



# Kino

## Surface Tensiometer

**Model: A5**

— *Weigh-based Interface Chemical Analytical System*



**Surface Tensiometer model A5** is an entry-level surface tension measurement instrument with full-automatic or manual type. A5 provides with micro weighing sensor and high-precision optical positioning sample stage. The instrument has the advantages of portability, high precision, easy operating, and direct digital display of measured values through LED displayer. It can be widely used in the fields of rapid detection, quality control, daily chemicals, coatings, and other industries to test surface and interface tension.

### Typical fields of application

- Teaching experiment for demonstrating the method for measurement of surface tension
- Quality control: ink, paint, plating fluid, cosmetics, and transformer oils, etc.
- Detergent ~ surfactant's absorbing speed, property, discussion of proper concentration

## Performance Features :

- ✧ The world's first portable classic surface tension meter based on the principle of DuNouy Ring or Wilhelmy Plate method
- ✧ The cost performance ratio of the products is very high, the price has great advantages, and the test performance is stable
- ✧ The micro sensor with higher speed and accuracy (1mg) and optical positioning stage with accuracy 0.01mm can effectively reduce the influence of measurement value caused by human error
- ✧ Precision micro sensor technology has higher precision, better repeatability, and more reliable measurement value than other manufacturers' torsion wire sensor
- ✧ The measurement results are directly displayed on the LED screen in unit “mN/m”, which is intuitive and clear
- ✧ The operation of the measured value is simple, and the balance can be quickly calibrated by simple external calibration of standard weights
- ✧ The principle of the third generation Wilhelmy plate method can automatically correct the buoyancy value and contact angle value, thus providing a strong guarantee for the realization of the following measurement values:
  - observe the surface tension value of surfactant which changes with time.
  - test the surface tension of medium and high viscosity samples (up to  $10^4 \sim 10^5$  CP.s)
- ✧ Two testing principles, Wilhelmy plate method and DuNouy ring method, are provided. (Note: when platinum ring method is used to test surface tension, an excel file provided by our company shall be used to calculate and correct the corresponding value.)
- ✧ Independent operation, no need to connect computer

## Technical Specifications :

<b>Measurement method:</b>	Wilhelmy Plate method / Du Noüy Ring method (option)
Measurement range:	0~2000 mN/m
<b>Max Load of sensor</b>	20g
<b>Resolution:</b>	0.1mN/m
Accuracy:	±1mN/m
<b>Sample stage:</b>	High precise positioning stage
<b>Resolution of positioning stage:</b>	0.005mm (Automatic) / 0.01mm (Manual)
<b>Travel distance:</b>	60mm (Automatic) / 10mm (Manual) (It could be adjusted the height through different height pillars )
<b>Data display:</b>	Digital on LED
<b>Measuring time:</b>	1~3 sec. after touching interface (low viscous liquid sample)
<b>Measuring temperature:</b>	Ambient temp.
<b>Sample volume:</b>	min. 15mL or (1mL sample vessel made of PTFE for option)
<b>Data output:</b>	RS485

<b>Power supply:</b>	AC100-220V, 50-60Hz, 10W
<b>Dimensions</b>	190 W x 250D x 250H mm
<b>Weight:</b>	2 kg

### **Standard Components**

• Main body	1	• Calibration weight (20g)	1
• Data Line	1	• Alcohol lamp	1
• Platinum plate	1	• Forceps	1
• Glass lab. dish for surface tension	2	• Install tool	1
• Glass lab. Dish for interface tension	1	• Operation manual	1