



COMPREHENSIVE PESTICIDE SURVEILLANCE USING A SINGLE SYSTEM

MassHunter Pesticides PCDL and Workflow for GC/Q-TOF

Monitoring pesticide residues is crucial to ensuring a safe food supply. There are currently over 1000 registered pesticides; the latest Agilent GC/TO and LC/TO instruments can each now deliver analysis of hundreds of these compounds per run. However, comprehensive calibration of hundreds of pesticides can be time consuming and cost prohibitive, especially considering it is often necessary to create different calibrations for different matrices or sample preparation procedures.

There is therefore a strong demand for the capability to qualitatively screen for a broad array of pesticides and quickly determine whether identified pesticides are in compliance with the regulated maximum residue limits (MRLs).

Confidently use accurate mass to perform target and suspect screening

The Agilent MassHunter Pesticides Personal Compound Database and Library (PCDL) and Workflow for GC/Q-TOF provide a comprehensive pesticide surveillance solution for both quantitative and qualitative screening. This solution combines a comprehensive PCDL and detailed qualitative and quantitative screening workflows for use with the Agilent 7200 Series High Resolution Accurate Mass GC/Q-TOF to ensure laboratories meet expanding demand and productivity goals.

The Agilent MassHunter Pesticides PCDL and Workflow for GC/Q-TOF includes:

- Easy adoption and start-up of dual qualitative and quantitative workflow using the included comprehensive workflow guide, PCDL, and methods
- Expertly curated accurate mass PCDL for GC/Q-TOF with more than 850 pesticides and environmental contaminants
- Customize the PCDL exactly for your analysis—easily add or update compounds, spectra, and retention times (RTs) through the latest PCDL Manager Software
- Optimized data collection using two sets of industry standard acquisition GC methods
- Confident Retention Time Locking (RTL)-based compound identification for use with the accompanying acquisition methods
- Keep your experiments current with 3-years of free PCDL upgrades



Agilent Technologies

Flexibility to perform quantification only when needed

Combining the Agilent MassHunter Pesticides PCDL and Workflow for GC/Q-TOF with the accurate mass capabilities of the 7200 Series GC/Q-TOF enables:

- Quantitative screening for pesticides employing either comprehensive multi-level or fast quantitation
- Qualitative (suspect) screening against the PCDL

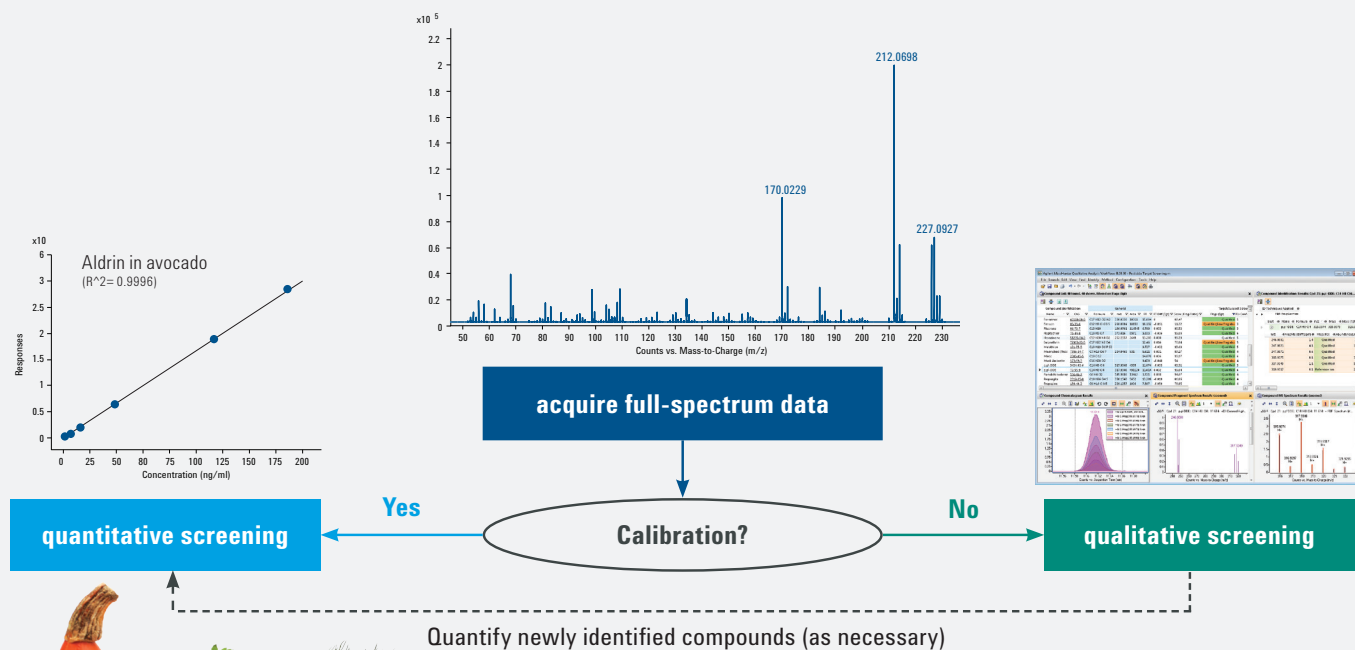
Unrivalled confidence in identification

Find by Fragments—a MassHunter Qualitative Analysis All Ions data processing workflow—provides an automated process for identifying compounds against PCDL input. MassHunter Data

Analysis software also offers a comprehensive review of screening results, assisted by delta RT, EIC alignment, fragment ratio score, and mass accuracy, to verify the compound's identification with even greater confidence.

When target compounds are available, a comprehensive multiple-level calibration curve can be generated with increased linear range, thanks to the SureMass feature in MassHunter Quantitative Analysis software. Fast quantitative screening, using a one- or two-level calibration, can be employed for rapid estimation of whether a broad range of pesticides are in compliance with certain MRLs.

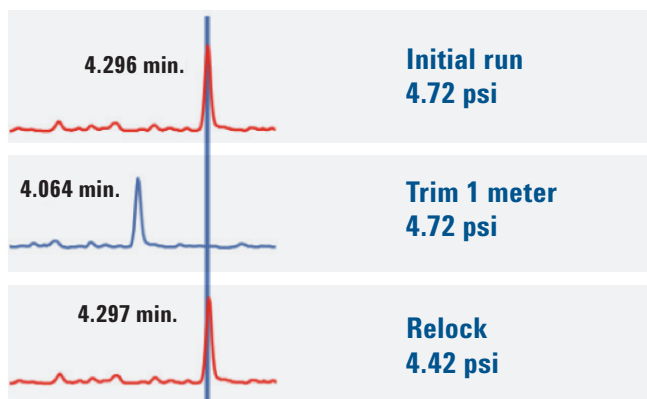
Workflow for quantitative and qualitative screening



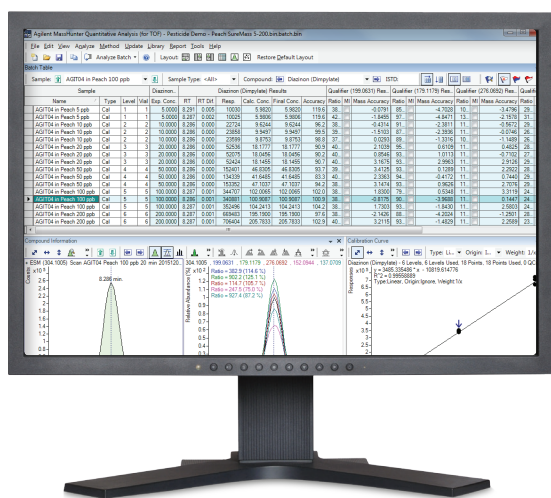
Developed in collaboration with leading pesticides laboratories

Transform your results from acceptable to exceptional using expert-developed acquisition methods and the MassHunter Pesticides PCDL and Workflow for GC/Q-TOF:

- Identify compounds through accurate mass, retention time, isotope pattern, and fragment confirmation
- Readjustment of RT in the library is never required—RTL ensures that the method always delivers the same RT regardless of column age, maintenance, or replacement
- 20-minute acquisition method with shorter cycle times for higher-throughput requirements
- 40-minute acquisition method when enhanced chromatographic separation is required
- Unique capillary flow technology enables backflushing, which extends column life and reduces run time through removal of late-eluting matrix components
- Add your own compounds and library spectra using the MassHunter Qualitative Data Acquisition auto-curate workflow to create PCDLs specific to your analyses
- Perform retrospective data analysis using newly added PCDL compounds—without the need to re-run samples



Auto RTL tuning following inlet or column maintenance enables your laboratory to start analyzing samples faster.



MassHunter Quantitative Analysis result and data review

Ordering information

The MassHunter Pesticides PCDL and Workflow for GC/Q-TOF can be purchased with a new instrument order or as an add-on to an existing 7200 Series GC/Q-TOF.

Description

MassHunter Pesticides PCDL and Workflow for GC/Q-TOF

Part Number

G3892AA

A full portfolio of customized products, services, and support



Agilent
CrossLab

From Insight to Outcome

Sample preparation for the most challenging food matrices

Matrix effects are of increasing concern, especially given the number of pesticides being monitored and their low detection limits. The innovative Bond Elut Enhanced Matrix Removal-Lipid, a new addition to Agilent's comprehensive QuEChERS products, delivers the most complete matrix removal and analyte recovery of any sample prep product.

Agilent CrossLab Services:

Maximize uptime with end-to-end support

You can trust Agilent CrossLab service experts to deliver valuable insights and keep your instruments running at top performance. Our industry-leading services—tailored to meet your needs—include application consulting, repairs, preventive maintenance, compliance verification, and education. Ask us how we can support your laboratory today.

Put your laboratory on the productivity fast track

Contact your local Agilent representative
or Agilent authorized distributor at
www.agilent.com/chem/contactus

Or call 800-227-9770 (in the U.S. or Canada)

For a description of available LC/MS Databases and
Libraries, and GDC/MS Analyzers, visit
www.agilent.com/chem/food-ms-solutions

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