Operator Manual
SINAR Model 6095 AgriPro™

Rev 2

Technical Specifications

Dimensions
21 x 7.5 x 7.5 cm

Weight
1.5kg (including carrying case)

Storage Temperature
-20 deg C to + 55 deg C; Humidity up to 98% non condensing

Construction
Non shock ABS Plastic
Measurement cell in polished Aluminium
Supplied with shock proof carrying case

Display
Direct digital display with accuracy to one decimal point

Power Supply
9 volt Alkaline Battery

Measurement range.
5 -45% depending on crop

Precision
+/- 0.5 %mc or better to Oven Method @ 135 +/- 2 deg C for I hour

Calibrations - individual calibrations for all Grain types including:
Coffee(Green Bean)
Wheat
Barley
Oats
Oil Seed Rape
Linseed
Peas
Beans

Repeatability
Standard Deviation of 0.05 to 0.15 (dependant on application)

Functions
Automatic temperature correction with calculation of average.

Warranty
2 years against component failure and faulty workmanship

Manufactured in the European Community

Operating Instructions:

1.   Measuring %mc

a)   Inspect the cell to ensure it is clean and empty
b)   Turn on the analyzer by pressing ON/TEST button. The >> MEASURE << menu will be automatically displayed.
c)   Accept mean by pressing the ON/TEST button.
d)   By using the ⬆ or ⬇ arrows select the crop for measurement.
e)   Fill the measuring cell evenly to the top, ensuring the crop is level with the top of the cell. Screw on the cap and tighten until the stainless steel pressure indicator is flush with the top of the cap. see figure 1a - 1 d.
f)   Press the ON/TEST button. The word >> TEST << will be displayed for approximately 10 seconds before the moisture content result is displayed.
The actual %mc will be displayed on the left-hand side of the LCD e.g. 14.9 % and the right-hand will show the average of the last measurements, e.g. 14.7%.
g)   The analyzer will remain with the chosen crop displayed and a new measurement can be made by emptying the test cell and re-filling with a new sample.

Note: DO NOT RE-TEST THE SAMPLE WITHOUT EMPTYING AND REFILLING.

2.   To select crop or function

a)   When pressing the ON/TEST the analyzer will show software version and the country code, followed by the level of battery and lastly the >> MEASURE<< menu. If you wish to accept this choice of menu press the ON/TEST button and the desired crop can be selected by use of the ⬆ or ⬇arrows. If you wish to return to the >> MEASURE<<menu simply press the ESC/OFF button and use the ⬆ or ⬇arrow keys to cycle through the menus.

3.   How to adjust a calibration

Each calibration can, if required be adjusted individually, up or down by 3.9%mc by increments of 0.1%mc.

a)   Turn the analyzer by pressing the menu >>MEASURE<< will be displayed.
b)   Using the ⬆ or ⬇ arrow keys the menu >>CALIBRATION<< can be selected
c)   Accept the menu by pressing ON/TEST.
d)   By using the ⬆ or ⬇ arrow keys select the desired crop.
e)   Accept this choice by pressing ON/TEST. The numeric value +0.0 is shown on the display.
f)   By using the ⬆ or ⬇ arrow keys the desired calibration can be adjusted up to a maximum of -3.9 to +3.9 %mc.
g)   Accept the adjusted value by pressing the ON/TEST button.

Note: Where an adjustment has been made to a factory installed calibration a * will appear at the end of the crop name.

Some calibrations are factory biased on delivery and should only be changed with extreme caution.

4.   How to clear the calculated average values.

a)   Turn on the analyzer by pressing the ON/TEST button. The menu>>MEASURE<< will appear on the display.
b)   By pressing the ⬆ or ⬇arrow key the menu >>CLEAR AVERAGE<< is selected.

Figure 1a. Fill the measuring cell evenly to the top, ensuring the crop is level with the top of the cell. Screw on the cap and tighten until the stainless steel pressure indicator is flush with the top of the cap.

Figure 1 b

Figure 1 c

Figure 1 d

❌ Screw cap under tightened. Stainless steel indicator sunken in cap

✔ Screw cap correctly tightened. Stainless steel indicator level with cap

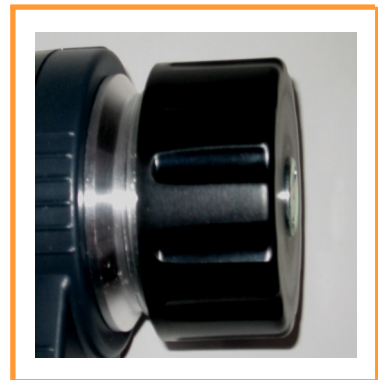❌ Screw cap over tightened. Stainless steel indicator proud of cap.

4.   How to clear the calculated average values(continued)

c)   Accept this choice by pressing ON/TEST. The wording "OK" will appear on the display followed by automatic return to >>MEASURE<<.

5   How to turn the unit off.

a)   Press the OFF/ESC button and hold down until the analyzer is turned off.

Note: The analyzer will automatically turn off 45 seconds after the last operation to conserve battery power.

5.   Constructing a Calibration.

If you require a calibration for a particular crop not included in the analyzer, then this can be done by selecting the calibration with name "BIT".

a)   Turn on the analyzer by pressing the ON/TEST button. The menu>>MEASURE<< will appear.
b)   Accept the menu by pressing the ON/TEST button.
c)   By using the ⬆ or ⬇ arrow keys select the "BIT" scale.
d)   Fill the test cell with the crop sample under investigation of known moisture content, screw down the cap and make a test as described in section 1.
e)   Write down the value which appears on the display together with the known moisture content value.
f)   Repeat the steps d) & e) with different known moisture content samples. Preferable at 0.5%mc change in sample over the moisture range of interest.
g)   A calibration chart can be constructed by plotting the BIT values against %mc. Unknown sample values can then be calculated by reading the BIT value and using the calibration scale to look up the moisture content of the unknown.

6.   How to read temperature.
Select the "BIT" calibration and proceed as detailed in 5.a) - 5.d) above.
The temperature is the value displayed on the right in ° C.

7.   Error Messages

The following error messages may occur on the display:

Error Message	Definition
Temperature ++	Temperature above limit
Temperature - -	Temperature below limit
Hi	%mc above upper limit of calibration
Lo	%mc below lower limit of calibration
Change Battery	Replace battery

8.   Useful information

Note: 1   Some grains, such as grass seeds are too small to push up the pressure indicator of the screw cap. In these circumstances screw down the cap all the way before taking a eading. Do not attempt to add additional grain to the cell having once compressed the sample.

Note 2.   High moisture grain will continue to compress in the test cell once the pressure cap is screwed down. Higher readings than actual may result if the TEST button is not immediately pressed after screwing down the cap.

Note 3.   Due to different size grains one can expect slight variations in measurement of the same sample due to variation in packing. To compensate for this effect it is recommended that 3-5 measurements are made of the same batch of grain and the average result is used as a true %mc in the grain. Remember to use a fresh sample for each new measurement.

Note 4.   If the sample temperature is greater than that of the measuring cell e.g samples coming directly from a dryer, it is recommended to preheat the measuring cell as follows:-

a)   Fill the measuring cell with the hot sample and wait for 40 seconds before emptying
        the cell.
b)   Refill the cell with a new hot sample and test as described in section 1.

9.   Storage and Use of the Analyzer

It is recommended that the analyzer is:

Always stored in the carrying case.

Not exposed to large temperature fluctuations.

Kept dry.

Allowed to acclimatise when taken from a cold storage location to a warmer testing environment to prevent possible condensation.

Cleaned thoroughly on all surfaces with a clean damp cloth and the battery removed before storage at the end of the season.

If the above instructions and guidelines are followed you can expect a long and excellent performance from your Sinar Model 6095 AgriPro Moisture Analyzer.