WATER ACTIVITY FOR VOLATILE SAMPLES

DESCRIPTION

The volatility problem

Measuring water activity in samples such as sauces, dressings, tobacco, spices, or teas has traditionally been difficult. The reason: they contain volatile compounds that interfere with chilled mirror and capacitance sensors.

Laser speed. Laser accuracy. Laser simplicity.

As world experts in water activity, it wasn't enough to engineer an instrument that directly measured water activity in most foods. So we created the TDL (tunable laser diode), which uses a laser sensor capable of accurately measuring even the most difficult volatiles. It's easy to use and takes only minutes to measure any sample—even soy sauce, pure alcohol, gasoline, and tobacco.

TDL WATER ACTIVITY FOR VOLATILE SAMPLES

Cuts through the volatility problem with laser precision

When it comes to measuring water activity of volatiles, readings don't get more precise. That's because the TDL uses a laser tuned to the absorption band of water. The laser beam—less than one nanometer wide—locks on to water molecules no matter what the concentration of volatiles. The TDL is even able to correctly measure the water activity of pure alcohol.

Measuring volatile compounds has never been easy. Until now.

Despite being a complex instrument, the TDL is easy to use. Its sensor has no moving parts and is housed in a fully sealed sample chamber. Best of all, it doesn't require user calibration. You're five minutes away from an accurate water activity no matter what the sample is.

Accurate readings in only 5 minutes

The TDL's laser takes five minutes to make a measurement of most samples. Compared to other instruments that take almost an hour, this adds up to significant time savings and quicker quality measurements no matter what ingredients are in your sample.

Volatility meets its match

Laser accuracy. Low-maintenance usage. Lightning fast measurement. The TDL stands alone, letting you measure water activity in previously impossible-to-measure samples.

TDL WATER ACTIVITY FOR VOLATILE SAMPLES

In fact, CORESTA (Cooperation Centre for Scientific Research Relative to Tobacco) specifies the TDL as the only sensor that can accurately measure water activity in tobacco products. Respected by customers and third party scientists alike, the TDL (tunable laser diode) delivers readings you can completely trust no matter what the sample contains.

SPECIFICATIONS:

Water activity	**Range:** 0.000–1.000 a_w **Resolution:** 0.0001 a_w **Accuracy:** ±0.005 @ 25 ◦C
Temperature	**Range:** 15–50 °C **Resolution:** 0.01 °C **Accuracy:** ±0.1 °C **Adjustment increment:** 1 °C
Read time	~5 min
PHYSICAL SPECIFICATIONS	
Case dimensions	Length: 26.7 cm (10.5 in) Width: 17.8 cm (7.0 in) Height: 12.7 cm (5.0 in)
Case material	POLYLAC PA-765 (ABS) with fire retardant
Sample cup capacity	14 mL (0.47 fl oz)
Weight	3.1 kg (6.8 lb)
Display	64 × 128 graphical
Operating temperature	Minimum: 4 °C Typical: 23 °C Maximum: 50 °C
Operating environment	0%–90% RH noncondensing
Data communications	USB A and RS-232 serial 9,600–115,000 baud
Power	110–220 VAC 50/60 Hz
COMPLIANCE	Manufactured under ISO 9001:2015 EM ISO/IEC 17050:2010 (CE Mark)

FEATURES

- Accurate: ±0.005 aw
- Accurately read any sample, including those with volatiles
- Verifiable with independent salt standards
- Repeatable: different users, different locations, same result
- Portable: weighs just 7 pounds
- Easy to use: precise aw readings with minimal training
- Secure: offers administrative control over calibration and data

Contact info

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This Instrument is manufactured by our principle company

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