






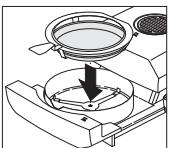



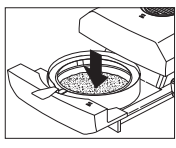






Short-Form Operating Instructions

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>  <p>END: 5.37%</p> 
---	--	---	--	---	--	--	--


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

Heating module adjustment

°C 95



or:

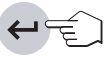
7 8 9

4 5 6

1 2 3


0 . ←

°C 125




Alphanumeric entries


A..Z




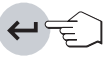
M



A..Z




MARCAP

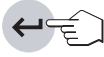
Heating module adjustment

Menu

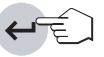
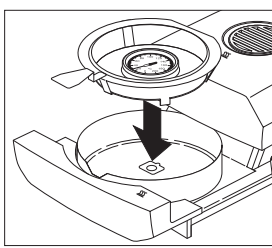
W.CAL: NO



T.CAL: NO




T.CAL: YES


Start

wait




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

T.CAL: 102



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


T.CAL: 158



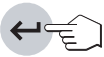
Balance adjustments

Menu


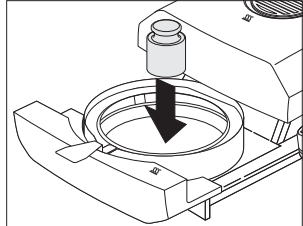
W.CAL: NO




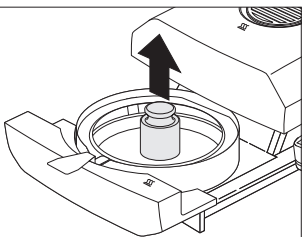
W.CAL: YES



W.CAL: 50.0000






W.CAL: 50.0000






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**

 **Rapid drying**

 **Gentle drying** (with temperature ramp)

 **Step drying**



Error messages

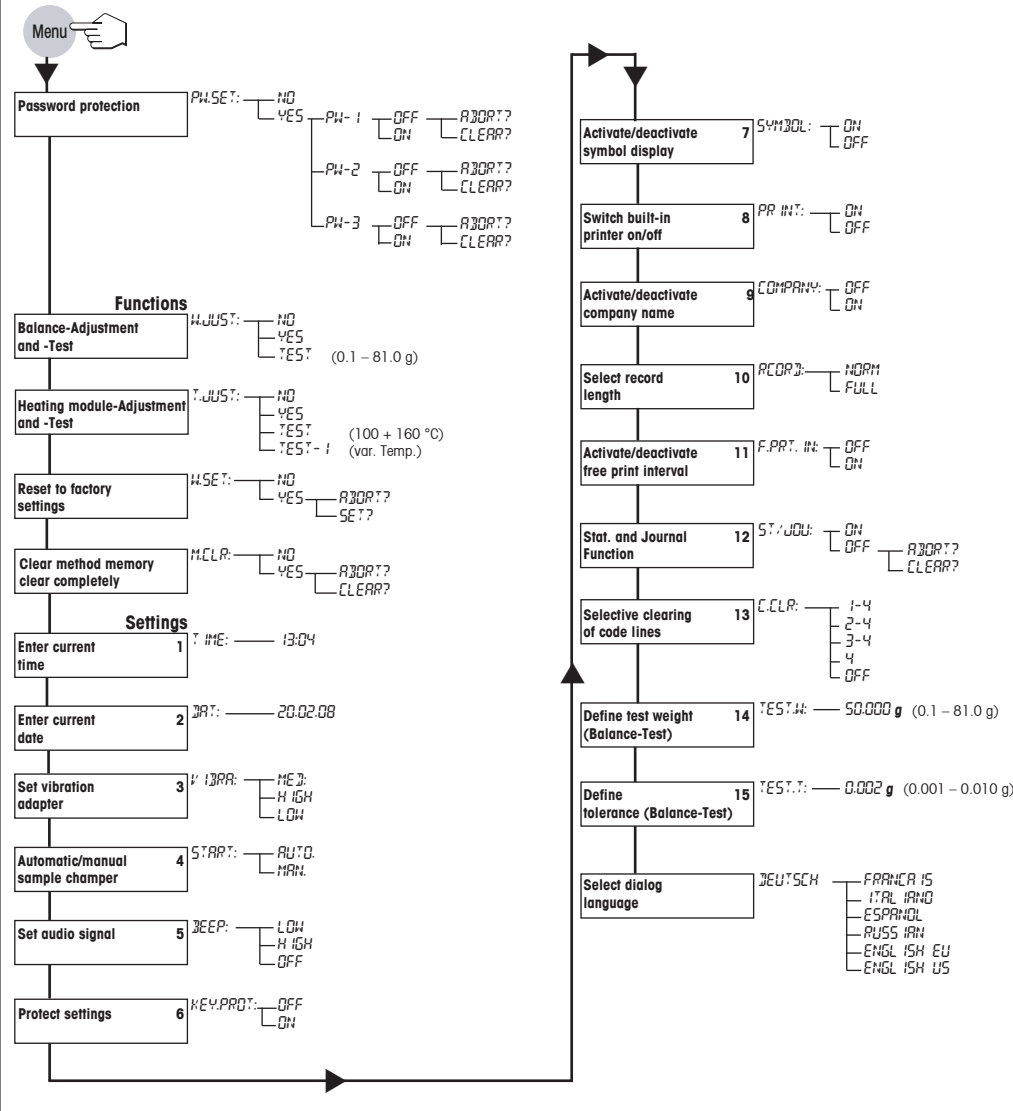
ERROR: 1	Cause: No stability during taring or adjustment. Remedy: Seek stable surroundings/optimum location/Take care that no part of the sample or the sample pan touch the draft shield element or the sample pan holder.
ERROR: 2	Cause: No or wrong adjustment weight loaded. Remedy: Load correct adjustment 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.

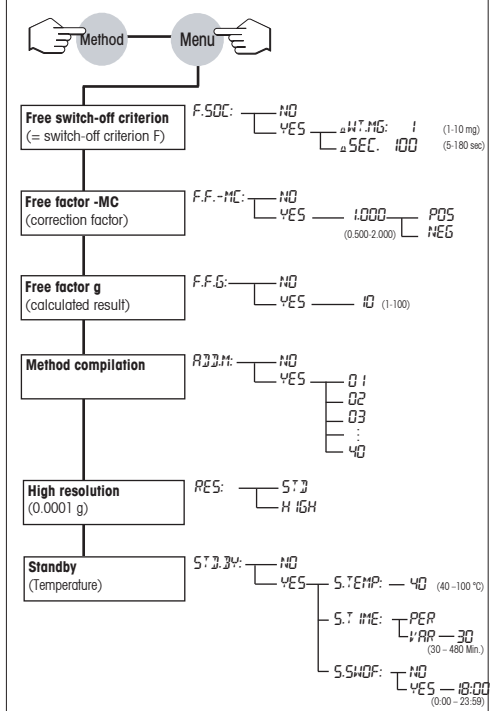
Record printout long (example)

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:		
	-----30.06.08-----15.18-----		

Menu overview



Method menu overview



Selecting the setting within a menu item:

