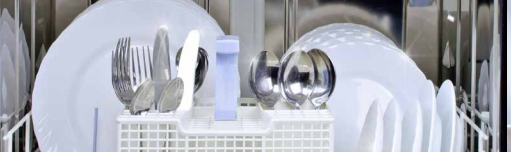
FORCE TENSIOMETER – K20

THE STAND-ALONE TENSIOMETER FOR QUALITY CONTROL

KRÜSS

Advancing your Surface Science



TENSIOMETRY FOR QUALITY ASSURANCE – FAST, USER-FRIENDLY, REPRODUCIBLE

- **Measurement of surface and interfacial tension, as well as the density of liquids**
- **Fast and easy use in quality control**
- **Semi-automatic measurement programs for reproducible conditions**

As specialists in interfacial chemistry, we at KRÜSS develop scientific measuring instruments with high precision and intuitive operating concepts. In our solutions for the everyday demands of quality assurance, we draw on our comprehensive application know-how and use high-quality components which perform precisely reproducible measurement sequences.

Our Force Tensiometer – K20 is such a solution for quality control where surface and interfacial tension play a role – as for emulsifiers or wetting and cleaning agents. Robust, easy to use, and independent of computer and an external power source, the measuring instrument provides precise, reliable analyses with high sample throughput. The processor-supported operating concept in particular makes the K20 the ideal instrument for the daily measurement routine – quick manual moves for preparation and automatic motor control for precise measurement.

Quality for your quality assurance

The exact force sensor and precisely manufactured measuring probes provide precise results for surface and interfacial tension with the ring and plate method. The force maximum for the ring method is reliably detected thanks to the motorized sample stage with high travel resolution. The K20 also contains the density measurement required for the ring method in its spectrum.

Rapid measurement preparation

Thanks to the large, illuminated sample area and smooth-running fine drive for the sample stage, manual preparation for the measurement is performed very fast and user-friendly. A magnetically locking air shield prevents disturbing air currents during measurement.

Intelligent, processor-supported measurement sequences

Integrated measuring programs control the motorized sample stage and ensure that the analysis is largely independent of user interaction and takes place under precisely reproducible conditions. However, the speed and other storable measurement parameters can be flexibly adjusted so that the sequence for the upper or lower measurement range of surface and interfacial tension can be optimized.

READY FOR CHANGING TASKS AND DAILY ROUTINE

- **Stand-alone operation with long battery life**
- **Temperature control accessories for process-oriented analyses**
- **Optionally with software-supported data management**

Independent of the mains supply and computers

Our Force Tensiometer – K20 allows for versatile use thanks to long battery life and an integrated data memory in stand-alone operation. The low weight and simple installation of the instrument enable quick relocation.

Meaningful simulation of technological processes

The optional tempering jacket enables measurements between -10 °C and 100 °C. Thus the instrument records all measured values dependent on temperature and allows, for example, the optimization of added surfactant on the basis of practice-relevant data. Moreover, an integrated magnetic stirrer provides for a homogeneous mixing of the sample.

Multiple options for data management

In addition to the direct output of results in the illuminated display, the K20 offers comprehensive options for data management. It has spacious, easy-to-manage data storage with quick access to all the results. In addition, the measured data, together with all important parameters, can be transferred to our tensiometer software. Output to a connected printer is also possible with the press of a button, independently of a computer.

TASKS AND APPLICATIONS

- Testing of the content of decomposition products in oil, especially transformer oil (ASTM D-971)
- Determination of the effectiveness of surfactants as wetting and cleaning agents
- Testing of surfactant content in solutions below the critical micelle concentration (CMC)
- Approval of tanks and cleaning validation in the food industry
- Measurement of interfacial tension for quality testing and optimization of emulsifiers
- Testing of cooling lubricants

MEASUREMENT METHODS AND OPTIONS

- Surface and interfacial tension according to the ring, plate and ring tear-off method
- Density measurement of liquids
- Measurement from -10 °C to 100 °C, temperature recording by optional sensor

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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