

Contact Angle Measuring Instrument

This instrument measures the contact angle of a liquid on a solid to determine liquid wettability. It can also measure surface/interfacial tension, CMC, droplet size, and surface free energy on various materials.



Overview

Advanced Surface Analysis

This contact angle measuring instrument is designed for precise scientific research in nano-materials science and surface engineering. It enables accurate measurement of liquid wettability on solid surfaces, including bulk, fiber, textile, and powder materials. The system combines high-resolution digital imaging with advanced software to calculate contact angles, surface tension, and surface free energy, providing essential data for surface modification studies.

Measurement Capabilities

Contact Angle Range	180 °
Measurement Techniques	3-point method, 4-point method, 5-point curve fitting, Protractor method, Hanging drop method, Owens two-calculation method
Accuracy	0.1° or 0.5° (selectable)

Hardware Specifications

Sample Stage Travel

20 mm Travel Distance	100 mm Max Sample Size
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Platform Adjustment

- Manual horizontal movement (60mm stroke)
- Manual vertical movement (50mm stroke)
- Lens manual movement (40mm stroke)

Imaging System	USB digital CCD camera with continuous variable power optical system
Image Magnification	50pixel/mm - 318pixel/mm

System Requirements

PC Requirements

- 32-bit operating system
- RS232 serial port
- USB 2.0 interface

Optional Accessories

Optional Modules

Heating platform (-100°C) • $\pm 15^\circ$ Sample swing table • 360° Vertical rotating platform • 360° Horizontal rotating platform • Fiber holder • Stretch fabric frame • Card inserting unit • Stop bubble device