

# Force Tensiometer K20



## The flexible tensiometer for routine quality assurance

Our Force Tensiometer – K20 is a robust, semi-automatic instrument for the precise measurement of surface tension and interfacial tension. Using the ring and plate method as the main tensiometric methods, it produces reliable measurements for the routine quality assurance of your surfactant solutions and interfacial processes.

### Tasks and applications

- Determination of the effectiveness of wetting agents
- Checking the surfactant content in solutions below the critical micelle concentration (CMC)
- Tank clearance and cleaning validation in the foodstuffs industry
- Measurement of interfacial tension for the quality assurance and optimization of emulsifiers
- Analyzing the aging status of oils according to ASTM D 971 and IEC 62961

### Measuring methods and options

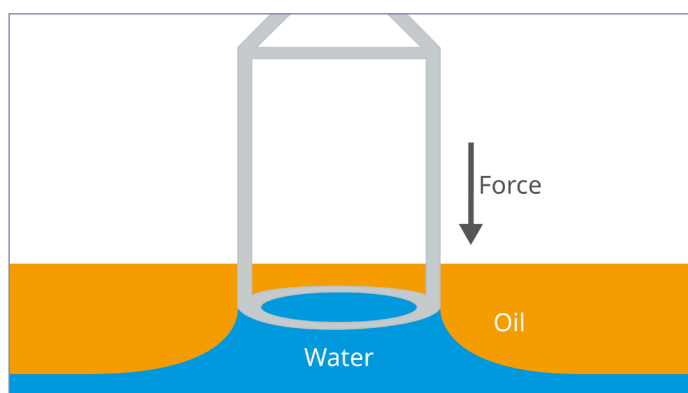
- Surface tension using the ring and plate method
- Interfacial tension using the ring and plate method
- Surface tension and interfacial tension using the ring tear-off method
- Measuring the density of liquids
- Temperature control from -10 to 130 °C, temperature measurement with external sensor

### Easy handling and preparation

The quick and simple manual operation of the sample stage and the large, illuminated sample chamber allow for swift positioning of the sample vessel. Then one of the prepared measurement programs moves the motorized sample stage and records the measurement results. The speed and other parameters can be easily optimized for the specific range of values of your particular application.



Preset parameters for computer-independent measurements



ASTM D 971 and IEC 62961: measuring interfacial tension of insulating oils

### Adaptable for different measuring conditions

An optional thermostat jacket enables process conditions for temperatures between -10 and 130 °C to be exactly simulated. When testing dispersions, an integral magnetic stirrer ensures that the sample is homogenous before the measurement is carried out.

### Additional options for data storage

As an extension of the instrument's internal storage, you can transfer results and related parameters to optional software. Alternatively, a report containing the results can be output to a printer at the press of a button.

#### Specifications

Force measurement		Temperature	control	measurement
Maximum load	50 g	Range	-10 to 130 °C	-20 to 150 °C
Resolution	100 µg	<b>Interfacial and surface tension</b>		
Measurement rate	5 Hz	Range	1 to 999 mN/m	
<b>Sample stage</b>		Resolution	up to 0.01 mN/m	
Travel distance	90 mm	<b>Liquid density</b>		
<b>Drive</b>		Range	1 to 2200 kg/m <sup>3</sup>	
Travel speed	2.4 to 14 mm/min	Resolution	1 kg/m <sup>3</sup>	