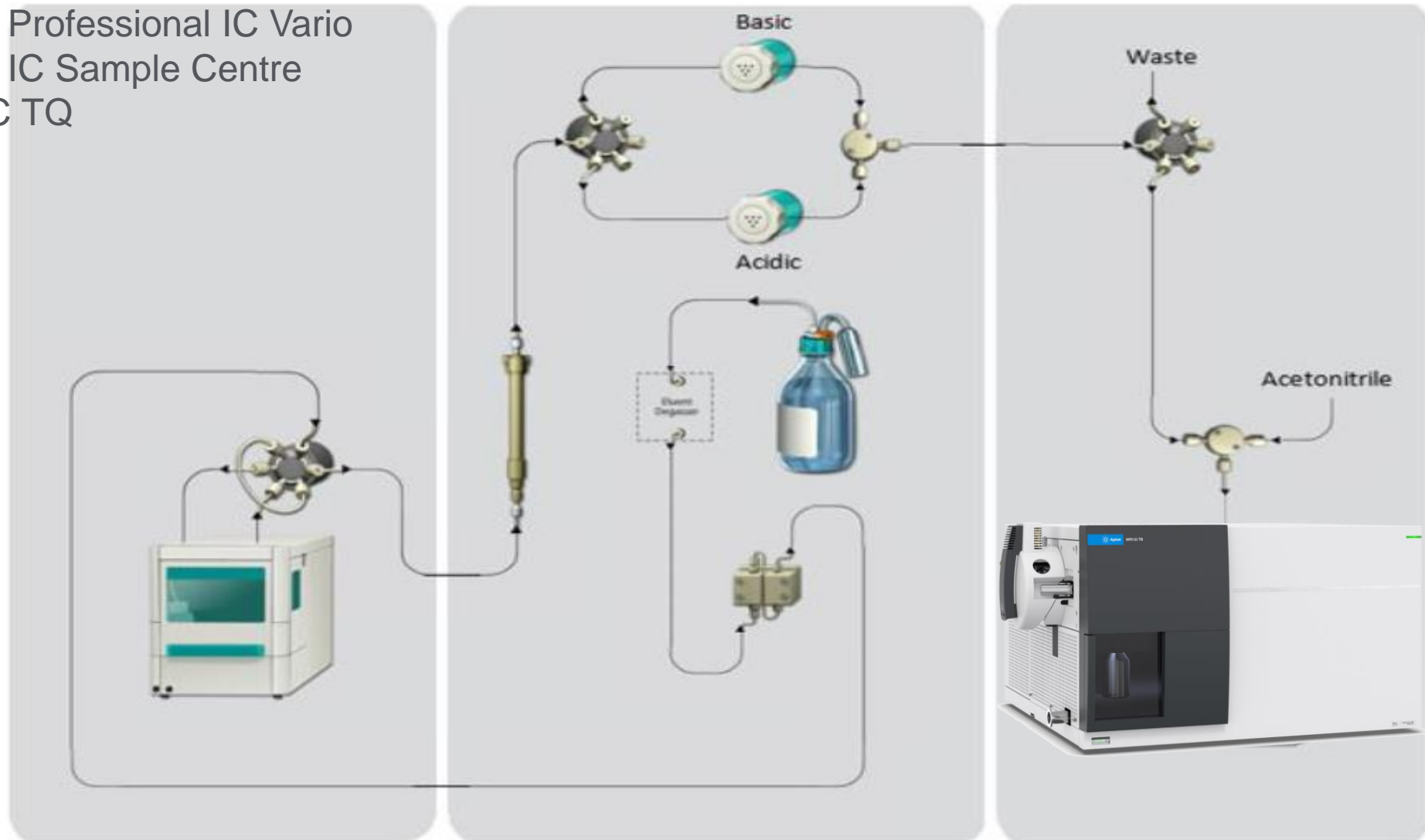
IC Application Note M-15



IC Application Note M-14

# Schematisches Diagramm des IC/MS/MS Setups

Metrohm 940 Professional IC Vario  
Metrohm 889 IC Sample Centre  
Agilent 6475C TQ



# Weitere IC-MS/MS Anwendungen in der Umweltanalytik

IC Methode für die Bestimmung polarer Pestizide (AMPA, Glyphosat)

## Metrohm 940 IC Conditions Polar Pesticides

Analytical Column	Metrohm Metrosep A Supp 7 – 250/ 2.0
Guard Column	Metrohm Metrosep A Supp 5 Guard/2.0
Suppressor Column	Rotor A MSM-LC
Column Temperature	45 °C to 60 °C
Mobile Phase	15 mM NaOH + 4 mM Na <sub>2</sub> CO <sub>3</sub> , Acetone in water (13.3%, v/v)
Chemical Suppressor	Regeneration: 0.3M NH <sub>4</sub> Cl / Rinse: UPW (Polar Pesticides)
Make Up Solvent	Acetonitrile
Run Time	36 min (Polar Pesticides)
Flow Rate	0.2 to 0.3 mL/min
Injection Volume	100 µL
Divert flow to waste	0.0 – 2.0 min

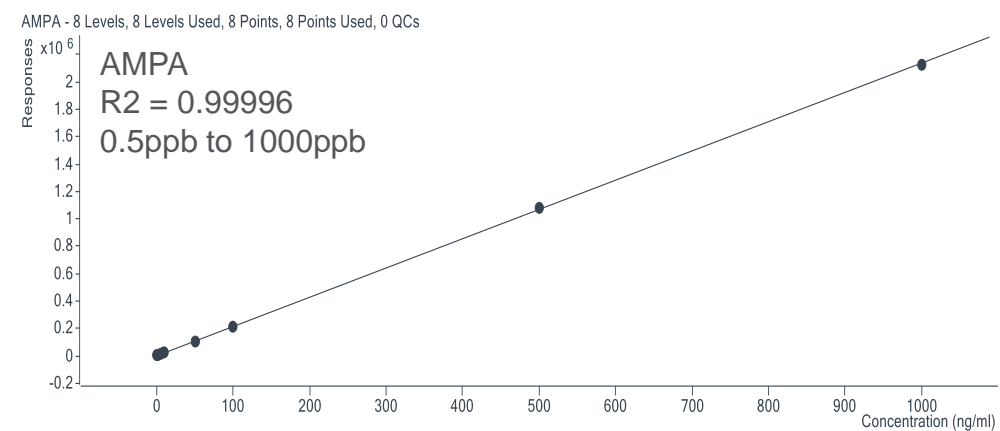
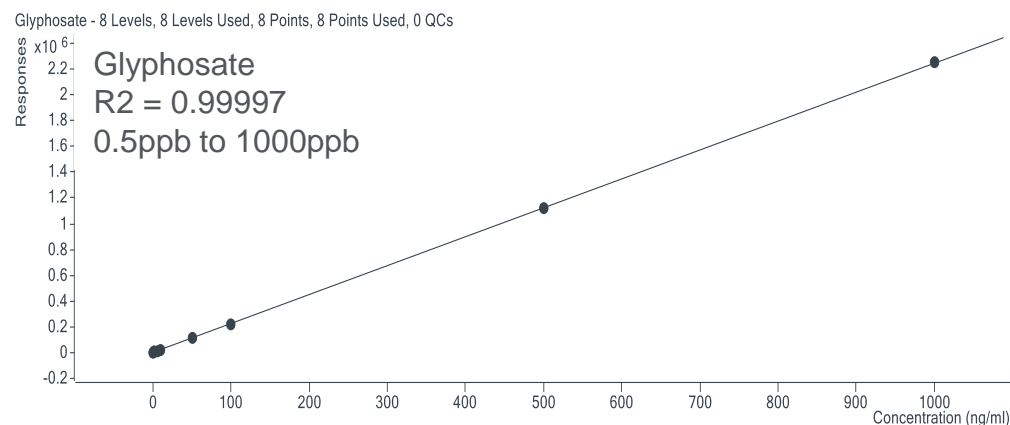
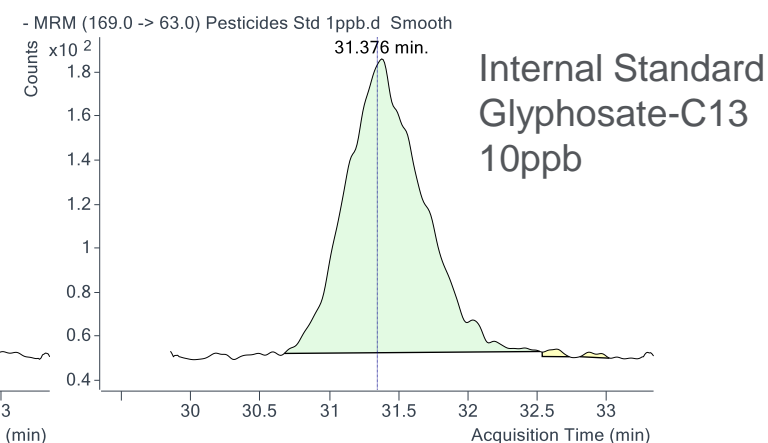
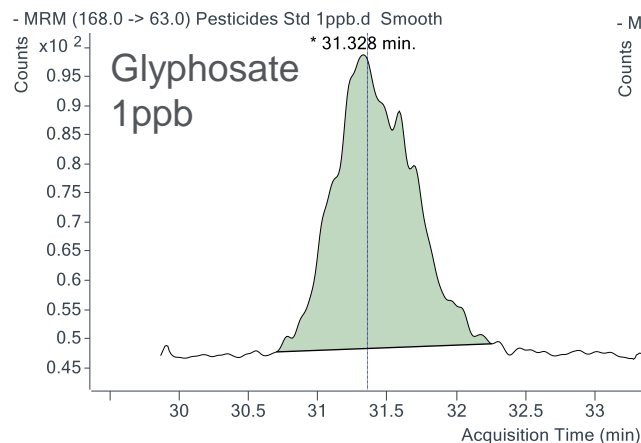
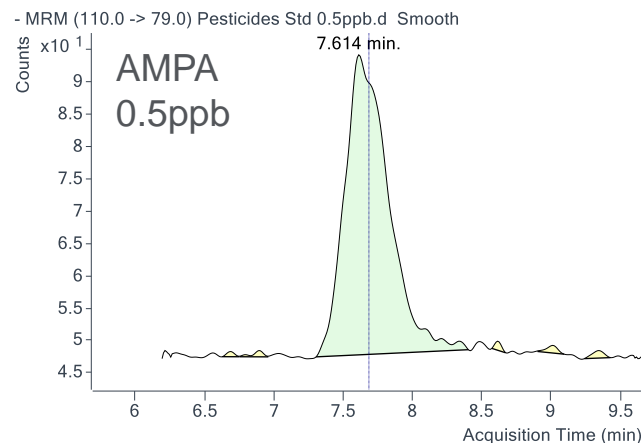


Agilent 6495C TQ required

# Weitere IC-MS/MS Anwendungen in der Umweltanalytik

## Quantifizierung Polarer Pestizide auf einem Agilent 6495C TQ

Lowest calibrator level in ultrapure water





# Kompatibilität Metrohm IC mit Agilent MS Systemen

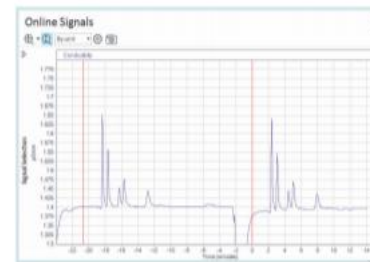
## IC Driver for Agilent OpenLab CDS



A perfect combination:  
Metrohm Ion Chromatography and OpenLab CDS Software

# Agilent OpenLab

Benefits of Agilent  
OpenLab CDS at a glance:



Agilent's newest generation CDS combines chromatography and mass spectrometry into one single data system. OpenLab CDS provides time-saving steps in the analysis, interpretation, and reporting workflows, so you can identify key information and improve turnaround time. Optional built-in technical controls provide peace of mind for analytical labs that need the highest level of data integrity.

- One software for all chromatographic applications
- One software for hyphenated techniques (IC-MS)
- Reduced training and software revalidation effort
- All data in one database

Integrierte Softwarelösung der IC gekoppelt mit Agilent MSD unter [Agilent OpenLab CDS](#)  
Verwendung zweier Softwares zur Steuerung der IC (MagIC NET) gekoppelt mit Agilent TQ unter [Agilent MassHunter](#)

Metrohm Brochure - 8.102.5007

# Welche Neuen Feature bietet das 6475 Triple Quadrupole LC/MS

## New and Improved Specifications

IDL < 3.5 fg Reserpine on Column  
S/N > 850,000:1 for 1pg of Reserpine  
High Res. "Narrow" Mode – 0.4 Da FWHM

## New and Improved Acquisition

Mixed Mode – MRM+Scanning  
500 concurrent transitions at 0.5ms Dwell  
"Standard HED" and "Large Molecule HED" modes  
0.1x to 10x Detector Gain factor boost

## New Intelligence Capability

Artificial Intelligence SWARM Tuning  
Intelligent Early Maintenance Feedback  
Intelligent Reinjection – iReflex Workflows  
Automated/Scheduled Tuning

## New Sustainability Certification

ACT Label – certified, transparent, and independent

IDL Proven at installation



my green lab  
certification.



# Ausblick





# Agilent

Trusted Answers