



Instruction manual
Koster Moisture Tester

MOSEGÅRDEN A/S

Koster Moisture Tester



Koster Moisture Tester with digital scale

MOSEGÅRDEN A/S

Det lille alternativ, der gør den store forskel



Introduction

Congratulations on your new Koster Moisture Tester.

This user guide describes how to use the Koster Moisture Tester.

Please read the user guide thoroughly before use.

This user guide must be read by all users of the Koster Moisture Tester.



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2. In general

2.1. Producer

Koster Moisture Tester
3077 Nationwide Parkway
Brunswick, Ohio 44212

2.2. Name of device

Koster Moisture Tester for feed and coarse feed

2.3. Machine sign

Koster Moisture Tester
Serial No.: (See the number of the tester)

2.4. Technical specifications

Dimensions: diameter x height:
18 x 30 (40 inclusive Specimen container)
Weight:
2.2 kg (2.4 kg inclusive Specimen container)

The tester uses 220 volts power outlet with earthing pin, 10 amp

3. Safety

3.1. Safety in general

Do not move or touch the device when it is connected to the power supply

3.2. Safety for this machine

The Koster Moisture Tester is fitted with a thermostat to prevent overheating.

3.3. Special risks

The Koster Moisture Tester **MUST NOT** be used if there is a danger of ignition of inflammable materials and liquids.

3.4. Other risks

When in use, the Koster Moisture Tester will get warm, therefore, do not move or touch the device until it has cooled down after use. The device must not be placed among inflammable transport materials before it is cooled down.



4. Overview and application



4.1. Overview

1. Digital scale
2. Fan
3. Heating element
4. Specimen container
5. Power outlet for connecting the device

4.2. Application and function

The Koster Moisture Tester is used to measure dry matter content and water content in feed for animals.

The specimen container is placed on the scale and filled with 100 grams of the product to be tested (up to 100 units if the original Koster scale is being used). Hence, the tester is connected to 220 - 240 volts power outlet in the recommended drying time.

When the drying is finished, shut off the power and the material is weighed again.

The dry matter content of the material = weight of the dried material.



4.3. Abuse and prohibition on use

The device may only be used on a flat surface of non-inflammable material.

Do not use the device near inflammable materials or liquids.

The device may only be used for feed products.

There must be no risk that inflammable materials such as straw, hay and other solid particles can blow onto the device.

Do not use the device for very wet products where there is a risk that liquid will flow down into the electrical components.

The device must not be washed, but can be wiped with a damp cloth. The netting and filters can be removed if there is a need for cleaning. The power connection must be disconnected if the nettings / or filters are removed.

Mosegård A/S cannot guarantee the product's functionality and accuracy, if the abovementioned guidelines are not obeyed

Fault detection

If the device does not heat:

1. Check that the connection cables are not loose. Small vibrations in the device may over time loosen the connection plug.
2. Check that the wires in the heating element are undamaged. Contact the supplier if you find a defect.
3. If the wires in the heating element are intact, the thermostat may be defect. Contact the supplier if the thermostat is defect.

The fan does not function:

1. Check the cable and connection plug. Check that the blades of the fan spin freely. If the fan blades do not spin freely, please try the following: Pull the plug out of the power point. Loosen the self-tapping screws that secure the netting at the bottom of the device and put a drop of light oil on shaft. Hence, the fan is gently turned around. Assemble the netting reconnecting the power. cure the fan again before
2. Check that the fault current relay of the electricity network or fuse are not disconnected.

4.4. Electrical connection

4.4.1. Connection cable

1. Connect the device with a 220 volts connection cable with earthing pin.



5. Operating instructions

5.1. Adjustment and installation

Place the device on a flat, level and dry surface where there is no risk that the device can get in contact with inflammable materials

5.2. Operation

5.2.1. In general

The device is used for evaporating water from the feed whenever you wish to know the dry matter content or water content of the feed.



5.2.2. Analysis

Weighing of feed sample

1. Place the specimen container on the scale and reset the scale. The digital scale must be connected to a power outlet to keep the resetting. The digital scale can be used with batteries but will then lose the resetting *).

2. Weigh 100 gram of the sample material in the specimen container on the digital scale

3. Place the specimen container on the device and let it dry according to the guided drying time as listed in the timetable below.



GUIDED drying time

Crops	Expected dry matter content	Guided drying hours
Grass ensilage	20 - 25%	45 minutes
Grass ensilage	30 - 35%	30 minutes
Grass ensilage	40 - 50%	25 minutes
Hat / hay ensilage	60 – 80%	20 minutes
Maize ensilage	25 – 40%	30 minutes

Weigh the sample material again and note how many grams (units) are left, and continue the drying for another 5 minutes to see if the weight continues to decrease.

If there is no change in the weight, the dry matter content has been found. If the weight still decreases, continue with another 5 minutes drying until the weight does not decrease any more.

On the digital Koster scale, the dry matter percentage is equivalent to the weight of the dried material when 100 grams are weighed from the beginning.

100 gram minus the weight of the dried material = water percentage.

*) In battery mode, the scale automatically goes off after a few minutes to conserve the battery. Therefore, when the scale is in battery mode, the scale must be reset before the specimen container is placed on the scale. Note the weight of the container and then fill it with 100 grams of material. By weighing after drying, the weight of the container is deducted.

When the feed sample is dried strongly, some of the fermentation products like ethanol, ammoniac and acetate content will probably evaporate, hence the result obtained may be adjusted so that the corrected dry matter percentage actually is 0.5 - 1.5% units higher than the result shown by the Koster Moisture Tester.

6. Maintenance

Check frequently that bolt and cable connections are correct and tightened properly.

Check the electrical components for occurred damages. If any defects are found, the components must be replaced before the device is used again.

6.1. Cleaning

The device must not be washed or rinsed, but can be cleaned by wiping with a hard wrung cloth. Disconnect the power before cleaning.

7. Disposal

Dispose the device by delivering it to the product dealer or recycling centre.