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Analysis & Testing Instruments



# Vacuum Decay Leak Detection Tester

## AUTO GBM-L1



## Introduction

AUTO GBM-L1 Vacuum Decay Leak Detection Tester adopts the principle of vacuum decay to detect micro-leakage of finished packaging. The tester is suitable for micro-leakage detection and integrity leak detection of various packaging containers. It can be applied to leak detection of pharmaceutical packaging, food packaging, and chemical industry packaging such as vials, ampoules, HDPE bottles, and prefilled needles. The seal tester has the advantages of non-destructive, non-destructive, and no need for sample preparation.

## Test principle

Based on dual sensor technology, vacuum decay method principle of dual circulation system. Connect the main unit of the microleak leak tester to a test chamber specially designed to hold the package to be tested. The instrument vacuumizes the test chamber, and a pressure difference is formed inside and outside the package. Under the action of pressure, the gas in the package diffuses into the test chamber through the leak hole. The dual-sensor technology detects the relationship between time and pressure, and compares it with the standard value. Determine whether the sample leaks.

## Standard

ASTM F2338-2009(2013), YY-T 0681.18-2020, USP<1207.2>

## Specification

Item	Technical Parameters
Absolute pressure test range	(0~300) kPa
Differential pressure test range	(-2~2) kPa
Detection sensitivity	1 ~ 2 $\mu\text{m}$

Balance/Test Time	1 ~ 3600 s
Vacuum time	1 ~ 3600 s
Set flow rate	0 ~ 3 mL/min
Test system	Dual Sensor Technology / Dual Cycle Test
Test chamber	Customized according to samples
Suitable for	Vials, ampoules, prefilled needles, infusion
Detection principle	Vacuum decay method
Host size	550 mm*330 mm*320 mm
Ambient temperature	20°C ~ 30°C
Relative humidity	Max 80%, no condensation
Working power	AC 220V, 50HZ

## Features

### ◆ Dual-sensor dual-cycle technology, non-destructive testing

Based on dual-sensor and dual-circulation system technology, high-quality absolute pressure sensor and differential pressure sensor, with an accuracy of 0.1% FS, can effectively detect large and small leaks, accurately calculate the leak hole diameter, and give a pass or fail judgment.

Non-destructive testing method is used to leak test the finished package, and the sample is not damaged after the test.

### ◆ The instrument has low sensitivity and good test repeatability

For rigid samples, the detection sensitivity is as low as 1 μm, and the test repeatability is as low as 0.8%. The instrument has stable performance, low noise and good repeatability.

### ◆ Imported brand accessories, excellent performance

Imported brand vacuum pump, pumping rate up to 3 L/s, noise as low as 50 DB, high ultimate vacuum,

convenient oil level detection and replacement.

The imported gas mass flow controller can simulate micro-leaks arbitrarily, with a resolution of 0.001 mL/min, which provides a reliable guarantee for the method verification of instrument sensitivity.

#### ◆ **Large size touch screen, intelligent operation**

Color 7-inch touch screen, clear view, sensitive touch, easy to operate.

Equipped with a micro-printer, USB data interface, and supports PC software measurement and control operation.



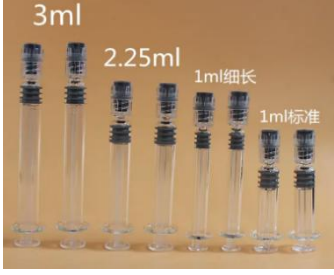



The test software is designed according to the GMP appendix "Computerized System". It has an audit trail function and multi-level authority settings for users, which can meet the needs of the pharmaceutical industry for data traceability.

#### ◆ **Personalized customization to meet the needs of different samples**

For different test samples, it supports customization of suitable test chambers to meet the needs of different tests.

For the same type of samples, it supports customized nesting mode, which can realize the sharing of a test chamber for samples of various specifications.

## Application

		
<p>Freeze-dried powder injection</p>	<p>Injection</p>	<p>Prefill needle</p>
		
<p>Eye drops</p>	<p>Plastic Ampoule BFS</p>	<p>Infusion bags</p>

## Factory configuration

<p>Standard</p>	<p>3 sets of host machine, vacuum pump, test chamber and yin and yang control (customized as required), professional software (GMP)</p>
<p>Optional</p>	<p>Imported gas flow meters, computers, printers, calibration certificates</p>

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