

# SEO Surface Tension Dynamic Contact Angle Analyzer



Well-known for its sophisticated high-end R&D systems, SEO(Surface Electro Optics) Corporation expands its family of wettability measurement instruments to include a systems suitable in the Educational, QC, Product development and multiple user applications.

Whether you need to monitor cleaning solutions, the cleanliness of parts, the spreading and adhesion of coatings or the interaction of fluids with biomaterials & pharmaceuticals. The DST-100 series provides solutions for determining:

## Features

- Surface Tension of Liquid
- Interfacial Tension
- Contact Angle of the Liquid-Solid Interface
- Effect of Liquid Absorbency on Textiles,paper.,etc
- Surface Homogeneity of Solid Sheets and Films
- Powders and other Porous Materials
- Penetration for resistance strain point of sediment
- Sedimentation for speed of a dispersion
- Composites ,Adhesives , Biomedical Polymers
- Inks ,Paints
- Oil Recovery
- Shampoos ,Detergents
- Eye-Care Products

## Functions

- DuNöuy Ring method
- Wilhelmy Plate method
- Density measurement
- Powder measurement
- Absorption measurement
- Zisman plot measurement
- Penetration measurement
- Sedimentation measurement
- Surface Energies measurement
- CMC measurement
- SEO Quantum software allows method storage and development, automatic calibration and a complete range of analysis

## DST 100 Application

- |                 |                               |
|-----------------|-------------------------------|
| • Film / Fibers | • Shampoos                    |
| • Powders       | • Cosmetics                   |
| • Composites    | • Detergents                  |
| • Adhesives     | • Pharmaceuticals             |
| • Bio-Polymers  | • Eye-Care products           |
| • Inks          | • Moisture Barriers           |
| • Paints        | • Semiconductor & Electronics |
| • Oil recovery  | • LCD, OLED display           |

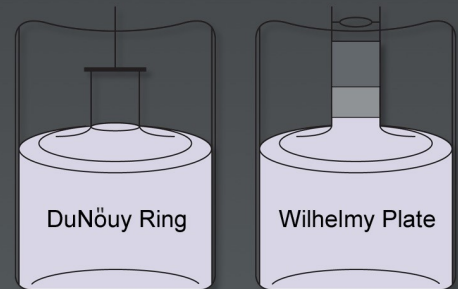


## Wilhelmy Plate Method

When measuring the surface tension of liquids, the method employs a thin vertical plate, usually a platinum plate or glassslide of known perimeter, attached to a balance. In case of a clean glass or platinum plate, we assume a zero contact angle, the surface tension can be determined.

## DuNöuy Ring Method

The Du Nöuy ring method is used for measuring the interfacial tension between two liquids and the surface tension of a liquid. In force tensiometry, a probe is hung on a precise balance and brought into contact with the liquid interface to be tested. The probe will experience some forces as it interacts with the surface of the liquid, and can be used to calculate the surface tension(ST) & Interfacial Tension (IFT).



## Measurement Range:

● : Available ○ : Optional

Model	DST 100S (Standard)	DST 100A (All-in-one)
<b>Basis Specifications</b>		
Weigh Resolution (100 ug)	●	●
Surface Tension Measurement range (1-2,000 mN/m)	●	●
Measurement Resolution (0.01 mN/m)	●	●
Max.Load (250 gram)	●	●

### Measurement

Surface Tension (Wilhelmy / DuNöuy Ring / Rod)	●	●
Interfacial Tension	●	●
Dynamic Contact angle	○	●
Surface Free energy	○	●
Zisman Plot	○	●
Penetration Measurement	○	●
Sedimentation Measurement	○	●
Absorption	○	●
Density (0.001~2.2 g/cm <sup>3</sup> )	○	●
Fiber measurement (≥ 100 μm)	○	●
Powder Wettability / Washbun method	○	●
CMC / Critical Micelle Concentration (Option - Auto / Manual)	○	○

### Measuring Assistance Unit

Sample stage Travel Distance	70mm	70mm
Speed	0.01~500 mm/min	0.01~500 mm/min
Stirrer	○	○

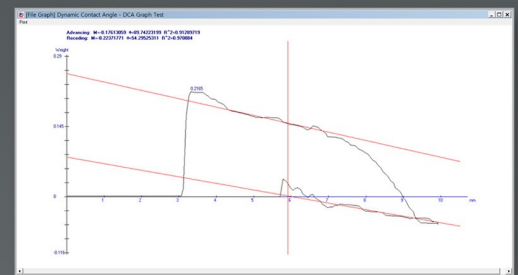
### Temperature Control

Circulation Chamber	○	○
Heat / Cool Water bath	○	○
Max control Temp. range (-35 °C to 150 °C)	○	○

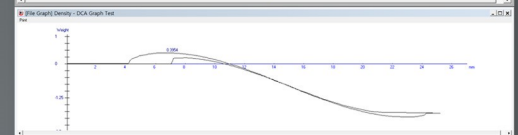
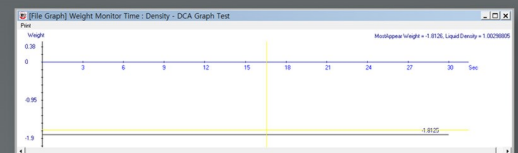
### Others

Dimension (mm) - 230 (W) x 310 (D) x 590 (H)	
(inch) - 9 (L) x 12 (D) x 21 (H)	
Weight (15 kg)	
Electric Power (100~220V / 50 / 60Hz)	

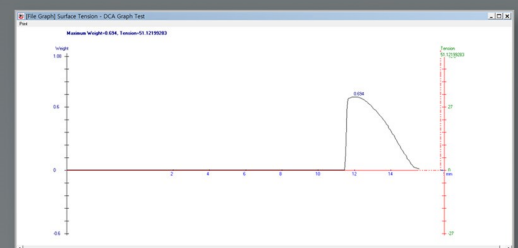
Specifications are subject to change without notice



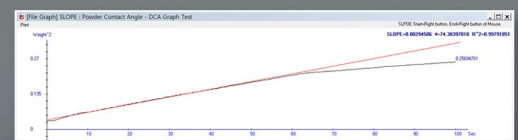
Dynamic Contact Angle (Advancing / Receding)



Two separate display areas show acquisition data and analysis data



Surface Tension by DuNöuy Ring (ASTM)



Washbun Method for powder measurement



[www.s-eo.com](http://www.s-eo.com)

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