



## Moisture meter



EN Operating instructions



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# WILE 55 - OPERATING INSTRUCTIONS

## 1. Box Contents

- Wile 55- moisture meter
- carrying case
- carrying strap
- operating instructions
- 9 V 6F22 battery (installed).

## 2. Usage

### 2.1. Preparation for the measurement

**Important:** The scales of Wile- moisture meter are developed to measure the quality of standard grain. Exceptional growth conditions and new sorts of grain can considerably affect grain features. Therefore, before the new harvest season we recommend to check the readings of your meter against an oven dried sample. Always take measurements of several samples and calculate the moisture content of the load by calculating the average of those measurements. If the measurement result is different, adjust the result according to the instructions in paragraph 3.4. This is especially important when you handle a lot of grain.

If the meter has not been used for some time, follow these steps:

- replace the battery (for more details see paragraph 5. Battery)
- read the operating instructions thoroughly
- make sure that the measuring cup is empty and clean
- if needed clean the measurement cup with a wood stick or tough brush.

### 2.2. Taking the sample

- Always take the samples from different places of the load. We recommend taking at least five samples. Define the moisture content of the load by calculating the average value of those five measurements.

- Remove scrap, green and other exceptional grains from the

samples.

- When taking the sample directly from the dryer wait until the temperature compensation is done or pre-warm the measuring cup with warm grain.
- Remember that the moisture inside the load in the grain dryer varies until the final stage of the drying process.

### 2.3. Filling the measuring cup



- fill the measuring cup one quarter with grain (1)
- gently shake the meter (grains will settle tighter in the measuring cup) (2)
- fill the measuring cup to the brim (3)
- wipe off excess grain (4)
- twist and tighten the cap until the center of the cap is on the same level with the cap's surface (5,6).

### 2.4. Quick measurement instructions

Switch on the meter with a single press on the **P**-button. The

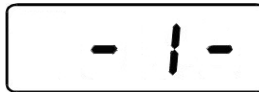
number of the selected scale (grain) will appear on the display. After that the meter will automatically calculate the measurement and in a moment the result of the measurement (moisture content) will be displayed. The meter automatically compensates the temperature difference between grain and the meter. After the measurement the meter will automatically turn off and will be ready for a new measurement.

## 2.5. Measurement step by step

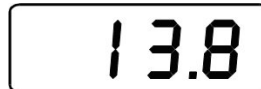
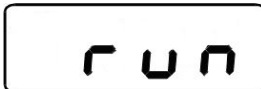
Switch on the meter with a single press on the **P**-button. First all the used marks will be displayed.



Then the number of the selected scale (grain) will appear on the display, for example **-1-**.



The meter will automatically calculate the measurement. During the measurement you will see **run** and then the moisture content in weight percent will be displayed, for example **13.8**.



After the measurement the meter will automatically turn off and will be ready for a new measurement.

You can ensure that the result represents the average quality of the entire grain load by taking the measurements from several different places of the load.

## 2.6. Checking and choosing the scale

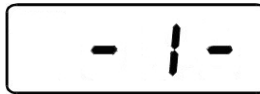
Always check that you are using the correct scale. The complete list

of scales can be found on the side sticker of the meter. Choose from the list, the appropriate scale for your grain. There is an additional **-0-** scale in the meter. **-0-** scale is used by Wile service department to calibrate the meters.

**-0-** scale is a basic scale which can also be used together with conversion charts. In this case you make the measurement using **-0-** scale and find the corresponding moisture value from the chart.

## 2.7. Checking the scale

Switch on the meter with a single press on the **P**-button. Wait the number of the currently selected scale, for example **-1-**, to appear on the display.



## 2.8. Choosing the scale

Switch on the meter with a single press on the **P**-button. Wait the number of the currently selected scale, for example **-1-**, to appear on the display. When the number of the scale is displayed, you can change the scale by pressing the **F**- button. When the number of the correct scale is displayed, keep waiting. You will see **run** on the display and in a moment the meter will turn off. Now the meter is ready for use.



## 2.9. Display the scale adjustment

If you want to adjust the scale or if the selected scale has already been adjusted, see paragraphs **3.4.** and **3.5.**

### 3. Processing the result

#### 3.1. Automatic average calculation

The meter can calculate the average value of several measurements. After you have made a measurement, the result can be saved for the average calculation.

#### 3.2. Saving the measurement result for the average calculation

Make the measurement as usual. When the result is displayed, press once the F- button. A will appear on the display and the meter will add the measurement result for the average calculation.



The average calculation is ready when two numbers, for example **A05** and **13,8** appear alternating on the display.



The values used in the example mean:

- **A05** - the number of measurement results included into the average value is 5
- **13,8** - the average value of those 5 measurements.

If you do not want to include the measurement result into the average calculation, don't do anything after the measurement, just wait until the meter automatically turns off it is then ready for the next measurement.

**Before calculating the average value of every new load of material, make sure that average calculation memory is empty and erase it if required.**

#### 3.3. Erasing the average calculation memory

Press and hold the F- button. Switch on the meter with a single



press on the **P**- button.

When you see **A** on the display, release the **F**- button. If the average value appears on the display, you can erase the average by pressing and holding the **F**- button. The memory is erased, when **0** and then **A00** appear on the display.



**Note! Always remember to erase the average memory after the measurement series so that the previous average value will not affect the average value of the new load.**

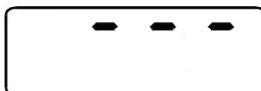
Average calculation memory can accommodate a maximum of 99 results. If no more results can be added to the memory, the number on the display will start blinking.

### 3.4. Adjusting the result

If the quality of the measured material is different from normal, the result can be incorrect. You can adjust the result shown by the meter to conform to a reference value.

#### Adjusting the value upwards

When the measurement result is displayed press twice on the **F**- button. **Three bars will appear on the upper edge of the display. Wait for a moment and the result appears on the display again.** Now each time you press the **F**- button, 0,1 moisture % will be added to the result.



#### Adjusting the value downwards

When the measurement result is displayed, press the **F**- button three times. **Three bars will appear on the lower edge of the**

**display. Wait for a moment and the result appears on the display again.** Now each time you press the **F-** button, 0,1 moisture % will be deducted from the result.



**Note! This adjustment is specific to the used scale. In other words there may be defined specific adjustment for each scale.**

### **3.5. Display the scale adjustment**

If the selected scale has been adjusted, you will see the adjustment displayed after run- text. Each scale can be adjusted for +/- 4 moisture percent. The value displayed may be for example “**-.5**”. This value means that the scale was adjusted downwards for 0,5 moisture percent.



When the scale adjustment value is displayed, you can not change it. You can adjust the scale only when the measurement result is displayed. For more information see also paragraphs **3.4. Adjusting the result** and **4. Grain properties**

### **3.6. Erasing the scale adjustment**

When the moisture content result is displayed, you can erase the adjustment. To do that press and hold **F-** button for about 6 seconds. When the result value on the display changes, you know that the adjustment has been erased.

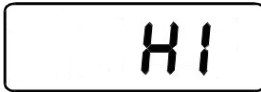
**Always make several measurements, because the moisture content in the full load can vary greatly.**

### **3.7. Exceptional result**

If the measurement result exceeds the upper limit of the

measurement range, you will see **HI** on the display.

If the measurement result falls below the lower limit of the measurement range, you will see **LO** on the display. The measurement range for grain and seeds is approx 8-35% and for oil seeds 5-25%. If you get **HI** or **LO** as a measurement result check if the correct scale is used and always make control measurements.



#### 4. Grain properties

The scales of Wile 55- moisture meter are developed in accordance with the official methods of definition of moisture content. To develop the scales we use the samples which represent mostly cultivated grain sorts in standard growth conditions.

Exceptional growth conditions can affect the quality of the grain and the electrical properties of the seeds.

This can affect the measurement result. For example, if specific weight is 10% lower than normal, the meter can show too low moisture content. Correspondingly if specific weight is higher than normal, the meter can show too high moisture content.

Therefore, before the new harvest season we recommend to check that the readings of your meter conform to the result of oven drying. If the measurement result is different, adjust the result according to the instructions in paragraph 3.4. This is especially important when you handle a lot of grain or when you suspect that the quality of grain you handle is different from normal.

#### 5. Battery

The meter runs on 9V battery of the type 6F22 or a similar alkaline battery. The battery is included in a new meter and is ready for use.

The meter gives a warning about the low battery voltage with

LOBAT-text in the upper left part of the display.



If the battery is almost empty, the display will show some random marks and **LOBAT**- text can fade.

The battery cover is situated on the bottom of the meter. Open the cover by pushing the locking lever over the battery symbol and replace the battery.

Remove the battery from the meter, if the device is not used for a long period of time. To ensure the correct functioning of the meter replace the battery when needed. If you suspect a fault in the meter, always test the battery first. Please note, that a battery slowly discharges itself even if the meter is not used.

## 6. Technical features of the meter

Wile 55 measures the moisture content of whole grains and seeds. The meter shows the moisture content of the material in weight percent. Measurement method is based on the alternating current resistance (capacitance) measurement of the material. The repeatability of the measurement is +/- 0,5 moisture percent or better.

The measurement range is (for more information see the package box ):

- grain and seeds 8-35%
- oil seeds 5-25%.

The grains and corresponding scales' numbers are listed on the sticker on the right side of the meter.

Technical features of Wile 55- moisture meter

- automatic average calculation
- opportunity to adjust the measurement result to conform to the result of oven drying as a reference value.

Method of moisture content definition is based on the technical specification: grain **ISO 712**, oil seeds **ISO 665** and corn **ISO 6540**.

Our method to sample the grain is based on **ISO 950** standard and while handling the samples we follow **ISO 7700/1** and **ISO 7700/2** standards (ISO = International Organization for Standardization).

## **7. Warranty and the maintenance of the meter**

All Wile products carry a 12 month manufacturer warranty for materials and workmanship. The warranty is valid for 12 months from the date of purchase on the receipt. To claim the warranty, the customer should return the defect product to the Manufacturer, reseller, or the nearest Wile Service Partner. The warranty claim must be accompanied by the description of the fault, copy of sales receipt and customer's contact information. The manufacturer / Wile service partner will repair or replace the defective product and return it as soon as possible. The liability of Farmcomp is limited to the price of the product in maximum. The warranty does not cover any damage that is caused by incorrect or careless use of the product, dropping the product or damage that is caused by repairs that are carried out by non-authorized personnel. Farmcomp does not accept any responsibility for any direct, indirect or consequential damages that are caused by the use of the product or the fact that the product could not be used.

The meter does not require any special service.

The meter can be cleaned with wet or dry fabric. Do not use any detergents or other strong cleaning substances. Do not put any liquids inside the meter.

Keep the meter in a dry place, preferably in room temperature. Prevent the meter from falling and getting wet.

**If you suspect a fault in the meter, please always test the battery first. If the meter requires repair, contact your local Wile retailer for assistance. Wile moisture meters can be calibrated and repaired only by Farmcomp and authorized Wile service partners.**



**Declaration of Conformity  
according to ISO/IEC Guide 22 and EN 45014**

**Manufacturer's name:  
and address:**

Farmcomp Oy  
Jusslansuora 8  
FIN-04360  
TUUSULA  
FINLAND

declares, that the product

**Product name:  
Model numbers:**

Moisture tester  
Wile 55

*conforms to **the EMC directive 2004/108/EC** by following the  
harmonised standard*

EN 61326-1:2006



Tuusula, Finland  
April 2, 2009

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