

Contact Angle Analyzer

Phoenix-EL



The contact angle is the angle at which a liquid/vapor interface meets the solid surface. The contact angle is a result of the interface/surface tensions (surface free energy) between liquid and solid surrounded by vapor.

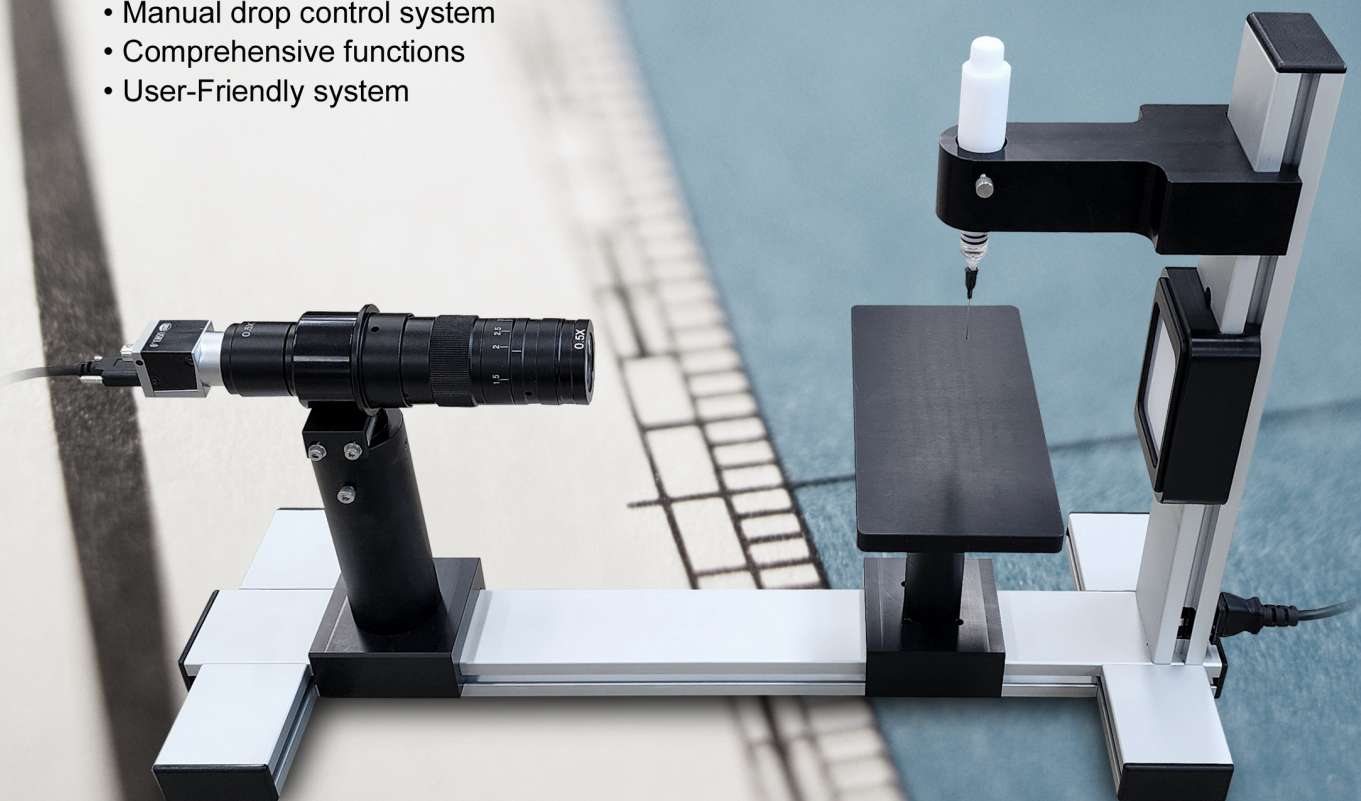
The SEO Entry-level model **Phoenix-EL** Contact Angle provides a fast, reliable, and easy method to measure contact angles/Surface energies and surface tensions of liquid droplets.

Typical Application

- Semiconductor applications.
- Detection of organic contamination on PCB and electronic components.
- Evaluation of cleanliness / treatment / coating processing.
- Hydrophobicity and hydrophilicity of solid surfaces.
- Biological application such as the detection and characterization of proteins.
- Adsorption / wettability of powder and pharmacy.
- Analysis of plasma treatments to increase the wettability on polymers surfaces.

Features

- Light weight, simple instrument , easy to use contact angle
- Automatic calculation the contact angle/surface energies & surface tension
- Easy connect to Laptop / PC via one USB interface
- Cost-effect contact angle system
- Manual drop control system
- Comprehensive functions
- User-Friendly system



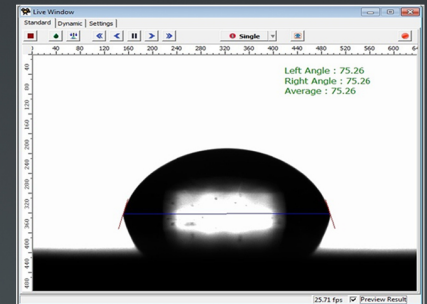
Capabilities

- Data checking instantly without open analysis window by preview result function.
- Static dynamic contact angles.
- Sequence image captures by time basis & dynamic movies.
- Surface energy / dynamic video.
- Sessile drop / surface tension by pendent drop method.
- Real time contact angle display.
- Precise calculate drop volume.
- Data comparison function.
- Curved sample measurement function.

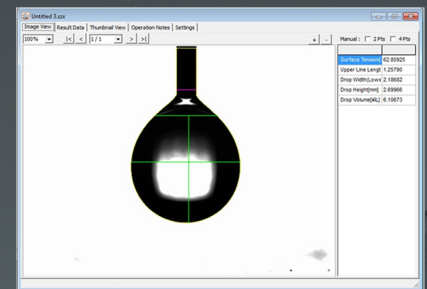
Technical Data

- *Model* Phoenix-EL
- *Max.Sample size (mm)* 200 x 70 x ∞ (mm)
- *Zoom* 4.5X
- *Resolution* 640 x 480
- *Max.Measuring speed* 500 F.P.S
- *Drop controll* Manual control system
- *Contact Angle range* 0 ~180, ± 0.1 accuracy
- *Operating system* Window 10, Window 11
- *Connecting type* USB Digital vision
- *Power supply* 110V / 220V, 50 / 60Hz
- *Dimension* 610 x 210 x 413 mm
(L x W x H, mm / in)
(24 x 8.3 x 16.3 in)

Sessile Drop Contact Angle with Preview Results



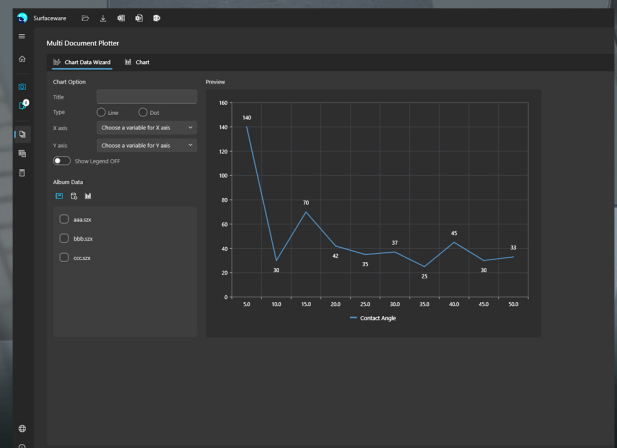
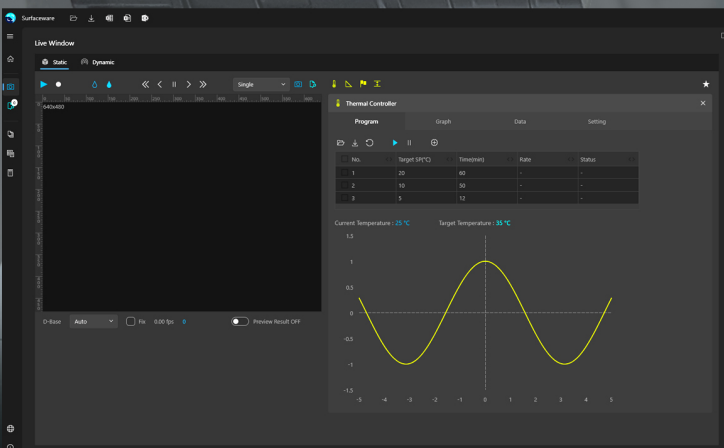
Pendent Drop Surface Tension



Surface Energy

Surface Energy Calculator									
Data Set Wizard									
Liquid Data									
Index	Liquid	Formula	Tension	Dispersive	Polar	Acid	Base		
1	1,1,2,2-Tetrabromethane		47.5	44.3	3.2	0	0		
2	1,2-dichloro-ethane		33.3	30.8	2.5	0	0		
3	1,4-Dioxane		33	33	0	0	0		
4	1,3-Pentandiol		43.3	27.6	15.7	0	0		
Load Default			Add		Del		Clear		
Contact Angles									
Index	Test Liquid	Sample	Angle	Tension	Dispersive	Polar	Acid	Base	
1	Diodomethane[GB]	Sample-0994051.szx	48.8962602	50.8	50.42	0.38	0	0	
2	Diodomethane[GB]	Sample-0994052.szx	48.8677865	50.8	50.42	0.38	0	0	
3	Diodomethane[GB]	Sample-0994053.szx	48.3323897	50.8	50.42	0.38	0	0	
4	Diodomethane[GB]	Sample-0994054.szx	48.2712012	50.8	50.42	0.38	0	0	
Set Liquid			Add		Del		Clear		
Surface Energies									
Index	Method	Sample	Contact Angles[Du]	Energy	Dispersive	Polar	Acid	Base	
2	2	Sample-0994051.szx	1,7	67.479706753	38.872584	38.607122			
3	2	Sample-0994052.szx	1,8	67.94629799	39.092666	38.852062			
4	2	Sample-0994053.szx	1,9	67.58622247	39.122147	38.858470			
5	2	Sample-0994054.szx	1,10	68.389263784	39.461087	39.528190			
Export to CSV			Set Method		Set Angle		Add		Del
2. Owens-Wendt Method (Geometric mean combining rule) Use 1 contact angle of each of 2 fluids on 1 solid Calculate									

Analysis Window



www.s-eo.com

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