Mark 3 LTE Moisture Analyzer

Modular Infrared Moisture Analyzer
with Quartz Heater

Advantages

– Economical and reliable alternative to the drying oven
– Intuitive operation for fast learning
– Easy one-button measurement
– Robust and fast, optimal for routine operation
– Multi-module operation for parallel measurements

Product Description

Mark 3 is a flexible moisture analyzer system for labs and production facilities. With its resolution of 0.01%, the Mark 3 LTE has been optimized to achieve excellent reproducibility in routine measurements and meets even highest demands because of its built-in Sartorius weighing technology.

Fast
Quick measuring times give you greater flexibility and let you adapt your production processes fast.

Flexible
Whether your samples are solid, liquid or pasty, the Mark 3 LTE provides optimal flexibility in analyzing a variety of samples with moisture contents ranging from 1.00% to 99.90%. With its optional modular add-ons of up to two heating units, it provides the best solution for every measuring task – regardless of whether you need to perform three or 300 measurements a day.

Easy
Even inexperienced users can reliably operate the Mark 3 intuitively and easily. Thanks to effective password protection, access can be restricted to strictly measuring functions. One touch of a button is all it takes to start a measurement.

Areas of Application
– Foods
– Chemical products
– Biomass & water purification
– Building materials
– Paper, pulp and composites
– Cosmetics
– Paints and coatings
– Agricultural products

Technical Specifications

Display of results	1 mg; 0.01%
Weighing capacity	40 g
Typical reproducibility of the weighing system	Starting at an initial sample weight of approx. 1 g: ± 0.2% Starting at an initial sample weight of approx. 5 g: ± 0.05%
Method of measurment	Thermogravimetric; loss on drying
Recommended moisture range	1.00 – 99.90%
Heat source	Four parallel infrared quartz cylinders
Modular extension	Optional; up to 2 heater modules connectable
Data printer	Optional internal thermal printer; 40 characters
Temperature range and adjustment	30 – 210°C in one-degree increments
Temperature steps	Programmable; one or two
Standby temperature	Standby temperature selectable from 30 – 160°C
Temperature display	Display of target temperature and actual temperature during the measurement and in standby mode
Display mode	Weight loss in mg | % moisture | % dry weight | % volatiles |
Modes of operation	Standard or concentration mode
Endpoint determination	Timer mode; when value falls below a defined weight loss per time unit (%/min); trend shutoff
Program storage	60 programs; battery-backed memory
Data storage	Results with statistics of the last 999 measurements: average, SD, RSD, min and max
Temperature adjustment	Optional set for internal electronic two-point adjustment
Adjustment of the weighing system	Manual calibration and adjustment using an external weight
Ideal initial weight	Audio and visual display for programmable weighing of a sample to an initial target
Initial sample weight lock	Lockable initial sample weight for optimal repeatability
Pass-fail function	Programmable target value, including limits; pass-fail information at the end of a measurement

Sample ID	Numeric, consecutive numbering, alphanumeric or turned off
User management	20 users can be stored with password protection
Password protection	Password protection against undesired adjustment of parameters
Languages	English, French, German, Italian, Portuguese, Spanish
Date and time settings	dd | mm | yy, mm | dd | yy, 12 h- or 24 h-format
Saving mode	Integrated timer to switch the analyzer on and off Programmable sleep mode after a longer period of non-use
Display	Backlit VGA display
Parameter and data input	Sealed membrane foil overlay with audible tactile feedback
Real-time curves	Real-time curves of the loss in weight (% or grams) as well of the temperature curves during and after the measurement
Acoustic signals	Key stroke, ideal weight met and end of test; selectable (on or off)
System status indicator lights	Two tricolor LEDs (balance & heater) on front of heater module
Data input | output	Serial and Ethernet; USB for service
Printout format (Printer optional)	Configurable printout: selectable header (3 lines), analyzer info, operator, sample ID, calibration info, program name, program parameters, interval print, weight info, result and signature line
Weighing system	Monolithic weighing system for high-precision results
Balance spill protection	Reservoir under draft shield to collect liquids, powders or granules
Operating range	15 – 30°C (59 – 86°F) | 10 – 85% rel. humidity; non-condensing
Power requirements	90-250 VAC 50 | 60 Hz, self-adjusting power supply
Housing dimensions (W × D × H)	41.3 × 49.5 × 23.5 cm (164" × 191" × 94"), modules combined
Weight	10 kg (22 lbs.), modules combined
Warranty	2 years

Order Numbers

LMA110-SET-P	Mark 3 LTE moisture analyzer with printer, consisting of – LMA100PA control module, incl. printer – LMA110SQ heater module for measurement (1 mg, 40 g)
LMA110-SET	Mark 3 LTE moisture analyzer without printer, consisting of – LMA110SA control module – LMA110SQ heater module for measurement (1 mg, 40 g)
Add-ons: LMA110SQ-000U	Mark 3 LTE heater module (1 mg, 40 g) as a modular add-on to a Mark 3 LTE (max. 2 heater modules)

Equipment Supplied
– Inter-module cable
– Power module cable
– Power cord
– Tweezers
– Sample pans
– Operating instruction manual

Addition for Mark 3 LTE with printer:
– Roll of paper

Accessories
A variety of consumables, cables and inspection, measuring and test equipment are available for the Mark 3 moisture analyzer along with other accessories. We will be glad to advise you in the selection of appropriate accessories.

Mark 3 LTE in parallel operation with 2 measuring modules

Sales and Service Contacts

For further contacts, visit www.sartorius.com

Europe

Germany
Sartorius Lab Instruments
GmbH & Co. KG
Otto-Brenner-Strasse 20
37079 Goettingen

Phone +49.551.308.0

France & Suisse Romande
Sartorius France
2, rue Antoine Laurent de Lavoisier
ZA de la Gaudrée
91410 Dourdan

Phone +33.1.70.62.50.00

Austria
Sartorius Austria GmbH
Modecenterstrasse 22
1030 Vienna

Phone +43.1.7965760.0

Belgium
Sartorius Belgium N.V.
Rue Colonel Bourg 105
1030 Bruxelles

Phone +32.2.756.06.90

Finland & Baltics
Sartorius Biohit Liquid Handling Oy
Laippatie 1
00880 Helsinki

Phone +358.9.755.951

Hungary
Sartorius Hungária Kft.
Kagyló u. 5.
2092 Budakeszi

Phone +3623.457.227

Ireland
Sartorius Ireland Ltd.
Unit 41, The Business Centre
Stadium Business Park
Ballycoolin Road
Dublin 11

Phone +353.1.8089050

Italy
Sartorius Italy S.r.l.
Via Torino 3/5
20814 Varedo (MB)

Phone +39.0362.5557.11

Netherlands
Sartorius Netherlands B.V.

Phone +31.30.60.53.001

info.netherlands@sartorius.com

Poland
Sartorius Poland sp.z o.o.
ul. Wrzesinska 70
62-025 Kostrzyn

Phone +48.61.6473830

Russian Federation
LLC "Sartorius RUS"
Vasilyevsky Island
5th line 70, Lit. A
199178 St. Petersburg

Phone +7.812.327.53.27

Spain & Portugal
Sartorius Spain, S.A.
Avda. de la Industria, 32
Edificio PAYMA
28108 Alcobendas (Madrid)

Phone Spain +34.913.586.095
Phone Portugal +351.800.855.800

Switzerland
Sartorius Mechatronics Switzerland AG
Ringstrasse 24a
8317 Tagelswangen (ZH)

Phone +41.44.746.50.00

U.K.
Sartorius UK Ltd.
Longmead Business Centre
Blenheim Road, Epsom
Surrey KT19 9QQ

Phone +44.1372.737159

Ukraine
LLS "Sartorius RUS"
Post Box 440 "B"
01001 Kiev, Ukraine

Phone +380.44.411.4918

Americas

USA
Sartorius Corporation
5 Orville Drive, Suite 200
Bohemia, NY 11716

Phone +1.631.254.4249
Toll-free +1.800.635.2906

Argentina
Sartorius Argentina S.A.
Int. A. Ávalos 4251
B1605ECS Munro
Buenos Aires

Phone +54.11.4721.0505

Brazil
Sartorius do Brasil Ltda
Avenida Senador Vergueiro 2962
São Bernardo do Campo
CEP 09600-000 – SP- Brasil

Phone +55.11.4362.8900

Canada
Sartorius Canada Inc
1173 North Service Road West, D4
Oakville, ON L6M 2V9

Phone +1.905.569.7977
Toll-Free +1.800.668.4234

Mexico
Sartorius de México, S.A. de C.V.
Libramiento Norte de Tepotzotlan s/n,
Colonia Barrio Tlacateco,
Municipio de Tepotzotlan,
Estado de México,
C.P. 54605

Phone +52.55.5562.1102

leadsmex@sartorius.com

Peru
Sartorius Peru S.A.C.
Avenue Alberto del Campo 411
Floor 12 – The Office
15076 – San Isidro, Lima

Phone +51.1.441 0158

Asia | Pacific

Australia
Sartorius Australia Pty. Ltd.
Unit 5, 7–11 Rodeo Drive
Dandenong South Vic 3175

Phone +61.3.8762.1800

China
Sartorius (Shanghai) Trading Co., Ltd.
3rd Floor, North Wing, Tower 1
No. 4560 Jinke Road
Zhangjiang Hi-Tech Park
Pudong District
Shanghai 201210, P.R. China

Phone +86.21.6878.2300

Hong Kong
Sartorius Hong Kong Ltd.
Unit 1012, Lu Plaza
2 Wing Yip Street
Kwun Tong
Kowloon, Hong Kong

Phone +852.2774.2678

India
Sartorius Weighing India Pvt. Ltd.
#69/2-69/3, NH 48, Jakkasandra,
Nelamangala Tq
562 123 Bangalore, India

Phone +91.80.4350.5250

Japan
Sartorius Japan K.K.
4th Fl., Daiwa Shinagawa North Bldg.
8-11, Kita-Shinagawa 1-chome
Shinagawa-ku, Tokyo, 140-0001 Japan

Phone +81.3.3740.5408

Malaysia
Sartorius Malaysia Sdn. Bhd
Lot L3-E-3B, Enterprise 4
Technology Park Malaysia
Bukit Jalil
57000 Kuala Lumpur, Malaysia

Phone +60.3.8996.0622

Singapore
Sartorius Singapore Pte. Ltd
10 Science Park Rd
The Alpha #02-13/14
Singapore Science Park II
Singapore 117684

Phone +65.6872.3966

South Korea
Sartorius Korea Ltd.
8th Floor, Solid Space B/D,
PanGyoYeok-Ro 220, BunDang-Gu
SeongNam-Si, GyeongGi-Do, 463-400

Phone +82.31.622.5700

Thailand
Sartorius (Thailand) Co. Ltd.
129 Rama 9 Road,
Huaykwang
Bangkok 10310

Phone +66.2643.8361-6

www.sartorius.com