

Ideal for non-destructive contact angle measurements

Portable Contact Angle Meter PCA-11

A compact and lightweight device for fully automated on-site measurements of contact angle, surface tension and surface free energy of solids

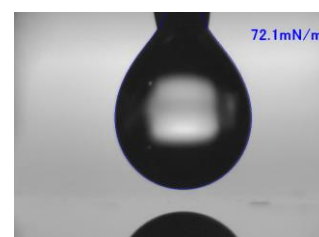
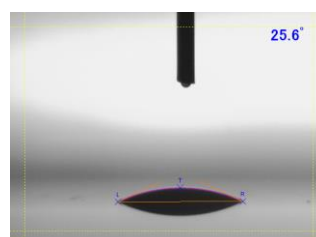
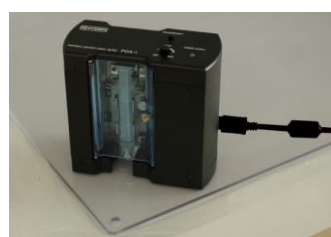
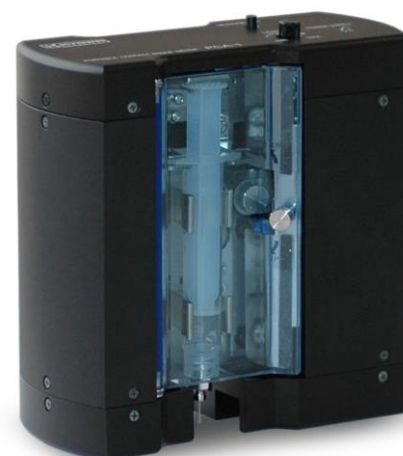
Testing on-site for quality control and evaluation of surface wettability, which is characterized by the contact angle, is often required during manufacturing processes or in the field.

The PCA-11 can be used on any material such as glass, metal, film, paper & pulp, polymer, wood, etc. that have to be measured on-site or that due to their size or shape cannot be analyzed with usual stationary contact angle measuring instruments.

Weighing only 650g, combined with the single-click fully automated operation and its precise measurements, the PCA-11 is the ideal solution for non-destructive surface evaluations.

FEATURES

- Single-click fully automated operation
- Precise measurement of contact angles, even on slopes of up to 90 degrees
- Analysis of surface free energy
- Measurement of surface tension using the pendant drop method
- Time-dependent measurements by image capture of 30 fps
- 500 droplets with a volume of 1 μl can be generated with one prepared syringe
- Simple replacement of syringe and liquid sample via easy accessible front door
- Visible needle tip allows precise capture of the target point



APPLICATIONS

- Evaluation of cleanliness of large panels and wafers
- Evaluation of surface modification techniques, such as corona, flame and plasma treatments
- Evaluation of hydrophobic and hydrophilic surfaces from automobiles parts, windshields, building walls, etc.

SPECIFICATIONS

Measuring methods	Contact angle: Sessile drop	Surface tension: Pendant drop
Analysis methods	Contact angle: Surface tension: Surface free energy of solids:	$\theta/2$, tangent, curve fitting (ellipse, circle) Young-Laplace, ds/de Owens-Wendt, Kaelble-Uy, Kitazaki-Hata, Wu, acid-base, Zisman
Measuring range	Contact angle: 0 to 180 °	Surface tension: 0 to 1000 mN/m
Resolution	Contact angle: 0.01 °	Surface tension: 0.01 mN/m
Accuracy ¹⁾	Contact angle: 0.5 °	Surface tension: 0.5 mN/m
Droplet dispensing	Automatic	
Dispensing resolution	0.1 μl	
Droplet deposition	Automatic	
Power supply	USB bus power (a windows laptop, which can be ordered optionally, is required to operate the instrument)	
Dimensions, weight	110mm(W) x 50mm(D) x 110mm(H), 650 g	
Operating environment	Temperature: +10 to +35 °C, relative humidity: 30 to 80 % (non-condensing)	

¹⁾ Accuracy is the repeatability in terms of standard deviation based on manufacturer's calibration standard.

For detailed information, please contact our sales partner or us directly at +81-48-483-2629 or at overseas-sales@face-kyowa.co.jp.

Specifications and designs are subject to change without notice.

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