

DataPhysics Instruments GmbH · Raiffeisenstraße 34 · DE-70794 Filderstadt

Universität Heidelberg

Physikalisch Chemisches Institut

Mr. M. Sc. Julian Czajor Im Neuenheimer Feld 253 69120 Heidelberg Quotation

Number: 1016514

Date: 10.10.2018

Your customer no: 104123

Date of inquiry: 10.10.2018

Your contact: Dr. Peter Oberschachtsiek

Phone: +49711770556-52

Email: p.oberschachtsiek@dataphysics.de

Dear Mr. Czajor,

Thanks allot for your inquiry. Below you can find the quotation for our OCA 15EC.

Item	Item No.	Quantity	VAT	Unit price	Total price
	Description		[%]	net [EUR]	[EUR]
1	2001082 OCA 15EC Package 1	1.0 pcs.	19.0	10,497.00 - 10.00 % Discount	10,497.00

Video based contact angle measuring system

The package is consisting of:

Video based contact angle measuring system
Software controlled measurement and analysis of the static and dynamic contact angle according to the

Sessile & Captive Drop-Method as well as the shape of

Pendant drops.

Determination of the wettability of solid surfaces, the surface free energy of solids and their components and the calculation of the surface and interfacial tension based on the analysis of the drop shape.

# Consisting of:

- basic module with measurement stage and adaptor for optics, the lighting electronics and the dosing unit
- sample table manual movable in horizontal and precisely adjustable in vertical (z-axis) direction via hand wheel
- lens mount with adjustable tilt
- high-performance 6x parfocal zoom lens with an integrated continuous fine focus



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- video system
- LED-lighting with manual and software controlled intensity including automatic temperature drift compensation
- power supply
- connection cables

#### Technical data:

- size of the sample stage: 100 x 100 mm<sup>2</sup>
- maximum sample size (LxWxH): 220 x 2 x 70 mm<sup>3</sup>
- max. sample weight: 3.0 kg; 15.0 kg clamped
- traversing range of sample table in x-y-z direction: 110 x 90 x 42 mm<sup>3</sup>
- size of the device (LxWxH): 550 x 160 x 365 mm<sup>3</sup>
- weight: 14 kg
- optics: 6x parfocal zoom with an integrated continuous fine focus (±6 mm) and USB camera, max. resolution 752 x 480 pixel, max. sample rate 311 images/s, field of view 1.05 x 0.66 ... 6.72 x 4.25 mm<sup>2</sup>
- range of contact angle: 0...180°; ±0.1° measuring accuracy
- measuring range of surface and interfacial tension: 0.01 ...2000 mN/m; ±0.01 mN/m resolution
- power supply: 100...240 V (AC); 50...60 Hz; 70 VA

#### SD-DM

Direct single dosing unit

For use with standard and disposable syringes and needles in conjunction with an optional electronic syringe unit ESr-D.

It enables direct liquid dosing without dosing tubes. Installation on the dosing bay of any OCA measuring device.

Consisting of the syringe unit carrier with fine adjusting screws for the axial and horizontal needle positioning and a connection cable.



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ESr-N

Electronic syringe unit

For use with the direct dosing systems, expandable to a nanodrop dosing system.

Motor-driven and software controlled.

#### Consisting of:

- syringe unit
- gastight precision syringe (500 µI) DS 500/GT
- dosing needle SNS 052/026
- adapter for disposable syringes ADAPT DS-D 1000
- 2 disposable syringes (1000 µI) of set DS-D 1000 SF
- 1 disposable dosing needle of set SNS-D 051/025
- 1 disposable dosing needle of set SNP-D 165/136

#### Technical data:

- piston travel speed: 0.2  $\mu m/s$  ... 10 mm/s;  $\pm$  0,1  $\mu m/s$
- dosing rate: 0.01 ... 5.28 µl/s with DS 100/GT

 $0.01 ... 26.39 \mu l/s$  with DS 500/GT

 $0.02 \dots 52.82\,\mu l/s$  with DS 1000/GT

 $0.02 \dots 55.30 \,\mu$ l/s with DS-D 1000

- dimensions (L x W x H): 45 x 55 x 280 mm<sup>3</sup>
- power: 24 V; 3 W

### SCA 20 Software

Contact angle measurement

Video based measurement and presentation of the static and dynamic contact angle according to the Sessile & Captive Drop-method. To record/store image sequences for the controlled analysis at fast processes. Controlling of the electronic syringe unit.

To run the software SCA your PC has to work under Windows 7, 8, or 10 without failure.

Price item 1 9,447.30



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Gross amount	Net amount	VAT	VAT rate
[EUR]	[EUR]	[EUR]	[%]
11,242.29	9,447.30	1,794.99	19.0
11,242.29	9,447.30	1,794.99	Total amount

Payment terms: 30 days net

Delivery type: Forwarding Agent
Terms of delivery: unpacked ex works

### Delivery conditions:

The General Conditions for the supply of products of the electrical industry are valid. In contrast to these conditions the warranty period is extended to 24 months.

Validity of quotation:

This quotation is valid for three months.

We would be pleased to receive your purchase order.

For more information on this quotation please do not hesitate to contact our sales manager Dr. Oberschachtsiek, phone direct +49-711-770556-52.

With best regards

DataPhysics Instruments GmbH

N. Langer i.A. Dr. S. Schaubach

This quotation is electronically transmitted and therefore not signed.