Introduction of FAMAS

FAMAS – *interFAce Measurement & Analysis System* is software to measure and analyze surface phenomena of solid and liquid, and presents physical properties of Contact Angle in static and dynamic ranges, liquid surface/interfacial tension, and surface free energy. It performs by coupling with KYOWA's contact angle meters.

FAMAS
interFAce Measurement & Analysis System
Ver. 2.2.0

KYOWA
Leading to answers

KYOWA INTERFACE SCIENCE CO., LTD.

Measurement Sheet Window

FAMAS adopts multiple-document interface. Multiple measurement sheets can be displayed at the same time in the base window, and each measurement sheet can be liked with individual parameter window (mentioned below). These enable easy comparison of data between different materials or conditions.

A measurement sheet is composed of 45 rows by 10 columns for data view.

Property window is visually almost same.

Parameter Window

A window to set up measurement conditions and parameters. Time functions, image threshold level, and algorithm for analysis are available as parameters.

The window is also usable as a "test measurement" for temporary measurement or checking image conditions.

Property Window

Measured image data, as well as numerical data, are saved and they can be confirmed and corrected on this property window. The images can be displayed as a slide show.

Standard Functions & Features

Fast Image Capture, 30-2,700 FPS

Continuous capturing of the images and analyzing them is possible. The frame rate is varied from 30 to 2,700 fps depending on the model and option.

Advancing & Receding Angles (DMo series and DMs-401 at option)

Hysteresis of drop advancing and receding angles can be obtained by increasing and decreasing captive drop volume.

Advancing   Receding

Advancing Angle   Receding Angle

Automatic Recognition of Drop Deposition

It allows measuring contact angle at a regular time after drop deposition.

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Live Image & Focusing Aid

The image monitor displays the live image of the actual droplet, the values (droplet volume, contact angle), and the signs to determine the results (fitting curve or points, baseline and tangent line). The focus aid is displayed with index graph and numerical value to eliminate personal error of focusing.
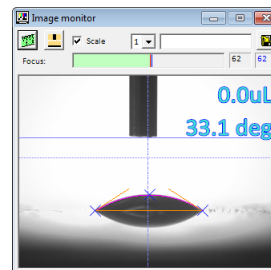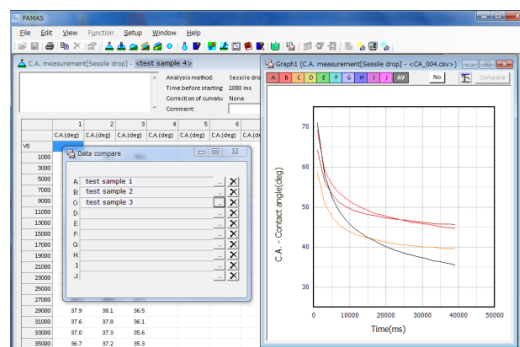
Threshold Level Adjustment

Threshold level to determine image binary can be adjusted before and after measurement. Both relative and absolute adjustments are possible to apply the optimized image analysis.

Graphing

Contact angle data versus time can be drawn on a graph. Besides the contact angle, variable data as shown below are also selected for graph data.

Variable Data Presentation

Besides contact angle, drop volume, absorbing amount, ratio of droplet remained volume, droplet height and width are obtained.
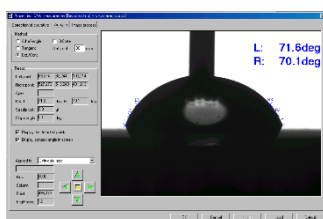
Correction of Curvature

Data correction on a convex surface such as lens and tube (in cross section) is possible by giving the radius of curvature.
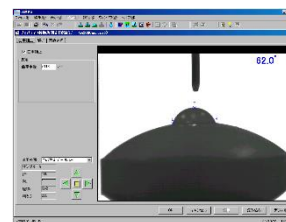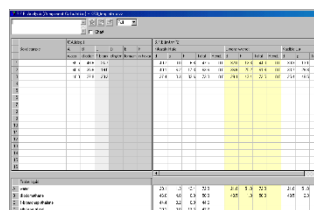

Optional Add-in Software

Variegated functions as below software are available as the FAMAS add-in software.
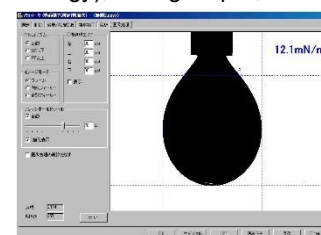
Dynamic contact angle
[Extension & Contraction method]

Measures advancing/receding angles by increase and decrease of captive drop volume.

Surface free energy

Analyzes solid and liquid surface free energy. Geometric mean, Harmonic mean, acid-base, Interaction analysis (work of adhesion, interfacial free energy), Young-Dupré, Zisman

Sliding angle

Obtains advancing/receding angles under tilting solid base. The base angle when droplet gets sliding is defined as Sliding Angle.

Pendant drop

Measures surface/interfacial tension of liquid samples by pendant drop method.

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