

SITA



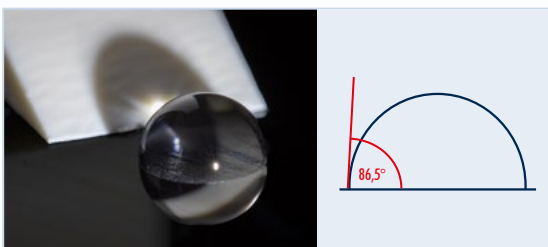
SITA *SurfaSpector*

Fast evaluation of surface wettability
in manufacturing processes
by measuring the contact angle

The SITA SurfaSpector is a new hand-held measuring device for testing the wettability of metal, glass and plastic surfaces, e.g. after surface treatment or cleaning. The device combines an objective measurement with simple handling and enables a fast evaluation of the surface.

- Automated measuring procedure including drop placement, drop detection and direct determination of the contact angle
- Handy sensor head for measuring at various parts geometries
- Simple operation via touchscreen
- Mobile use without PC directly at the plant or in the process
- Limit value monitoring in measuring profiles usable for various applications
- Optional PC software SITA-SurfaceLog for advanced measurement data visualization and export

Measuring principle



A drop of water is precisely placed at the surface by an automatic dosing unit. The drop is illuminated from the side. A shadow of the drop is projected onto an inclined measuring surface. The projection is recorded from above by a high resolution camera and the picture is corrected for perspective. The drop shape is determined and the contact angle calculated. The lower the contact angle, the higher the wettability.

Technical Data

Contact angle

Range	5°...175°
Resolution	0.1°
Liquid	pure water, refillable, 4 ml for 4,000 measurements

Method

Optical determination of the contact angle of a lying drop	
Drop volume	1 µl
Min. sample surface	5 x 5 mm

Operation

Main unit	5" TFT-display 800 x 480 pixel, capacitive touch, intuitive graphical user interface
Sensor	measurement start button, LED for optical feedback

Power supply / interfaces

Li-Ion battery	2x 6,400 mAh, min. measurement time 6 hours
Power plug	12 V, 2.5 A (max. 17 V, 3 A)

Interfaces and memory

USB	USB-C (data transfer, USB-C power delivery)
Memory	10 GByte

Dimensions and weight

HxWxD / Weight	Main unit: 80 x 210 x 130 mm / 1,100 g Sensor: 117 x 50 x 82 mm / 330 g
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Accessories

Calibration standard, stand

Applications

- Quality assurance after parts cleaning
- Wettability inspection
- Testing of surface activation, e.g. after a plasma treatment and many more applications in surface analysis

