

FT-F1 is professionally designed for the fogging characteristics evaluation of volatile constituents of decorating materials used in cars and aircrafts, e.g. plastic articles, polyurethane, textiles, leather, adhesives, nonwovens and thermal forming elastomers at high temperature conditions. Furthermore it could be used for the fogging phenomenon test of high intensity discharge (HID) headlamps of cars.



## Professional Technology

- Wide range and high precision of temperature control device to support the combinations of non-standard test conditions
- 6 test stations can perform specimen test or blank test simultaneously
- This instrument ensures accurate and reliable test data through stable running condition

## Test Principle

The preconditioned specimen is heated and evaporates in the beaker; the volatile constituents condense on the glass plate or aluminum foil treated in cooling chamber. Take off the glass plate or aluminum foil when the condensation process is finished. The fogging characteristics could be obtained by measuring condensed constituent weight and fogging value on the glass plate or aluminum foil and comparing with the data before condensation process.

This instrument conforms to the multiple international and national standards:

ISO 6452, DIN 75201, SAE J1756, QB/T 2728, BS EN 14288, PV 3920, PV 3015, ES-X 83231, NES M0161, D45 1727, GM 9305P, TSM 0503G

## Three Test Methods

**Gloss Method:** The specimen is heated in the beaker and its volatile constituents are condensed on the cooling glass plate. The fogging value could be obtained by calculating and comparing the gloss values occurred before and after condensation process.

**Haze Method:** The specimen is heated in the beaker and its volatile constituents are condensed on the cooling glass plate. The fogging value of the specimen could be obtained by calculating and comparing the fogging values occurred before and after condensation process.

**Weighing Method:** The specimen is heated in the beaker and its volatile constituents are condensed on the cooling aluminum foil. The fogging value-the weight of condensed constituents could be obtained by analyzing the weight changes of aluminum foil occurred before and after condensation process.

## Instrument Structure



The instrument mainly consists of constant high-temperature bath, constant low-temperature bath, cooling plate, beaker, glass plate, meter, sample cutter and other accessories, through which it can perform the processes of sampling, heating, condensation and test.

### Operation Process

Prepare specimens-----switch on high and low temperature baths-----clean beakers and glass plates-----place specimens----place glass plate or aluminum foil-----place cooling chamber-----perform test for a specified period of time----take off glass plate or aluminum foil and place certain time----measure the gloss value, fogging value of glass plate or weight value of aluminum foil-----compare the data and obtain test results

### Applications

This instrument is applicable to the determination of:

Basic Applications	Decorating Articles of Cars	Test the volatility of car decorating articles, e.g. instrument boards, knobs, seat cushions, floor leather and ceiling materials at high temperature
	Plastic Particles	Test the volatility of plastic particles at high temperature
	Carpets	Test the volatility of carpets at high temperature
	Leather	Test the volatility of leather at high temperature
Extended Applications	Sponge, Rubber and EPE Thermal Insulation Materials	Test the volatility of sponge, rubber and EPE thermal insulation materials at high temperature
	High Intensity Discharge Lamps	For the fogging test of front high intensity discharge lamps of cars
	Adhesive Products	Test the volatility of adhesive products at high temperature

### Technical Specifications

Specifications	FT-F1
Temperature Range of High-Temperature Bath	Room temperature~150°C (room temperature~280°C is optional)
Accuracy	±0.1°C (150°C)
Temperature Range of Low-Temperature Bath	0~100°C
Accuracy	±0.1°C
Size of High-Temperature Bath	670 mm (L) x 490 mm (W) x 540 mm (H)
Size of Low-Temperature Bath	400 mm (L) x 220 mm (W) x 520 mm (H)
Net Weight of	32 kg (except the weight of heat conducting medium)



High-Temperature Bath	
Net Weight of	15 kg (except the weight of heat conducting medium)
Low-Temperature Bath	
Power Supply	220VAC 50Hz / 120VAC 60Hz

Configurations

Standard Configurations	Instrument, Constant Temperature Control Device, Gloss Meter, Sample Clamp Ring, Beaker, Fluorine Rubber O-ring, Rubber Fixing Ring, Rectangular Glass Plate, Round Glass Plate, Aluminum Foil, Round Sample Cutter of Aluminum Foil, Lid, Stand of Glass Plate, Round Sample Cutter and Accessory Stand
Optional Parts	Haze Meter, Analytical Balance (0.01 mg), Beaker, Fluorine Rubber O-ring, Rectangular Glass Plate, Round Glass Plate, Aluminum Foil, Round Sample Cutter of Aluminum Foil, Stand of Glass Plate, Heating Fluid, DIDP and DOP