BUBBLE PRESSURE TENSIOMETER – BP50

SIMPLE AND MOBILE MEASUREMENT
OF DYNAMIC SURFACE TENSION AND
SURFACTANT CONTENT

KRÜSS

Advancing your Surface Science

THE HANDY SOLUTION FOR HIGH-PRECISION MEASUREMENTS IN QUALITY ASSURANCE

- **For testing surfactant content and measuring dynamic surface tension**
- **Specially designed for mobile use in quality control**
- **Lightweight, simple and fast**

KRÜSS is a leading manufacturer of measuring instruments for surface and interfacial chemistry applications. This also applies to industrial quality assurance. For many years now, we at KRÜSS have been developing mobile solutions for one of our outstanding application areas: testing the surfactant content of cleaning and galvanic baths.

When it comes to reliable quality control in this field, our Bubble Pressure Tensiometer – BP50 is being used with huge success. Being a mobile lightweight of just 600 grams, the ergonomically shaped instrument was developed specifically for mobile usage with a notebook. It precisely measures the dynamic surface tension, which reacts particularly sensitively to concentration changes, even with high levels of surfactant content.

Our software-controlled BP50 provides flexible high-speed tests which use easily readable signal colors. These automatically indicate whether a determined value lies within the set limit range, or if the surfactant content needs to be adjusted.

Surfactant analysis for a wide range of process speeds

We have designed the Bubble Pressure Tensiometer – BP50 to cover a wide range of surface ages between 15 and 16,000 milliseconds. At fast speeds, the BP50 reliably analyzes the effect of surfactants in highly dynamic processes such as spraying or printing. The dynamic surface tension at a surface age of a few milliseconds indicates how effectively a wetting agent acts in this short time. Low speeds with long surface ages are attained with equal precision and make it possible to approach the equilibrium surface tension, which is relevant for slow processes. Thus, the BP50 gives a complete image of the time behavior of a surfactant – knowledge that enables you to optimize the use of surfactants for your specific process.

SIMPLE. MOBILE. FAST.

- **Mobile use inside and outside of production facilities**
- **Disposable capillaries facilitate handling**
- **Intuitive software for measurement controlling and data management**

TASKS AND APPLICATIONS

- Testing the surfactant content in electroplating and cleaning baths
- Surfactant development
- Optimization of spraying processes
- Development of washing and cleaning processes
- Optimization of coating and printing processes

MEASURING OPTIONS

- Bubble pressure method: the maximum internal pressure of a gas bubble formed by means of a capillary in a liquid is measured
- Determination of the surface tension dependent upon the surface age
- Long-term measurement of surface tension at a constant surface age
- Quick test at a variable surface age with a valuation based on predefined limits
- Temperature measurement and recording
- Fully automatic software-controlled measurement of dynamic surface tension at a wide range of surface ages
- Complete scope of functions of KRÜSS LabDesk™ software accessible

Easy measuring of soiling or hardening liquids

Our Bubble Pressure Tensiometer – BP50 combines the benefits of compact size with state-of-the-art technical components, including air supply, a pressure sensor and a temperature sensor. Thanks to the special disposable capillaries, the BP50 is able to easily measure soiling or hardening liquids such as inks or paints. It avoids the time-consuming creation of water repellency that is otherwise necessary with glass capillaries.

The easy handling lightens the day-to-day workload in quality assurance. It simplifies and speeds up measurements that are carried out with the instrument held in hand. When using the common bubble pressure technique, the capillary must be immersed with a constant depth. With our BP50, the immersion depth has no influence on the measurement.

The optional PA2510 precision-height holding device ensures that the instrument is held in place reliably and securely for long-term measurements and the use of large surface ages. All this makes the BP50 a full-fledged laboratory instrument.

Transparency in measurement and data management

Our LabDesk™ software with its integrated and flexibly modifiable measurement templates reduces preparation time to a minimum. The software supports you with easy-to-use results management. For this purpose, it provides automatic overview diagrams, comprehensive measurement reports, and transparent data organization right down to the free combination of data measured with different types of tensiometers. The comprehensive and expandable substance database makes LabDesk™ a data pool of substances which are of key interest to you.

ALWAYS CLOSE TO YOU

At KRÜSS, we combine technical know-how and scientific expertise with plenty of passion. That is why we not only produce high-quality measuring instruments for surface and interfacial chemistry – we offer a unique combination of product and scientific consulting. Our continuous know-how transfer ensures that not only we at KRÜSS keep pace with scientific developments, but also our customers.

In this way, we help you to optimize and make better use of your technologies. This has made us the global market leader in the field of surface and interfacial tension measurement. As a matter of course, we will gladly support you with further information as well. Feel free to ask us about publications, application cases, and helpful information about other KRÜSS products. We are always close to you.
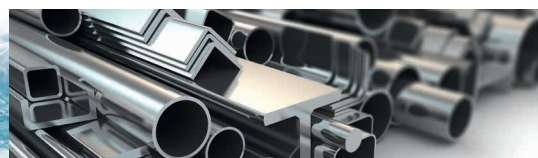
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