

Density Meter

DM-3005 DM-3005A DM-3004



Advanced U-tube vibration, more accurate results

- The U-tube vibration densitometer only needs 2~3mL of sample at least, which greatly saves your precious experimental samples.
- Peltier temperature control provides you with experimental results at precise temperature.



Excellent display and operation logic, helping efficient operation

- High-definition display of U-tube real-time images, convenient for you to check whether there are bubbles in the U-tube while injecting.
- Follow the built-in SOP to operate, you will get it once you use it.



Support automatic injection, achieve higher throughput

- Standard peristaltic pump to automate your injection, measurement and cleaning processes.
- Ensure accurate results without operator influence.
- Reduce exposure to hazardous materials during the injection process.












Ensure compliance, use with confidence

- Complies with ASTM D4052, D5002, D3505, ISO 12185, IP 559 petroleum standards and all relevant pharmacopoeias.
- Four levels of user management permissions, data reporting, electronic signature.
- Audit trail is optional for DM-3005, DM-3005A to comply with 21 CFR Part 11.
- Built-in network module, equipped with multiple communication interfaces, data can be saved, exported and printed.

Description

Working under the principle of U-tube vibration, it can measure liquid density quickly, and has the functions of electronic excitation, vibration frequency counting and display. By injecting a small amount of samples into the vibrating sample tube, the density of the sample can be calculated according to the change of the vibration frequency of the sample tube and the calibration data.

Features

-  **LCD** Color LCD touchscreen.
-  Android operating system.
-  HD camera video for detection.
-  Minimum sample volume is approx. 2mL to 3mL for measuring each time.
-  Designed with the built-in Peltier temperature control.
-  Fast mode and accurate mode meets different needs.
-  Compatible with manual and automatic injection.
-  Comply with pharma standards
-  Audit trail is optional for DM-3005, DM-3005A to comply with 21 CFR Part 11.

Applications



Industry Applications

Model	DM-3005	DM-3005A	DM-3004
Beverage Industry	Measuring sugar concentration, food additive indicators , soft drink quality control		
Food Industry	Grape juice, tomato juice, fructose syrup, vegetable oil and canned food processing		
Brewing Industry	Detection of alcohol concentration of liquor, yellow wine, red wine, beer, fruit wine, rice wine, etc.		
Chemical Industry	Chemical urea, detergent, glycol, acid, alkali and polymer density testing		
Pharmaceutical Industry	Quality control of raw materials and finished products, determination of specific gravity and density (relative density) of pharmaceutical preparations		
Petrochemical Industry	Crude oil API index, gasoline, diesel, kerosene density detection, additive mixing ratio process monitoring		
Machining	Cleaning agent testing for metal processing, machine manufacturing, automotive industry, and electronic appliances		
Flavors and Fragrances	Edible flavors, daily flavors, tobacco flavors, food additives and spices		
Testing Agency	Standard laboratories, statutory testing agencies, third-party testing of liquid density measurement		

Specification

Model		DM-3005	DM-3005A	DM-3004
Measuring range	Density	0.00000 g/cm³ to 3.00000 g/cm³	0.0000 g/cm³ to 3.0000 g/cm³	0.0000 g/cm³ to 3.0000 g/cm³
	Temperature	5 ℃ to 70 ℃	5 ℃ to 70 ℃	5 ℃ to 50 ℃
Accuracy	Density	±0.0001 g/cm³	±0.0003 g/cm³	±0.0005 g/cm³
	Temperature	±0.05 ℃	±0.05 ℃	±0.1 ℃
Repeatabilit	Density	±0.00005 g/cm³	±0.0001 g/cm³	±0.0002 g/cm³
Precision	Temperature	±0.02 ℃	±0.02 ℃	±0.05 ℃
Digital resolution	Density	0.00001 g/cm³	0.0001 g/cm³	0.0001 g/cm³
	Temperature	0.01 ℃	0.01 ℃	0.01 ℃
Feature	Measuring mode	Density (g/cm³) Density (kg/cm³) 4 ℃ / 20 ℃ / 25 ℃ / Synthermal specific gravity of water More than 30 built-in units such as Density, Specific gravity, Alcohol, API, Brix, Urea, User-defined, etc.	Density (g/cm³) Density (kg/cm³) 4 ℃ / 20 ℃ / 25 ℃ / Synthermal specific gravity of water User-defined	Density (g/cm³) Density (kg/cm³) 4 ℃ / 20 ℃ / 25 ℃ / Synthermal specific gravity of water
	Injection	Manual / Automatic (peristaltic pump)	Manual / Automatic (peristaltic pump)	
	Injection check	1080P HD camera, video check, photo check	1080P HD camera, video check, photo check	
	Calibration	Dry air & Distilled water, Multi-point calibration	Dry air & Distilled water, Multi-point calibration	
	Drying pump	Built-in DC air pump, connected to the drying bucket, can provide continuous dry air	Built-in DC air pump, connected to the drying bucket, can provide continuous dry air	
	Atmospheric pressure compensation	Built-in atmospheric pressure sensor, automatically compensates for atmospheric pressure	Built-in atmospheric pressure sensor, automatically compensates for atmospheric pressure	
	User management permissions	Four levels	Four levels	/
	Electronic signature	Yes	Yes	/
	Audit trail	Optional FDA software	Optional FDA software	/
	Report format	PDF / Excel	PDF / Excel	
Technical data	U-tube	Quartz glass	Quartz glass	
	Minimum sample volume	Approx. 2mL to 3 mL	Approx. 2mL to 3 mL	
	Temperature control	Peltier (high precision platinum resistance, digital PID regulation, PWM temperature control)	Peltier (high precision platinum resistance, digital PID regulation, PWM temperature control)	
	Display	10.1" color LCD touchscreen	10.1" color LCD touchscreen	
	Operating system	Android	Android	
	Internal storage	128G	128G	
	User management	200	200	/
	Method management	200	200	100
	Test result record	200,000	200,000	100,000
	Communication interfaces	RS232, USB, RJ45	RS232, USB, RJ45	RS232, USB
	Connect PC, LIMS	Yes	Yes	Yes
	Printer (Optional)	Thermal printer Stylus printer Wifi printer	Thermal printer Stylus printer Wifi printer	Thermal printer Stylus printer
	Power supply	AC 100 to 240 V, 50/60 Hz, 120W	AC 100 to 240 V, 50/60 Hz, 120W	
	Product dimensions (L×W×H)	439 mm × 350 mm × 217 mm	439 mm × 350 mm × 217 mm	
	Package dimensions (L×W×H)	720 mm × 470 mm × 390 mm	720 mm × 470 mm × 390 mm	
	Net weight	12 kg	12 kg	8.5 kg
	Gross weight	20 kg	20 kg	15 kg