

## What is a tensiometer?

A **tensiometer** is an instrument used to measure the **surface tension of liquids**. It can also measure other properties, like contact angle.



Surface tension comes from the cohesive forces between the

molecules of a liquid. At the surface of a liquid, the molecules predominantly experience forces pointing inward, leading to the formation of a 'skin' that resists external force. Surface tension can also be described as the tendency of a fluid surface to form the least possible surface area – in the absence of any other forces, a drop of liquid will form a perfect sphere. You experience this property when you see the formation of droplets, or the ability of small insects to walk on water.

By providing precise measurements, tensiometers help us to understand the properties of liquids in numerous scientific and industrial processes. The measurements obtained from a tensiometer are crucial for research in fields such as material science, chemistry, and biology, as well as in industries like pharmaceuticals, cosmetics, cleaning agents, and the development of coatings, adhesives and their application.

## What is a tensiometer?

We offer a few kinds of tensiometers.

- A force tensiometer measures surface tension by determining the force required to detach a probe or ring from the liquid's surface, that force being directly related to the liquid's surface tension
- The Biolin Scientific Sigma range are force tensiometers
- [Sigma 700 & 701](#)
- [Sigma 702 & 702ET](#)
- [Sigma 703D](#)
- A bubble tensiometer measures surface tension by analysing the pressure required to form and maintain a bubble at the tip of a capillary immersed in a liquid, providing dynamic surface tension data
- These Sita instruments are bubble tensiometers
- [DynoTester+](#)
- [Pro Line T15+](#)
- [science line t100](#)
- An optical tensiometer measures surface tension by analysing the shape of a liquid droplet using advanced camera techniques to determine the droplet's profile and calculate the surface tension
- The Biolin Scientific Theta range are optical tensiometers, measuring surface tension and other properties like contact- angle
- [Theta Lite](#)
- [Theta Flex](#)
- [Theta Flow](#)

[Talk to us](#) about your surface tension measurement needs.

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