

One minute water activity

metergroup.com/food/products/aqualab-3



New AQUALAB 3

The speed challenge

Normally, measuring water activity takes a significant amount of time. The sample must come to equilibrium with the air in the headspace above the sample before a reading can be taken. Depending on the sample, that can take 2-5 minutes—even longer for coated products and products high in fat. There hasn't been a way around "equilibrium time" or "dwell time." Until now.

Fast answers, no waiting

The new AQUALAB 3 breaks the speed barrier. Using SKALA-powered predictive AI, it delivers both water activity and moisture content readings on a single sample in one minute.

Clear shipments quickly

AQUALAB 3 lets you know within one minute whether the batch will pass or fail. Quickly test as many samples as you need to establish a robust testing protocol and accurately predict in-package water activity. **Don't wait for answers**—clear shipments quickly and avoid logistical snarls.

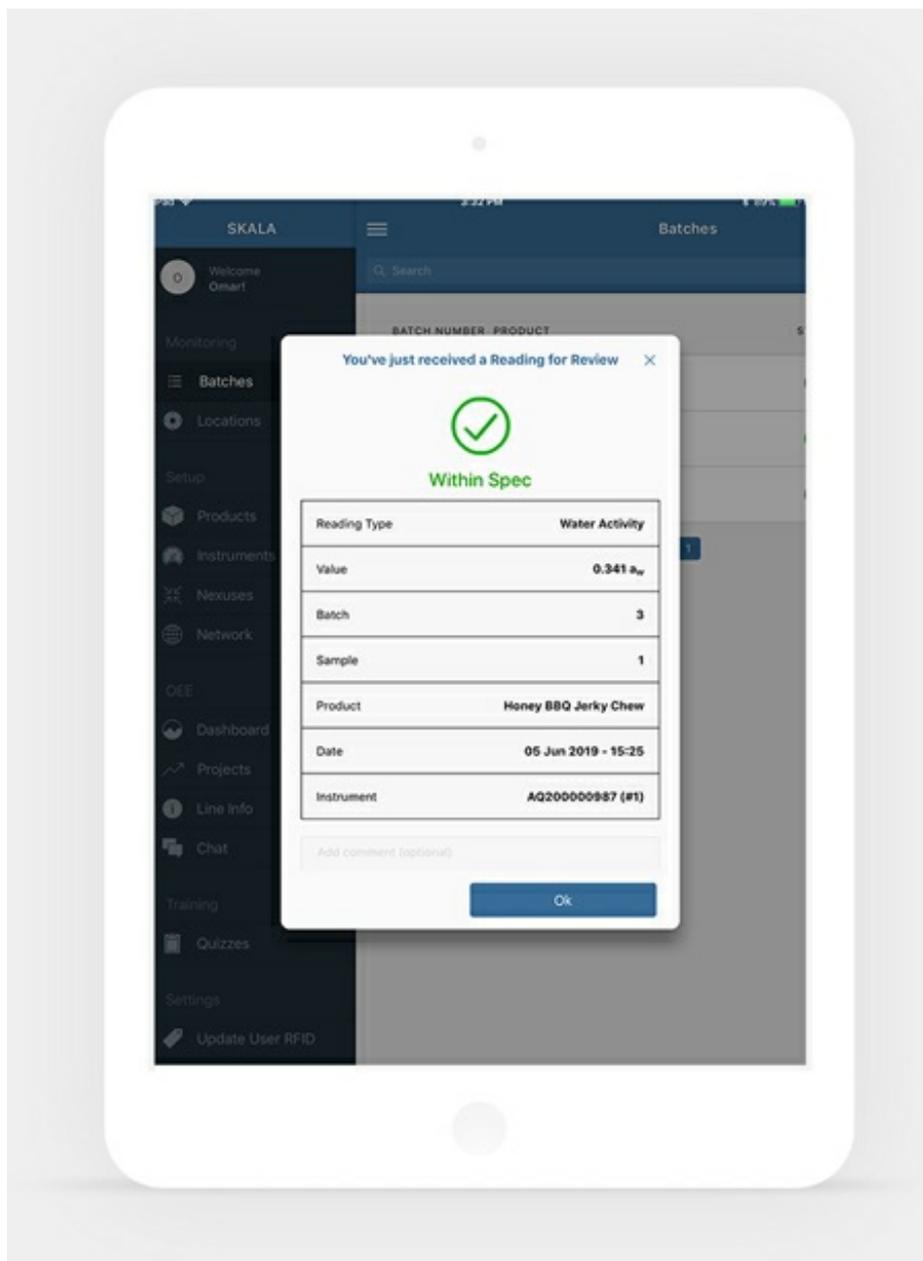
Avoid rework and scrapped batches

Make fast decisions at the line to address issues before your process goes out of control. Get "outside operating limits" indicators within 60 seconds and use the predicted final

values to adjust belt speed, oven temperatures, water content in dough, and other parameters before they result in rework or scrap. Fast water activity measurements offer the most precise way to monitor and control moisture at the line.

Speed changes everything

One minute water activity offers options you've never had before for robust and rapid pass/fail determination, tighter process control capability, and rock-solid indicators to clear shipments on time.



AQUALAB 3 FEATURES

- Fast: water activity readings in 1 minute.
- Easy to use: precise measurements, minimal training
- Expandable: connect and manage multiple AQUALAB 3 instruments with one iPad
- Repeatable: certified standards for repeatability across users and locations

- Multiple reading types: simultaneous moisture content readings
- Optional block exchange program includes annual recalibration, extended warranty, and service plan

For labs getting started with moisture control: access real time water activity, moisture content data and basic functions like search and CofAs.

For labs with digital dreams: collect and manage data from checklists, locations, and all your lab instruments (automatically!) for safety and quality.

For pros who need customization: bring lab and production line data together for total moisture control to maximize yield and profit.

Features

- See all water activity and moisture content readings in real time
- Set pass/outside limits/fail specs
- Print batch Certificates of Analysis (water activity readings)
- Search and filter all water activity and moisture content readings

Features

- View real-time dashboards for process control
- Export all readings for advanced analysis
- Connect other instruments (pH meter, moisture meter, brix meter, balance, etc.)
- Integrate location measurements (oven temp, humidity, etc)

Features

- Define and display process control dashboards for production
- Integrate data from PLCs
- Implement overpack dashboards and machine learning
- Smokehouse module

Specifications

MEASUREMENT SPECIFICATIONS

Water activity

Sensor type: Chilled mirror dew point and capacitive hygrometer
 Range: 0.030–1.000 a_w
 Resolution: 0.0001 a_w
 Accuracy: $\pm 0.005 a_w$ (dew point), $\pm 0.015 a_w$ (capacitance)
 Repeatability: 0.002 a_w (dew point), 0.010 a_w (capacitance)

Moisture content

Accuracy: 0.1%–0.5% to moisture content reference
 Repeatability: 0.02%

Operating temperature

Controlled at constant: 25 °C
 Resolution: 0.1 °C
 Accuracy: ± 0.1 °C

Read time	Minimum: 60 s (One-Minute Water Activity Mode; subscription required) Maximum: >200 s (estimated)
PHYSICAL SPECIFICATIONS	
Case dimensions	Length: 23.4 cm (9.2 in) Width: 23.4 cm (9.2 in) Height: 12.1 cm (5.0 in)
Case material	Polycarbonate-ABS (PC-ABS)
Sample cup capacity	7.5 mL (0.25 fl oz), partially full, recommended 15 mL (0.51 fl oz), full
Weight	5 kg (11 lb)
Operating temperature	Minimum: 15 °C Maximum: 35 °C
Display	iPad
Operating environment	0% - 90% noncondensing
Data communications	USB A to USB B 9,600 baud
Power	110–240 VAC
Reading duration	Minimum: 60 s (One-Minute Water Activity Mode; subscription required) Maximum: >200 s (estimated)
COMPLIANCE	Manufactured under ISO 9001:2015 EM ISO/IEC 17050:2010 (CE Mark)