

# Attension Theta Lite

Modules and Accessories

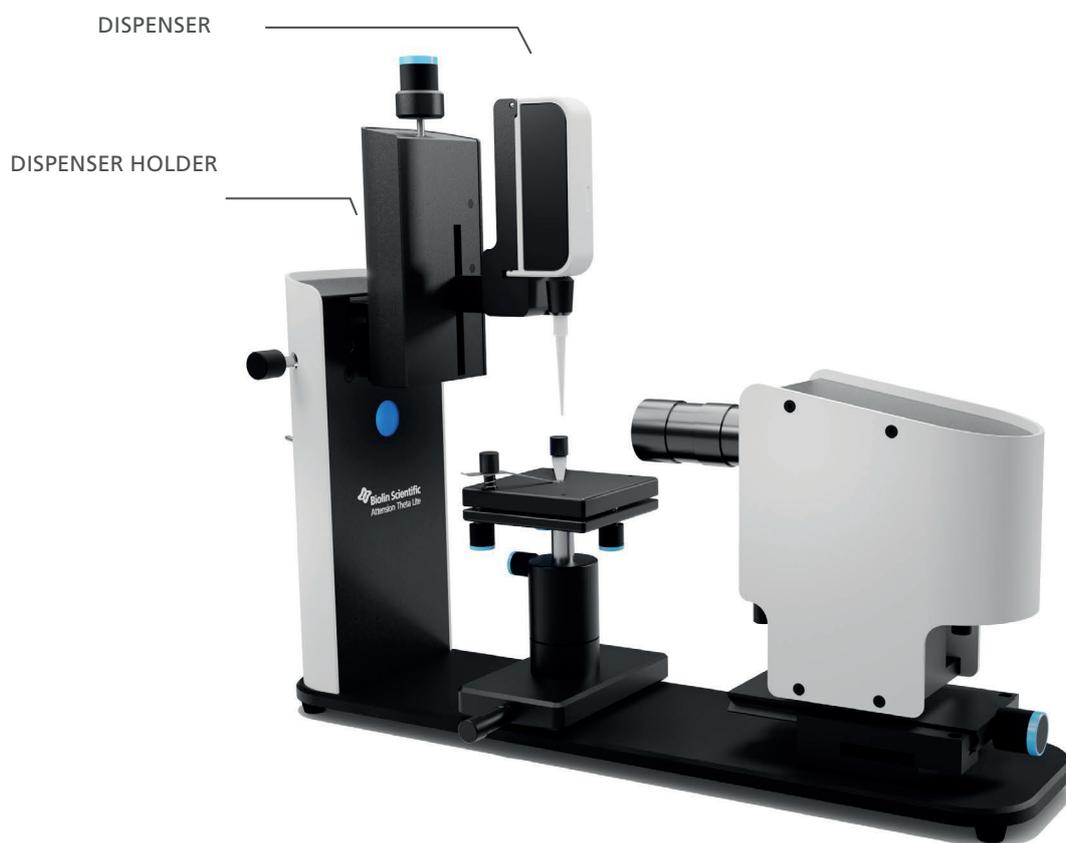
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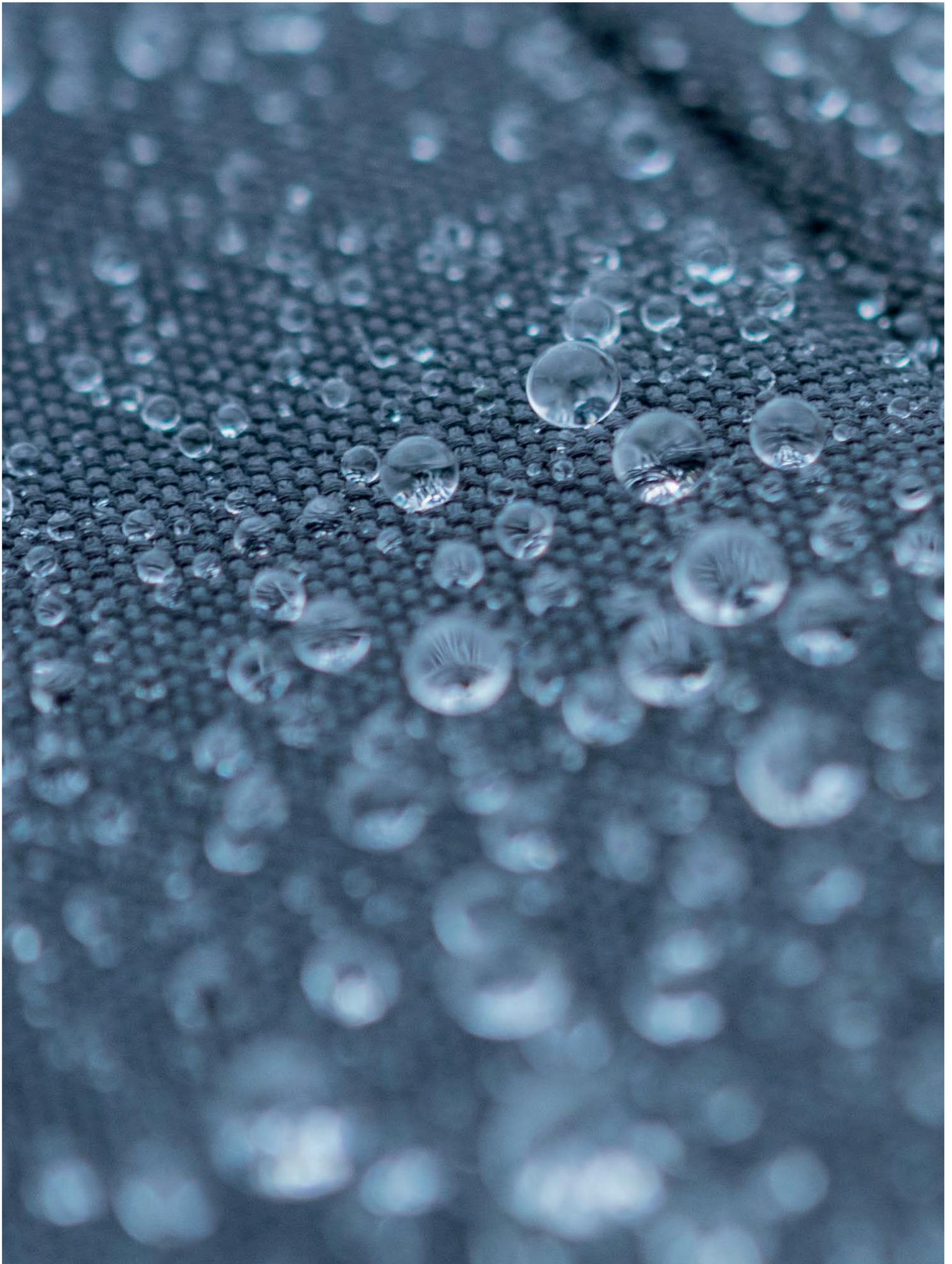


# Theta Lite Accessories

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Theta Lite is a compact and accurate contact angle meter for effective measurements of contact angle and surface free energy. It also measures surface and interfacial tension. Accessory options for Theta Lite expand its capabilities for different applications.





## Dispenser

Dispenser creates the droplets used in measurements. Theta Lite can use either manual or automatic dispenser, with single or double liquid.

### Manual Precision Syringe Dispenser (C205M)

Accurate manual drop formation when automation isn't required. Continuous adjustment range. Droplet volume can be seen live in the OneAttension software.

### Automatic disposable tip dispenser (C320)

Automatic drop formation without the need for needle or syringe cleaning. For maximized easy-of-use. Combine up to two for C320s for automatic surface free energy calculations. Can be used with positive displacement syringe for down to 0.1 ul droplets and to measure dynamic contact angles with the needle method.

### Automatic Single Liquid Dispenser (C201)

Automatic drop formation using syringes and needles. Dynamic contact angle (DCA) measurements with the needle method.

## Dispenser Holder

Dispenser holder is responsible for depositing the droplet on the sample in a contact angle measurement.

### Manual dispenser holder for manual syringe C205M and single liquid dispenser C201 (T221A)

Gentle drop deposition when automation isn't required. Simple one touch design gives high repeatability of the deposition.

### Disposable tip dispenser holder for T221A (T223A)

Allows attachment of one automated disposable tip dispenser C320 to T221A.

### Manual horizontal movement for two dispensers for T221A (T223B)

Allows attachment of one or two automated disposable tip dispenser C320 to T221A. With two dispensers, automated SFE calculations are possible.



Manual Precision Syringe Dispenser (C205M) with the Manual Dispenser Holder (T221)



Automatic Disposable Tip Dispenser (C320) with the Manual Dispenser Holder (T221A) with Disposable tip dispenser holder for T221A (T223A)



Automatic Single Liquid Dispenser (C201)

## Accessories

A range of different accessories expand Theta Lite capabilities for example in measuring dynamic contact angles or temperature control.

### Tilting stage (C218)

Tilting stage with manual tilting. Used for studying dynamic contact angles. Tilting range from 0 to 90°. Coarse and fine tilting movement.



Tilting stage C218

### Measuring chamber, fluid bath heated, 110° C (C203W)

Thermostatted fluid bath measuring chamber for air phase temperature control of substrate and drop. Requires fluid bath.



Measuring chamber, fluid bath heated, 110° C (C203W)

### Liquid/liquid chamber, fluid bath heated, 100° C (C217W)

Thermostatted fluid bath liquid/liquid measuring chamber.

Can be used for liquid/liquid contact angle studies.

Requires fluid bath.



Liquid/liquid chamber, fluid bath heated, 100° C (C217W)

### Fluid bath heated cuvette chamber for interfacial tension studies with separate cuvette, 100°C (C208W)

For measurement of interfacial tension between two liquids by pendant/raising drop method. Includes cuvette C208C and water bath thermostatted sample stage cuvette holder.

Requires water bath.

### PT-100 temperature probe for T102ME (T102MT)

PT-100 temperature probe to enable stand-alone temperature control by the T102ME in the sample vessel.

### Quartz Cuvette, compatible with C208W (C208C)

1 optical quality quartz cuvette compatible with C208W.

### Large cuvette also for high temperatures (C208A)

For measurement of interfacial tension between two liquids by pendant/raising drop method also at high temperature.



Fluid bath heated cuvette chamber for interfacial tension studies with separate cuvette, 100°C (C208W)

### Measure chamber, room temperature (C202)

Room temperature measuring chamber for environmental protection (e.g. air flow) of substrate and drop.



Measuring chamber, room temperature (C202)

### Digital thermometer (T202)

Stand-alone thermometer with display and probe for temperature measurement directly from sample.

### Calibration ball pack, with certificate (C216)

Calibration pack with certified calibration ball made to NIST No.821/263669-00 including original certificate document.



Large cuvette for high temperature (C208A)

### Bath/circulator, Julabo CD-200F (T102USB)

A constant temperature bath/circulator, for sample liquid temperature regulation. Temperature range -20 to +150°C. Stability  $\pm 0.03^\circ\text{C}$ . Digital readout.

### Bath/circulator, Julabo F25-ME (T102ME)

A constant temperature stand-alone bath/circulator for sample liquid temperature regulation. Serial port connection. Temperature range -28 to +200°C. Stability  $\pm 0.01^\circ\text{C}$ . Digital readout.



Calibration ball (C216)

### Active vibration isolation system small (AVS-LARGE)

Especially recommended to prevent influence of vibrations in sensitive pendant drop measurements. Active vibration isolation system includes two long isolation elements, external controller, bread board table and necessary mechanics.

### Contact angle and surface tension verification pack (C216A)

Contact angle and surface tension calibration verification pack. Comes with certification.



Contact angle and surface calibration pack (C216A)

### PC (C215)

Computer with pre-installed OneAttension software, compatible with the Theta Lite.



## Related Items

- Precision syringe without needle, 1 ml (C205)
- Needle for C205 and C205A/C201, gauge 14 (C209-14)
- Needle for C205 and C205A/C201, gauge 22 (C209-22)
- Needle for C205 and C205A/C201, gauge 30 (C209-30)
- Hydrophobic needle for C205, C205A/C201, gauge 14, 20 pcs (C209A-14)
- Hydrophobic needle for C205, C205A/C201, gauge 22, 20 pcs (C209A-22)
- Hooked needle for C205 and C205A/C201, gauge 22 (C210-22)
- Hooked needle for C205 and C205A/C201, gauge 14 (C210-14)
- C514 Tip adapter for PFA tips (C514PFA) for C320
- C514PP-200 Disposable polypropylene tips for C320 and C311-300, 1000 pcs
- C514PFA-10 Disposable PFA tips for C320 and C311-300 (requires C514 Tip adapter for PFA tips when used with C320), 10 pcs
- C514PFA-100 Disposable PFA tips for C320 and C311-300 (requires C514 Tip adapter for PFA tips when used with C320), 96 pcs
- C514PC-200 Parylene coat tips for C320 and C311-300, 96 pcs
- C514DCA, Needle adapter pack for C311-300, 2 pcs PTFE adapters and 50 pcs disposable gauge 30 needles
- C320DCA Positive displacement pipette for DCA measurements with C320 (includes C320DCA-s)
- C320DCA-s Disposable syringes for C320DCA, 25 pcs
- C205B, Disposable syringe for manual dispensing, 50 pcs
- C209B-14, Disposable needle for C205B and C205, gauge 14, 50 pcs
- C209B-22, Disposable needle for C205B and C205, gauge 22, 50 pcs
- C209B-30, Disposable needle for C205B and C205, gauge 30, 50 pcs

### IQOQ documentation (IQOQ-ThetaLite)

Extended checklist for ensuring that the instrument has been installed correctly (IQ) and that it is operating correctly (OQ).



Needle adapter pack for C311-300 (C514DCA)



Hooked needle for C205 and C205A/C201, gauge 22 (C210-22)

### Service

Attention offers a variety of different service options from service contracts to repairs. Please contact your local sales representative to find out more.



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