

Solutions for Food Analysis



LECO

EMPOWERING RESULTS

Elemental Analysis | GC Mass Spectrometry | Metallography

Solutions for Food Analysis

Determining Quality and Safety



Recent scares in the safety of our foods have put new pressure on countries and producers to ensure that the integrity of our food supply remains intact. Imported, exported, and domestic food products are under global scrutiny, and LECO addresses these issues with instruments that can analyze and verify the quality of dairy products, meats, cereals, poultry, beer, and wine. From raw foods to final consumer-ready products, LECO instruments offer fast, accurate testing and productivity-enhancing features like autoloaders.



FP828 Nitrogen/Protein Elemental Analysis

The FP828 makes it possible to achieve fast results in organic matrices from food to fuels. The dual-stage furnace system operates at temperatures up to 1050 °C with pure oxygen to ensure the complete combustion of all organic samples, without requiring additional metal oxidizing reagents or other carrier gases. A variety of features, including automated sample loaders, increase sample throughput while maintaining a low cost-per-analysis.

- Rapid 2.8 minute analysis times for diverse organic matrices
- 500 mg nominal sample mass
- Extended reagent lifetimes maximize lab efficiency and lower operating costs
- Complies with AOAC, ASTM, ISO, AACC, and ASBC-approved methods of analysis
- Additional configurations—carbon/nitrogen



928 Series Elemental Analysis for Macro Samples

By incorporating state-of-the-art hardware with an on-board touch-screen software platform, the 928 Series allows you to easily handle the most demanding sample applications. Macro sample mass capability (up to 3 grams for Nitrogen/Protein, regardless of sample carbon content) with rapid cycle times and a resulting low cost-per-analysis make the 928 Series ideal for a variety of food, feed, and soil applications.

- Rapid determination of macro sample sizes (up to 3 grams) in as little as 5 minutes
- Extended reagent lifetimes maximize lab efficiency and lower operating costs
- Rugged design meets the demands of difficult applications
- Complies with AOAC, AACC, AOCS, and ASBC methods of analysis





TGM800 Thermogravimetric Moisture

The TGM800 is a high precision, automated thermogravimetric moisture determinator that utilizes a direct method for replacing tedious loss-on-drying techniques. It is applicable to a wide variety of sample matrices including food, feed, milled, and agricultural materials.

- Flexible method settings enable configuration of system to match manual loss-on-drying test methods
- Measure up to 16 samples at a time with optimized drying time using mass constancy end point recognition
- Precise oven temperature ramping and set point control up to 175 °C



TGA801 Moisture/Ash/Volatile Matter

The TGA801 is your total solution for fast and robust macro thermogravimetric constituent analysis. Determine weight loss as total moisture or ash in various organic materials. The TGA801 is perfect for a variety of industries and applications—including foods, feeds, and milling products.

- Automated thermogravimetric analysis batch of up to 19 samples
- Determines multiple constituents such as moisture/ash and LOI from a single sample
- Optimized analysis time using automatic end point recognition based upon sample mass constancy



PEGASUS® BTX GC-TOFMS

The Pegasus BTX is a Time-of-Flight GC-MS platform that delivers exceptional sensitivity and non-target data acquisition in unison. The improved chemical information transforms workflows from routine to exploratory.

- Single-femtogram sensitivity illuminates a myriad of trace level analytes
- Revolutionary StayClean® Ion Source design eliminates the need for source cleaning, even after sustained matrix exposure
- Advanced deconvolution algorithm yields clean EI spectra with excellent commercial library matching
- Uncover simultaneous targeted and non-targeted information from a single injection without sacrificing sensitivity
- Innovative detector mechanism delivers unparalleled performance, backed by two-year warranty



PEGASUS BTX 4D GCxGC-TOFMS

The Pegasus BTX 4D pairs the BTX with one of LECO's GCxGC modulators for added chromatographic resolution.

- Comprehensive multidimensional chromatography substantially increases chromatographic resolution, separating analytes that previously coeluted and improving identification confidence
- QuadJet™ Thermal Modulator delivers 5 to 10X sensitivity gain and optimized chromatographic control—available with LN₂ or cryogen-free packages
- Paradigm™ Flow Modulator delivers affordable, robust, and simple GCxGC-MS for any sample
- Shift™ Flow Splitter maintains constant split ratio between MS and FID for optimized quantitative capabilities
- ChromaTOF® software automates difficult tasks like off-aroma identification, sample comparison, and process monitoring





PEGASUS GC-HRT⁺ (High Resolution TOFMS)

The Pegasus HRT equips labs for advanced food safety investigations with High-Resolution Accurate Mass performance, multiple ionization modes, and powerful software tools that expose pesticides and other NIAS with ease.

- Folded Flight Path[®] (FFP[®]) delivers spectral resolution >50,000 and mass accuracy <1 ppm for accurate elemental formula determination
- Available with Multi-Mode Source[™] (MMS[™]) for EI, CI, and NCI without any hardware changes or MS venting
- Spectral Analysis Toolkit allows advanced data visualization with mass defect, RDBE, Van Krevlen, and other plots and tools
- High Resolution Deconvolution[®] (HRD[®]) produces spectra with excellent library matching and elemental composition for any mass spectral peak



PEGASUS GC-HRT⁺ 4D

The Pegasus HRT⁺ 4D pairs LECO's most advanced mass spectrometer with the excellent chromatographic resolution of the QuadJet GCxGC system. The result—more analyte identifications with more confidence.

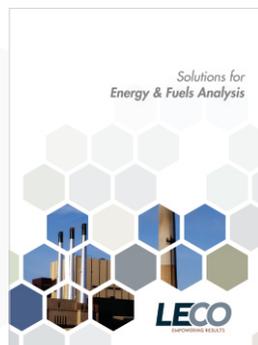
- The best chromatographic resolution paired with high-speed HRMS creates the ultimate discovery tool for advanced food safety research
- HRT 4D retains <1 ppm mass accuracy, >50,000 resolution, and MMS from HRT—and added sensitivity boost thanks to QuadJet Thermal Modulator
- Linked GCxGC contour plots and spectral analytical plots unlock chemical discoveries from many thousands of identified compounds



Additional LECO solutions are also featured in the following market-centered brochures.



Metals
209-205-001



Energy & Fuels
209-205-002



Environment & Agriculture
209-205-005



Metabolomics
209-240

LECO, SmartLine, Cornerstone, Quicksilver, TruMac, Pegasus, True Signal Deconvolution, Folded Flight Path, FFP, ChromaTOF, High Resolution Deconvolution, HRD, Flux, Multi-Mode Source, MMS, QuadJet, and KADAS are trademarks of LECO Corporation

3000 Lakeview Avenue | St. Joseph, MI 49085 | 800-292-6141 | Phone: 269-985-5496
info@leco.com | www.leco.com | ISO-9001:2015 Certified | LECO is a registered trademark of LECO Corporation.

LECO Corporation



EMPOWERING RESULTS

© 2025 LECO Corporation