new

AquaLab TDL Water Activity Meter

AQUA LAB BY DECAGON

AquaLab TDL is the only water activity meter in the world that isn't affected by volatiles.

- **Breakthrough Tunable Laser Technology**
  Precision laser beam measures the presence of water and only water.
- **Measure Any Sample**
  Unlike capacitance and chilled mirror sensors, the tunable diode laser is unaffected by volatiles.
- **Easier Cleaning**
  A sensor with no moving parts and a completely sealed sample chamber makes the AquaLab TDL more robust and easier to clean.

AquaLab TDL Benchtop Water Activity Meter

Measure the water activity of any sample with the **first water activity sensor completely unaffected by volatiles**.

Anyone, from a technician in the lab to an operator at the line, can measure water activity in five minutes or less to ±0.005 a_w specifications.

How it Works

Put up to a 7.5 ml sample in a disposable cup, seal the sample chamber lid over the sample, and wait for vapor equilibrium. At equilibrium, the relative humidity of the air in the sample chamber is equal to the water activity of the sample.

Tunable Diode Laser Sensor

The TDL measures the relative humidity of the air in the sample chamber by emitting a finely-tuned near-infrared laser beam across the headspace. Because water vapor has strong absorption bands in the near infrared (NIR), the sensor can measure the presence of water vapor in the headspace very precisely.

Unaffected by Volatiles

The beam of the laser, which is less than one nanometer wide, is specific for the commonly occuring isotope of water. Other vapor molecules, including the vapor of different isotopes of water, do not affect the reading.

Read Any Sample

The sensor is powerful enough to measure the water activity of previously impossible to measure samples, including high concentration ethanol, even gasoline.

Speed and Accuracy

Measure water activity in five minutes or less with ±0.005 a_w accuracy. The AquaLab TDL is the fastest, most precise water activity meter available for volatiles.

Use (Almost) Anywhere

Water activity is temperature dependent. Internal temperature control lets you set a measuring temperature between 15 and 50 °C and use the instrument anywhere--even outside a climate-controlled facility.

Robust, Easy to Clean

The sensor has no moving parts, and is housed in a fully-sealed sample chamber. The clamshell lid offers easy access to all parts of the sample chamber for cleaning.

Secure Data

AquaLab TDL stores time, date, and user information with every measurement and calibration, and can store up to 8,000 secure data points. Set up to 25 unique users and passwords to control access to data.

Use available AquaLink software to maintain compliance records and archives, run statistical analysis, and print reports for customers and decision-makers.

Learn More

Visit wateractivity.com to see how water activity can keep your products safe and your process lean.

Learn More. Visit **www.aqualab.com/tdl** to see the TDL in action, call 509-332-2756 or email sales@aqualab.com for a quote.

AquaLab TDL | SPECIFICATIONS

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Sensor type	Tunable Diode Laser Infared Temperature
A_w Accuracy	±0.005 a_w at 25 °C
A_w Range	0.000 to 1.000 a_w
A_w Resolution	0.0001 a_w
Sample Dish Capacity	7.5 ml recommended (15 ml full)
Measurement Time	Less than five minutes
Display	128 x 64 graphical interface
Temperature Control	25 °C, 15 to 50 °C with calibration
Sample Temperature Accuracy	± 0.2 °C
Sample Temperature Resolution	0.01 °C
Test Result Memory	8,000 readings (each reading includes water activity, moisture content, temperature, time, date, operator, and sensor used.)
Program Identification	Alphanumeric; Programmable to display product name, lot, or product ID number
Operating Environment	4 to 50 °C (39.2 to 122 °F) 0 to 90% Relative Humidity (non-condensing)
Universal Power	110 V to 220 V AC, 50/60 Hz Less than 0.4 amps
Data Interface	RS232A compatible, 8-data bit ASCII code, 9600 baud, no parity, 1 stop bit, cable included
Case Dimentions	26.7 x 18.0 x 12.7 cm (11 x 7.7.1 x 5.1 in)
Case Material	Lustran 433 (ABS) with fire retardant
Weight	3.1 kg
Warranty	One year parts and labor

- Free **loaner service** during warranty periood
- Free **technical support**
- Free **application support** over the life of the instrument

For Questions or a Quote
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www.aqualab.com/tdl

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