Microbiology Cell Biology Biotechnology Process Control

I&L Biosystems

Steroglass **WaterLab**

Dew Point Water Activity Meter


Shh... you know the
shelf life?

Who doesn't know?

You've just bought a pack of delicious, crunchy biscuits and you've just eaten one of them with pleasure but you have forgotten about closing the package properly. After a few days, feeling peckish, you take out the open pack. You bite into the biscuit and find out that it is soft, has an almost cake-like texture and somehow tastes different. Anyway, the package is put back into the drawer. The next time we feel like eating biscuits again, the bisquits are mouldy.

But what is the reason for this?
Water activity plays a key role here. Water activity is a measure of the actual amount of water available, which can have a negative effect on the microbiological and biochemical changes of a product like our biscuits. The water activity in a product is thus closely related to the shelf life, degradability and stability of a product over time.

Why is that?
The water activity determines the product properties: if the water activity value is not in the optimal range, product properties such as taste, texture, but also the flowability of powder or tablet consistency can be influenced. Typically, the lower the water activity, the longer the shelf life of the product. For each microorganism species there are separate water activity limits below which reproduction in the product cannot occur (see table below). The total water content, on the other hand, cannot provide any information about the shelf life.

This makes it clear why biscuits must be stored correctly and why controlling water activity is an essential factor in quality assurance and product development. The WaterLab dew point water activity technology supports you!

Microorganism	Minimum a_w-Value
Salmonella spp.	0,93
Escherichia coli	0,95
Clostridium botulinum	0,97
Listeria monocytogenes	0,90
Saccharomyces cerevisiae	0,90
Aspergillus niger	0,77

Let the speed, accuracy and flexibility of WaterLab dew point activity technology convince you

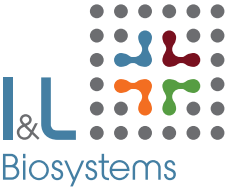
- Water activity meter (aw) in accordance to ISO standard 21807: 2004 and subsequent ISO 18787
- Large 7 inch color touch screen display
- User-friendly software and menu navigation
- Data protection through user management with password protection including 21 CFR Part 11 compliance
- Connection to your LIMS system
- USB interface as well as connection to an external PC
- Equipped with Wi-Fi functionality for connections to local networks and a remote control connection
- Individual administration of data and graphs

WaterLab
is an indispensable instrument for the quality control of products and ingredients in the food, pharmaceutical and cosmetic industries.

WaterLab program selection

- Individual standard measurements
- Repeatability checks
- Repeatability checks with individual accuracy errors
- ISO standard measurements
- Temperature stress tests (15°C to 50°C)

Technical Data	
Measurement range	from 0,030 to 1,000 a_w
Accuracy	± 0,003 a_w at + 25 °C
Repeatability	± 0,001 a_w
Calibration	Simple or multiple (0,250 - 0,500 - 0,760 - 0,920 - 0,984)
Balance / measurement times	<5 Minutes
Probe sensor	dew point (according to ISO standard)
Display resolution	± 0,0001 a_w (4 decimal place)
Complete thermostatic of the sample	adjustable from + 15 °C to + 50 °C in 1°C steps
Operation at room temperature	from + 5 °C bis + 50 °C
Digital resolution	0.01 °C
Temperature Accuracy	± 0,2 °C
Selectable language	English, German, French, Italian, Spanish



I&L Biosystems GmbH
Königswinterer Straße 409
53639 Königswinter • Germany
Tel.: +49 2223 9192-0
Fax: +49 2223 9192-48
info@il-biosystems.de
www.il-biosystems.com

Present across Europe

Germany | Netherlands | France | United Kingdom | Denmark | Ireland | Sweden