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EasyDrop Contact Angle Measuring Systems: Two of an easy kind



EasyDrop Standard and USB – two compact and easy to handle contact angle measuring instruments for flexible use in quality control.

- **Contact angles easy and fast**
- **Fast and precise dosing and sample positioning**
- **Budget-friendly thanks to manual operation**
- **Several drop shape analysis methods for big and small angles**
- **Surface energy by all established methods**
- **Surface tension with the pendant drop method**
- **Comfortable evaluation and data management**



Really simple: contact angle with EasyDrop

EasyDrop Standard for PC operation and EasyDrop USB for working with a notebook: with these two instruments in the new KRÜSS product range measuring contact angles and surface free energy is as quick and simple as rarely before. The duo offers everything required for both routine lab work and on-site measurements. Quality managers gain quick access to reliable results. Scientists use the sophisticated analytical tools for research at a high level. The chiefly manual 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

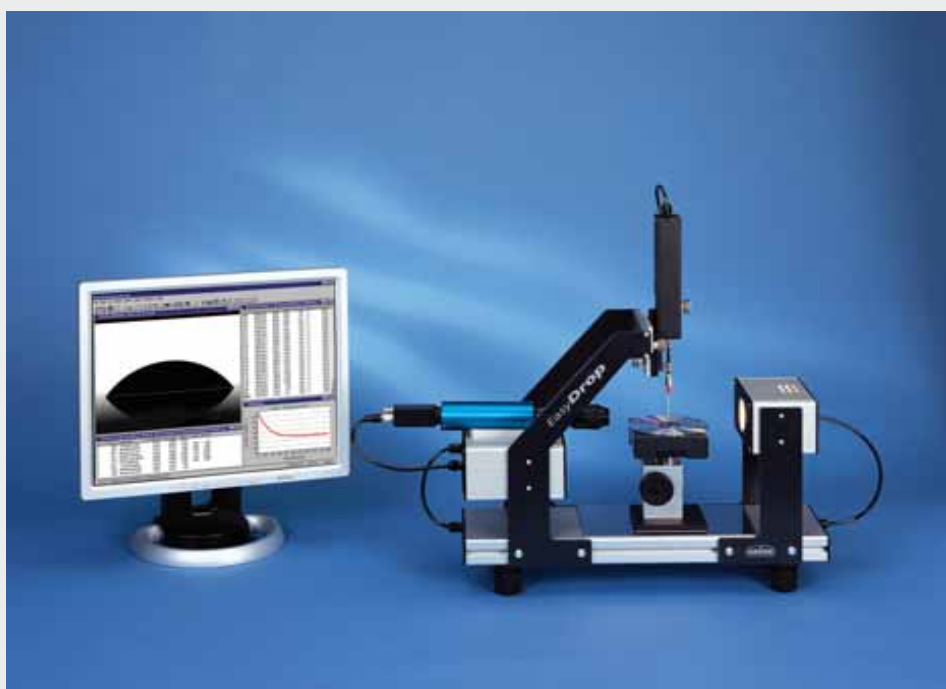
systems rapidly deposit the drop on the surface in no time at all. The regulable illumination and image sharpness together with the 6-fold zoom ensure optimal drop presentation. The camera records the digital image and allows perfect drop shape analysis. The contact angle and surface free energy can be calculated and protocolled by time-proven KRÜSS software.

With the EasyDrop you benefit from the modularity of KRÜSS products: the instrument can be extended or converted at any time – for example with a thermostat chamber or other purpose-built devices (see list of accessories on the last page).



Stationary: 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. EasyDrop Standard works together with the time-proven software DSA1 which uses a PC with a frame grabber board. 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.



Especially with EasyDrop Standard:

- Work with a PC
- Manual or software-controlled single dosing system
- DSA1 for software control via serial interface

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.



Especially with EasyDrop USB:

- Work with a notebook
- Manual double-dosing system (patent rights pending)
- DSA2 software for USB support

The software

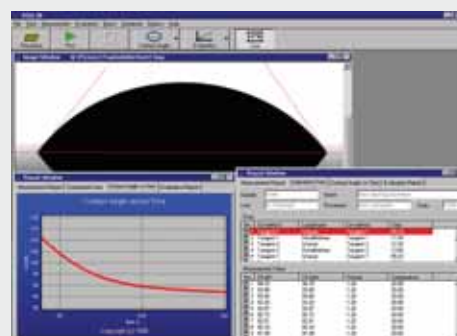
The measuring sequence is accompanied by our drop shape analysis programs DSA1 for EasyDrop Standard and the USB compatible software DSA2 for EasyDrop USB.

The evaluation of the drop image takes place in the video window of the software: the baseline is determined automatically; for measuring the contact angle both programs have several automatic methods available.



The DSA software is ideal for use in quality assurance, but at the same time is a scientific tool with which the surface free energy of a solid can be calculated using various generally recognized methods. The surface tension of liquids can also be measured quickly and easily.

In addition, the DSA programs also function as both a library and a data archive. Built-in extendable substance databases form the basis for the surface free energy calculation from contact angle data. And for the management, preparation and presentation of the measuring data both programs come with useful and flexible presentation and export functions.

Both DSA1 and DSA2 work in combination with other contact angle measuring systems from KRÜSS – with the classical ones, but also with brand-new instruments. Measuring results from different applications can be easily gathered together and compared.



- Drop Shape Analysis and surface energy calculation with all established methods
- Automatic base line detection
- Integrated liquids data base
- Comfortable data management
- Tools for graphic presentation of results

	EasyDrop Standard	EasyDrop USB
		
Measuring range*:	1-180°	1-180°
Angle resolution:	± 0.1°	± 0.1°
Camera:	Monochrome interline CCD, 752 x 576 px, 25/30 fps	Monochrome CMOS sensor 752 x 480 px, 25 fps
Objective:	6x zoom	6x zoom
Light source:	Software-controlled halogen lamp	Manually controlled halogen lamp
Stage:	Manual, moveable in x-y-z direction	Manual, moveable in x-y-z direction
Max. sample size:	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
Outer dimension:	520 x 160 x 530 mm (WxDxH)	520 x 160 x 530 mm (WxDxH) + Notebook
Weight:	Appr. 10 kg	Appr. 10 kg
Power:	110/220 V, 50/60 Hz	110/220 V, 50/60 Hz
Software:	SW21 (DSA1) for Drop Shape Analysis	SW23 (DSA2) for Drop Shape Analysis
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

Technical specifications are subject to change without notice.

* Referring to calibration standard

** Utility model pending

EasyDrop Standard, EasyDrop USB		
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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