

FD-610

Infrared Moisture Determination Balance



● Specifications FD-610	
Measurement Method	Detection of weight loss by heating & drying
Sample Mass	5 ~ 70g optional weight sampling format
Minimal Display Digit	Moisture(Solid content) 0.1%, Weight : 5mg
Measurement Subjects	Moisture / Solid Component content, Weight, Temperature
Measurement Range	Moisture/ Solid Component content: 0.0 ~ 100% Weight: 0.000 ~ 69.995g Displays "WEIGHT CHECK" over 70g. Temp.: 0 ~ 200 °C
Precision:	±0.1% (5g or more)
Measurement Mode	Time Measurement Mode: 1 ~ 90 minutes Auto Measurement Mode: A: Moisture change 0.1% in one minute B: Moisture change 0.1% in two minutes
Drying Time Setting Range	1~ 90 Minutes (One minute increments) Stops in 90 minutes for safety in Auto Measurement Mode
Drying Temperature	65 ~ 195°C (1°C increments, with memory)
Setting Range	
Drying Completion Point	Moisture/solid component content monitoring (Auto Measurement Mode)
Detection Method	
Display Format	Digital LCD display
External Output	RS232C interface
Environmental conditions	Temperature: 5 ~ 40°C Humidity : 85%RH or less
Sample Dish	SUS manufactured (ø95, 10mm depth)
Heat Source	185w Infrared bulb x 1 pce
Temperature Measurement Method	Thermistor
Power Supply	AC100 ~ 240V (50/60Hz)
Power Consumption	Max.185W (Bulb) + 2W (Control section)
Size and Weight	210(W) x 320(D) x 318 (H)mm, 3.0Kg
Auto Tare Function	Automatic tare at 30-second intervals.
Accessories	Infrared Bulb (185W) x2, Sample dish x2, Sample dish stand Windshield, Spare Fuse(0.5A) Power Supply cord, Aluminum Sheets (20 pcs) Spoon set, Pincet, Dust Cover, Operating Manual
Options	Printer set (VZ-330, Printer Connection Cable VZC-14, Printer Paper, AC Adaptor) Printer Paper (10 rolls), Aluminum sheet (500 pieces), Sample Crusher TQ-100



● Optional Printer VZ-330

⚠ Safety precautions

- For safe operation, ensure you read the Operating Manual before use.
- Do not attempt to measure material that will cause dangerous chemical reactions on heating. Further, the tester becomes very hot, so please take precautions against burns and/or fire.

Requests

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ISO 9001 Management System Enhancement Department of the Japanese Standards Association (JSA) registers the Quality Management System of the above organization, which conform to JIS Q 9001, ISO 9001.
 The Scope of the Registration:
 Design, development and production management of Moisture Testers, NIR Composition Analyzers, Grain Inspectors and Coating Thickness Testers. Calibration and repair of Moisture Testers, NIR Composition Analyzers, Grain Inspectors and Coating Thickness Testers.

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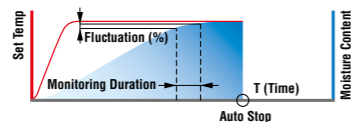
FD-610 is a heat, dry & weigh method infrared moisture determination balance that follows very closely the procedure of officially standardized drying methods, such as the 130 Centigrade / One Hour method (USDA) and the 130 Centigrade / Two Hour method (ISO). These methods weigh the sample very accurately before and after oven heating to ascertain the weight loss, from which the water content can then directly be deduced. These methods are the standard for moisture measurement but require well-trained personnel and suitable facilities and are inevitably time consuming. Therefore, it is difficult to measure many samples quickly and easily. FD-610 is almost the only solution available to measure a variety of samples at your convenience. It ensures handy and accurate measurement.

Other moisture meters with electronic or optical devices are made to measure one specific sample. No other moisture meter offers the versatility of FD-610 which uses a 5mg-resolution weighing unit and a proven 185-watt infrared lamp. Also featured is Auto Measurement Mode, the total drying process control software, which halts the heating and displays the moisture content automatically. Optional printer VZ-330 enables you to print out the data in numerical form. FD-610 is the essential moisture balance for all quality control and testing divisions where the most accurate and convenient moisture measurement is required.

Two Efficient and Handy measurement modes:

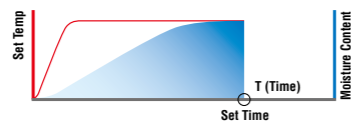
Auto Measurement Mode

Halts the heating automatically when the weight changes or when fluctuations fall within 0.1% in the last 1 or 2-minute duration.



Time Measurement Mode

Halts the heating after the appointed period of time.



Samples of Various Shape and in Various Condition to be Measured

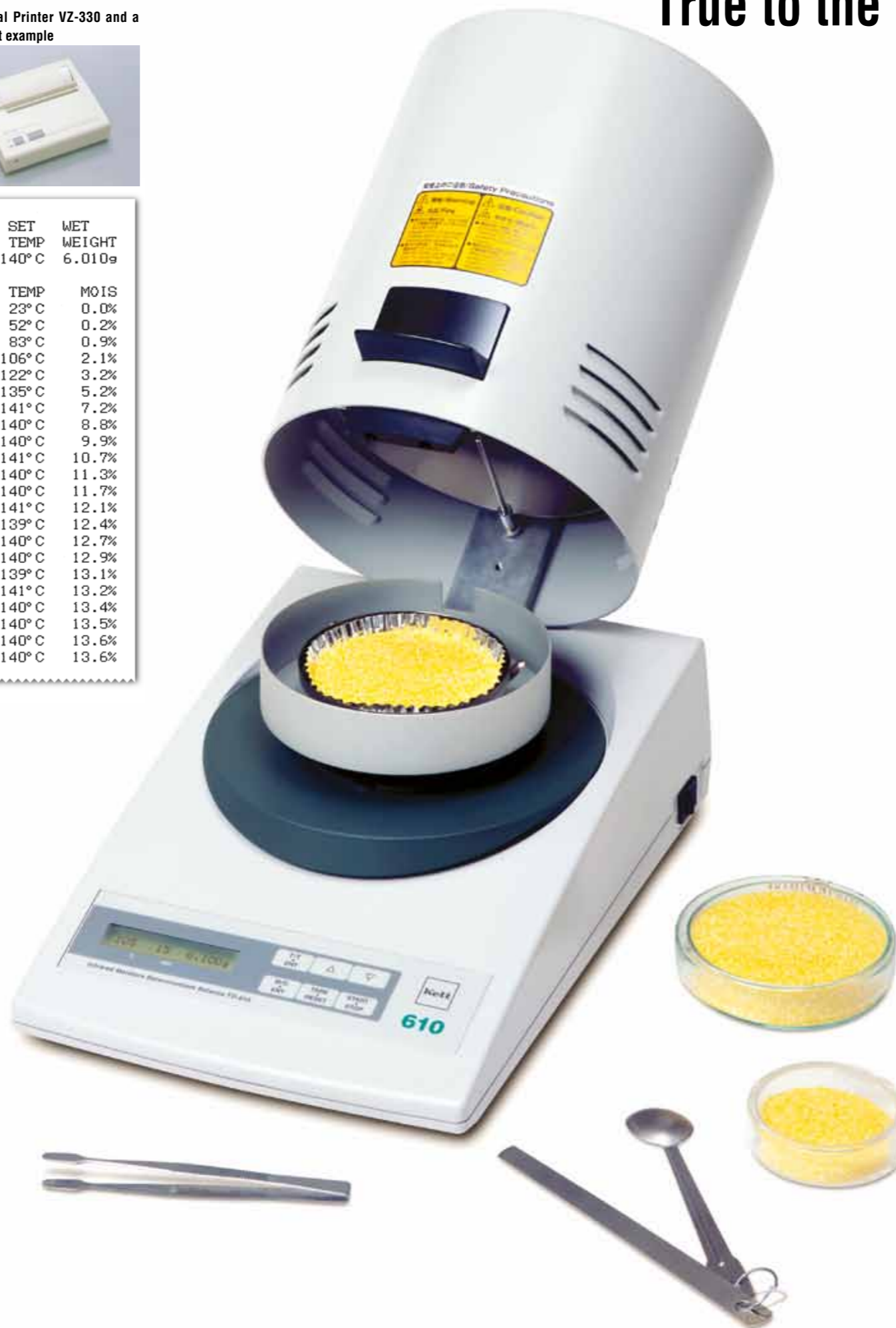
You can measure most of samples with various shape and condition providing that they vaporize only water and exhibit no harmful chemical reaction when heated.



Optional Printer VZ-330 and a printout example



SET TIME	SET TEMP	WET WEIGHT
A	140° C	6.010g
MIN	TEMP	MOIS
0	23° C	0.0%
	52° C	0.2%
1	83° C	0.9%
	106° C	2.1%
2	122° C	3.2%
	135° C	5.2%
3	141° C	7.2%
	140° C	8.8%
4	140° C	9.9%
	141° C	10.7%
5	140° C	11.3%
	140° C	11.7%
6	141° C	12.1%
	139° C	12.4%
7	140° C	12.7%
	140° C	12.9%
8	139° C	13.1%
	141° C	13.2%
9	140° C	13.4%
	140° C	13.5%
10	140° C	13.6%
×10	140° C	13.6%



Moisture Measurement, True to the Basic



- Heat, Dry and Weigh. Most Close to the Standardized Drying Method.**
 The FD-610's heat, dry and weigh method is very close to the "Drying Method", the official standard for moisture measurement.
- Moisture or Solid component Content Display**
 Easily switch the display between moisture content and solid component content.
- Auto Tare Function**
 Automatic zero adjustment is done during measurement to ensure accuracy. The scale drift is compensated for, even during long-term measurement.
- Steady and Quick Infrared bulb**
 The quality of the infrared bulb of FD-610 has been proven in many applications.
- Two Essential Measurement Modes**
 Time Measurement mode and Auto Measurement mode can be selected to suit the condition and nature of the samples.
- Condition Selectable Auto Measurement Mode**
 Auto measurement modes halt the heat drying by monitoring the changes of the sample weight. Heat drying is stopped after detecting a 0.1% weight fluctuation in one or two selectable minute durations.
- Optional Printer**
 All the data during or after measurement, including the drying process in progress and the last measured, can be printed out in numeric form.
- For all the industries**
 Grains, Starch, Flour, Dried Noodle, Processed Fish and Meat, Seasonings, Confectioneries, Dairy Products, Dried Foods, Food Oils, Medical Products, Ore, Coke, Glass Materials, Concretes, Synthetic Fertilizer, Paper, Pulp, Cotton, Fiber and many other industrial products.

