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EasyDrop Contact Angle Measuring Instrument: Three-fold simplicity



- Contact angle measurement with high-quality optics
- Quick and easy handling
- Measurements with 1 or 2 standard liquids
- Surface free energy according to various evaluation methods
- Manual or automatic dosing
- Single or double dosing
- Budget-friendly instrument design
- With protocol software or scientific evaluation tool

KRÜSS

Classical: EasyDrop Standard

The EasyDrop Standard is the cost-efficient access to scientific working. Equipped with either manual or computer-controlled single dosing, the EasyDrop Standard is the all-rounder of the EasyDrop line. All standard drop shape analysis methods and all the usual models for calculating the surface free energy are available. Surface and interfacial tension measurements by the pendant drop method round off the program.



Flexible: EasyDrop USB

Measurements on site and with a laptop – no problem with EasyDrop USB. The standard interface makes the framegrabber superfluous and allows the instrument to be set up rapidly and without any complications. The low weight of the EasyDrop contributes to its high degree of flexibility. The key is a new type of double-dosing system (patent rights pending); this allows measurements to be made with two standard liquids without having to change syringes. On the software side the whole range of KRÜSS evaluation methods for contact angle and surface free energy measurements is available. The pendant drop method is included in the program as a matter of course.



Really simple: contact angle with EasyDrop

EasyDrop Standard, USB and Smart: with these three instruments in the new KRÜSS product range you can now measure contact angles and surface free energy as quickly and simply as never before. The trio offers everything required for both routine lab work and on-site measurements. Newcomers to the measuring techniques for wetting processes can rapidly achieve results without needing a long familiarization period. Professionals can use the sophisticated analytical tools for research at a high scientific level. The chiefly manu-

al components ensure that EasyDrop remains favorably priced despite its high performance level.

The manual sample table moves the sample to the right position in only a few seconds. Single or double dosing deposits the drop on the surface in no time at all. The regulable illumination and image sharpness together with the 6-fold zoom ensure optimal drop presentation. The high-quality camera records the digital image and allows perfect drop shape analysis. The contact

angle and surface free energy can be read off directly or can be protocolled and calculated by time-proven KRÜSS software products.

With the EasyDrop you can also benefit from the modularity of KRÜSS products: the instrument can be extended or converted at any time – for example with a thermostat chamber or a different dosing unit.

Independent: EasyDrop Smart

The EasyDrop Smart works with an intelligent camera that already includes the know-how for contact angle measurements. The firmware contains various evaluation methods for contact angle measurements and 3 standard methods for calculating the surface free energy. It is ideal for quality control: a well-laid-out display with integral evaluation menu makes the instrument fully independent from a computer and collects the data in a voluminous database. If you still want to have your results processed by a computer then a data-logger is available; output on a protocol printer is also possible without any problems. The EasyDrop Smart also uses the new type of double-dosing system – this means smooth measurements without continually having to change syringes.





The EasyDrop Smart simplifies quality control by means of variable display colours.

A green background indicates: The results are within the predetermined tolerances. A red background shows: The values are out of range.

Through this, a misinterpretation of the results is almost impossible.



	EasyDrop Standard	EasyDrop USB	EasyDrop Smart *
			
Measuring range:	1-180°	1-180°	1-180°
Accuracy:	± 0.1°	± 0.1°	± 0.1°
Camera:	Monochrome interline CCD, 25/30 fps	Monochrome CMOS sensor 752 x 480 px	Monochrome CCD sensor 640 x 480 px
Objective:	6x zoom	6x zoom	6x zoom
Light source:	Software Controlled Halogen Lamp	Halogen Lamp	Halogen Lamp
Stage:	Manual, moveable in x-y-z direction	Manual, moveable in x-y-z direction	Manual, moveable in x-y-z direction
Drop placing method:	Drop deposition by stage movement	Drop deposition by syringe movement	Drop deposition by syringe movement
Max. sample size:	300 x ∞ x 50 mm (WxDxH)	300 x ∞ x 50 mm (WxDxH)	300 x ∞ x 50 mm (WxDxH)
Dispension type:	Manual or motorized automatic single direct dosing system	Manual direct dosing system, with 1 or 2 syringes	Manual direct dosing system **, with 2 syringes
Outer dimension:	520 x 160 x 530 mm (WxDxH)	520 x 160 x 530 mm (WxDxH) + Notebook	520 x 160 x 530 mm (WxDxH) + Control Panel 235 x 160 x 85 mm
Weight:	Appr. 10 kg	Appr. 10 kg	Appr. 10 kg + Control Panel 1.7 kg
Power:	110/220 V, 50/60 Hz	110/220 V, 50/60 Hz	110/220 V, 50/60 Hz
Software:	SW21 (DSA1) for Drop Shape Analysis	(DSA2) for Drop Shape Analysis	Smart camera for contact angle and surface free energy
Computer requirements:	IBM PC compatible, with one free PCI Slot, running Windows 9x/NT/2000/XP	IBM PC compatible, running Windows 2000/XP	-
Communication Interface:	1x Serial Interface (RS232)	1x USB 2.0 interface	1x Serial Interface (RS232)
Datalogger Software:	-	-	yes, Serial Interface (RS232) required

* Patent pending

** Utility model pending

EasyDrop Standard, EasyDrop USB, EasyDrop Smart	
Accessories:	ST01 Suction plate
	ST02 Special sample holder made of POM for contact angle measurements on thin films and foils
	ST03 Powder sample holder for sessile drop method
	ST04 Special sample holder for films and paper
	TC11 Environmental chamber for very large samples (-10°C to 120°C)
	TC3010 Environmental chamber (-10°C to 120°C)
	TC40 Peltier temperature chamber (-30°C to 160°C)
	Various contact angle and pendant drop standard sets
	Various needles and syringe
	Various glass cuvettes for SFT/IFT measurements



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