

**Precise measuring instruments
for viscosity and surface science**

Product range 2024 / 2025

Version 2024-04-01

Tensiometer TD5

Precise data. Constant values.

TD5 - The compact scientific instrument with perfect control and new methods



The Du Noüy-ring/Wilhelmy-plate method for the measurement of surface and interfacial tension in liquids is an established method for the characterization of surfactant solutions, oils and other liquids.

With the TD5 and its powerful Surface.Meter software you have full control of the measurement as you see all raw data in real time.

On top of this, the TD5 offers unique methods like the drop adhesion force measurements. The latter is of specific interest as it allows to directly measure the liquid-solid interactions. With this and other features the TD5 is one of the most compact research-grade tensiometer on the market.

Special Features:

- || Extremely compact research tensiometer
- || Surface/Interfacial tension measurement with full control
- || Powerful Surface.Meter software
- || Advanced analytical methods like drop adhesion force tests

Scope of supply:

- || TD5 automatic tensiometer, incl. Surface.Meter software
- || Measuring ring acc. to Du-Noüy, 2-legged (Pt/Ir) (EZ 325)
- || Density measurement set (UD 320)
- || Sample beakers, \varnothing 6 cm, 10 units (EG 011)

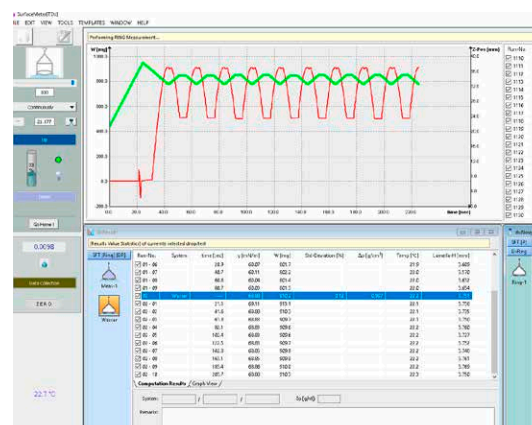
| Technical data | TD5 (LMT 880) |
|---------------------------------|--|
| Surface tension measuring range | 0.75...2000 mN/m (ring) 0...999 mN/m (plate) |
| Surface tension resolution | 0.01 mN/m |
| Density resolution | 0.002 g/cm ³ |
| Weighing system resolution | 0.1 mg |
| Maximum Weight | 210 gr |
| Table movement | Motor driven PC controlled (precision drive) |
| Ring correction | Automatic (acc. to Zuidema and Waters) or Harkins-Jordan |
| Temperature range with TDJ 805 | 5...80 °C |
| Dimensions (WxDxH) | 226x189x360 mm |
| Power consumption | 15 W |
| Weight, net | 11.3 kg |

For research, quality control and product development

Comprehensive Software with full control

Advantages & benefits

- || Surface.Meter software for standard surface, interfacial tension measurements and drop-adhesion force measurements
- || Complete control over all parameters like weight and position
- || Easy data handling and export for all QC and research purposes
- || Integrated liquid database
- || Integrated calibration procedure with the option to use an external calibration weight
- || Sample area is protected by windshield
- || Sample spacers allow quick handling and adjustments



Measurement modes and options

Advantages & benefits

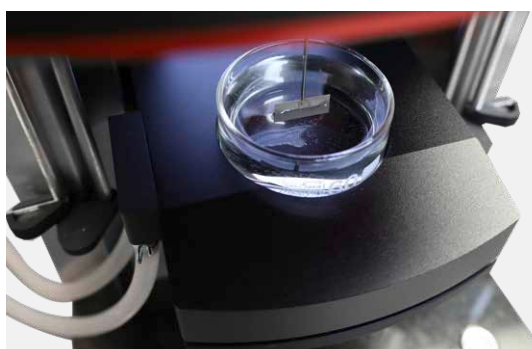
- || Surface tension and interfacial tension measurements according to the respective norms
- || Surface and interfacial tension measurements using the Pull-through method
- || Density measurement software and tool included
- || Drop adhesion measurements to determine solid liquid interactions
- || Micro-Penetration measurements optional
- || Internal and external calibration procedure
- || Temperature range 5...80°C, optional temperature sensor available



Accurate temperature with TDJ 805 temperature control unit and LOOP

Advantages & benefits

- || Fast and effective temperature control of your samples by connecting an external thermostat (e.g. LAUDA Scientific LOOP 100)
- || Temperature-controlled measurements between 5 and 80°C
- || Incl. sample beaker \varnothing 6cm (EG 011-1) and windshield
- || Low space requirement with convenient controls within the Surface.Meter software



LMTZ939

Innovative drop-adhesion force measurement

Advantages & benefits

- || Precise measurement of solid-solid and liquid-solid interactions
- || With the help of a cuvette various environmental phases are possible, allowing also the measurement of bubble-solid interactions
- || Different probe sizes for a wide measurement range



LMTZ936

Accessories



LMTZ939

LMTZ934 Sample spacer L60, Height 32 mm

LMTZ937 Sample spacer L70, Height 25 mm

LMTZ938 Sample spacer L80, Height 19 mm

LMTZ939 Thermostated jacket TDJ 805

Enables fast and effective temperature control of your samples by connecting an external thermostat (e.g. LAUDA LOOP 100), incl. sample beaker \varnothing 6 cm (EG 011-1) and windshield, temperature range 5...80°C

LMTZ936 Drop-adhesion force tool

For the measurement of solid-solid and liquid-solid interactions

Consisting of :

|| Needle holder (LMTZS100)

|| LNE 23 (EZ 532), LNE 20 (EZ 529), LNE 18 (EZ 527)



LMTZS901

LMTZS901 Ring Adjustment Tool RAT 01

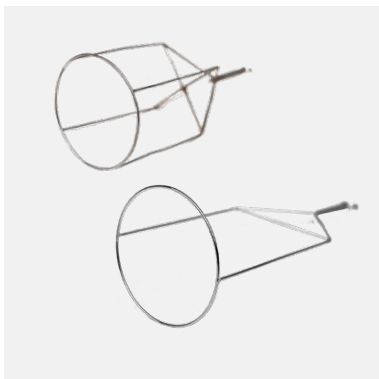
Tool set for ring dressing

Consisting of :

|| Alignment table for ring with 2 and 4 leg

|| Roller for flattening the ring

|| Ring alignment tool



EZ 325 | EZ 326

Du Noüy ring

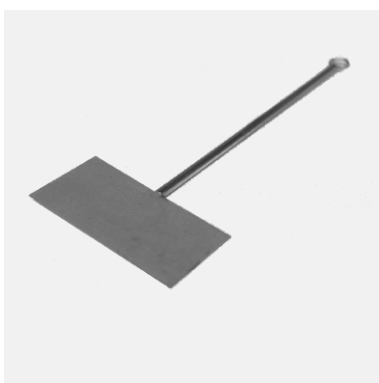
|| Ring diameter: 19.5 mm

|| Wire diameter: 0.4 mm


|| Ring radius: 9.75 mm

|| Wire radius: 0.2mm

| Technical data | EZ 325 | EZ 326 |
|----------------|---------------|---------------|
| Length | 48 mm | 48 mm |
| Legs | 2 | 4 |
| Fits for | TC1, TD4, TD5 | TC1, TD4, TD5 |



EZ 324

Wilhelmy plate 

|| Width: 19.9 mm

|| Roughness: 50 μ m

| Technical data | EZ 324 |
|----------------|---------------|
| Thickness | 0.1 mm |
| Height | 48 mm |
| Fits for | TC1, TD4, TD5 |

Accessories

SDK 005 Calibration for tensiometers

Meas. method acc. to standard DAkkS-DKD-R 3-3, meas. range up to 2,5 g, calibration certificate issued by an accredited testing laboratory

SDK 006 Certificate for measuring ring

Calibration certificate issued by an accredited testing laboratory (ring has to be ordered separately)

EZ 033-2 Calibration weight (500 mg) with DKD certificate 320 Density measurement set

EG 004 Sample beakers

For density measurement, 50ml, 10 units

EG 011 Sample beakers

∅6 cm, 10 units

EG 081 Sample beakers

∅7 cm, 10 units

EG 010 Sample beakers

∅8 cm, 10 units

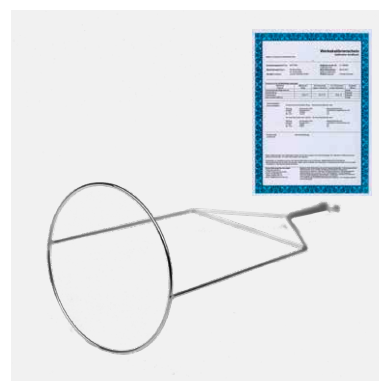
EG 047-1 Double-walled glass thermostating vessel

For TD/TC tensiometers, height 30 mm

EZ 286 Bunsen burner

For cleaning ring and plate

UD



SDK 006
Certificate for measuring ring



EG 011



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