

## Pocketgoniometer PG-3

A pocket goniometer measures the contact angle, which appears at the interface between a liquid droplet and a substrate surface.

The contact angle is commonly used to understand how a liquid and a substrate surface interact with each other. In our daily lives we are often exposed to contact angle phenomena similar to these situations: why rain drops "bead up" on a waxed car, why an egg does not stick in a "non-stick" frying pan, why a glue might not always repair a broken cup, how the rain droplets can stay on the outside of the tent roof, how a wet diaper can remain dry against the skin.

The pocket goniometer PG-2 is an automated instrument for measurements of static and dynamic contact angles even on absorbent materials like paper.

The built-in camera captures a video sequence of the liquid droplet applied on the surface to measure contact angle (wetting), volume (absorption) and base width (spreading) of the droplet as a function of time.

Connects to a standard laptop or PC with a USB port, which will also supply power to the instrument.

### Features

- Measurement of static contact angles - wetting of non-sorptive surfaces, dynamic contact angles - wetting and sorption as a function of time, surface tension, surface free energy
- Very small size easily carried in the pocket
- Integrated camera : captures 15 images/sec
- Manual dispensing unit for special test liquids
- Built-in pump : adjustable in 0.5  $\mu$ l steps
- User-friendly software for Windows 98/ME/2000/XP
- Video output and software for automatic evaluation of surface tension, wetting, spreading and absorption as a function of time

### Physical specifications

#### Dimensions

16 x 5.5 x 4.2 cm (L x W x H)

#### Net Weight

350 g



### Applications

Printing - Agriculture - Paper - Detergents - Corona treatment - Coating - Pharmacy - Board - Inks - Flame treatment - Adhesion - Biomedicine - Wood - Oils - Surface sizing - Cleaning - Papermaking - Metals - Surfactants - Surface tension - Absorption - Cosmetics - Plastic - Water - Surface contamination - Wettability - Dentistry - Textile - Solvents - Surface energy

### Material

Parts in the pocket goniometer that are in contact with liquids are designed of following materials:

- Liquid container: glass with top in Delrin
- Pump tubing: metal tube stainless steel (SIS2333), pump tubing Tygon (R3607) drop tubing (PTFE)
- Manual dispenser: cylinder wall (Polypropylen), plunger (PTFE), nose stainless steel (SIS2346), dispensing tip stainless steel (SIS2333)

### Standards

TAPPI T-458, ASTM D724, ASTM D5946