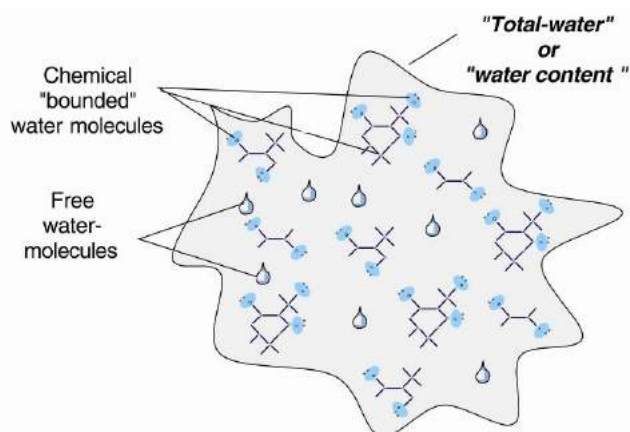


As Easy as Never Before: Control and Improve your Product Quality!

Tired to perform never-ending and work-intense stability and shelf-life testing to get an idea about the durability or chemical/physical behavior of your product over time? Or, are you looking for additional measures to improve the quality of your products?

Then it is a perfect moment to talk about a little known, but very powerful parameter which is so easy to measure: **Water Activity**



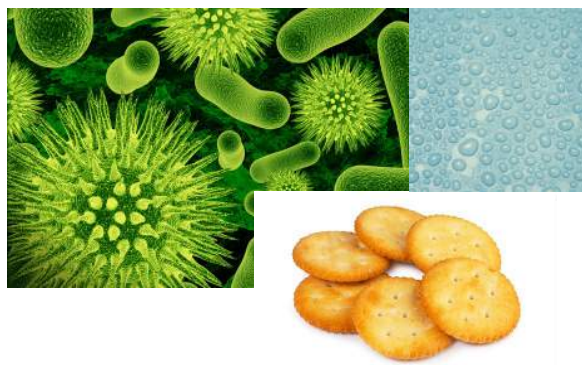
As human needs water to survive, bacteria, molds and other pathogens do as well. The difficulty is that water in a product can be present in two different forms: bound and free. Bounded water (i.e. crystal water) can not support the growth of microorganisms but free water does. But how much of this free water is in a product? Unfortunately, there is no analytical method available to determine the amount of free water. Moisture or water content provides the amount of total water - means, bound and free together, without a clue how much is the contribution of the free water. But, no worries, there is a method to measure the activity of the free water, and self-naming it is the **Water Activity**.

A lot of literature is available which links water activity and possible development of specific bacteria, molds and pathogens. In other words: by knowing the water activity of your product, you know the risk of microbial spoilage.

But as the free water can act as well as solvent and reactant, chemical and physical properties of your product are affected too. Have you ever wondered about missing crispness of a cracker or about brown colored milk powder even intended to be white? By knowing the water activity, you are able to get a picture what really happens in your product on different levels.

On one simple page: water activity helps you to get an idea and to control:

- **Microbiological Stability**
 - Shelf-life
 - Food safety
- **Chemical Stability**
 - Content of proteins and vitamins
 - Reactivity of ingredients (enzymes)
- **Physical Stability**
 - Colour, taste and nutritional value
 - Solubility and texture



It is obvious that every lab, dealing with product stability, safety and quality has to be equipped with a water activity meter.

Why not start today measuring water activity?

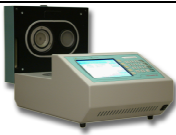


A unique maintenance concept consisting of re-useable SAL-T salt calibration standards, pre-calibrated replacement sensors, chemical cell protection filters and much more, cut costs of ownership and put maintenance tasks performed by the lab personnel to a very low level.

Is it really necessary to have different water activity meters?

Every sample has its own characteristics in terms of ingredients, texture, color and taste and thereby influences the free water and finally the water activity in a different way. This factor, plus the temperature influence, defines the measurement time and the accuracy of the same. Stable measurement conditions are finally the key to a successful quality control!

Novasina offers three types of water activity meters, carefully developed and designed, offering the most suitable solution to customers samples and requirements:

- **LabMaster-aw:** High-end instrument with full temperature-controlled chamber. It can handle all types of samples from 0.04aw to 1.00aw.
- **LabTouch-aw:** Semi-temperature controlled measurement chamber, optimized for the measurement of aw values in the range of 0.60aw to 0.90aw
- **LabSwift-aw:** portable aw-meter without any temperature control, thus environmental (lab) temperature is the measurement temperature. Suitable for low to medium aw-measurement ranges (0.11aw to 0.6aw)

Indicative instrument selection table:	 LabMaster-aw	 LabTouch-aw	 LabSwift-aw
Lean Meat (fresh, dried, processed)	✓	✓	✗
Fatty meat (sausages etc) (fresh, dried, processed)	✓	✗	✗
Bakery products With fillings as jam, chocolate etc	✓	✓	✗
Bread and bread products	✓	✓	✓
Cereals	✓	✓	✓
Fish	✓	✗	✗
Chocolate incl. fillings, sweets, candy	✓	✓	✗
Powder, spices and dried products	✓	✓	✓
Milk powder, dry dairy products	✓	✓	✓
Yogurt, cheese, processed milk	✓	✗	✗
Pet food	✓	✓	✗
Pharma products (API,...)	✓	✗	✗
Cosmetics (emulsion, gloss,...)	✓	✗	✗

Novasina – Swiss Quality, Flexibility and Competence

For more than 50 years Novasina is the leader in the production of precision instruments for water activity measurement in foodstuff, processed food as well as pharmaceutical, chemical products and cosmetics. Thanks to a longstanding experience and research and development we are able to offer today reliable, high quality "Swiss made" products that set new standards in the water activity measurement.

Talk to a Novasina expert to learn more how your sample's water activity can be measured and your product quality improved:

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