

KOSTER

Moisture Tester, Inc.

Moisture Tester USER INSTRUCTIONS

Read All Instructions before Operating



INSTRUCTIONS

The Koster Moisture Tester consists of an evaporation unit, specimen container, digital scale. It is used to accurately measure moisture content within a wide variety of materials, including hay, silage, grains, beans, corn, rice, seeds, nuts, wood chips, etc.



CONTENTS (varies based on bundle)

1. Koster Heater (Platinum includes on/off switch)
2. Aluminum specimen container
3. Digital scale accurate to 0.1g (chargable)

* Pictured items may vary slightly from contents

SAFETY PRECAUTIONS

This unit produces heat temperatures which may exceed 300 degrees, please keep away from children and follow these basic safety instructions to avoid the risk of fire, electric shock and other injuries:

1. Never operate the unit near flammable or combustible materials.
2. The units components can get very hot during operation. To avoid injury, do not touch the enclosure until it has been turned off for at least 5 minutes.
3. Always unplug the unit when not in use.
4. Do not use the unit if any component has been damaged.
5. The unit has a 110 volt current, do not operate in damp or wet locations.
6. Do not use where gasoline, paint or flammable liquids or gases are present.
7. Be sure the ventilation at the bottom of the unit is clear of obstructions.
8. Avoid use of extension cords which may overheat and cause fire or shock.
9. Do not submerge in water or any other liquid.
10. Do not test or dry materials that are visibly dripping wet.
11. Use only small amounts of test materials so as not to block ventilation.

HOW TO CARE FOR YOUR MOISTURE TESTER

1. Turn off and unplug from power supply before cleaning
2. Use a clean, soft and damp cloth to gently clean all surfaces
3. Do not submerge in water or any other liquid
4. Do not spray cleaning liquid or other chemicals on the tester
5. Be sure the vents on the bottom of the unit is free of dust and other elements.
6. Cleaning with compressed air from the top-down is recommended
7. Store in a safe place free of dust, straw, hay, cobwebs and flammable items.

OPERATING INSTRUCTIONS

1. Place scale on a flat, level surface. The scale is a delicate and sensitive device and should be treated with care.
2. Place your sample on center of scale platform.
3. Turn the scale on.
4. Gently place specimen container on to scale and measure 100g of material. For Hay and porous materials use 10g to allow for ventilation during drying process.
5. Carefully spread material evenly in specimen container.
6. Place specimen container upon heater.
7. Plug in cord of heater into 110 volt AC current. Turn on unit.
(True 220V heater available for international use)
8. It may take several minutes for the unit to reach maximum temperature.
9. Dry sample for 30 minutes or established drying time. Then place the specimen container/sample on the digital scale and record the new weight.
10. Return the the specimen container to the heater and dry for another 10 minutes. Place the sample on to the scale and record the second reading measurement. Repeat this step until no change in measurement.
11. The CHANGE IN WEIGHT REPRESENTS THE MOISTURE CONTENT. The final material weight represents the dry matter. For example:

Beginning Weight = 100.0g	10.0g
End Weight = 87.4g	8.7g
Moisture Content = 12.6%	13%

12. Add all the time intervals together to establish the typical drying time for the material being measured.

The Koster Moisture Tester determines moisture by using a faster version of the Oven Drying Method as recommended by the USDA for crops. The typical time for testing some of the most popular crops is as follows:

Crop	Typical Drying Time (minutes)	Typical Moisture Content for Safe Storage*
Corn, Beans	45-60	15% or less
Corn (ensilage)	20-40	60 to 65%
Wheat/Barley	20-30	15% or less
Hay (10 grams)	15-25	25% or less
Silage/Haylage (10g or 100g)	15-30	40 to 60%
Oats, Rye	20-30	15% or less
Rice	40-60	14% or less
Peanuts (shelled)	40-50	10% or less
Wood Chips	60-120	varies

* Extended storage times may require lower moisture levels, please consult your local agricultural agent for your specific crop.

Many factors including temperature, humidity and variety of crop affect the time required to evaporate moisture and consequently the time required to make a moisture test. We recommend that you establish the drying times for the particular crops you harvest within your area. It is fine to go beyond these times as there is no risk of 'over-drying'.

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