



AquaLab TDL 2: Measure the unmeasurable

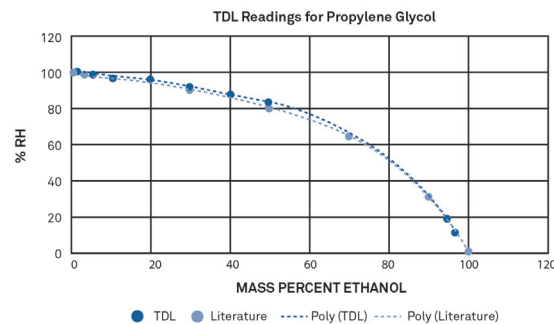
Make high-precision USP 922-compliant water activity measurements on any sample—even highly volatile ones—with the TDL 2 water activity meter.



The volatile problem, solved

For years, volatiles have caused issues with a_w (RH) measurements. During readings, volatilized molecules have confused, damaged, or delayed sensors. At a certain volatile threshold, reliably measuring water activity was simply impossible.

The new TDL 2 does what other sensors can't: completely ignore deceptive volatile compounds.



The math vs. the measurements

The TDL 2 unlocks a vast new landscape of previously impossible direct measurements – this graph is just a glimpse. With every substance we've tested, the TDL 2 matches theoretical values — and in some cases, prompted scientists to check assumptions and fix calculations.

Stop fussing with filters

No matter the compound or concentration, only water's unique isotopic wavelength signature can trigger the TDL 2's sensor. Whatever the volatile – from isopropanol to toluene – it will have no effect on the TDL 2's accuracy or measurement speed. And it won't damage the sensor.



Molecular precision



Read any volatile



<5 min readings



No filters

Laser precision – literally

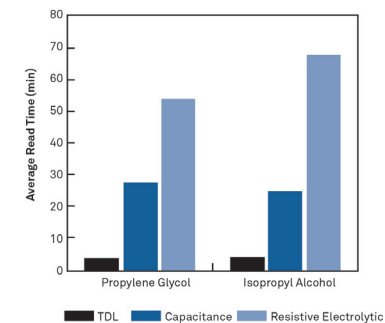
The TDL 2 owes its accuracy to a powerful laser. Less than one nanometer wide, the laser is tuned to water's signature on a molecular level. Direct interaction between laser, sensor and water vapor makes relying on the literature completely unnecessary.

The TDL 2 plays key roles at some of the world's top companies.

- Final product release testing
- Establishing skip-lot testing suitability
- API stability studies
- Setting packaging and storage standards
- Microbial limits testing

Accurate to ± 0.005 . In five minutes or less.

Most instruments need 30-60 minutes for a single reading – if they can handle volatiles at all. The TDL 2 delivers dozens of readings in the time it takes to find and install the right filter on an electrolytic sensor.



Measurement Specifications	Water Activity.....	Range: 0.000–1.000 _{aw}
	.....	Resolution: 0.0001 _{aw}
	.....	Accuracy: ±0.005 _{aw} @ 25 °C
	Temperature	Range: 15–50 °C
	.....	Resolution: 0.01 °C
	.....	Accuracy: ± 0.1 °C
	.....	Adjustment increment: 1 °C
	Read Time.....	~5 min
	Operating environment	0% - 90% noncondensing
	Operating temperature	Minimum: 4 °C
	.....	Typical: 23 °C
	.....	Maximum: 50 °C
	Repeatability	± 0.001 _{aw}
	Sample temperature accuracy	± 0.1
	Program	Alphanumeric
Interface	RS232 and USB	
Display	Backlit graphic	
Teraterm compatible		

Features summary

- Accurate to ±0.005_{aw}
- Read any sample, even highly volatile compounds, with no filters or fuss
- Quick: readings in five minutes or less
- Verifiable with independent salt standards
- Easy to use: precise water activity readings with minimal training
- Low maintenance: no moving parts to wear out
- Secure: offers administrative control over calibration and data
- Repeatable: different users, different locations, same result
- Portable: weighs just 7 pounds
- One minute predictive readings available



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