Surface Tension and Interfacial Tension Measurement

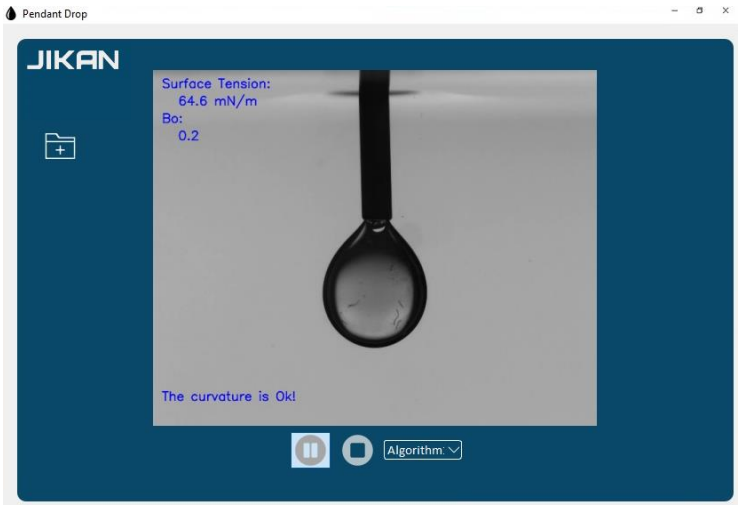
Our surface tension and interfacial tension measurement service utilizes the pendant drop method to provide accurate and reliable analysis of fluid properties. These measurements are essential for understanding liquid interactions and are widely applicable in industries such as coatings, material science, and chemical engineering.

Surface Tension Measurement:

In this test, a droplet of the fluid is suspended from a needle to form a pendant drop. The shape of the drop is captured by a high-precision camera, and the image is analyzed using advanced software to calculate the surface tension. Additionally, the test includes the calculation of the drop volume and critical dimensionless numbers, such as the Bond (Bo) and Worthington (Wo) numbers, providing a comprehensive assessment of the fluid's properties.

Interfacial Tension Measurement:

For interfacial tension measurement, the interaction between two immiscible liquids is analyzed. Similar to the surface tension test, the pendant drop method is used to assess the tension at the interface between the liquids. This test is crucial for applications involving emulsions, coatings, and other complex fluid interactions.



Sample Requirements:

- For Surface Tension:
  - Volume: Less than 1 mL of the liquid is sufficient for the test.
  - Density: The density of the fluid must be known and provided before testing.
- For Interfacial Tension:
  - Density: The densities of both liquids must be known.
  - Volume of Lower Density Liquid: The liquid with the lower density must be available in at least 40 mL and should be transparent or semi-transparent. A minimum of 1 mL of the higher-density liquid is required for the test.
- General Requirements:
  - Surface Compatibility: The fluid should not dissolve or undergo significant changes when exposed to air or the test environment.
  - Output: For each sample, the measured surface tension and interfacial tension values, along with images of the pendant drop, will be provided.
  - Additional Calculations: The test also provides the drop volume and calculated Bond (Bo) and Worthington (Wo) numbers, offering deeper insights into the fluid's behavior.
  - Imaging Capabilities: Our equipment supports detailed imaging and analysis to ensure high accuracy in all measurements.

This service is designed to deliver precise and reproducible measurements, supporting your research and development needs. For custom tests or specific fluid requirements, please contact us for coordination and pricing details.

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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