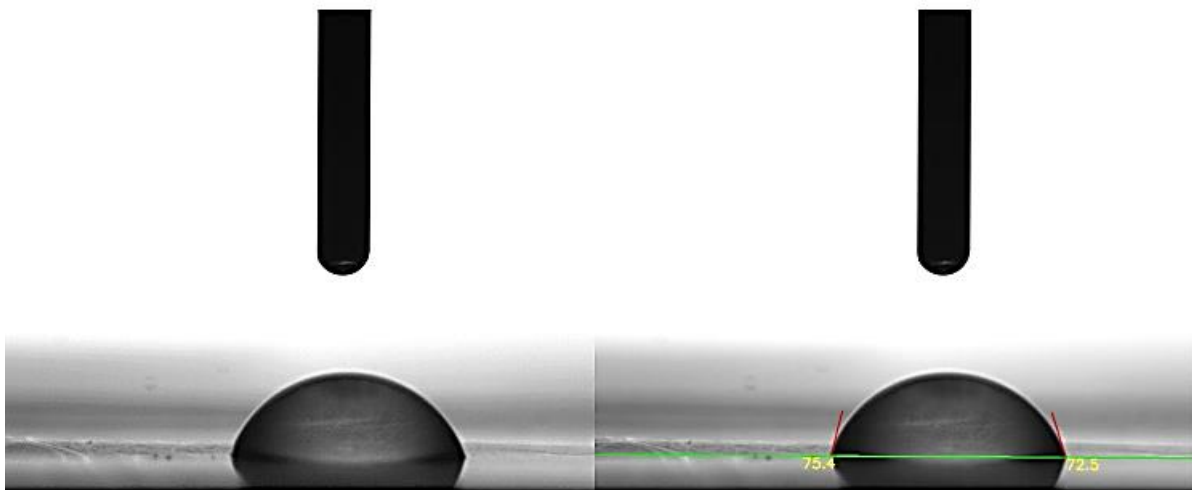


Contact Angle Measurement

This test allows for the measurement of the contact angle of a fluid droplet on a solid surface. The main applications of contact angle measurement include determining hydrophobicity or hydrophilicity, self-cleaning properties, surface energy, and other surface characteristics. The contact angle is measured using the Sessile Drop method.

In this test, a droplet of a specified volume (e.g., 4 microliters according to ASTM D7334 standard) is placed on the sample. Then, a high-precision camera captures images of the droplet and the contact angle at the three-phase contact line where the droplet meets the surface. The captured image is processed using image analysis software to calculate the angles. For dynamic contact angle measurement or contact angle hysteresis, the droplet size is increased and decreased by injecting and withdrawing fluid at a slow rate, allowing for the calculation of advancing and receding angles (and hysteresis).



Sample images of contact angle measurement. The image on the left is the raw image, and the image on the right has been analyzed using Jikan Assistant software.

Sample Requirements:

- Sample Size: Samples should be at least 1x2 cm and at most 5x5 cm (typically, 3 drops are placed on each sample).
- Thickness: The thickness (height) of the samples should not exceed 25 mm.
- Custom Sizes: Measurement for samples with different dimensions or with fluids other than water is possible only with prior coordination. If the fluid is not water-soluble, the cost of the syringe used will be included in the test fee.
- Surface Requirements: Samples should preferably have a flat surface.
Note: If the sample does not have a flat top and bottom surface or cannot be placed on the stage for any reason, the responsibility of providing a suitable fixture lies with the client. If no appropriate fixture is available, the test will be performed with additional costs.
- Sample Integrity: Measurement cannot be performed on samples that dissolve or deform in water (or the specified fluid).
- Output: For each sample, the measured contact angles (output from image processing software) and an image of the drop on the surface will be provided.
- Additional Measurements: In addition to static contact angle measurement, it is possible to measure contact angle hysteresis and advancing and receding contact angles (using the method of increasing and decreasing the drop volume).
- Drop Evaporation Test: The drop evaporation test (observing the evaporation process and contact angle changes on regular or hydrophobic surfaces during evaporation) can be performed with prior coordination.
- Imaging Capabilities: Imaging for measuring surface tension and other properties using the pendant drop method is available.

For details about the test fees or if you have any additional questions, feel free to reach out to us at one of the numbers provided below.

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