



# eFA-st lab

## Food Analysis Science & Technology



### What is AW?

The water activity (AW) is the free water or available water or “active” water in food and must not be mixed up with the water content which is the water strongly bound to specific sites on the chemicals that comprise the foodstuff.

The AW is an important measurement to maintain the chemical stability of foods, the microbiological stability of personal care products, to improve the shelf-life of a product, to predict which microorganisms will be sources of spoilage.

For example, most of the bacteria do not grow at water activities below 0.91 and molds which are the most tolerant of low water conditions grow in the range of 0.61 - 0.94.

This parameter helps in controlling the non-enzymatic reactions too.



# Specifications eFA-st lab

If you work in a laboratory this instrument is particularly adapted for you. You are looking for an accurate, powerful and robust instrument, which is nevertheless light enough to move from one site to another if necessary. This model is dedicated to research.

## THE INSTRUMENTS MAIN FEATURES

**Principle of the measure:**  
Dewpoint determination by cooling mirror

**Construction**  
Rugged metal construction  
Large 7" touch screen

**Modern communication**  
Ethernet to get access to the instrument from everywhere, and wifi capability to get display on tablet or smartphone  
With optional PC software easy creation of eFast-Lab cluster dispersed worldwide for easy inter-laboratories measurements

**Easy to use and navigate**  
Control by touch-screen and by standard PC software (no installation).  
An optional bluetooth mouse is available if touch-screen not wanted

**No cooling fan**  
Once the optional temperature regulation is selected, the cooling fan is working only if it is required. If the range 20°C-25°C has been selected, thanks to the aluminium casing, the fan is very rarely active.

**Easy and Fast service**  
No need to send back the unit. The instrument can be remotely controlled via the internet without the need of a PC to evaluate the problem and perform firmware update  
The measurement head / sensor can easily be swapped and replaced for quick and effective service thanks to its new mechanical and electronic design  
The sensor doesn't need each 6 months to be reactivated. Average years between 2 breakdowns of the sensor 15years.

**Measurements**  
Accuracy from  $\pm 0.003$   
Range from 0.050 up to 1.000  
Measurement time from 2 min to 5 min depending on the measurement mode and range of AW  
Repeat automatically 3 times the same measurement in accordance to GPL. Total time of measurements around 10 min Up to 20 years of saved data (for 200 measurements/day)

**Optional Temperature regulation**  
Accuracy  $\pm 0.01$  °C of better temperature regulation at 25°C  
or  
range 0-50°C  
Instrument supplied with : 30 plastic cups with lids  
2 saturated calibration salts  
Operating temperature range of the instrument : 15°C - 45°C

**More options:**  
Advanced PC software CFR21 Part 11 to control the data of up to 10 instruments, with operation control.  
Automation to control the unit without the need to touch it (in respect of health advice)

## Some Values of AW Threshold



0.95	Pseudomonas
0.91	Salmonella
0.87	Many Yeasts
0.80	Most Molds
0.75	Mycotoxigenics
0.65	Xerophilic Molds
0.60	Osmophilic Yeasts



**SMART IDEAS CREATE SMART INSTRUMENTS**

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