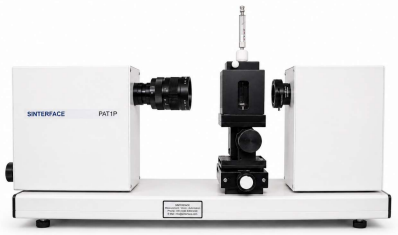
TECHNICAL DATASHEET

PAT-1P

Profile Analysis Tensiometer

Compact interface characterization

Compact optical tensiometer for surface and interfacial characterization using pendant-drop, buoyant-bubble and sessile-drop analysis. The PAT-1P supports time-resolved tension measurements, wetting analysis and optional dilational measurements.



KEY PERFORMANCE

1–1000	±0.1	1°–179°	0.1 s
MN/M	MN/M	CONTACT ANGLE	TIME RESOLUTION
Tension range	Resolution	±0.1° accuracy	Dynamic analysis

Measurement Performance

Surface / interfacial tension	1 – 1000 mN/m
Tension resolution	± 0.1 mN/m
Contact angle	1° – 179°
Contact angle accuracy	± 0.1°
Measurement duration	Seconds to days
Optional oscillation frequency	0.001 – 0.2 Hz

Experimental Capabilities

Pendant drop	Surface & interfacial tension
Buoyant bubble	Surface & interfacial tension
Sessile drop	Contact angle
Area / volume control	Optional automatic control
Dilational rheology	Optional elasticity & viscosity
Temperature range	0 – 80 °C*

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Technical Specifications

Imaging & Acquisition

Camera	CMOS camera
Maximum resolution	1280 × 1024 px
Standard acquisition	25 images/s at 1280 × 1024
High-speed acquisition	100 images/s at 640 × 480
Interface	USB 2.0
Optics	Fixed or zoom objectives

Instrument

Dimensions (L × W × H)	500 × 220 × 120 mm
Weight	7 kg
Cell volume	Up to 25 ml
Minimum liquid amount	100 µl
Power supply	Via USB

Modules & Configuration Options

The compact PAT-1P platform can be extended with dedicated dosing configurations, temperature-controlled cells and specialized capillary systems for advanced experimental requirements.

- Automatic Dosing
- CA-1P

TECHNICAL NOTE

*Temperature control, dilational measurements, automatic drop volume/area control and drop/bubble oscillations depend on the selected instrument configuration and optional accessories. Specifications may be subject to technical modification.

PRODUCT

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