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PFER BECK

ITEM NUMBER
CH1230

USER MANUAL

LCpro Batch control

Indicators for routine control of large steam sterilizers
according to DIN EN ISO 11140-1 TYPE 2, DIN EN 867-5

Contents
1 LCpro test specimen with serial number and stainless steel holder 500 indicators in 20 blocks of 25 strips of 4-step indicators # 12304

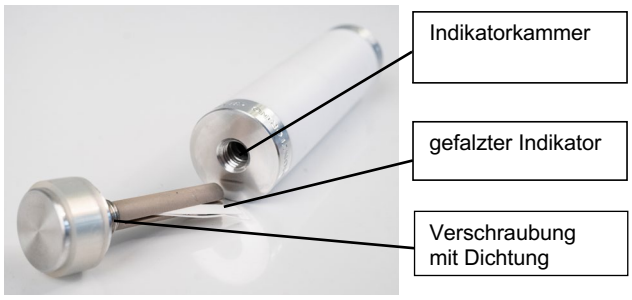
Advantages

- Easy handling
- Robust construction
- Constructive design based on hollow body instruments
- Carrying out leak tests
- Long service life
- Reliable results

Area of application
The LCpro batch control system is used for in-process control in steam sterilizers in the healthcare sector that comply with the DIN EN 285 standard and are vented via fractionated pre-vacuum stages. In the healthcare sector, a temperature/time combination of 134 °C and 5 min is generally preferred.

The task of the test body is to test the complete venting and thus the steam penetration. The indicator changes color when exposed to steam. The color change to black occurs when the indicator has been exposed to the amount of saturated steam that corresponds to a pure exposure time of 5 min at a steam temperature of 134 °C. Use with other temperature/time combinations is possible.

Fitting the LCpro test specimen to the indicator system
The indicators are supplied as a block of 25 pre-punched indicator strips. One indicator is cut out at the perforated narrow sides. The indicator holder capsule of the TUBE 1230 is unscrewed. The indicator is folded together at the crease with the printed side facing inwards and pushed into the gap, see the following picture. The test specimen is screwed together and placed next to the sterilized items near the door and in the lower part of the chamber.



At the end of the program, the indicator is removed from the test specimen and the color change is assessed. The indicator is self-adhesive. To do this, the carrier layer is peeled off at the punching and the indicator is glued in for documentation.

Notes on the evaluation of the indicators and on possible sources of error
When exposed to saturated water vapor, the indicator changes color from ochre to gray-brown to black depending on the time.

Appearance of the indicator	Notes on the assessment
evenly yellow	Indicators in the initial state
uniformly black	Proper course of the sterilization process
Color gradation light-dark	The gradient can occur in different color intensities. It occurs when the indicator has been exposed to no or too little steam, i.e. the test specimen is not completely free of inert gases, e.g. air. There are many possible causes, e.g. leaks, insufficient ventilation, insufficient steam quality, overheating.
even gray-brown	The test specimen was fully vented, but a lack of steam condensation on the indicator leads to a lack of color depth and indicates overheated steam or too short a holding time.
uniform yellow with reddish nuance	No steam has reached the indicator. Possible cause: No or insufficient ventilation.
Protective layer of the indicator fields has come loose	Moisture was present in the test specimen before or during venting. Possible causes may be • the test specimen was not completely dry, • the sterilizer was not preheated or overloaded, • the tube C and/or load has not been conditioned • the rate of pressure change was too high.

Allgemeine Hinweise

- The 4 level indicators 12304 and the LCpro form the indicator system.
- The LCpro should be used at the same temperature as the items to be sterilized.
- Before each use, the test specimen must be visually inspected to ensure that the seal is intact and in place.
- A leak test must be carried out after every 500 runs. The instructions are enclosed.
- To prevent the indicator from being unnecessarily affected by environmental influences, it should only be removed from the packaging immediately before use. The indicator blocks must be kept sealed in the pressure seal bag and not near a heat source, e.g. on the sterilizer.

Storage conditions
See product labeling.

Warranty
The robust design ensures a very long service life. However, if changes are detected, e.g. displacement of the locking disks, we will provide the user with a free replacement. Mechanical or other changes or manipulations are excluded.