




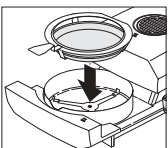

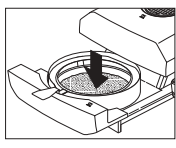



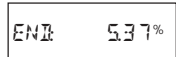

Short-form operating instructions

HR83 Moisture Analyzer





For detailed information see operating instructions

METTLER TOLEDO

Moisture determination (chronological sequence of the measurement cycle and status display "User Guide")

<p>Switch on</p>  	<p>1 Standby mode</p> <p>Reset</p>  <p>Return to standby mode at any time with «Reset»</p>	<p>2 Load pan</p> 	<p>3 Tare</p> <p>→ 0/T ←</p> 	<p>4 Weigh in</p> 	<p>5 Start</p> <p>Start</p> 	<p>6 Drying</p> <p>wait</p> 	<p>7 Read result</p>   
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Enter drying temperature (standard and rapid drying)

°C 125

°C 130

Enter drying time










min 3:30

min 4:00

Select method

Select method:








Method

12

Numeric entries

°C 95

or:

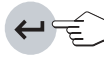
7 8 9

4 5 6





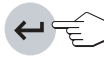
1 2 3

0 . ←

°C 125





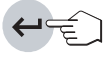


Alphanumeric entries

M

MARGARINE

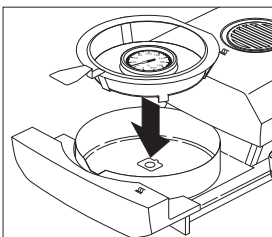
Heating module adjustment

W.CAL: NO


T.CAL: NO

T.CAL: YES



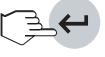
Start

wait




Read off 1st temperature on temperature adjustment set and enter:

T.CAL: 102

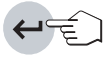


wait



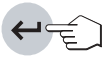


Read off 2nd temperature on temperature adjustment set and enter:

T.CAL: 158



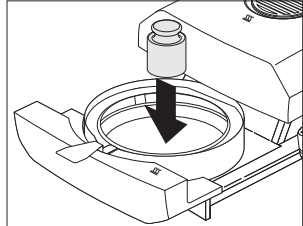
Balance adjustments

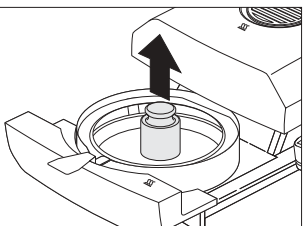
W.CAL: NO

W.CAL: YES

W.CAL: 5000g




W.CAL: 0000g



Function keys


Selection of the switch-off criterion




Automatic switch-off

1: Quick drying sample


5: Slow drying sample




Manual switch-off with the «Stop» key



Free switch-off one free switch-off criterion for each method




Timed switch-off




Test measurement with record printout

Selection of the display mode




Moisture content

0 -100




Dry content

0 100




Current sample weight in grams

g



ATRO moisture content


0 -1000




ATRO dry content

0 1000


Selection of the drying program




Standard drying



Step drying



Rapid drying



Gentle drying (with temperature ramp)



Error messages

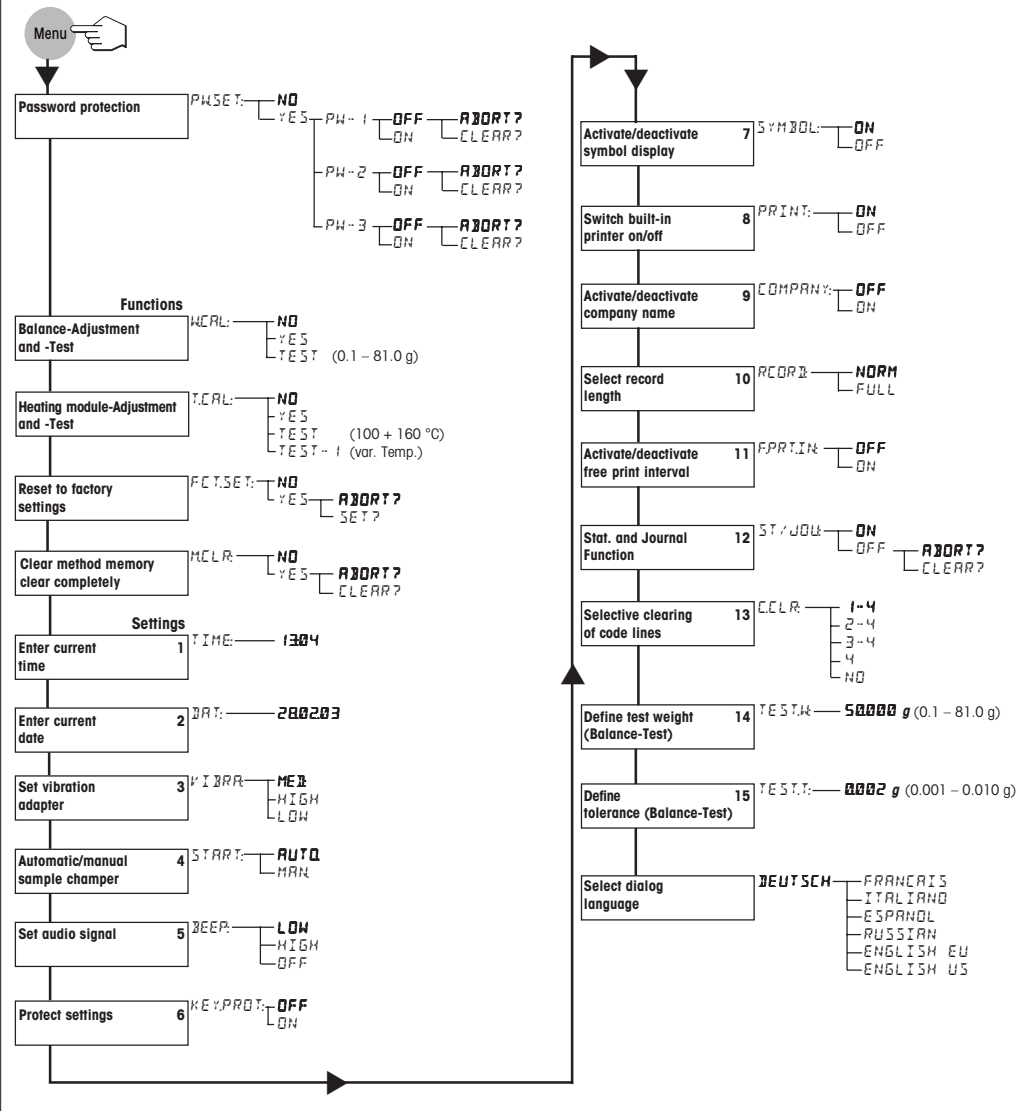
ERROR: 1	Cause: No stability during taring or adjustment Remedy: Seek stable surroundings/optimum location/Take care that no part of the sample or the sample pan touch the draft shield element or the sample pan holder
ERROR: 2	Cause: No or wrong adjustment weight loaded Remedy: Load correct adjustment weight
ERROR: 3	Cause: Loaded sample weight too low Remedy: Weigh in sample with minimum weight (100 mg)
ERROR: 4	Cause: Sample vessel has not been tared Remedy: Tare sample vessel
ERROR: 5	Cause: Upper/lower limit of admissible input range violated. For the «Target» key, see Operating instructions Remedy: Enter value in admissible range. For the «Target» key, see Operating instructions
ERROR: 6	Cause: Keypad has been locked in menu, printer deactivated in menu Remedy: Cancel keypad locking, activate printer in menu
ERROR: 7	Cause: The selected switch-off criterion does not permit a time entry Remedy: Select switch-off criterion "Timed switch-off"
ERROR: 8	Cause: Time limit for value entry in heating module adjustment exceeded (10 minutes) Remedy: Repeat heating module adjustment and enter value in good time
ERROR: 9	Cause: Undefined condition Remedy: Press «Reset» or switch instrument off then on again with «On/Off» key.
ERROR: 10	Cause: Sample chamber has not cooled down sufficiently Remedy: Allow the instrument to cool down to the starting temperature
ERROR: 11	Cause: Password was entered incorrectly Remedy: Enter password correctly
ERROR: 12	Cause: The method parameters are protected by a password (PW-1) Remedy: Reset password PW-1, change the methods and set a new PW-1

Important: You must acknowledge the error messages with the «Reset» key before you can continue working with the instrument. Consult the operating instructions of your instrument for information on other error messages.

Record printout long (example)

A	----- - MOISTURE DETERMINATION - -----	A	Record title
B	COFFEE LTD	B	Company name text
C	PRODUCTION XY	C	Department name text
D	METTLER TOLEDO Halogen MoistureAnalyzer	D	Manufacturer and Designation of the instrument
E	Type: HR83	E	Type of the instrument
F	SNR: 1234567890	F	Serial number of the instrument
G	SW: 2.01	G	Version number of the software
H	Balance-Adjustment 52	H	Identification of the balances adjustment
I	Dryer Unit Adjustm. 23	I	Identification of the heating module adjustment
J	Measurement 12	J	Consecutive number of the measurement
K	Method: 38 COFFEE POWDER	K	Number and Name of the selected method
L	C1: QUALITY CHECK	L	Comment lines
M	C2: BEFORE PACKING	M	Selected switch-off criterion
N	C3: CHARGE 4711	N	Selected drying program
O	C4: HANS MUSTER	O	Ramp time
P	Switchoff mode 2	P	Drying temperature (set temperature)
Q	Gentle drying	Q	Selected display mode
R	Ramp time 1:00 min	R	Sample weight at start of drying
S	Drying temp. 105 °C	S	Measured value at each print interval
T	Disp. mode 0...-100 %MC	T	Total time of drying
U	Start weight 2.507 g	U	Dry weight of the sample in grams
V	1:00 min -2.51 %MC	V	Moisture content
W	2:00 min -3.39 %MC	W	Final result in the selected display mode
X	3:00 min -3.71 %MC	X	Field for signatures
Y	Total time 3:19 min	Y	Date and time at the end of the measurement
	Dry weight 2.412 g		
	Moisture 0.095 g		
	End result -3.79 %MC		
	Signature:		
	----- 30.06.03 --- 15.18 -----		

Menu overview



Method menu overview

