

microscale vapor pressure of petroleum products



automatic microscale vapor pressure analyzer

The design of vapor pressure determination in the instrument is based on Triple-expansion principle. Inject the sample of known volume into a temperature controlled measuring room with a piston in it, seal the measuring room, expand the volume of the sample by X times in three steps, measure the total pressure after every expansion step and calculate the dissolved partial pressure of the air and dissolved pressure of air in the sample. And then raise the temperature to a certain value and measure the total pressure at the temperature.

test method

ASTM D5191 To determine the total vapor pressure exerted in vacuum by air-containing, volatile, liquid petroleum products, including automotive spark-ignition fuels with or without oxygenates. This test method is suitable for testing samples with boiling points above 0 °C (32 °F) that exert a vapor pressure between 7 kPa and 130 kPa (1.0 psi and 18.6 psi) at 37.8 °C (100 °F) at a vapor-to-liquid ratio of 4:1. Measurements are made on liquid sample sizes in the range from 1 mL to 10 mL. No account is made for dissolved water in the sample.

ASTM D6378 To determine the vapor pressure exerted in vacuum by volatile, liquid petroleum products, hydrocarbons, and hydrocarbon-oxygenate mixtures. This test method is suitable for testing samples with boiling points above 0°C (32°F) that exert a vapor pressure between 7 and 150 kPa (1.0 and 21 psi) at 37.8°C (100°F) at a vapor-to-liquid ratio of 4:1. The liquid sample volume size required for analysis is dependent upon the vapor-to-liquid ratio chosen and the measuring chamber volume capacity of the instrument.

key features

Fully Automatic

- Measuring method is selected and the corresponding result will appear on the screen upon completion

Small Sample Size

- Required amount of sample for test is 1mL
- 2.5mL of sample is needed for each rinse to avoid contamination (3x rinse per cycle)

Industrial Touch Screen User Interface

- 7-inch Color Touch Screen is built-in

USB & Network Connections

- RS232 interface for connection to Thermal Printer
- USB interface for connection with mouse or storage device
- Internet (Ethernet) Line

software capabilities

- Standard test methods are preprogrammed or user-defined test programs can be created.
- Results will automatically appear on the screen after completion of the test.
- Ability to measure multiple temperature points in steps as low as 0.1°C and up to 100 points.
- Built-in storage of up to 1,000 test results.



specifications

Conforms to the specifications of:

ASTM D5191, D6378;

Excellent Correlation to:

ASTM D323, D4953; EN 13016-1; IP394, JIS K2258-2; SH/T 0794; SH/T 0769; GB/T 8017; SN/T 2932

Temperature Range: 0 to 120°C (30 to 250°F)

Temperature Stability: +/- 0.1°C

Pressure Range: 0 to 1000 kPa (0 to 145 psi)

Pressure Resolution: 0.01 kPa

Sample Volume: 1 mL (2.5 mL rinse - 3x per cycle)

Vapor/Liquid Ratio: 0.02/1 to 4/1

Interfaces: USB, RS 232, Ethernet

Power Supply: 100-240VAC, 50/60Hz, 150W

dimensions

W x D x H, in. (cm)

8.9x11.5x15.4 (22.5x29x39)

Net Weight: 26.5 lb (12kg)

ordering information

catalog no. **description**

K24870 Automatic Microscale Vapor Pressure Analyzer 100-240V 50/60Hz

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