
Pasta Moisture Tester (Model PB-3004)

The logo for Kett, featuring the word "Kett" in a white, serif font inside a dark gray square.

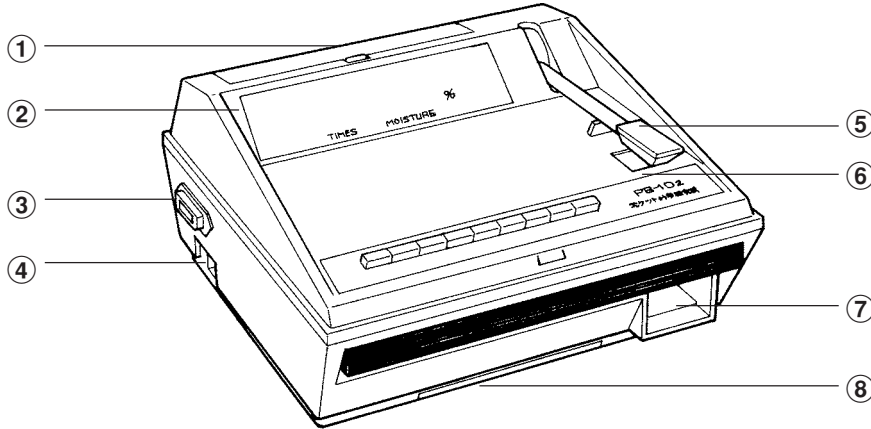
Operating Manual

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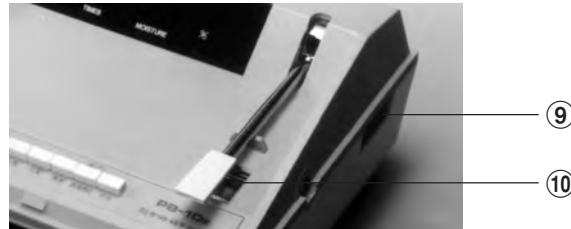
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1. Part Names

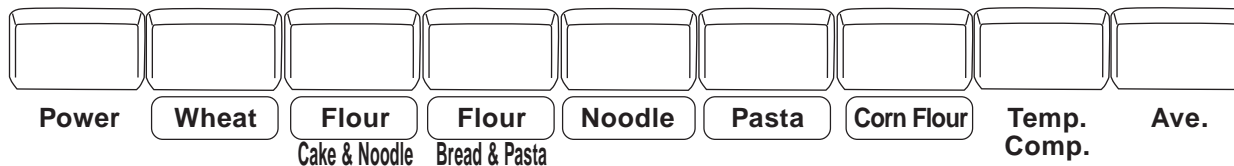
1. Main Unit



- ① Accessories Comartment
- ② Disply
- ③ Printer Connector
- ④ Power Supply Socket
- ⑤ Measurement Lever
- ⑥ Shutter
- ⑦ Sample Port
- ⑧ Power Cord Compartment
- ⑨ Measuring Section
- ⑩ Crushing Compartment



2. Switches



3. Accessories



- ① Sample Dish
- ② Checker
- ③ Measuring Spoon
- ④ Spiral Brush
- ⑤ Brush
- ⑥ Cleaning Brush
- ⑦ Crushing Handle
- ⑧ Power Cord
- ⑨ Metal Plate

2. Specifications

1. Cereals Measured : Wheat, Flour (Cake & Noodle, Bread & Pasta), Noodle, Pasta, Corn Flour
2. Measurement Format : AC Resistance Format
3. Measurement Range : Wheat : 8~20%
Flour (Cake & Noodle) : 8~20%
Flour (Bread & Pasta) : 8~20%
Noodle : 8~20%
Pasta : 8~20%
Corn Flour : 8~20%
4. Accuracy : $\pm 0.1\%$ (manufacture), $\pm 0.5\%$ (drying method)
5. Power Supply : AC220V
4"D"size batteries (Approximately 15 hours continuous operation)
6. Display Format/Contents : Digital LED display:Moisture(%),Number of times measurement performed
7. Response Time : Approximately 3 seconds
8. Sample Temperature
Compensation Format : Automatic compensation using thermostat
(features automatic temperature compensation function)

- 9. Operating Temperature : 0~40°C
- 10. Operating Humidity : 95%R.H. or less
- 11. Output : Printer output (Centronics standard)
- 12. External Dimensions : 250(W)×240(D)×125(H)mm
- 13. Weight : 3.5kg
- 14. Option : Printer (VZ-300)

3. Before Making Measurements

- 1 . Please use a 220 AC power supply or 4 size "D" batteries as the power supply for the PB-3004. When using an AC power supply, remove the power cord from the power cord compartment and connect the plug to the socket on the main unit.



When using batteries as the power supply, insert 4 size "D" batteries into the battery compartment on the bottom of the unit, making sure to align the positive (+) and negative (-) ends correctly.



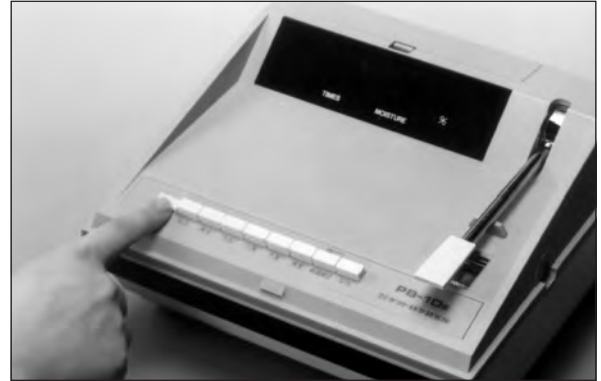
2. Insert the crushing handle in the correct position.



3. Insert the sample dish into the sample port completely so that the front edge comes into contact with the back of the port.



4. Press the POWER Switch.
The pilot lamp in the display will light.



5. Press the sample selection button corresponding to the type of grain you wish to test.



4. Sample Taking and Crushing

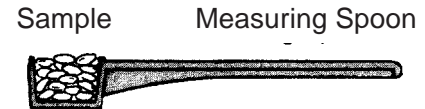
The method of sample taking and crushing depends on the products.

Notes concerning taking of samples

When taking samples, extract portions which are believed to have moisture contents representative of the average for the entire quantity of cereal.

For example, samples taken from portions which are exposed to sunlight or in contact with the bottom of the container are not appropriate representative samples.

Also avoid directly extracting samples by hand, as moisture from the hands may make it impossible to make accurate moisture measurements. A sample which completely fills the supplied measuring spoon when flat should be considered the standard sample quantity.



A. Wheat

1. Completely fill the measuring spoon provided with wheat.

Notes:

Only use the measuring spoon provided to take samples.

Correct measurements cannot be made using the measuring spoon provided with the previous PB-1D Model moisture tester.

2. Raise the measuring lever, open the crushing compartment cover, and insert the sample.



3. Turn the crushing handle to crush the sample.



4. Remove the sample dish and shake it lightly to flatten the sample.



B. Wheat Flour, Corn Flour

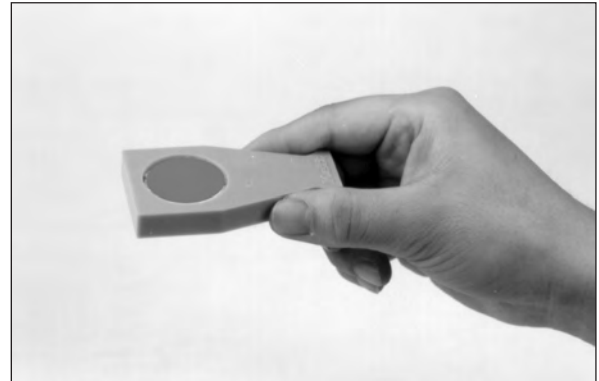
1. Completely fill the measuring spoon provided with flour.
(Remove the excess sample using a pencil or the like.)



2. Spoon out the flour into the sample dish and shake it lightly to flatten the flour.



3. For **Wheat Flour**, place the metal plate on the sample dish.
For **Corn Flour**, no metal plate is necessary.



C. Noodle, Pasta

1. In case of Noodle or Pasta, first crush the sample as shown in the right Fig. Keep the ground sample into a vinyl bag or a can and so on.



2. Completely fill the measuring spoon provided with the ground noodle or pasta.
(Remove the excess sample using a pencil or the like.)



3. Spoon out the ground sample into the sample dish and shake it lightly to flatten the ground sample.



5. Measurements

1. Insert the sample dish all the way into the measurement section so that the front edge of the dish comes into contact with the back of the compartment.

Note:

When measuring wheat flour, place a metal plate onto it.



2. Push down the measurement lever until it stops. The number of times the measurement is to be performed (TIMES) and moisture value reading (MOISTURE %) will be indicated in the display.



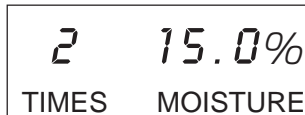
Press the AVERAGE button in order to obtain the average moisture value after making measurements several times. A point will appear at the lower right of the TIMES display to indicate that the average value is being displayed.

When the AVERAGE button is pressed again the TIMES display for the next measurement will return to "1".

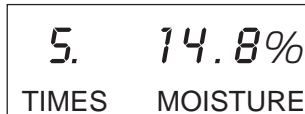
The maximum number of measurement times (repetitions) is 9.

The TIMES display will return to "1" when measurements are performed 10 times.

Display during normal measurement



Display when the AVERAGE button has been pressed

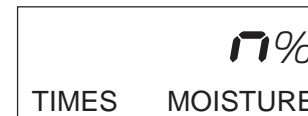


Notes concerning taking of measurements

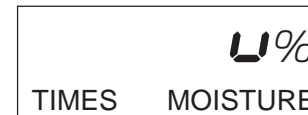
Although the valid measurement range of the PB-3004 is shown in specifications, values up to 2% of this range are actually displayed. However, the precision of moisture values displayed which are outside of the valid measurement range are not guaranteed. Use these value readings as rough guides.

The Over Indicator (**n**) will be displayed if the sample's moisture content exceeds this range, and the Under Indicator (**u**) will be displayed if the moisture content is below this range.

Over Indicator



Under Indicator



6. Testing, Maintenance and Storage

1 . Testing

Use the supplied checker to check to make sure that the PB-3004's electrical circuits are functioning normally.

First press the power switch. Next release all of the sample selection buttons so that none is selected (none of the selection buttons is pressed). Insert the checker into the measurement section and lower the measurement lever.

The electrical circuitry is functioning normally if a numeric value of 14.9 15.1 is displayed at this time. In most cases, failure to display a normal value is due to the presence of dirt in the testing section. Perform the test once again after thoroughly cleaning the testing section if the normal values are not displayed.

2. Maintenance

Measurement Section

It is very easy for spilled samples to accumulate in the section where the sample dish is inserted, so the supplied brushes should occasionally be used to clean this section. It is particularly easy for errors to arise if measurements are made when there is sample material adhering to the electrode plate (round metal plate) .

Crushing Section

If a new sample is crushed when there are still traces of old samples adhering to the crushing rollers, the new sample will be contaminated with the old sample material and accurate measurements will be impossible. It is therefore necessary to clean the rollers with the supplied brushes while turning them.

Sample Dish

When using the sample dish continuously, use the brush to remove any sample material adhering to the inside and back of the dish.

3. Storage

After using the PB-3004, clean it well as described above and then store it in a dry place where it will not be exposed to direct sunlight. Be sure to remove the batteries if storing the unit for an extended period of time.



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