Automatic Microscale Vapor Pressure Analyzer

test method

This test is done 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.

Another test is done 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.

K24870 Automatic Microscale Vapor Pressure Analyzer

automatic microscale vapor pressure analyzer

The design of vapor pressure determination in the instrument is based on the 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. Then raise the temperature to a certain value and measure the total pressure at the temperature.

ordering information

catalog no.	description
K24870	Automatic Microscale Vapor Pressure Analyzer 100-240V 50/60Hz

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
Automated Calibration Routine
Fast & Easy On-site Calibration – No PC required
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 wxdxh,in.(cm)
8.9x11.5x15.4 (22.5x29x39)
Net Weight: 26.5 lb (12kg)

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