C870M Integrated Loss-on-Drying Testing System

C870M Integrated Loss-on-Drying Testing System is based on the gravimetric method and is designed and manufactured in accordance with pharmacopoeias and testing standards of the food and chemical industries. It is suitable for loss-on-drying testing in the above-mentioned fields.

Product Features [Note 1]

Precise, Traceable, and Convenient Measurement

- Dual-chamber independent design achieves true separation of drying and weighing, avoiding the influence of high temperatures on the balance.
- Sample weight is automatically determined, avoiding interference from human factors.
- German-imported touch-screen electronic balance with repeatability up to 0.05 mg (optional).
- Visualized balance design and traceable data.
- Internal calibration balance for quick disassembly and easy measurement.

Safe and Compliant: Standardized Processes for Safer Operation

- Automatic cover opening and closing technology for test cups ensures a more compliant testing process.
- Automatic temperature adjustment for true room temperature weighing.
- Fully enclosed, zero-leakage test chamber prevents the leakage of hazardous gases.
- Nitrogen circulation and discrete electric control systems provide dual safety protection.
- The system is equipped with various sensors and intelligent audible and visual alerts for safer operation.

Intelligent and Efficient: Fully Automated Process, Saving Time and Space

- Equipped with a fully automatic gripper, Labthink's latest technological advancement, that can mimic rapid movement of 12 test cups.
- Bidirectional rotation control & freely adjustable number of rotating cups simplifies the test cup filling process.
- Automatic operations of liquid cooling system (water filling/draining/liquid level detection) reduce

manual operation.

- Drying, cooling, and room temperature weighing are fully automatic and require no human intervention.
- 10.1" medical-grade touchscreen allows the instrument host to operate independently of a computer.
- The instrument host features a desktop design, saving space and adapting to various laboratory layouts.
- The system has an embedded network port, which can be connected to the Internet for remote control and upgrades.
- Professional computer software complies with GMP requirements for data traceability, satisfying the needs of the pharmaceutical industry.
- Multi-level user access control with configurable permissions.
- Electronic signature is designed in accordance with 21 CFR Part 11.

Test Principle

Take the sample and mix thoroughly (if the crystals are large, they should be quickly crushed into particles smaller than 2 mm). Take approximately 1 g or the weight specified in the standard and place the sample in a test cup that has been dried to constant weight under the same conditions as the sample. Weigh accurately and, unless otherwise specified, dry at 105℃ to constant weight. Calculate the loss-on-drying of the test sample from the weight loss and the sample weight.

Reference Standards

US Pharmacopeia, European Pharmacopoeia, British Pharmacopoeia, Japanese Pharmacopoeia, Chinese Pharmacopoeia, and other pharmaceutical-related testing standards
GB 5009.3-2016 and other food-related testing standards
GB/T 6284, JIS K 0068 and other chemical product-related testing standards.

Applications

Basic Applications	**Pharmaceuticals**	Loss-on-drying and moisture content determination of various pharmaceuticals.
Extended Applications	**Food**	Loss-on-drying and moisture content determination of various foods.
	Chemicals	Determination of loss on drying for various chemical products.

Technical Parameters

Table 1: Test Parameter Note 2

Parameter\Model		C870M
Test Range	mg	0.3～40000
		0.05～20000(Optional)
Resolution	mg	0.1
		0.01 (Optional)
Repeatability	mg	±0.3
		±0.05 (Optional)
Temp. Range	℃	Room Temp. ～ 130
Temp. Fluctuation	℃	±0.5
Test Pressure	kPa	0 ～－20 Note 3
Extended Functions	21 CFR Part 11	Optional
	GMP Computer System Requirements	Optional

Table 2: Technical Specifications

Test Stations	12
Test Cup Volume	40 mL Note 4
Gas Specifications	Compressed air (air source is to be provided by the user)
Gas Source Pressure	0.5 MPa～0.7 MPa (72.5 PSI～101.5 PSI)
Port Size	Φ8 mm polyurethane pipe
Host Dimensions	24.8” H x 41.3” W x 28.7” D (63cm× 105cm× 73cm)
Power Supply	120 VAC ±10% 60 Hz / 220 VAC ±10% 50 Hz (Select one from the two)
Net weight	**396 Lbs (180 kg)**

Table 3: Product Configuration

Standard	Instrument host, balance (0.1 mg), liquid cooling module, gas drying module,

Configuration	test cups (12 pcs), Φ8 mm polyurethane tube
Optional Parts	Software, GMP computer system requirements, 21 CFR Part 11, air compressor, test cup (40 mL), weight (200 g), balance (0.01 mg), weight (50 g)

Note 1: All product features described are subject to the specific specifications listed in the "Technical Parameters" tables.

Note 2: All parameters in the table were measured in the Labthink laboratory by professional operators, according to the requirements and conditions of relevant laboratory environmental standards.

Note 3: Test pressure can be customized.

Note 4: Test cup volume can be customized, but the test range may vary and should be based on the actual delivery.

✧ **Labthink is committed to innovation and improvement in product performance and functionality. For this reason, product technical specifications may change accordingly. No further notice will be given for the above. The company reserves the right to modify and provide the final interpretation.**