

Almond Moisture Content Made Simple

10X MORE PRECISE; CALIBRATION FREE

Moisture plays a key role whenever almonds change hands. Growers want to know that they are being paid fairly. The buyer wants to make sure their almonds won't allow mold or aflatoxin growth. Everyone needs a method that is simple and consistent.

AquaLab Series 4TE DUO uses the "Dew Point Method" to measure moisture in almonds. The result: complete moisture analysis with some big advantages over traditional almond moisture methods.

How It Works

The Dew Point Method doesn't use dielectric signals, scales, or density calibrations. Using AquaLab is as easy as loading

a sample, closing the product's lid, and waiting for vapor equilibrium.

Inside the instrument, a beam is focused on a tiny mirror to determine the dew point temperature of the air in the chamber. That temperature is then translated into almond moisture and water activity readings for a sample. The instrument is lightweight, portable, and easy to use.

10X the Precision

This method is precise because small changes in moisture cause large changes in vapor pressure for almonds. This means the AquaLab measures tiny changes in moisture very precisely. In almonds this precision is

typically +/-0.05% moisture content, much higher than with other methods.

Testable Accuracy

Ever wonder if a moisture meter is working properly? With AquaLab, checking performance is easy. Standard salt solutions with traceability can be used whenever you want to make sure your meter is working right.

Stop Mold and Aflatoxin

With AquaLab, you get both a moisture and a water activity reading. This makes it easy to check if your almonds are in a range that will support mold growth. Any lot over 0.700 aw can support mold growth.

- **Odor-free** — no oven
- **Precise** — reduces error by up to 90%
- **Verifiable** — with independent salt standards
- **Repeatable** —
- **Portable** — weighs just 7 pounds
- **Easy to use** — precise measurements with minimal training
- **Secure** — offers administrative control over calibration and sample data
- **Complete moisture analysis** — both moisture content and water activity

Both moisture content and water activity are critical quality measures in almonds.

**AQUA
LAB**
BY DECAAGON

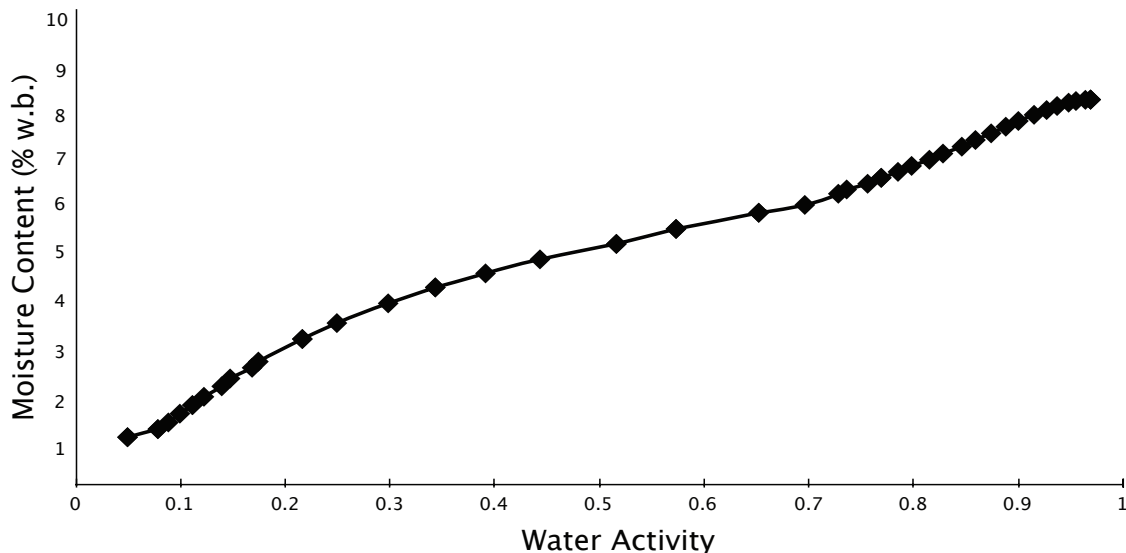
2365 NE Hopkins Court
Pullman, Washington 99163
509-332-2756
www.wateractivity.com

AquaLab 4TE DUO

Dewpoint Moisture Analyzer



Free Loaner Service
Free Technical Support
Free Application Support
over the life of the instrument



Almond Moisture and Water Activity - This data set allows water activity to be used to calculate almond moisture.

AquaLab 4TE DUO Specifications

Sensor Types

- Chilled-mirror dewpoint
- Infrared temperature

Water Activity Accuracy

$\pm 0.003 a_w$

Water Activity Range

0.10 to 0.85 a_w

Moisture Content Precision

0.05%

Agreement to Moisture Content Reference Method

$\pm 0.1\%$ to $\pm 0.5\%$

Sample Dish Capacity

7 ml recommended (15 ml full)

Resolution

Moisture: 0.01% mc
Water Activity: 0.0001 a_w

Measurement Time

Less than five minutes

Display

128 x 64 pixel lcd display with backlighting.

Results Displayed

Percent moisture and a_w

Temperature Control

15 to 50 °C (± 0.2 °C)

Temperature Stability

User-selectable range, internal thermoelectric controlled

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 (noncondensing)

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 Dimensions

26.7 x 17.8 x 12.7 cm
(11 x 7.1 x 5.1 in)

Case Material

Machined aluminum frame; Lustran 433 (ABS) with fire retardant

Weight

3.18 kg (6.9 lb)

Warranty

Three years, factory parts & labor

Certifications

CE; AOAC Approved Method for Measurement of Water Activity; Part 11 Compliance

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