CONFIDENTLY CONFIRM PESTICIDES AND ENVIRONMENTAL POLLUTANTS IN COMPLEX MATRICES

Agilent Pesticides and Environmental Pollutants Analyzer 4.0

Powered by market-leading Triple Quadrupole GC/MS technology, this factory configured, chemically tested analyzer puts you on the fast track to measuring pesticides and environmental pollutants in complex matrices.

Concern about trace-level pollutants in food and the environment is driving the demand for rapid and reliable identification of chemical residues. Meeting this challenge requires technologies that can differentiate pesticides, PCBs, PAHs, PBDE, and other targets from organic interferences at low ppb concentrations.

The Agilent Pesticides and Environmental Pollutants (P&EP) Analyzer 4.0 follows SANCO guidelines and lets you accurately confirm target pesticides while reducing the time required from start-up to results. It combines the leading-edge innovations of the Agilent 7890B GC and 7010B Series Triple Quadrupole GC/MS with pre-tested methods and a comprehensive MRM database to transform your results from acceptable to exceptional.

The Agilent P&EP Analyzer 4.0 includes the following to maximize performance and support your complete workflow:

- Choice of pre-tested, retention time-locked methods
- Dynamic MRM enhances data efficiency by automatically optimizing an analyte’s dwell time
- Capillary Flow Technology and backflush-ready configurations
- Reverse sandwich injection saves bench work
- P&EP MRM database with > 1,100 compounds
- Over 7,500 matrix-optimized MRM transitions
- QuEChERS and EMR—Lipid sample prep kits
- Installation with a checkout sample for verification of chromatographic performance
- OPTIONAL: JetClean self-cleaning ion source and Method and Application Services

Agilent Technologies
MARKET-LEADING TECHNOLOGY DELIVERS SUPERIOR ANALYTICAL PERFORMANCE

Automated Retention Time Locking (Auto RTL)
Pre-tested methods provide optimal analysis
A choice of four (4) pre-tested methods to meet your individual analytical needs for performance or flexibility driven method setup. As a core method parameter, Auto RTL precisely matches RTs from column to column, instrument to instrument, and lab to lab for methods that have the same nominal parameters. The result: peaks are where you expect them in the chromatogram. Retention time locking provides the basis for effective dynamic MRM methods.

Capillary Flow Technology (CFT) Backflush
Three configurations remove heavy sample components
Injecting heavy matrix samples can retain high-boiling compounds at the head of the column, causing analyte interferences and degrading chromatographic performance. Reversing column flow using CFT backflush eliminates the need to bake columns at the end of the run to remove heavy materials, reduces system cycle time, minimizes source cleaning, and provides stable baselines and retention times for target analytes.

Dynamic Multiple Reaction Monitoring (dMRM)
Easier method maintenance and better performance
Enable larger target lists in a single run due to more efficient use of instrument data acquisition time using dMRM with retention-time scheduled MRM transitions. Convert your time segment-based methods to dMRM methods for easier method maintenance and better performance. Achieve faster maximum scan speeds in combined scan/MRM mode for simultaneous analysis of non-targets. dMRM also provides an intuitive way to build and modify acquisition methods using the P&EP MRM database.

MassHunter qualitative chromatogram of an organic honey dMRM run
Reverse Sandwich Injection
Streamlined sample injection

Using sandwich injections can save significant bench work otherwise needed to prepare matrix-matched calibration standards and/or addition of internal standards to the samples. Injecting matrix before the sample benefits the analysis. Updated MassHunter Data Acquisition Software simplifies the sandwich injection options.

Updated P&EP MRM Database
Simplify the creation of compound lists and analytical methods

The P&EP 4.0 Analyzer not only provides the most comprehensive MRM Database on the market, it also guarantees state-of-the-art analyses with a 3-year site subscription with free updates. It also includes over 7500 MRM transitions that have been optimized in a variety of complex matrices like spinach, jasmine rice, and black tea. Alternate MRM transitions help avoid matrix interferences and increase confidence in the identification of target compounds in difficult matrices. The database is fully compatible with Agilent GC/MS MassHunter Data Acquisition’s dynamic MRM (dMRM) functionality.

JetClean Self-Cleaning Ion Source
Reduce source maintenance and get more consistent results

The Agilent JetClean self-cleaning ion source keeps your P&EP Analyzer free of matrix deposits that would otherwise build up over time and degrade instrument performance. Using a carefully controlled hydrogen flow, JetClean technology significantly reduces the need for cleaning the ion source, thereby extending maintenance-free operation periods of the analyzer.

To review our full line of analyzers, visit www.agilent.com/chem/food-ms-solutions
**Agilent Method and Application Services**

Achieve the best scientific outcome at each step of the workflow

Agilent application consultants provide you with comprehensive guidance for trace-level analysis of pesticides and environmental pollutants in food and environmental matrices, including optimization of the MRM acquisition method. Optional sample prep consultancy can provide you with step-by-step guidance.

**Agilent QuEChERS and EMR—Lipid Startup Kits**

Sample preparation made easy

Agilent offers a broad range of QuEChERS sample prep products for a variety of matrices. The P&EP 4.0 Analyzer includes a QuEChERS+EMR—Lipid Startup Kit applicable to frequently analyzed sample matrices. The innovative sorbent in the Enhanced Matrix Removal—Lipid dispersive SPE (EMR—Lipid dSPE) product selectively removes lipids in complex matrices without losing analytes of interest.

**Agilent P&EP Analyzer 4.0 Ordering Information:**

Choose one of the following options when you order an Agilent 7000D/7010B Series Triple Quadrupole GC/MS with an Agilent 7890B GC analyzer system:

<table>
<thead>
<tr>
<th>Part No</th>
<th>Backflush Method</th>
<th>Run Time</th>
<th>Dimensions</th>
<th>Backflush</th>
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<tbody>
<tr>
<td>M7411AA</td>
<td>Flexible Constant Pressure</td>
<td>40 min</td>
<td>30 m column x 0.5 m restrictor</td>
<td>Post Column</td>
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<tr>
<td>M7412AA</td>
<td>Constant Flow (CF)</td>
<td>20 or 40 min</td>
<td>15 m column x 15 m column</td>
<td>Mid Column</td>
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<tr>
<td>M7414AA</td>
<td>Selective CF</td>
<td>20 min</td>
<td>5 m column x 15 m column</td>
<td>Mid Column</td>
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</tbody>
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Call **800-227-9770** (in the U.S. or Canada)

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