

C830 Migration & Non-volatile-matter Content Tester

is one highly integrated, high efficiency and automatic tester for determination of migration and non-volatile matter contents, which can be widely used for determination of migration of various packaging materials for food and their products, non-volatile contents of packaging materials for pharmaceuticals, total solids, water and fat of food, water and insoluble substances of pharmaceuticals and food additives. The instrument supports fast evaporation mode and efficient reagent recycling function so that water, trichloromethane, acetic acid, ethanol, n-hexane and other reagents can be used to improve the testing efficiency.

**Features^{Note2}****Professional**

As an innovator and leading manufacturer, Labthink is dedicated to development of testing instrument for determination of migration and non-volatile contents, which is highly-integrated, automatic, precise and harmless.

- Integrated testing process with evaporation, drying and weighing all-in-one instrument, which can be used for determination of migration and non-volatile contents with trichloromethane, acetic acid, ethanol, n-hexane and many other reagents.
- Harmless testing process. The evaporated reagent will be collected and processed through special gas pipes, without requiring additional gas handling systems in laboratory.
- High efficiency reagent recycling function makes it possible to recycle 90% ^{Note1} of n-hexane without introducing extra foreign matters (e.g. bath water).
- The testing process is automatic without human intervention, which can protect the operators from the hazardous gases and guarantee the safety of operators.
- Automatic testing process. With precise automatic weighing system, operating errors can be minimized and constant weight can be obtained effectively.
- Precise testing process. Specially designed constant temperature chamber and weighing system can guarantee the testing accuracy.

High Efficiency

High-efficiency and automatic design minimize the human operation. With advanced technology, the instrument supports simplified test method, testing process and combination of tests.

- World's leading fast evaporation technology can reduce the evaporation time by heating the reagent to the status most close to boiling.
- The test chamber can be opened and shut automatically. The airtight test chamber makes the operation safe and simplified.

- With gas balancing technology, the concentration of evaporated reagent can be reduced quickly, which improves the evaporation efficiency and operating safety.
- The testing process is efficient with flexible and professional process parameters as well as multiple test modes including proportional mode, standard mode, differential mode and fast mode, etc.
- The instrument is equipped with 9 working stations, with independent test parameters, process data and test results.
- Labthink's exclusive extended working station mode (optional) supports 9 to 90 stations of multiple testing instruments ^{Note3}.

Intelligent

The instrument is embedded with Labthink's latest operating software, which is featured with user-friendly interface, intelligent data processing, strict user management and secure data storage. It also supports Labthink exclusive DataShield™ ^{Note4} (Optional) which provides the users with safe and reliable management of test data and test reports.

- Test data can be displayed in various forms including curves and data list
- Test data will be saved and encrypted in a unique way so that all the test information will be saved securely and reliably and protected from being tampered
- Various forms of test data can be searched, exported and printed out

Test Principle

➤ Total Migration

The specimen shall be soaked in the solution which is simulator of various food. When the solution is evaporated to dryness, the total migration of non-volatile contents can be measured and calculated.

➤ Non-volatile-matter Content

The specimen shall be soaked in standard reagent. When the reagent and blank liquid bath are evaporated to dryness, the total weight of non-volatile-matter contents can be obtained by comparing with the blank liquid.

Test Standards ^{Note2}

ISO 759-1981, GB 31604.8-2016, GB/T 9740-2003, YBB00342002-2015 and YBB00132002-2015, etc.

Applications ^{Note2}

Basic Application	Determination of migration of packaging materials for food and their products	Determination of migration of food packages made of PE, polystyrene, PVC, PP, melamine, EPS and plant fiber, etc.
		Determination of migration of rubber gasket, sealing ring of pressure cooker, rubber nipple, rubber tubes in food industry.
		Determination of migration of coatings in the interior wall of food containers such as Vinylidene Chloride, epoxy novolac, Polyamide epoxy resin and PTFE, etc.

**Determination of
Non-volatile-matter
Contents of
packaging
materials for
pharmaceuticals**

Determination of non-volatile contents in transfusion bottles, eye drop bottles, oral liquid vials, oral medicine bottles, transfusion bags and their caps which are made of LDPE, HDPE, PP and PET, etc.

Determination of non-volatile contents in compound films and bags made of PE, BOPP, VMCPP and PET, etc.

Determination of non-volatile contents in compound rigid sheeting made of PVC, LDPE, PVDC and PA for medical use

Determination of non-volatile contents in PE/Aluminum/PE compound tubes for ointment and LDPE films and bags.

Determination of non-volatile contents in Halogenated butyl rubber closures for injection or injection powder

Determination of non-volatile contents in medicinal gasket, rubber closure, piston and protective cap.

Technical Specifications

Table 1: Test Parameters^{Note1}

Item/Model		830M	830H
Test Range	mg	0.5~80000	0.3~80000
Resolution	mg	0.1	0.1
Repeatability	mg	0.5	0.3
Test Temperature	°C	Room Temperature-130	Room Temperature-130
Temperature Accuracy	°C	±0.5	±0.5
Additional Functions	Fast Evaporation Mode	N/A	Standard
	Reagent Recycling Function	N/A	Standard
	Acid, Alcohol & Alkane Test	N/A	Standard
	Extended Working Station	N/A	Optional
	DataShield™	Optional	Optional

Table 2: Technical Specifications

Number of Working Stations	9 stations with independent weighing systems, test parameters can be different from each other, test data is independent, Customization Available
Test Cup Capacity	200ml, Customization Available
Gas Supply	Compressed Air (Power Gas), High-purity Nitrogen (99.999%, Balance Gas)

Note: The gas supply is not in supply scope.

Gas Supply Pressure	≥0.6MPa
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Port Size	Φ6mm PU Tubing
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Note 1: The parameters in the table are measured by professional operator in Labthink laboratory according to relative requirements for laboratory standard conditions.

Note 2: The described product features, test standards and configurations should be in line with Table 1: Test Parameters. For extended applications, customization is available to meet the special testing requirements

Note 3: The extended working station sets and instruments should be purchased separately.

Note 4: DataShield™ provides safe and reliable data application support. Multiple Labthink instruments can share one single DataShield™ system which can be purchased as required.

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