



20813002

Ygrasia 100

Moisture Analyzer

User Manual

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For claims under the warranty please contact your local supplier. You may also send the instrument directly to manufacturer, enclosing the invoice copy and by giving reasons for the claim.

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## II. Safety



### IMPORTANT Safety Items to be Observed.

## Safety Warnings

### **! Dangerous (may result in a serious loss of property or casualties)**

1. The instrument must be grounded and away from sources of electromagnetic interference.
2. Before use, please confirm the voltage and frequency of the power supply match the instruments' nameplate voltage requirements
3. The instrument should be operated via a separate power outlet.
4. When the instrument is not in use, turn 'OFF' the power switch and unplug the power plug.
5. Do not alter, cut or shorten the instrument's power cord.
6. Do not repair the instrument without proper authorization, only a qualified or accredited service technician should conduct repairs.

### **! Warning (may cause property damage or personal injury)**

7. Please fully read and understand all the user manual instructions prior to operation.
8. When unplugging the power plug, do not pull on the power cord directly.
9. Prior to all the below activities, the instruments power plug must be 'unplugged':
  - 9.1 When replacing the fuse
  - 9.2 Instrument failure
  - 9.3 Instrument not in use for long periods
  - 9.4 When moving or relocating the instrument

### **! Attention (may affect performance or service life)**

1. The instrument should be placed on a stable, hard, and level surface.
2. The instrument requires adequate ventilation and operating space.
3. The instrument must be used in accordance with the correct settings as outlined within this user manual.
4. Only accredited and qualified professional repair technicians can open the instrument or conduct require repairs. Persons performing repairs on the instrument other than those selected or approved by the Company shall operate to void any warranty contained hereinabove for the product.

## III. Ygrasia Moisture Analyzer – Introduction

The Ygrasia moisture analyzer provides reliable, fast, and accurate measurements of trace levels of moisture content within your samples. The moisture analyzer uses the Loss On Drying (LOD) method to measure moisture. The moisture analyzer first weighs a sample and then heats it until dry and weighs it a second time when dry. The difference in the initial and dry weight of the sample is used to calculate the percentage of moisture loss during the drying process.





## 3.1 After Sales Support

If problems are encountered or technical assistance is required, when installing or using the instrument, please contact the service department at [saleseurope@hollandgreenscience.com](mailto:saleseurope@hollandgreenscience.com). The Company may provide technical assistance and information regarding the instrument or equipment or service without charge at its sole discretion. Buyer assumes sole responsibility for any reliance on or use of such assistance and information, and the Company makes no warranty thereon.

Upon contact the following information is required to be provided:

- Product serial number (located on rear panel instrument nameplate)
- Warranty card
- Description of issue or problem (i.e., software or hardware)
- Method and or operating steps you have undertaken towards resolution.
- Your contact details inclusive of telephone number and email address.

## IV. Technical Specifications

<b>Product Name</b>	Ygrasia 100
<b>Parameters</b>	
Model	20813002
Capacity	110g
Resolution	0.001g
Operating Temperature	5 °C ~ 35 °C
Display	LCD (White backlight with black front)
Calibration	External Calibration
Interface	RS232
Pan Size	φ90mm
Packing Size	490 x 350 x 360 mm
Gross Weight	6kg
Heating Source	Halogen Lamp
Temperature Sensor	PT 100
Temperature Range	40 °C ~ 199 °C
Temperature Step	1 °C
Moisture Range	0.00 % ~ 100.00 %
Moisture Accuracy	0.01%
Dry Range	100.00% ~ 0.00%
Time Setting	1 ~ 99 minutes in 10 seconds
Heater	230V±15% 50Hz
Balance	Input: 230V 50Hz Output: 9V
External Dimensions (mm)	200 (D) x 180 (W) x 380 (H)

## V. Standards and Conformity

Construction in Accordance with the following  
Standards:

FCC Part 15 B

ANSI C63.4:2014

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## VI. Inspection

### 6.1 Packing List

Unpack the equipment carefully and check for any damage which may have arisen during transport. In the event of identified damage, please contact [saleseurope@hollandgreenscience.com](mailto:saleseurope@hollandgreenscience.com).

- Carefully unpack the shipping container.
- Check the instrument and accessories against the 'Packing List' below.

The package includes the following items:

Item Description.	Quantity.
Moisture analyzer mainframe	1
Wind cover	1
Sample pan holder	1
Tray handle	1
Power cord	1
Aluminum sample pan	1 set / 50pcs
100g standard weight	1
Quick setup card	1



**Note:**

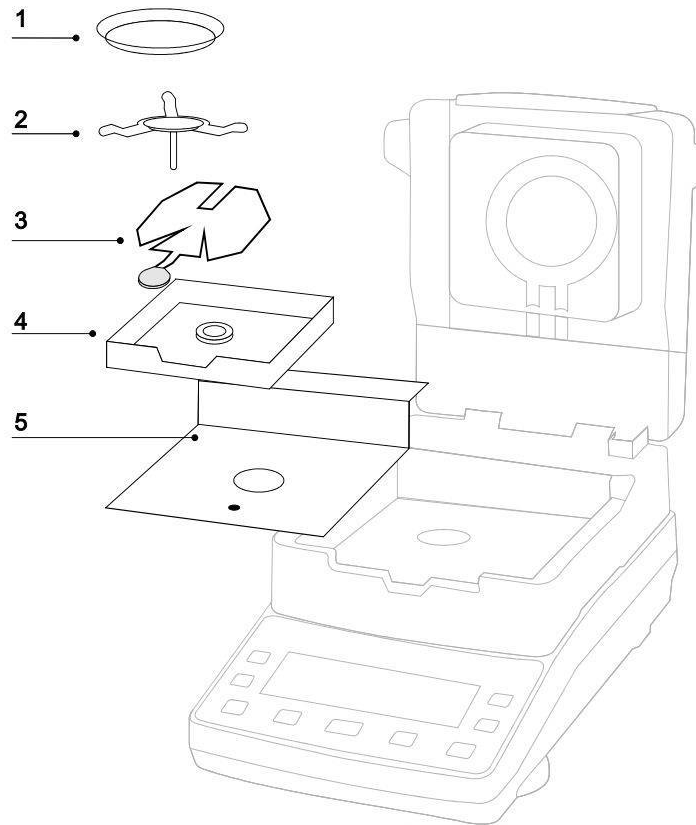
If you find any visible damage to the product, please do not plug in the power of the product.

## VII Installation instructions

### 7.1 Precautions

- The moisture analyzer is used to measure the moisture content of a sample. Improper operation of the analyzer may result in personal injury and/or equipment damage.
- Make sure the power cord is connected according to the instructions in the manual.
- Do not use the equipment in a hazardous, wet, or unstable environment.
- Unplug the power cord before cleaning the equipment.
- The equipment should be located in a well-ventilated area with at least 1 meter of free space between the top of the analyzer and the ceiling.
- Please wear protective equipment when necessary.
- Do not modify alter or modify the analyzer. If maintenance of this equipment is required, it should be done by factory-authorized professionals.
- Do not put inflammable materials near the instrument.
- Do not handle the halogen lamp when it is hot.
- Care should be taken when testing the moisture level of hazardous or poisonous materials. Make sure that all the recommended precautions are followed.
- Heating inflammable materials may produce highly flammable gas that could ignite. Therefore, for this case, it is recommended that the process temperature be kept low and all flames in the nearby area are extinguished.
- Only process samples that are toxic or corrosive in well-ventilated areas.
- The testing bench should be level and very stable.
- The moisture analyzer is designed for use at room temperature, in a dry, well-ventilated area. The operating area should be free of strong vibrations and large magnetic fields.

## 7.2 Installation of accessories



Install the accessories according to Figure x. Installation order from top to bottom: 1-2-3-4-5

1. Aluminum scale pan
2. Triangle scale frame
3. Scale pan brackets
4. Wind cover
5. Stainless steel plate

## 7.3 Other installation requirements

- The analyzer has two adjustable footpads in the front that are used to level and stabilize the equipment during operation.
- Please allow at least 30 minutes of warm-up time before measurements are taken to ensure accuracy.

## VII Operating Instructions

### 8.1 Display



### 8.2 Icon Introduction

6 --- The percentage of dry weight (%) / Moisture (%m) / weight (g)

5 --- The current temperature or Setting temperature

4 --- Set time and test time

1 --- Test mode



STANDARD --- Standard test mode



FAST --- Rapid test mode



SOFT --- Gentle test mode

3 --- Stop test mode



AUTOMATIC --- Automatic



MANUAL --- Manual stop mode

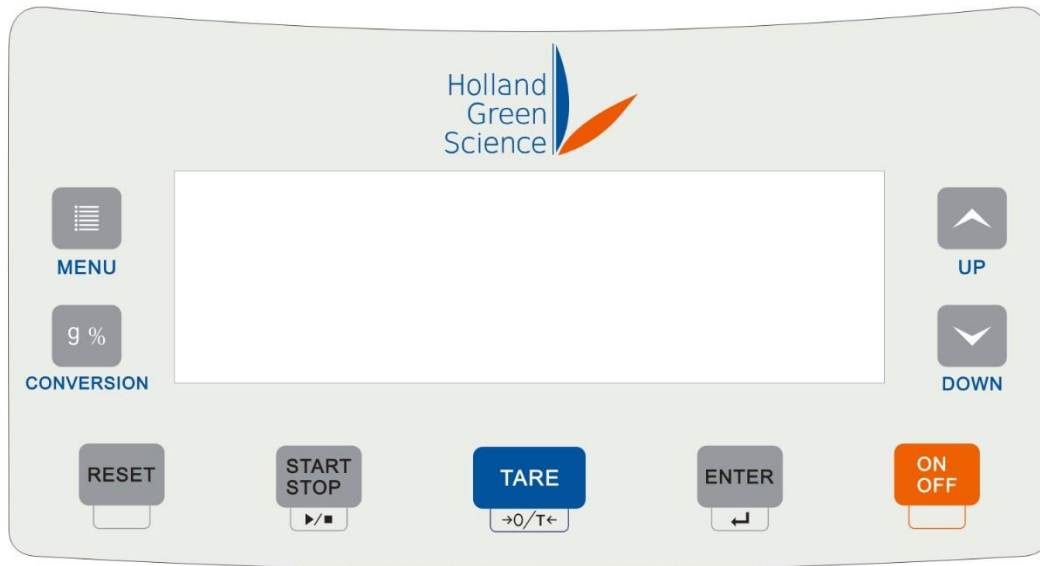


TIMING --- Timing stop mode



--- Test state

## 8.3 Keypad



NAME	Key features
ON/OFF	Power on/off, off the internal DC power supply
START/STOP	Start heating/Stop heating
TARE	Weight cleared, settings exit
MENU	Enter the setting menu
CONVERSION	Switching measurement results
ENTER	Confirm the current settings, go to next
RESET	Return to the weighing mode(short press), calibration balance(long press)
DOWN	Reduce
UP	Add



## 8.4 Testing for the first time





- When using the moisture analyzer for the first time, the settings are set to factory defaults. Change factory settings if necessary.
- Put an empty sample pan on the holder (see section 7.2).
- Press "TARE" to clear the weight of the pan.
- Put the sample on the pan (sample weight should be at least 1g. The most optimal sample weight is between 3 to 5g).
- Close the heating cover and press "Start / Stop" to start the test. The heating tube should be lit and the heated symbol in the upper left corner should begin flashing. The screen should display the current temperature, heating time, and moisture content of the current sample.
- At the end of the test, the halogen heating lamp will automatically turn off and the buzzer will sound an alarm. The display screen will display the moisture content, heating time, and current temperature.  
Note: Don't touch the sample plate. The temperature is very high at the end of the test.
- Press "Reset" to return to weighing mode.

## 8.5 Parameters Setting





### 8.5.1 Heating parameters storage and recall

- The moisture analyzer can store a total of 16 groups of heating parameters. Each group can store parameters like the heating method, stop mode, and test time test.
- In weighing mode, press "Menu" to enter the parameter setting mode. The address number should be flashing. Press the "down" or "up" key to select the desired address number. Number 0 is the factory setting. 1 to F is for users. **Note: this number is a hexadecimal number, meaning symbols "0"–"9" represent values 0 to 9, and "A"– "F" represent values 10 to 15.**
- Press "ENTER" to exit the parameter setting mode and go back to weighing mode.
- After entering the address number (1-F), press "ENTER" and enter the desired parameters (heating mode, stop mode, time mode). Press "TARE" to store the parameters entered.

## 8.5.2 Test mode and setting

- Standard test mode : This mode is the factory default setting. It is suitable for most samples. The heating temperature can be set. The sample is heated to the set temperature and remains at the temperature until the test ends automatically.
- Rapid test mode : This mode is suitable for samples with higher moisture content. The heating temperature can be set. At the beginning of the heating process, the temperature will exceed the set value. Later the temperature will drop to the set temperature and remain until the test ends automatically.
- Gentle heating mode : This mode is suitable for samples with low moisture content, especially if the outer shell of the sample is easily hardened when heated. It takes a longer time for the temperature to rise to the set temperature. The heating time can be selected by the user.
- Press "MENU" to enter the parameter setting mode. Press "ENTER" until the heating mode is shown and the icon flashes . Press "UP" or "Down" to choose the mode and press "ENTER" to confirm.

## 8.5.3 Stop mode setting

- Automatic stop mode : During the test, the moisture content of the sample is continuously reduced through heating. The test will automatically stop when the sample's weight loss is less than 2mg within the specified time (this mode is activated after 15 seconds of heating). Upon reaching the weight loss threshold, the test will stop automatically, and the display will show the sample's moisture content, heating time, current temperature, and set parameters.
- Manual stop mode : The sample heating process will continue until "start/stop" is pressed to end testing.
- Timing Stop Mode : Stop time is set by the user. The sample heating process will continue until the set heating time has passed. Press "MENU" to enter the parameter setting mode. Press "ENTER" until the shutdown mode when flashing . Press "UP" or "Down" to choose the stop mode. Press "ENTER" to confirm.
- Go to the next parameter (temperature) setting.



## 8.5.4 Heating temperature setting

The instrument temperature setting range is from 0-199 degrees. Press the "MENU" to enter the parameter setting mode and press the "ENTER" key until the  $120^{\circ}\text{C}$  flashing. Press "UP" or "Down" to choose the temperature. Press "ENTER" to go to the following setting (time setting). The icon  $120^{\circ}\text{C}$  will display the current temperature when it's heating.

## 8.5.5 Heating time setting

- The operator needs to set the stop time when in timing stop mode. Press the "MENU" to enter the parameter setting mode and press the "ENTER" key until the  $88:88$  flashing. Press "UP" or "Down" to choose the temperature. Press "ENTER" to confirm.
- The operator needs to choose the heating cycle when in gentle heating mode.

## 8.5.6 An example

- Use water as the sample.
- Press the "MENU" to enter the parameter setting mode. Choose   . Temperature:  $120^{\circ}\text{C}$ . Press "ENTER" and go to weighing mode.
- Put a piece of dry paper on the pan. Press "Tare" to clear the weight. Put 3g of water on the paper and wait until the weight reading is stable. Press "START/STOP" to begin the test. Wait for the alarm to sound twice and then check the result. The m% should be 100%.

*Weighing error or sample weight deficiency can lead to inaccurate test results.*

## 8.6 Calibration

When an error occurs calibration can increase measurement accuracy.

- Press the "Reset" key and hold until the display shows "-cal-".
- When the display starts flashing "100.000", put the sample intended for calibration on the pan. The display should show "====".
- Wait till the display shows "100.000" and then remove the sample.

- After removing the sample the display will show "===== " again. Wait till it shows "0.000" and the calibration is complete.

## 8.7 Baud Rate Setting

Press "ON" then release it and press "TARE". The screen will show "1200/2400/4800/9600". Press "Enter" to choose the baud rate you need. Press "Reset" to go back to the test page.

## IX Prompt of Display

Prompt	Reason and Solution
UNDEr19	The sample weight is less than 1g. Put on more than 1g of sample.
Lo tEr77P	The temperature setting is less than 40°C. Reset the temperature.
Lo305EC	The testing time is less than 30 seconds.
HAL06	The power for halogen lamp is bad.
Lo377 IN	The time setting for soft testing mode is less than 3 Minutes.

## X Print Test Results

- Please choose a printer that is compatible with the moisture analyzer
- Use the following steps to print the moisture analyzer measurements:
  1. Press and hold "Menu" until the display shows "print".
  2. Select the print language using the "up" or "down" keys: L-C (Chinese) or L-E (English). Press "Enter" to go to the next step.
  3. Choose which result to print by selecting from the numbers 1-5. 1 – indicates the latest test result. Press "enter" to confirm printing.
  4. The printer will print the test report automatically.
  5. Please do not press any key on the print panel during printing.

## XI Usage Tips and Maintenance

- Warm up the moisture analyzer for 30 minutes and do a calibration before using it for the first time.
- Every time a new sample is loaded in the moisture analyzer, please allow 5 seconds for the moisture analyzer to stabilize before beginning the test.
- Cover the heater when not in use and do not put any weight on the pan. The halogen lamp may be crushed if excessive weight placed on it.

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