

WATERLAB AW METER, SUGGESTIONS FOR A PROPER USE

WaterLab is an indispensable analyzer in Quality Control of products to determine the risk of microbial development and the shelf-life of a product over time. It is able to quickly and intuitively carry out analyses with maximum precision in conformity with latest ISO-18787.

In fact, its technology is based on Dew Point sensor that allows to determine aW in just 5 minutes!

Sample preparation:

WaterLab can analyze samples such as solids, powders, liquids without particular preparation. The quantity is not important and samples do not have to be weighed, the only need is to have a representative portion filling half the cup and covering the entire surface.

Moreover:

- it is advisable to handle the sample as little as possible;
- in case of non-homogeneous products (e.g. chocolate biscuit) a representative sample containing all the various components must be placed in the tray;
- in case of complex samples, it is possible to: dissect a portion with a scalpel or scissors; gently homogenize with a mortar (the use of an automatic homogenizer is not recommended);

More complex matrix/products to be analyzed are:

- Products that contains volatile substances in a concentration higher than 5%: alcohol; aromas; etc...
- Products with oil film;
- Fatty products;
- Low concentration aW products, close to low values achievable, like lyophilized samples;
- Products with sponge texture;

Sample cups:

WaterLab sample cups are meant to be disposable and Steroglass Srl recommend to use a new cup for each sample to ensure the integrity of your water activity data.

In fact, residue of hold samples, or even not perfectly dried cups after washing, affect measurement accuracy and repeatability. In addition, a repeat washing of cups could even break down cup plastic coating that also introduce error.

Moreover, the use of lids prevents moisture loss or gain if samples aren't immediately tested.

Daily control and calibration:

Regarding WaterLab calibration please consider that we do not suggest to perform a multipoint calibration really frequently.

A good practice is to wait about 15 minutes from power on and perform, as first day reading, a measure of an aW standard as a sample to check if WaterLab is working well.

If reading is good (within error of $\pm 0,005$ as per ISO specification) continue using the unit as calibration is not needed.



STEROGLASS S.r.l.

apparecchi in vetro soffiato
forniture per laboratori chimici

Cap. Soc. € 103.000,00 i.v.

Strada Romano di Sopra, 2/C - 06132 - S. Martino in Campo - Perugia

Tel. 075.609091 (r.a.) Fax 075.6090950

e-mail: info@steroglass.it ; steroglass.amm@pec.collabra.it ; internet: www.steroglass.it

R.I. / C.F. / P. IVA 01870870548 - VAT IT 01870870548 R.E.A. N. 164737



When instrument is out of specifics, please consider that:

- Single point calibration allows you to choose a reference standard and adjust calibration curve offset depending on this single point. So that single calibration does not change the data of the multipoint calibration and consists of an offset that is added onto the entire reading scale;
- Selective calibration allows to calibrate on a single or on more points without changing the intercept of the entire calibration curve so as not to affect the other points of the same. This procedure makes it possible to calibrate one or more points independently.

Our suggestion for Customers that use to analyses always samples with a “specific and almost known” aW range is to use Selective Calibration in 1-2 points.

In addition, yearly maintenance and calibration of the instrument is warmly suggested and could be performed by authorized Steroglass partner only.

For any additional technical support needed you can refer to authorized local Steroglass partner or write an email to sat@steroglass.it

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Strada Romano di Sopra, 2/C – 06132
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