

PEGASUS® BT

PEGASUS® BT 4D



**HIGHER PRODUCTIVITY
IN YOUR LABORATORY**

LECO
EMPOWERING RESULTS



Pegasus BT

SMART ON DATA. SMART ON SIZE.

Today's laboratories are being asked to do more everyday – more samples run, more data acquired, more chemical information processed, and more results achieved – all in less time, and for less money.

A smart investment for any laboratory looking to perform qualitative or quantitative analysis of knowns and unknowns, the *Pegasus BT* GC-TOFMS is the first benchtop GC time-of-flight mass spectrometer to deliver higher sample throughput, better chemical information, and very low maintenance costs resulting in improved overall productivity in your laboratory and results that are of the highest quality.

BENEFITS OF THE PEGASUS BT GC-TOFMS

Pegasus BT

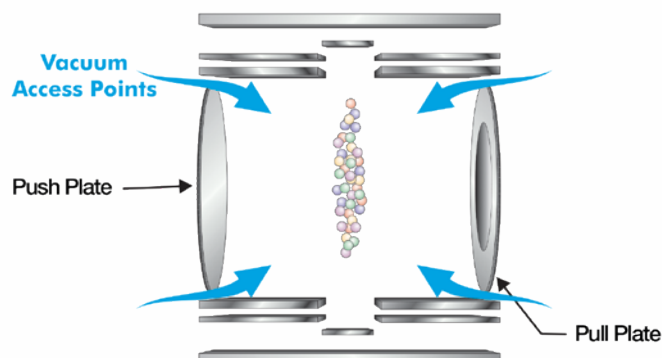
The Pegasus BT combines new, compact GC mass spec hardware with our powerful ChromaTOF® brand software, giving you high instrument performance, as well as complete and comprehensive data for simplified routine analysis. Ideal for pesticides, metabolomics, petroleum, and food/ flavor/ fragrance quality analysis applications.

STAYCLEAN® ION SOURCE

Open-style EI source virtually eliminates downtime associated with source cleaning*, which means you can spend your time running more samples.

* Even after 3,000 sludge injections, source has not needed cleaning.

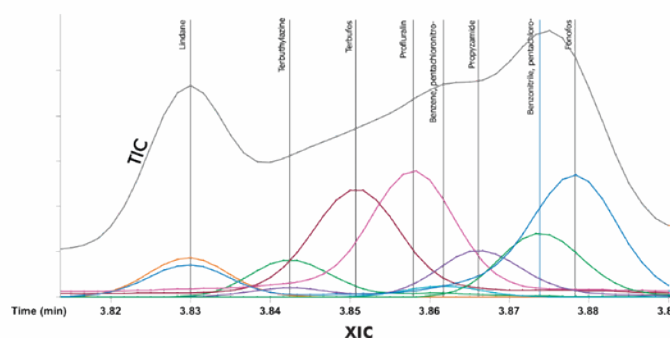
Open-Style EI Source



NONTARGET DECONVOLUTION® (NTD®)

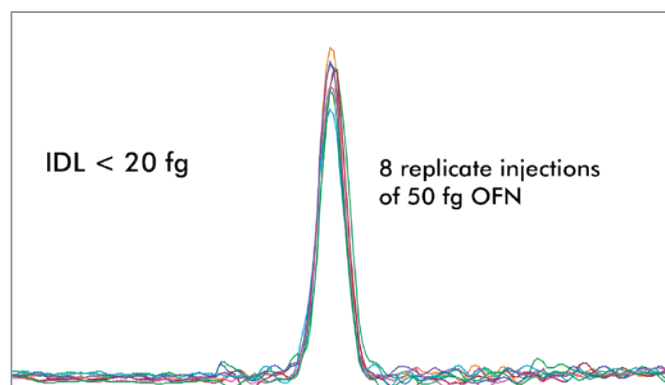
Automated deconvolution ensures that coeluting peaks and matrix interferences don't hinder your analyses.

Eight pesticides identified within 5 sec R. T.

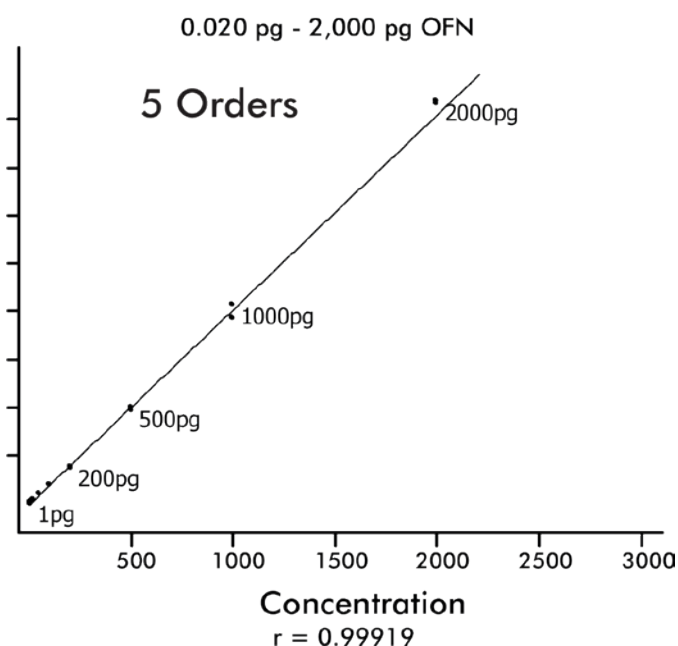


ENHANCED SENSITIVITY

Find and quantify an unlimited number of analytes – in every run, every time. No need for additional targeted analyses.



Detection Limit

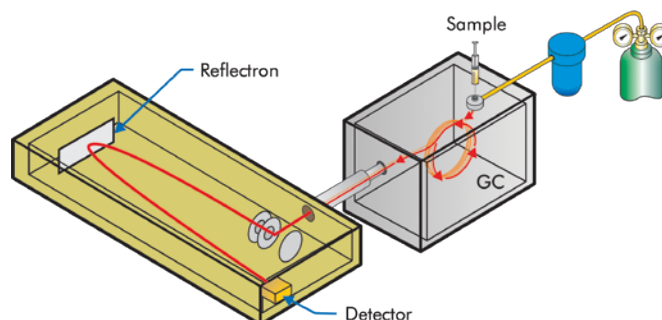


Quantitative Dynamic Range

FEATURES OF THE PEGASUS BT GC-TOFMS

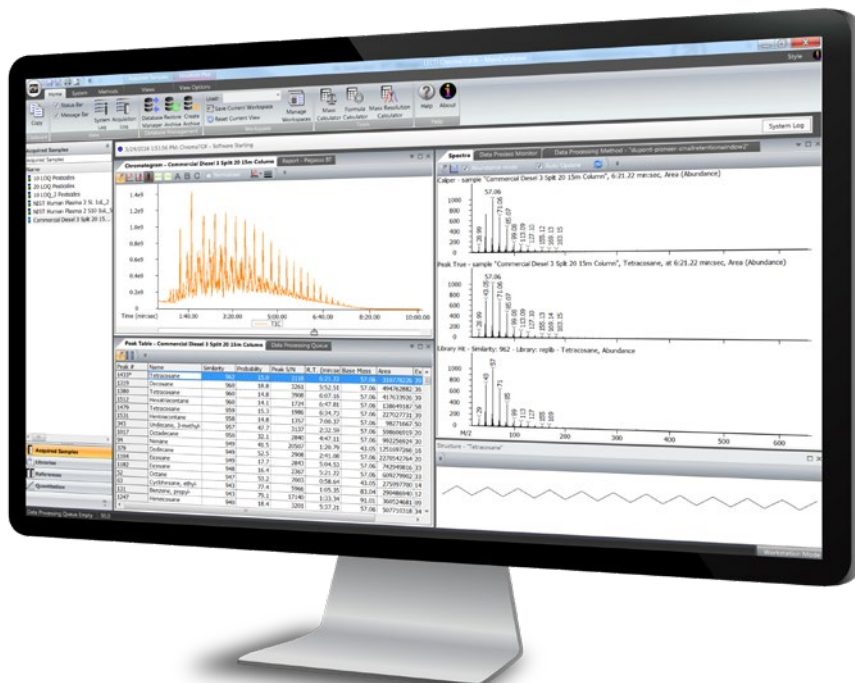
Pegasus BT

- Industry-leading sensitivity helps you find and quantify an unlimited number of analytes, while working with proprietary deconvolution algorithms to yield clean, high-quality spectra
- Complete historical record of mass spectral components for each sample is retained for future data mining
- The tried-and-tested reliability and durability of our StayClean® ion source on a convenient benchtop unit



ChromaTOF

Obtaining better chemical information is really only part of the solution. What to do with all that data? We have a solution for that – our exclusive *ChromaTOF* brand software package works seamlessly with your *Pegasus BT* to efficiently process your data and remove the guesswork involved with analyte identification, quantitation, and reporting.



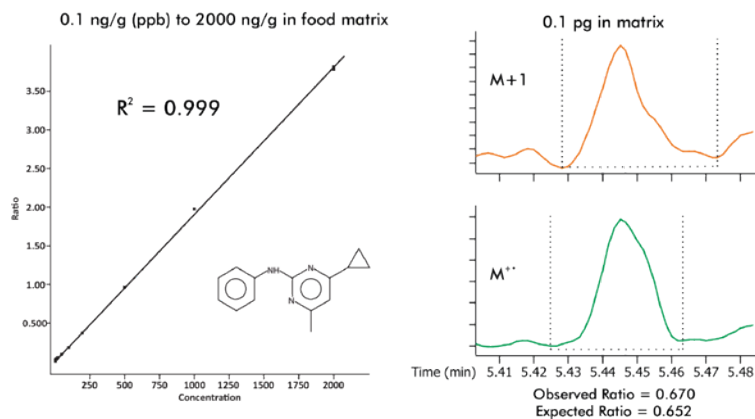
- Peak tables link library search results with deconvolution for easy review and comparison
- Apply filters to any parameter and easily see what you are interested in, then save and re-use on any data file
- Easy-to-configure interface to review data the way YOU want; easily save and re-use for other analyses
- Database feature contains all information regarding your project – including sample information, meta-data, data, methodology, and reports
- Acquisition control for automated batch and sample handling; including automated data processing
- Quantitation section allows easy review of chromatograms and their integration, calibration curves, and results
- Management of libraries such as NIST or Wiley; with the ability to create your own spectral databases
- Compare data side-by-side using the Reference feature
- Diagnostics provide a detailed look at the system; pressure of the vacuum, ion source parameters, and a quick run feature

APPLICATION ANALYSIS USING THE PEGASUS BT – FAST, EFFICIENT, AND SENSITIVE ANALYSIS OF PESTICIDES

Pegasus BT

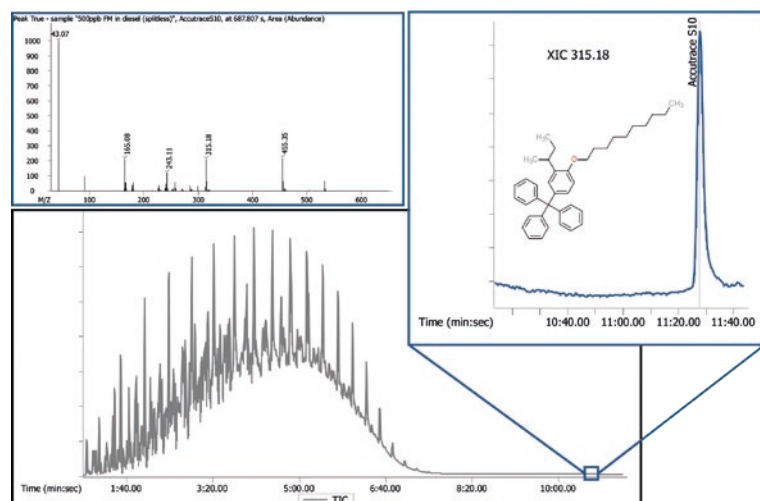
CALIBRATION CURVE IN STRAWBERRY MATRIX: CYPRODINIL

Calibration Curve in Strawberry Matrix: Cyprodinil



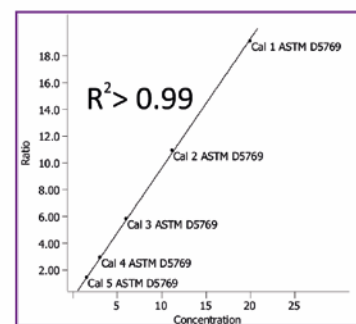
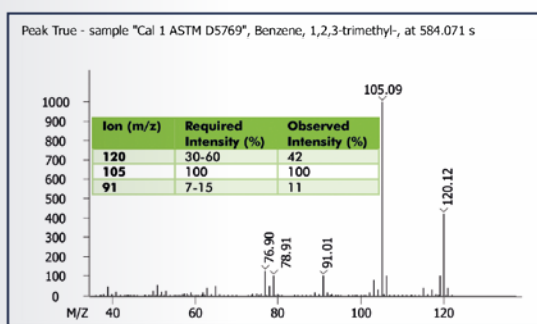
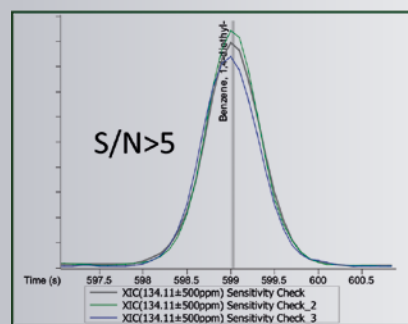
The calibration curve at left shows excellent linearity, and sensitivity easily meets all standard requirements.

CHARACTERIZATION OF FUEL MARKERS AT TRACE LEVELS IS EASY AND ROUTINE



Full TIC chromatogram of a spiked commercial diesel sample.

ASTM 5769 METHOD REQUIREMENTS ARE EXCEEDED AND TOTAL AROMATICS IN FINISHED GASOLINE CAN BE INVESTIGATED.



Calibration = Valid



Pegasus BT 4D

THE NEW *PEGASUS* BT 4D: IMPROVE ALL PARTS OF YOUR ANALYSIS WITH GC×GC-TOFMS

QUALITATIVE POWER

The *Pegasus* BT 4D improves identification due to the increased chromatographic capabilities of GC×GC

QUANTITATIVE POWER

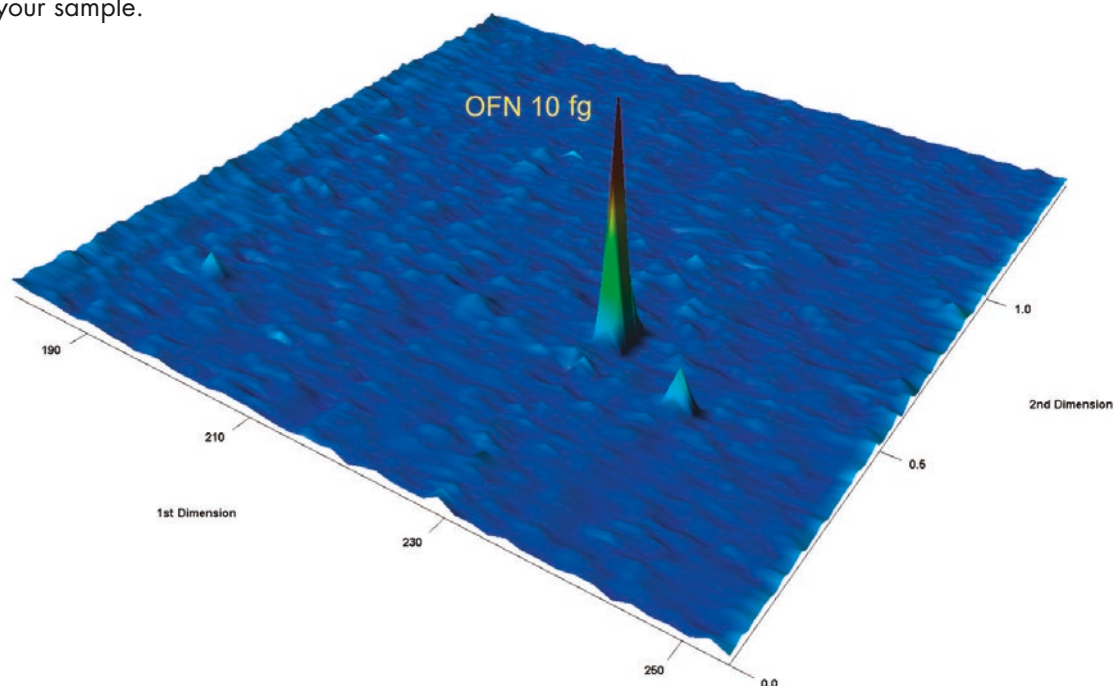
The *Pegasus* BT 4D provides lower detection limits by increasing signal and reducing noise

With the *Pegasus* BT 4D you are able to perform qualitative and quantitative analysis all at once through a single run, which not only yields richer chemical data, but also gives you an overall increase in your laboratory's productivity and efficiency.

EXCELLENT SENSITIVITY

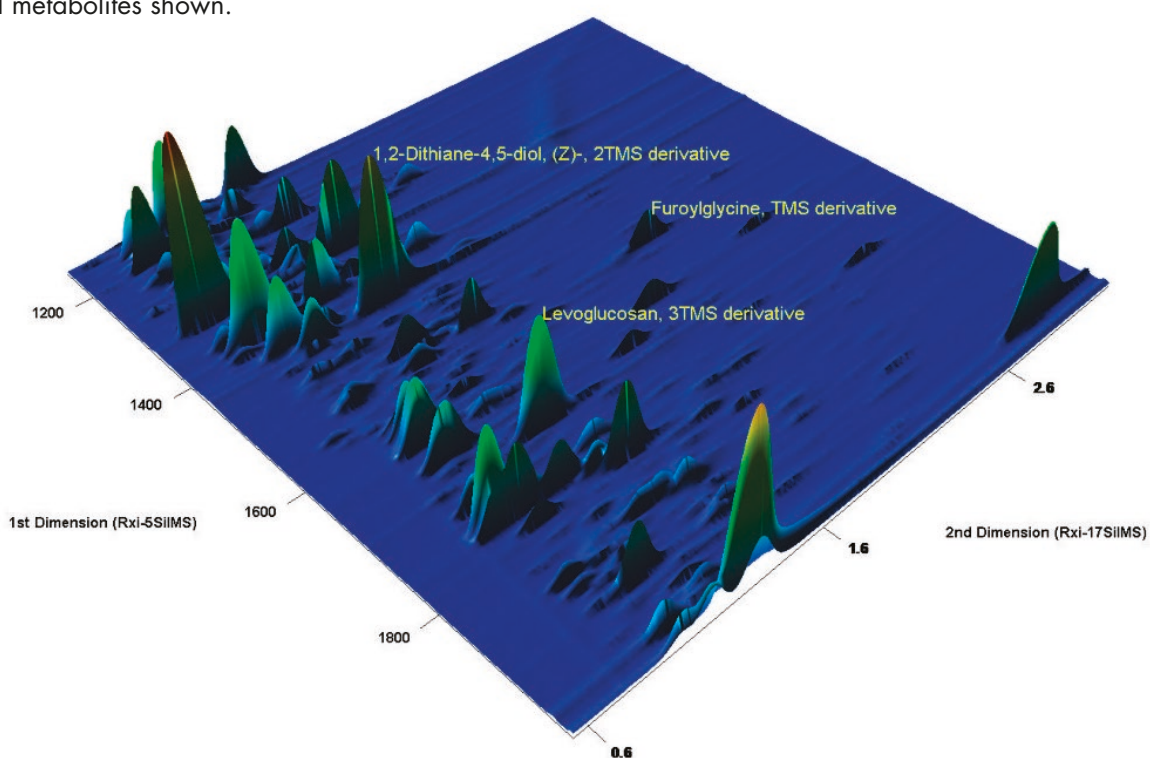
Pegasus BT 4D

The enhancement of S/N with the GC×GC modulation process makes what was once unobserved a clearly identifiable analyte in your sample.



IDENTIFY MORE WITH CONFIDENCE/ NON-TARGETED ANALYSIS

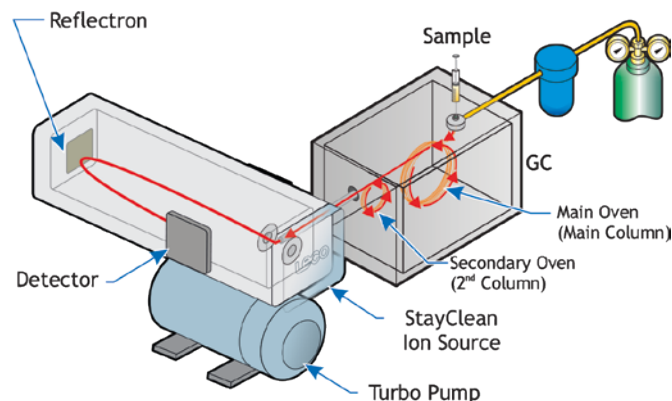
Smokers Urine on the *Pegasus BT 4D* –
GC×GC identifies more analytes;
a few identified metabolites shown.



WHAT WILL GC×GC DO FOR YOU?

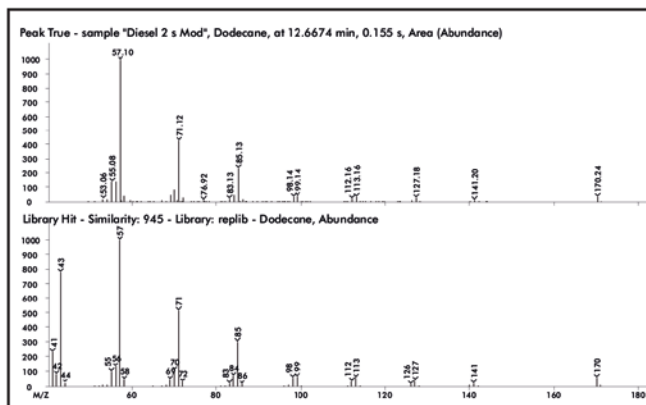
Pegasus BT 4D

- Industry-leading sensitivity is improved with the addition of GC×GC, which enhances S/N and makes what was once unobserved a clearly identifiable analyte
- You'll be able to identify more compounds, more efficiently with the power of GC×GC separation
- The tried-and-tested reliability and durability of our StayClean® ion source eliminates the need for source cleaning, improving your productivity
- LECO's *ChromaTOF* brand software works seamlessly with the new Pegasus BT 4D to automatically process user data and remove the guesswork involved with analyte identification and quantification
- You'll know what to expect from your data, through the power of chemically structured chromatograms

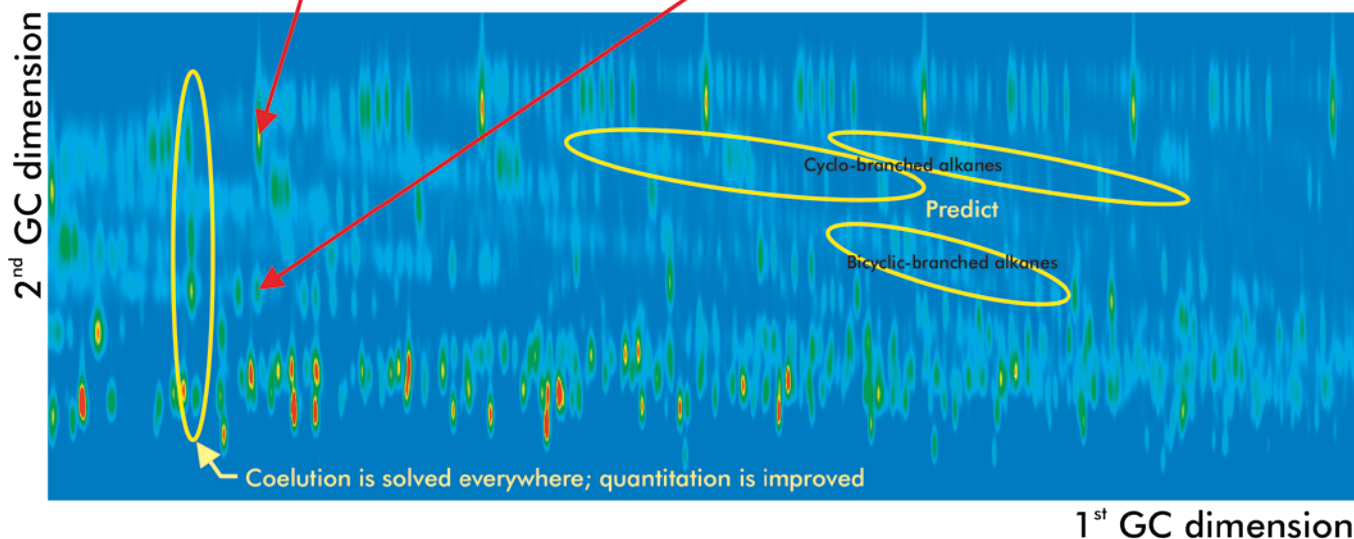
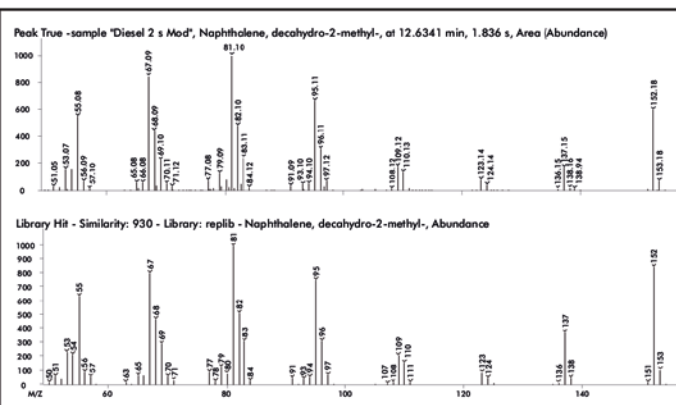


PREDICT, QUANTIFY, AND IDENTIFY WHAT IS IN YOUR SAMPLE

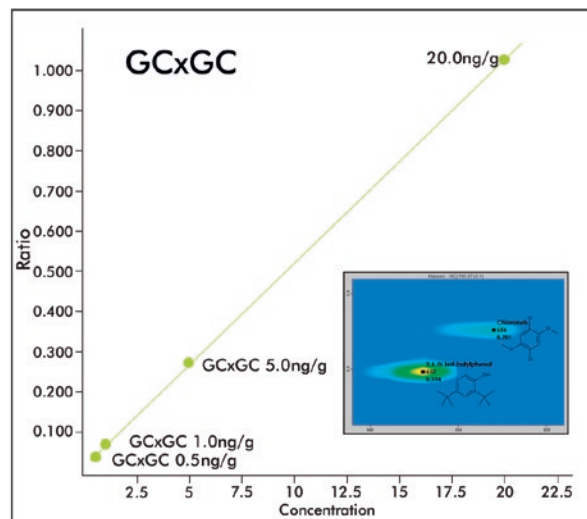
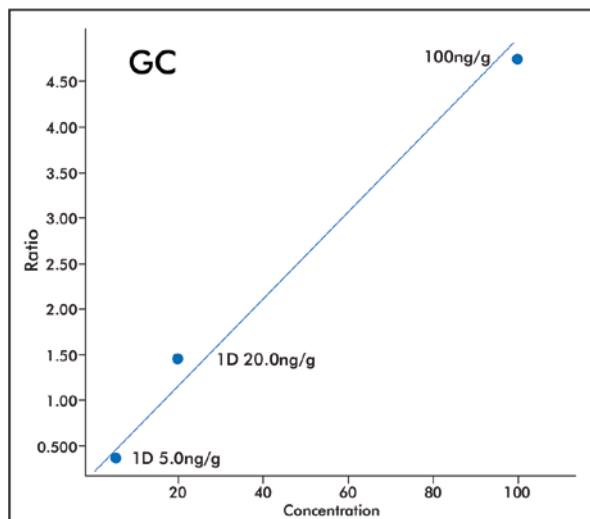
Excellent Identification 1



Excellent Identification 2

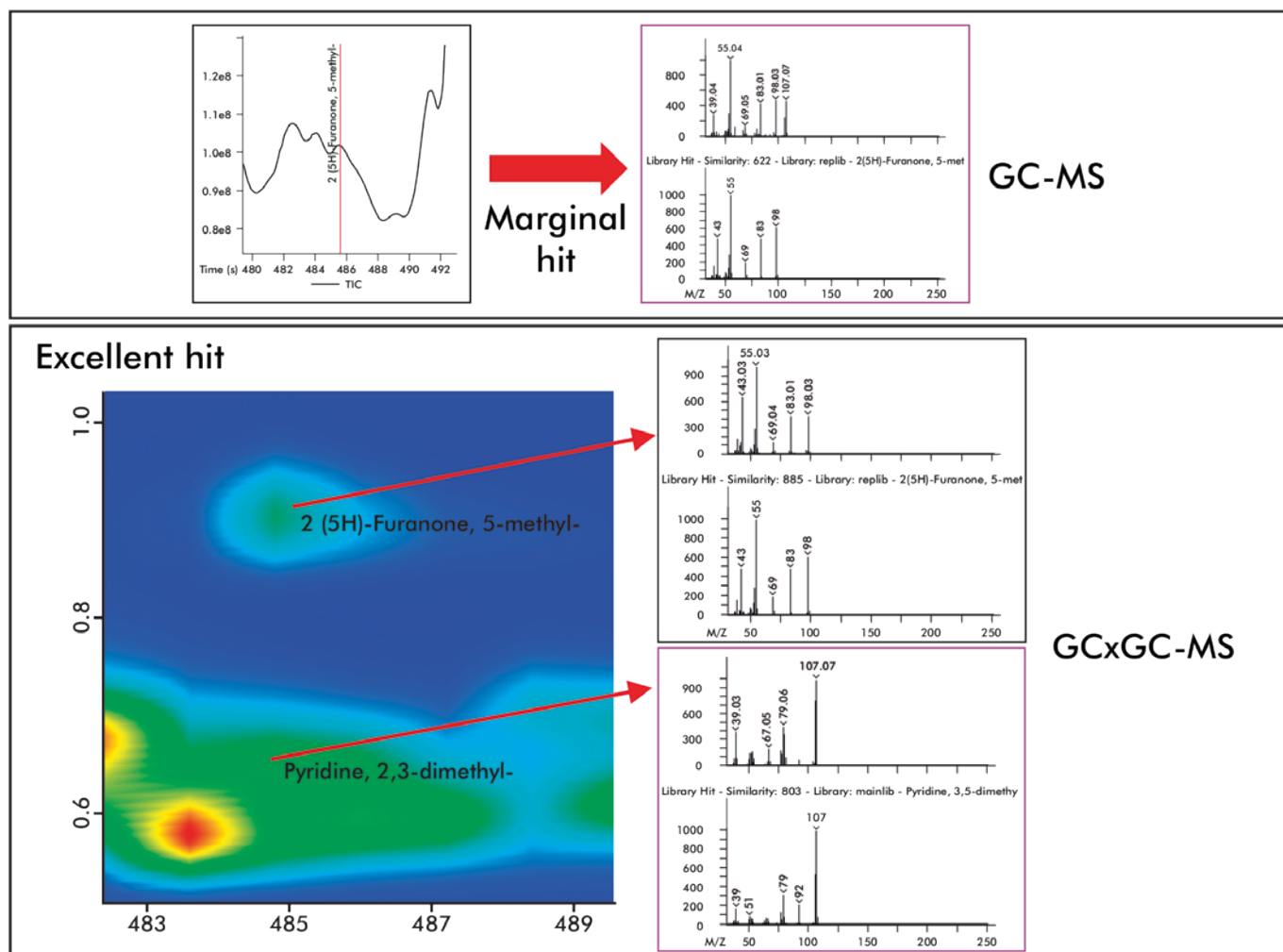


By leveraging GCxGC's superior chromatographic resolution, you can often separate target analytes from matrix interferences or other target compounds. In the figure below, you can see the GC and GCxGC quantitation curves for Chloroneb. Thanks to the improvements from GCxGC peak focusing and chromatographic resolution, Chloroneb is separated from the nearby matrix interference. This results in dramatic improvements in overall sensitivity, linearity, and quantitation accuracy.



QUALITATIVE ANALYSIS USING THE PEGASUS BT 4D

Improve your identification – what was once a poor identification is now confidently confirmed.



LIFE SCIENCE AND CHEMICAL ANALYSIS SOLUTIONS

Every day around the world, LECO instruments continuously perform analyses for today's most complex applications. Whether you are analyzing samples in the food, flavor/fragrance, petroleum, environmental, or life science (metabolomics) industries, we have an instrument configuration to meet your needs.



Our Simply GCxGC® tool takes the worry out of GCxGC by guiding you step-by-step to maximize peak capacity.

Learn more at: www.leco.com/simply-gcxgc

PEGASUS GC-HRT⁺ 4D

- Next generation of high performance mass spectrometers for the GCMS market
- Folded Flight Path® (FFP®) technology to allow users to achieve resolutions of up to 50,000
- Employs *ChromaTOF* brand software with High Resolution Deconvolution® (HRD®) for seamless data handling
- Encoded Frequent Pushing® (EFP®) improves sensitivity with dramatic duty cycle improvements



LECO'S COMMITMENT TO QUALITY AND SERVICE



*European Application and
Training Center, Berlin – Germany*

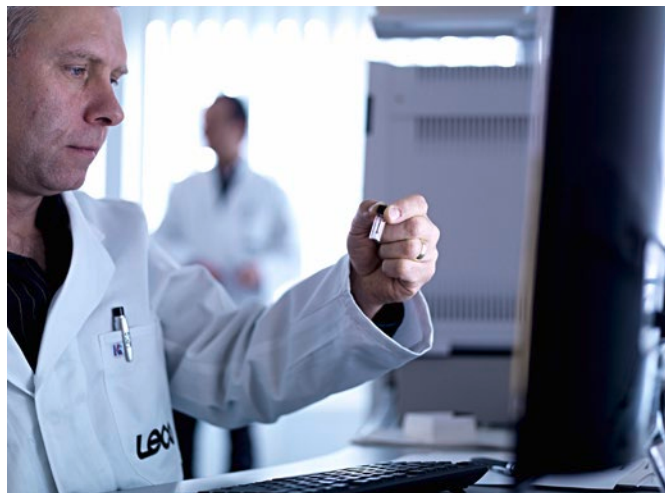
Our global network of sales and support includes over 25 subsidiaries worldwide, and is dedicated to customer service and satisfaction. Our commitment to quality is further underscored with ISO-9001:2015 certification. We conform to CE quality and safety specifications, fully testing instruments at our on-site Compliance Testing Center.

WORKSHOPS AND TRAININGS

At LECO, we strive to serve and support our customers long after the sale of an instrument. Our regular and on-demand training courses cover maintenance, instrument operation, and software. Led by our experts, these training programs help you get the best value from LECO technology, and additionally provide an excellent opportunity for networking with other lab professionals. Currently available workshops and training courses are listed on our website:

leco-europe.com/category/events

leco-europe.com/category/events/training-classes



“Everyone is very knowledgeable (brilliant, if I may say!) and willing to help with any questions/problems. I am amazed at and extremely happy with the high level of service LECO provides.”

– LECO Customer and Class Participant

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