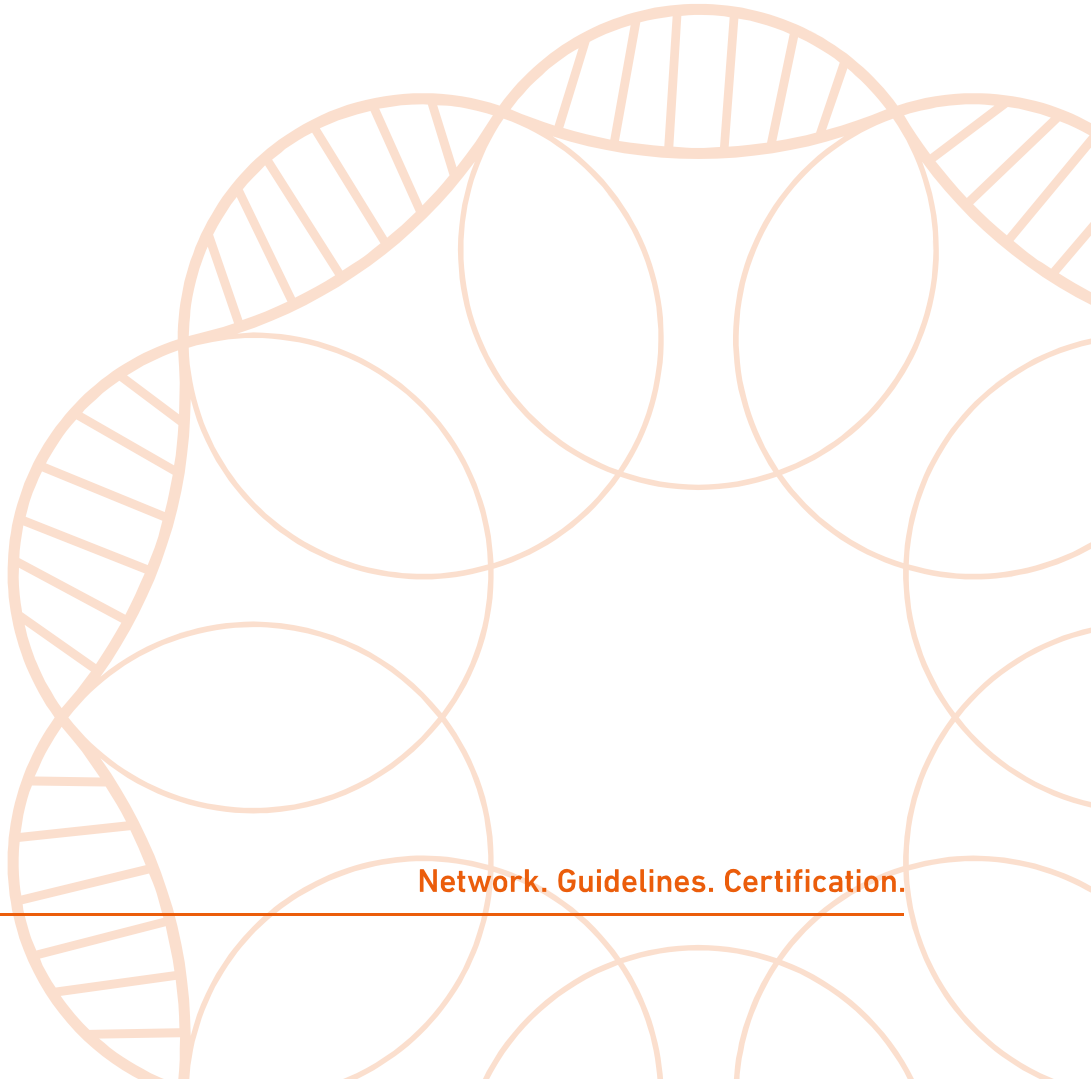
THE GLOBAL STANDARD
FOR LIVESTOCK DATA

ICAR Guidelines for periodic checking of the milk meters

Lactocorder by WMB AG

Version March, 2018



Network. Guidelines. Certification.

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1 General information

CAUTION The routine inspection with water must be carried out on perfectly clean devices.

CAUTION In order to avoid remains of dried test fluid, the devices must be cleaned after the test by means of a normal alkaline CIP-cleaning (Cleaning in Place).

2 Reference value

The LactoCorder milk yield measuring device's reference value is established by dividing the value read from the display by a correction factor. This correction factor takes account of the difference between the specific weight, the viscosity of the milk as well as its foaming characteristics and the test fluid. In all firmware versions until 063xxxx measured with Florin S Plus this correction factor is 1.000 which means that no correction is necessary. From version 06403xx, which has integrated the measurement of goats, the correction factor is 1.014. However, by measuring with Neoagrar Top S the correction factor is for all firmware versions 1.000. The results of earlier inspections are available for use during periodic inspections.

3 Required equipment

a. Vacuum pump with negative pressure of 40 to 50 kPa.
b. Hoses with a 14-16mm internal diameter.
c. Flow reducer (Flow ca 5.5 kg/min), art.2506 (supplier: WMB AG).
d. Intermediate piece with air inlet, art. 2505 (supplier: WMB AG).
e. Calibrated electronic scales.
f. A bucket with a volume of at least 15 litres.
g. A milking pail for receiving the test fluid.
h. Thermometer.

4 Test fluid

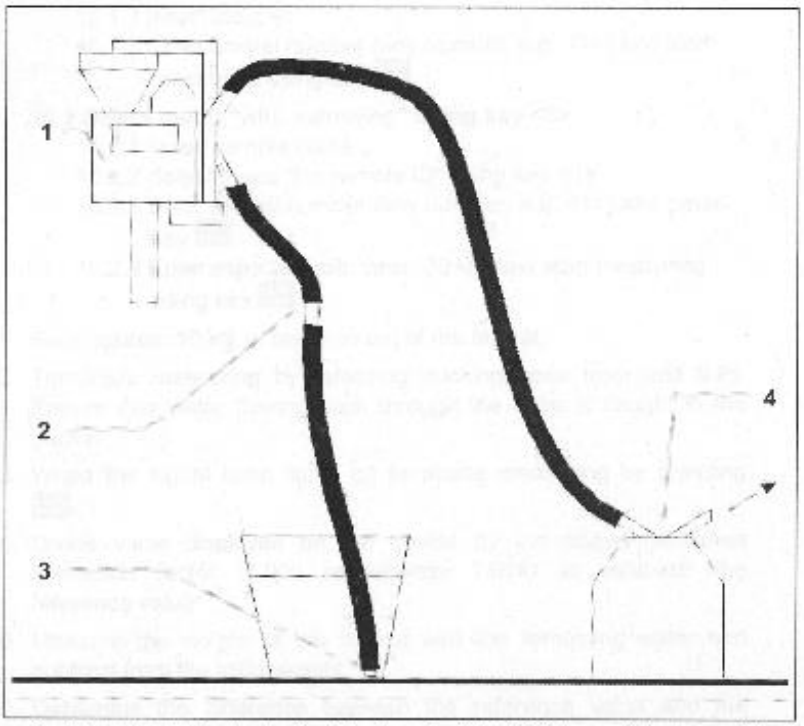
4.1 Florin S Plus

a. Water with a temperature of 20 °C +/- 5 °C
b. Addition of
   - 2% (volume-%) Florin S Plus, art.2685 (supplier: WMB AG)
   - 0.1% ANTIFOAM Y30 EMULSION, art.1290 (supplier: WMB AG)
c. Mix test fluid well. The test fluid may be used for 50 measurements and one day only.

4.2 Neoagrar Top S

a. Water with a temperature of 20 °C +/- 5 °C
b. Addition of 0.3% (volume-%) Neoagrar Top S, art.15566 (supplier: WMB AG)

c. Mix test fluid well. The test fluid may be used for 50 measurements and one day only.



1 *Secure LactoCorder at a height of approx. 1.5 metres (untilted)*
2 *Art.2505 Intermediate piece with air inlet*
3 *Art.2506 Flow reducer*
4 *Connection vacuum 40 to 50 kPa*

5 Test procedure

1. Have the bucket with approximately 15 litres of test fluid ready and calculate its exact weight
2. Switch on the LactoCorder using the ON OFF key
3. From version 06403 for species select "cows"

   - In the main menu <5> continue
   - Service <6>
   - Adjustments I <2>
   - Continue <E>
   - Species <6> (select cows <1>)
4. Shift further in the main menu with key <5>
5. Select the menu " Measuring without OD" using key <7>
6. Confirm correct position (i.e. "Milking") of the two rinse levers using the key requested by the device <x> (random number)
7. Enter herd number (any number, e.g. <1>)
8. Enter milking position (any number)

9. Select menu "with signal lamp" using key <1>
10. Measuring with or without sampling (variant 10.1 or 10.2)

    10.1 Select menu "without sampling" using key <1>

        10.1.1 Insert stopper

        10.1.2 Enter animal number (any number, e.g. <1>) and start measuring using key START STOP

    10.2 Select menu "with sampling" using key <3>

        10.2.1 Insert sample bottle

        10.2.2 Select menu "No sample ID" using key <1>

        10.2.3 Enter animal number (any number, e.g. <1>) and press key START STOP

        10.2.4 Enter expected milk yield "20 kg" and start measuring using key START STOP

11. Suck approx. 10 kg. of test fluid out of the bucket
12. Terminate measuring by removing sucking hose from test fluid. Ensure that water flowing back through the hose is caught in the bucket
13. When the signal lamp lights up terminate measuring by pressing START STOP
14. Divide value displayed on the device by the above-mentioned correction factor (1.000 respectively 1.014) to establish the reference value.
15. Measure the weight of the bucket with the remaining water and subtract from the initial weight.
16. Determine the difference between the reference value and the effective quantity of water drawn through.
17. Cleaning the devices with an alkaline detergent and properly rinsing it afterwards with clean water.

6 Analysis of sample volume

a. The reference value for the sample volume must be between 33 and 38 g.

b. If the result of measurement lies within the range of the reference value, the device is cleaned with clear water while also rinsing through the split-off valve by means of the valve test (see separate instruction: cleaning monitoring).

c. If the result of measurement lies outside the range of the reference value the following fault could be present:

- The sampling valve has not been cleaned properly.
- The concertina seal for ventilating air during sampling is missing.
- The concertina seal is damaged.
- The sampling bottle is damaged in the area of the mounting throat and is not sealing or is otherwise leaky.
- The O-ring on the bottle holder is damaged.

- There is an air gap between the bottle holder and the sampling mount.
- A crack in the housing of the sampling mount.

If all such error sources have been excluded the "Correction sample amount" must be checked and adjusted as necessary (factory-adjusted).

a. Shift to another menu point in the main menu by pressing the <5> key
b. Select key <6> in the 'Service' menu
c. Select key <2> in the 'Settings' menu
d. Select the menu 'Correct sample size' with the <3> key, enter the difference and confirm by pressing the <Enter> key.
e. Select the menu 'Back' using the <Clear> key 3 times until one arrives back in the main menu and continue the test procedure.

Please send the device to the Service Centre to be checked if the result of measurement still cannot be brought to match the reference value even after entering a correction value.

7 Analysis of measurement results (in accordance with Dr. D. Nosal)

a. The device is functioning correctly if the difference between the first measuring results is a value less than 0.1 kg.
b. A second measuring should be carried out if the difference for the first measuring is greater than 0.1 kg.
c. The device is functioning correctly if the average difference between both measuring results is a value less than 0.2 kg.
d. A third and fourth measuring must be carried out if the difference is greater than 0.2 kg.
e. Measuring should be repeated if the limit value cannot be maintained. First check the device for damage or incorrect assembly.
f. If the limit value still cannot be maintained the device should be subjected to alternating acidic/alkaline cleaning. (The test fluid has different moistening characteristics to milk which means that contamination of the device during the water test will probably become more marked than for milk measuring).
g. The MPKF factors should be reloaded if necessary, as they can be slightly altered by water measuring with dirty devices. (Measuring in milk would, however, lead to rapid automatic normalisation of these factors).
h. If the limit values still cannot be maintained the device should be sent to the manufacturer for inspection.