Solution for
Environment & Agriculture Analysis

LECO
EMPOWERING RESULTS

Solutions for Environment & Agriculture Analysis
Preserving Our World & Resources, Ensuring the World's Food Supply

Whether you are evaluating pesticides in soil or determining sulfur in plant tissue, LECO provides innovative, time-saving environmental analysis solutions. Instrumentation is available for analyzing and identifying hundreds of known and emerging environmental threats in soils, plants, fertilizers, grains, pesticides, and feeds. For select instruments, software includes an Environmental Protection Agency reporting package, allowing you to create customized reports directly from your sample data.

832 Series Sulfur/Carbon

LECO's 832 Series of Elemental Determinators are specifically designed to perform carbon and sulfur analysis in wide range of organic and some inorganic materials. The 832 Series is a valuable resource for the environmental and agriculture sector because of its ability to provide fast and accurate analysis of soil, plant tissue, and feed samples.

- Improved solid-state IR cell design delivers superior analytical performance and stability
- High-efficiency furnace with intelligent control lowers operating costs and optimizes furnace reliability
- Ergonomic design powered by LECO's exclusive Cornerstone® brand software with touch-screen interface increases usability and operational control reducing bench space requirements
- Large, reusable ceramic boats with open surface area facilitate ease of sample handling and efficient sample combustion

FP828 Nitrogen/Protein and CN828 Carbon/Nitrogen Elemental Analysis

The FP828 and CN828 make it possible to achieve fast results in organic matrices such as soils, fertilizers, and plant tissues. 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
- Flexible configurations—nitrogen/protein, carbon/nitrogen
- Sample mass up to 500 mg
- Extended reagent lifetimes maximize lab efficiency and lower operating costs
- Optional S832 add-on provides independent sulfur determiantion
- Complies with AOAC, ASTM, ISO, AACC, and ASBC-approved

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 drying time end-point recognition
- Precise oven temperature ramping and set point control up to 175 °C

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 ability (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 5.3 minutes
• Extended reagent lifetimes maximize lab efficiency and lower operating costs
• Rugged design meets the demands of difficult applications
• Operator-centered design with touch-screen Cornerstone® brand software promotes an ergonomic workspace and optimized workflow

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, ash, volatile content, or LOI in various organic, inorganic, and synthetic materials. The TGA801 is perfect for a variety of industries and applications—including feeds, milling products, foods, and soils

• Obtain multiple analyses such as moisture, ash, and volatile matter from one sample
• Analyze 19 samples simultaneously
• Optimize analysis time using automatic end point recognition based on sample mass constancy

PEGASUS® BT GC-TOFMS

The tried-and-tested reliability and durability of our *Pegasus* brand in a convenient benchtop unit gives you more uptime, improved chemical data, and an increase in overall productivity and efficiency.

• Industry-leading sensitivity helps you quantify at SIM levels while attaining full scan mass spectra
• Discover unexpected residues (pesticides) with NonTarget Deconvolution® (NTD®) within the same injection
• StayClean® ion source virtually eliminates the need for source cleaning

PEGASUS BT 4D GCxGC-TOFMS

The *Pegasus* BT 4D provides enhanced sensitivity by coupling our benchtop *Pegasus* BT with our high performance GCxGC thermal modulation system.

• Ability to interrogate challenging samples where the best sensitivity and chromatography are needed, making it a perfect fit for environmental samples
• StayClean® ion source virtually eliminates the need for source cleaning

PEGASUS GC-HRT⁺ (High Resolution TOFMS)

Developed to withstand the rigor of modern analytical demands, High Resolution TOFMS technology provides high-performance MS capabilities, including acquisition speed, mass accuracy, accurate relative isotopic abundance, mass resolution, and dynamic range, all available simultaneously. Folded Flight Path® (FFP®) technology, available exclusively from LECO, provides the needed path length (up to 40 m) to achieve high performance resolution, along with the stability to guarantee excellent mass accuracy.

- Folded Flight Path technology enables resolution of up to 50,000, mass accuracies less than 1 ppm, and acquisition rates up to 200 spectra/second
- LECO's exclusive *ChromaTOF* brand software utilizes Automated Peak Find through High Resolution Deconvolution® (HRD®) for seamless data handling
- Encoded Frequent Pushing® (EFP®) contributes to increased sensitivity, expanded dynamic range
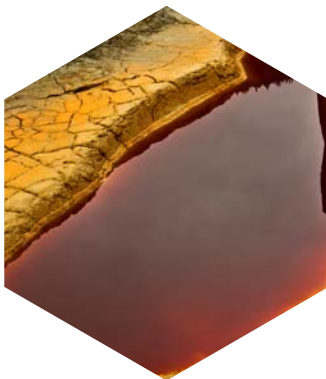
PEGASUS GC-HRT⁺ 4D

LECO's *Pegasus GC-HRT⁺ 4D* provides users with the unprecedented ability to investigate the most complex petroleum samples and identify unknown analytes. Find more analytes than ever before using *High Resolution Deconvolution (HRD)* and comprehensive GCxGC chromatography.
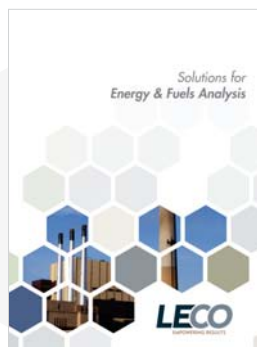
- Mass accuracies of 1 ppm and chromatographic potential at least two times greater than any mass spectrometer currently available on the market
- Chemical ionization source allows users to identify molecular species
- The industry's most established GCxGC systems; thermal modulation with liquid nitrogen or cryogen-free versions
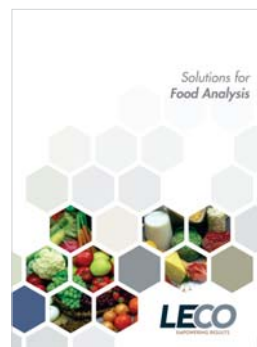
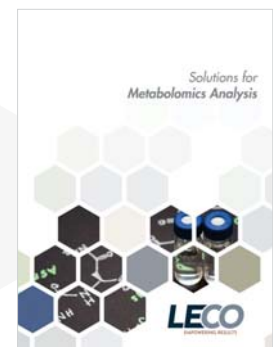## Additional LECO solutions are also featured in the following market-centered brochures.

Solutions for Metals Analysis	Solutions for Energy & Fuels Analysis	Solutions for Food Analysis	Solutions for Metabolomics Analysis
Metals 209-205-001	Energy & Fuels 209-205-002	Food 209-205-004	Metabolomics 209-240