C840H Integrated Evaporation Residue Testing System is designed and produced based on the principle of gravimetric method measurement and testing standards for plastic packaging and chemical reagents, etc. It is suitable for the determinations of evaporation residue of food or pharmaceutical packaging, total migration of food contact or pharmaceutical contact materials or products, and evaporation residue of chemical reagents and purified water.

Characteristics [Note 1]

Traceable Data

- Equipped with Labthink's latest fully automatic gripper that can simulate human hands to realize rapid moving and weighing of 25 test cups.
- Dual-chamber design realizes separation of evaporation and weighing in separate chambers to avoid the influence of high temperature and high humidity on the scale.
- High precision electronic scale with a repeatability up to 0.05mg.
- Precision scale is easily visible through the viewing panel, can be calibrated and traced with a standard material(weights) for data traceability.
- The scale can be quickly disassembled for maintenance and calibration.

Safe & Compliant

- Fully-closed, zero leakage water bath avoids harmful gas overflow.
- Water fill and drainage of the water bath are automatic; and the liquid level is automatically detected.
- Rapid liquid cooling system quickly achieves room temperature weighing.
- Nitrogen purge cycling and independent electrical control system are safe for tests of flammable, explosive or toxic gases which may be released from test material
- Highly efficient reagent collection reduces environmental pollution.

Intelligent Control

- 12.1" medical-grade touch screen user interface, the instrument is operated independently without a computer.
- The instrument mainframe adopts a desktop design to save space.
- Water bath automatically moves in and out of the chamber and automatically closes the lid for convenient operation.
- Water bath evaporation, drying, cooling and weighing at room temperature are completed automatically.
- The instrument is equipped with various kinds of sensors with sound and light intelligent reminders for operator safety.

- The instrument is embedded with a network port and can be connected to the Internet for remote control and upgrading.
- Professional software meets GMP requirements for data traceability and the needs of the pharmaceutical industry.
- Multi-level operation authority management for users can be configured on demand.
- Electronic signature is designed as per standard requirements of 21 CFR Part 11.

Testing Principles

➢ Total Migration

The sample is soaked in the solution which is chosen to simulate different foodstuffs. When the solution is evaporated and dried, the total migration amount of non-volatile matter can be obtained.

➢ Non-volatile Matter

The sample is soaked in a solution as required by the various standards. After the soaking solution and blank solution are evaporated and dried, the total weight of non-volatile residue is obtained by comparing with the blank solution.

Test Standard Compliance

ISO 1135-4:2015, ISO 1135-5:2015, ISO 3826-1:2019, ISO 3826-4:2015, ISO 8536-4:2019, Pharmacopoeia, YBB00342002-2015, YBB00132002-2015 and other standards for pharmaceutical production and pharmaceutical packaging.

EN1186-3, GB 31604.8-2016, GB/T 5009.60 and other standards for food contact materials.

ISO 759-1981, ISO 6353-1:1982 GM14, GB/T 9740 and other related standards for determination of chemical reagent residue after evaporation.

Applications

Basic Applications	Purified Water	Determination of non-volatile matters in purified water for pharmaceutical applications.
Extensive Applications	Pharmaceutical Packaging Materials	Determination of non-volatile matters of various pharmaceutical composite films, bags, bottles, rubber plugs and caps.
	Food Contact Materials	Determination of the total migration amount of polyethylene, polystyrene, polyvinyl chloride, polypropylene, melamine, foam polystyrene and plant fiber molding products.
	Chemical Reagents	Determination of various chemical reagent residues after evaporation.

Technical Parameters

Table 1: Test Parameters [Note 2]

Parameter\Model		C840H
Test Range	mg	0.05～10000
		0.3～80000 (optional)
Resolution	mg	0.01
		0.1 (optional)
Repeatability	mg	±0.05
		±0.3 (optional)
Temperature Range	℃	Room temperature～130
Temperature Fluctuation	℃	±0.5
Extended Functions	21 CFR Part11	optional
	Computer system requirements for GMP	optional

Table 2: Technical Specifications

Test Stations	25
Test Cup Volume	100mL[Note 3]
Gas Specifications	Compressed air (gas source is provided by the user)
Gas Source Pressure	≥ 72.5 PSI/500 kPa
Port Size	Φ8mm Polyurethane tube
Instrument Mainframe Dimensions	32.6” H x 43.3” W x 28.7” D (83cm × 110cm × 73cm)
Power Supply	120VAC±10% 60Hz / 220VAC±10% 50Hz (Select one from the two)
Net Weight	440Lbs (200kg)

Table 3: Product Configuration

Standard Configuration	Instrument mainframe, including scale (0.01mg), electrical control module, reagent collection module, liquid cooling module, test cups (25 cups), Φ8 mm Polyurethane tube
Optional Parts	Software, computer system requirements for GMP, 21 CFR Part11, air compressor (exhaust capacity > 200L/min), test cup (100mL), scale (0.1mg), weight (50g)

Note 1: The described product characteristics are subject to the specific annotation of the "Technical Parameters" table.

Note 2: The parameters in the table are measured in Labthink's laboratory by professional operators as per requirements and conditions of the relevant laboratory environment standards.

Note 3: The test cup volume can be customized, but the test range may be subject to alteration.

✧ Labthink is always dedicated to the innovation and improvement of product performance and functions. Therefore, technical specifications are subject to change without further notice. Labthink reserves the rights of final interpretation and revision.