

Contact Angle Meter - Executive Overview

The FTS Technologies CAM100 is a compact camera based instrument for measuring contact angles of liquids on solids as well as their Free Surface Energy. Powerful drop shape analysis software makes detailed analysis user friendly and error free, ensuring reproducible results. The CAM100 is an accurate, simple, easy to use, yet extremely powerful instrument. The CAM100 is designed with versatility in mind making it the perfect instrument for industrial, QC, education and R&D applications.

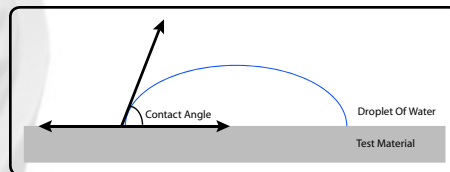


Live images on the PC monitor showing the droplet on the solid surface reassures the operator of validity of the contact angle measurement. Image capture and base-line definition are all automatic and quick. Also included in the package is automatic Surface Free Energy (SFE) calculation software based on manual data entry.

Why Measure Contact Angle?

Precise characterization of material surfaces and liquids plays a vital role in the development of new, better performing products with improved wettability and adhesion qualities. Measurement of contact angles and surface/interfacial tensions provides a better understanding of the interactions between solids and liquids or liquids/liquids. These interactions play a key role in understanding adhesion, material wettability, biocompatibility, lubricity of solid surfaces as well as the wetting, washability, spreading and adsorption of liquids. Contact angle, surface/interfacial tension and surface free energy measurements provide the information needed for the development and modification of liquid and solid surfaces using today's sophisticated surface engineering techniques.

Contact angle is the angle formed by a liquid at the phase boundary where a liquid, gas and solid intersect. The shape of the drop is controlled by the three forces of interfacial tension. Static Angle and Advancing Angle are quantitative measures of the wetting of a solid by a liquid, but they can also be used as a quality control measure in surface treatments and surface cleanliness. Receding Angle is a quantitative of the adhesion of a solid to a liquid.



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