

PIN-TYPE LED BAR GRAPH

MOISTURE METER

USER GUIDE

V1.0



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INTRODUCTION

Thank you for purchasing the Trinator Moisture Meter (TMM) Pin-Type LED Bar Graph Moisture Meter. Please read this user's manual carefully and thoroughly before using the meter.

The TMM is designed for applications in post-harvest cannabis processing. Examples include:

- Checking the moisture content of your flower before trimming or packaging

The meter bases its measurements on the relationship between the moisture content of a material and its electrical conductivity. The wetter a material, the higher its conductivity.

The two replaceable steel pins at the top of the TMM serve as electrodes of a conductance meter optimized for measuring moisture content. The meter displays measurements of the material's % moisture.

For super dense flower, the meter's readings largely reflect surface moisture content because:

1. Moisture that is close to the surface has a greater effect on the reading than moisture deep below it; and
2. The pins of the TMM are only 3/8 in. (10mm) long and cannot be driven deep into dense material. For softer materials like soil, paper, or powders, readings are more likely to reflect the average moisture level of the material between its surface and the penetration depth of the pins (normally far less than 3/8 in.). The TMM's front-panel bar graph of 10 LEDs measures % moisture over two different ranges: 7 to 15% (LOW), and 16 to 35% (HIGH). A slide switch on the back of the meter requires the user to choose the right range for the material under test. The same switch functions as the power switch. Whenever the meter is powered on, the bar graph momentarily indicates the remaining battery life. After powering on, the meter's calibration can be checked by inserting the test pins into holes in the pin protection cover.

The TMM is powered by a 9V battery included in the blister pack.

DISCLAIMER

Eteros Technologies recognizes that the Trinator Moisture Meter is a purpose-built device for measuring the moisture content of cannabis by licensed producers. Please check all municipal, provincial/state, and federal laws and regulations before using the Trinator Moisture Meter. Eteros Technologies does not promote or condone the use of equipment in any way that may be deemed illegal.

Eteros Technologies recognizes that our equipment can be used for processing herbs, hops, flowers, and many other products. It is not the responsibility of Eteros Technologies to confirm alternative applications for our equipment.

KEY FEATURES

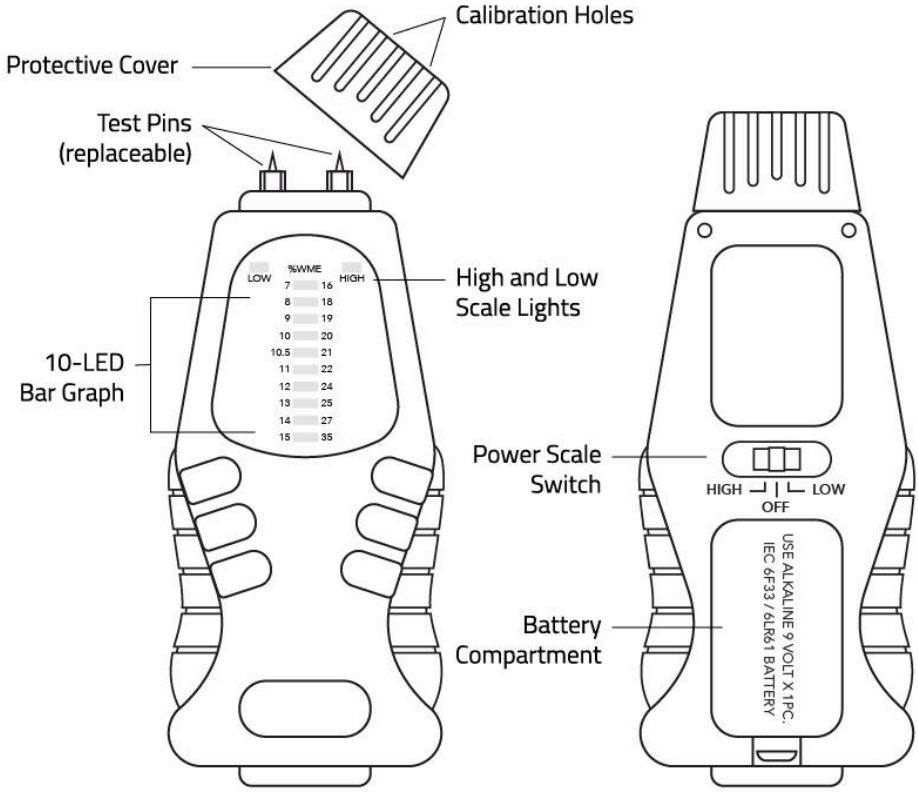
- 10-LED display
- 7 to 35% measurement range, with separate HIGH and LOW scales
- Protective cap doubles as calibration checker
- Full battery and low battery indications

WHAT'S IN THE BLISTER PACK

The TMM comes in a plastic blister pack along with a 9V battery, and a protective test pin cover.

PRODUCT OVERVIEW

The figure below shows all of the controls and indicators on the front and the back of the TMM, as well as the location of the battery compartment on the back.



SETUP INSTRUCTIONS

INSTALL BATTERY

To open the battery compartment, turn the meter over and push up the flange on the bottom of the battery compartment cover. Lift and remove the cover and set it aside. Plug the included 9V battery into the wired socket inside the compartment. The terminals of the battery and the socket mate in only one way, with the smaller male terminal plugging into the larger female terminal. Close the battery compartment by replacing its cover and snapping it shut.

OPERATING INSTRUCTIONS

1. **POWER ON:** To power on the TMM, slide the Power/Scale switch on the back of the meter to the HIGH position.

Moving the switch should cause some or all of the LEDs on the front panel to illuminate in sequence from bottom to top. If no LEDs light up, you can assume that the battery is dead and must be replaced.

The number of LEDs that light up corresponds to the remaining battery life. If all eight LEDs light up, that means the battery is fully charged. If only a few light up, the battery is weak and should be replaced soon.

A few seconds after the LEDs light up, they will go dark. If most of the LEDs light up at power on, the HIGH LED at the upper right will light and remain lit. If only a few LEDs lit up, the HIGH light will blink, indicating a weak battery that should be replaced.

2. **CALIBRATE:** To check the calibration of the TMM, power on the meter by sliding the Power/Scale switch to the HIGH position. Remove the protective cap from the top of the meter, taking care not to stab yourself with the two sharp pins beneath the cap. Then turn the cap over and place its two holes over the two pins. If the meter is calibrated, an LED at the 18%, 19%, 20%, 21%, and 22% positions on the HIGH scale will illuminate.

3. **INSERT PINS:** With the cap removed, insert two metal pins into the cannabis flower you want to test. Push the pins gently but firmly into the bud, ensuring they penetrate to a sufficient depth to provide an accurate reading. Try to insert the pins in different locations on the bud to get a representative measurement.

Once the pins are inserted, give the meter a moment to stabilize and take a reading.

4. **HIGH MOISTURE READINGS:** If the material has a moisture level between 16% and 35%, one of the LEDs will light up. The number at its right indicates the moisture level in % moisture content.

If the material's moisture level is higher than 35%, the bottom (35%) LED will light up. This indicates that the material's moisture level is beyond the range of the TMM. If the material's moisture level is lower than 16%, no LED will light.

LOW MOISTURE READINGS: To determine whether the material's moisture level is lower than 16%, slide the Power/Scale switch on the back of the meter to the LOW position. If one LED lights up, the number at its left indicates the moisture level in % moisture. If no LED lights, the material's moisture level is less than 7% and beyond the measurement range of the TMM.

5. **REPEAT AS NECESSARY:** If you're testing multiple buds or different parts of the same bud, repeat the process. Ensure you're getting consistent readings across all samples.

MEASUREMENT TIPS

Remember, while a moisture meter can provide valuable information, it's just one tool in the process of monitoring and managing cannabis flower quality. Use it in conjunction with other methods such as visual inspection and tactile assessment to ensure optimal results.

- Never use force to drive the pins into a hard surface.
- When measuring the moisture level of soil, surface readings will be lower than readings with the test pins deep in the soil.
- Conductive or metallic objects will always light the lowest LED on the bar graph, regardless of the selected scale.

- Measurements are skewed by two variables: ambient humidity and the density of the flower species. The best way to compensate for the effect of these variables is to develop your own moisture level curves, based on your experience working with different cultivars on a day-to-day basis.
- The TMM has no auto power-off function. To avoid discharging the battery, manually power off the meter after each measurement session by sliding the Power/Scale switch on the back to the OFF position.

SPECIFICATIONS

Measurement Range	7 - 35% moisture content over two scales: <ul style="list-style-type: none">• 7% to 15% (Low)• 16% to 35% (High)
Measurement Accuracy	±1 LED
Pin Length	3/8 in. (10mm)
Calibration Check Point	20% ±2 LED
Low Battery Alarm Level	<7.5V
Operating Temperature	32° to 140°F (0° to 60°C) at <80% R.H.
Storage Temperature	23° to 140°F (-5° to 60°C)
Current Consumption	<15mADC
Dimensions	6.5 x 2.7 x 1 in. (164 x 69 x 26mm)
Weight	3.2 oz. (91g)
Power Source	9V battery (included)