

# TGA801

*Thermogravimetric Analyzer*



**LECO**  
EMPOWERING RESULTS

# TGA801

## Thermogravimetric Analyzer

The TGA801 is the latest generation of automated macro thermogravimetric analyzers to enter our lineup. The TGA801 maintains the core capabilities and reliability of previous generations of LECO macro TGA instruments, while providing key improvements in performance and robustness. By incorporating state-of-the-art hardware with an on-board touch-screen software platform and a rugged design, the TGA801 provides accurate, high-precision thermogravimetric constituent analysis—moisture, ash, volatile content, and LOI in various organic, inorganic, and synthetic materials. Complying with ASTM standardized methods, the TGA801 is applicable to many industries and applications including coal, cement, catalyst, foods, and feeds.

Macro thermogravimetric analysis replaces the often slow, labor-intensive, traditional manual gravimetric techniques that require multiple sample weighing and transfer steps involving ovens, muffle furnaces, and desiccator equipment. The flexible method settings, automation, and hardware capabilities of the TGA801 deliver an automated analysis process while requiring only the manual measurement of the initial sample mass, saving you time in your lab.



### *Maximize Productivity and Improve Work Flow*

- Automated thermogravimetric analysis batch of up to 19 samples
- Eliminate the handling, transfer, and cooling time required of traditional gravimetric methods
- Determine multiple constituent analysis such as moisture, volatile matter, and ash from a single sample and analysis batch sequence
- Optimize analysis time using automatic end point recognition based upon sample mass constancy



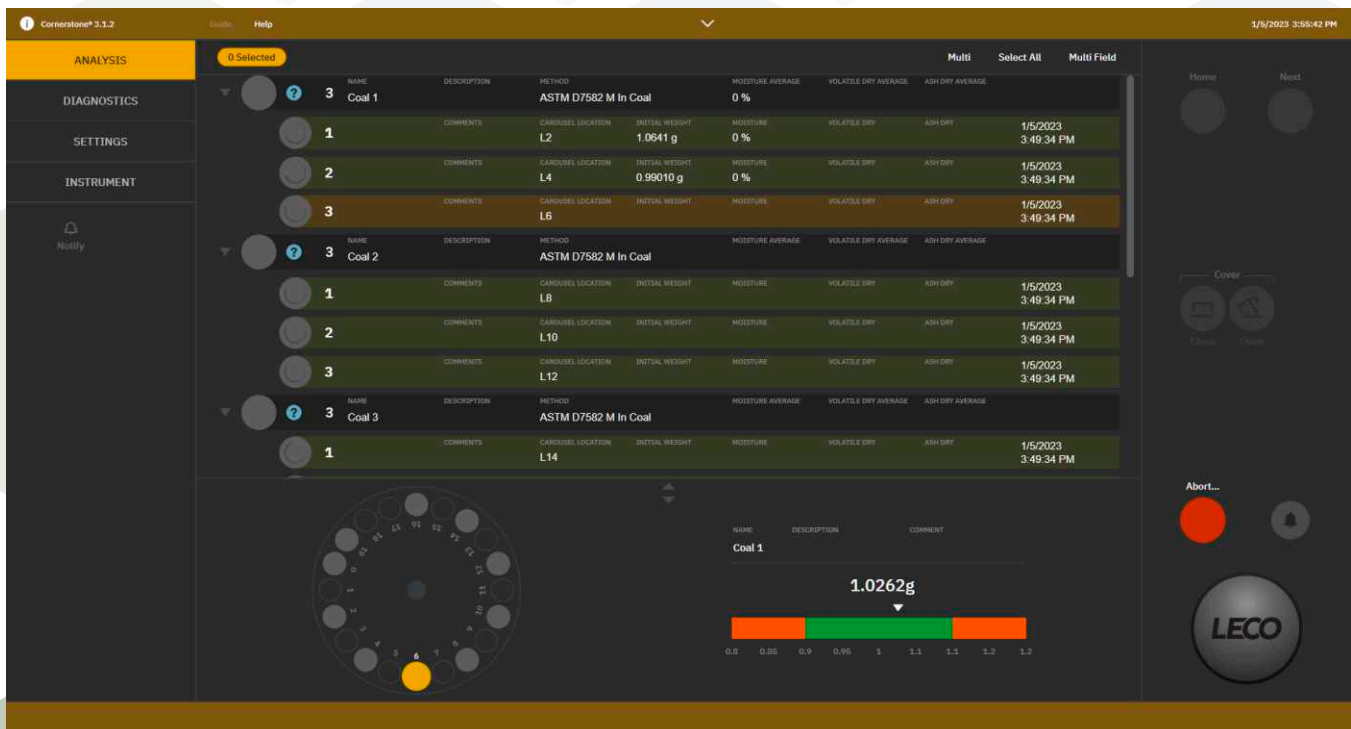
# User-Friendly Cornerstone® Brand Software

LECO's exclusive Cornerstone brand software with touch-screen interface enables complete access to analysis control, method settings, diagnostics, reporting, and more in a highly organized, intuitive, and immersive environment. Designed through a collaboration of customer feedback and innovative engineering, Cornerstone features all of the routine day-to-day operations within a single Analysis screen designed for speed and ease-of-use. Our innovative grouping of sample data into sets and replicates simplifies the data output and automatically calculates relevant statistics, alleviating the need for additional data processing.

## Analysis



## Loading Screen



## Software Features and Benefits

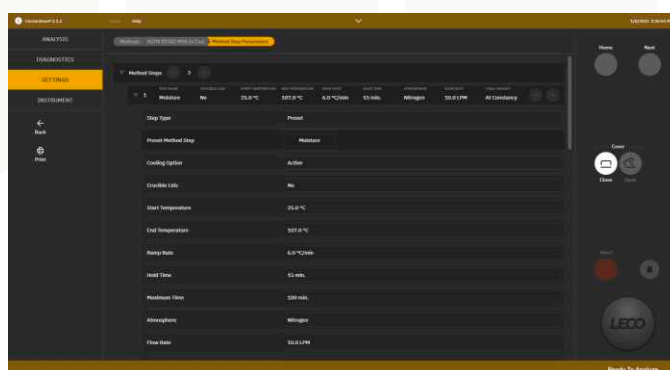
Cornerstone software is divided into four main sections—Analysis, Diagnostics, Settings, and Instrument—for simplified navigation and organization. Toolbars, sliders, and drop-down menus make it easy to set parameters for calibration and data processing. The software also includes real-time monitoring of ambient parameters, with fully animated system diagrams.

Advanced interactive diagnostic features include a thorough digital on-board manual, maintenance animations, photo illustrations, and screen captures that quickly provide the direction needed without having to refer to multiple manuals.

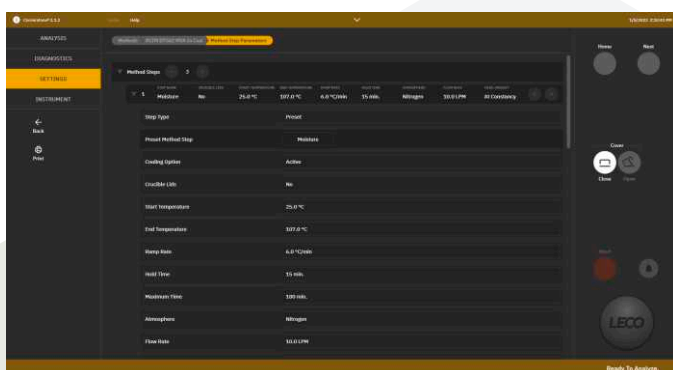
Cornerstone also supports a multilingual interface, user permissions, extended data archiving and filtering, compatibility with various Laboratory Information Management Systems (LIMS), and flexible reporting capabilities. Compliance to FDA regulations 21 CFR Part 11 for a closed analytical system is also supported.



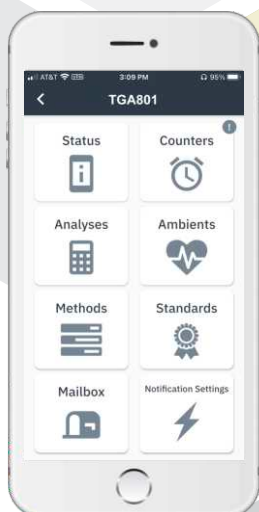
Diagnostics ▶ Ambients



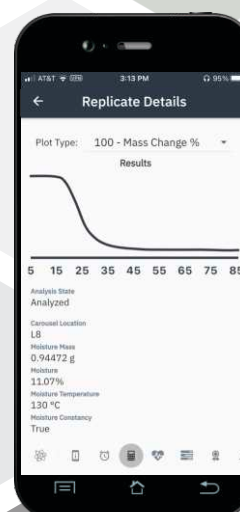
Instrument ▶ Furnace



Settings ▶ Method



An optional Cornerstone Mobile application feature enables remote viewing of the instrument software from a smartphone, tablet, or PC. It can also be programmed to set automatic notifications from the instrument against predefined software conditions using e-mail, text message, or the Cornerstone Mobile application.



## Instrument Highlights and Features

### Superior Analytical Performance

- Stable and precise mass measurements throughout the analysis cycle using an integrated, thermally isolated 0.0001 g low drift balance
- Precise furnace temperature ramping and set point control provides excellent temperature accuracy with low temperature overshoot
- Rotating automation sequence provides uniform exposure of all samples to the furnace conditions
- Automated control of furnace atmosphere and gas flows (air, nitrogen, or oxygen)



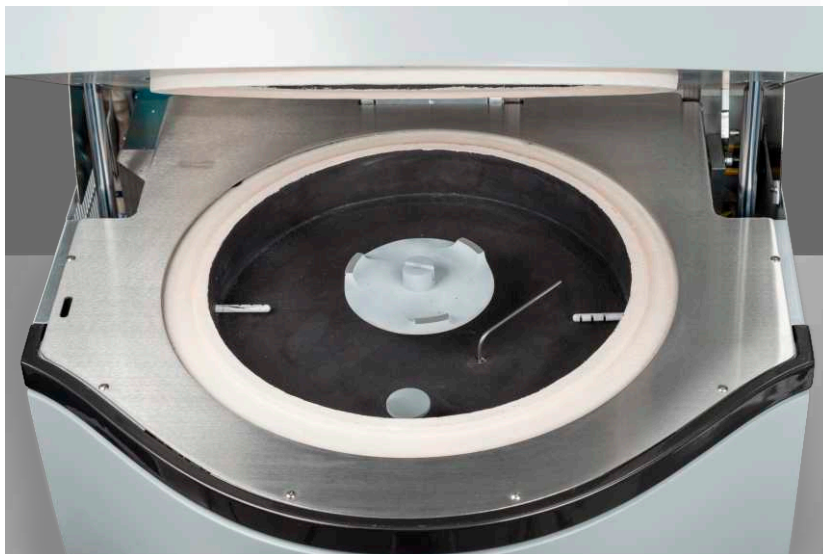
### Unparalleled Versatility

- Automated multi-sample analysis batch, up to 19 samples
- Macro sample mass capabilities, nominal 1 g
- Flexible method settings enable configuration of system to emulate classic gravimetric test method requirements
- Optimized analysis time with the automatic end point recognition using sample mass constancy



## Innovative System Design

- Rugged, high-performance ceramics enable operation temperature up to 1000 °C
- Robust and reliable motor-driven rotary system automation mechanism provides versatility and speed
- External ventilation system provides reliable removal of furnace exhaust while eliminating possible balance vibration interference
- Software provides seamless sample login and loading process with real time graphical displays of analysis cycle data



## Reliability with Trusted Service and Support

- Knowledgeable sales force with a customer-centered focus dedicated to helping you understand and identify the best instrumentation fit for your application
- State-of-the-art Technical Service Laboratory with experienced technical application chemists to assist in method development and other application related requests
- Global and regional LECO service network comprised of regional support centers and over 25 international LECO subsidiaries, dedicated to providing service and support offerings, including field service visits over the lifetime of the instrument

## LECO—Your Source for Total Analytical Solutions

### 832 Series

- Simple, fast, accurate sulfur/carbon determination in organic materials
- High-efficiency furnace with intelligent control lowers operating costs and optimizes furnace reliability
- Individual wide-range IR detection
- Operator-centered design with touch-screen Cornerstone brand software promotes an ergonomic workspace and optimized workflow
- Optional Performance Package (P) and Dual-Range (DR) 832 model also available

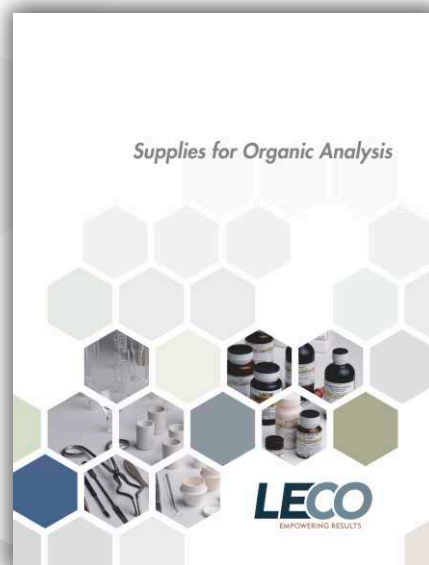


### TGM800 Moisture

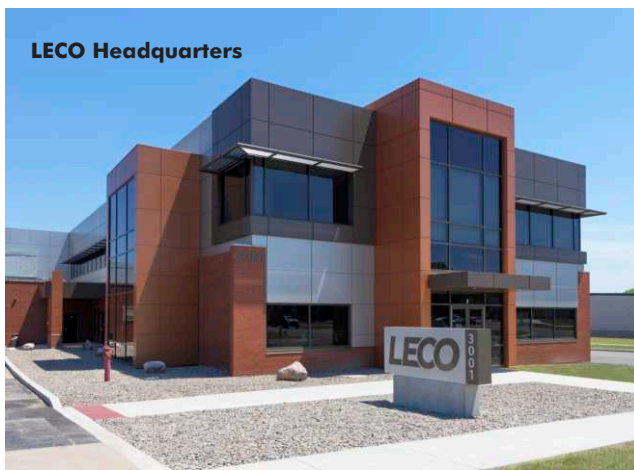
- High precision, automated thermogravimetric moisture determination, which utilizes a direct method for replacing tedious manual loss-on-drying techniques
- Measure up to 16 samples at a time with drying time end-point recognition
- Intuitive Cornerstone brand software with flexible method settings and touch-screen operation
- Precise oven temperature ramping and set point control up to 150 °C
- Remote access through Cornerstone Mobile provides access to data, plots, and instrument status from smartphone, tablet, or desktop computer

### Organic Consumables

Get the best results from your LECO instrument by using genuine LECO consumables. Visit [www.leco.com](http://www.leco.com) for featured items, specials, and ordering information (Form number 203-828).



Our global network of sales/support includes over 25 subsidiaries worldwide, and is dedicated to customer service and satisfaction. The one thing all laboratories need to be successful is results they feel confident in. Since 1936, LECO has worked with our customers to find the right solution for the type of sample analysis they are performing, helping them to achieve data that is clear, consistent, and accurate. But our commitment to the customer doesn't end when our instruments are delivered.



**LECO Headquarters**



**Robert J Warren Customer Experience Center**



**Technical Research Center**



**Global Support Center**

LECO is dedicated to enhancing the user experience long after the sale by offering thorough training on our instruments and technology, accessibility to instrument service programs that keep your instruments in top working order, and access to friendly service and support to ensure you are getting the most out of your purchase—support that will empower your laboratory for success.

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