# NEMIS L-Check reference probe (REF 00006)

# NEMIS TECHNOLOGIES

#### Intended use

The NEMIS L-check reference probe can be used to perform a calibration verification on NEMIS BTL1 luminometers.

#### BTL1 maintenance schedule

The NEMIS BTL1 luminometers do not need any scheduled servicing. The user should regularly inspect the device for obvious defects and if contamination or spillage occurs, clean the device according to the instructions listed in section 9.1 of the user manual.

## BTL1 calibration schedule

The NEMIS BTL1 luminometers measure light from chemiluminescent reactions in RLU (relative light units) by means of a self-calibrating photodiode sensor. Before shipping each BTL1 luminometer is calibrated and tested according to internal standards and procedures of the manufacturer. The device performs a self-test / self-calibration cycle each time at start-up. No calibration by the user is required.

## BTL1 calibration verification

To proof that a BTL1 luminometer works correctly, NEMIS recommends performing a calibration verification every six months or after each event that might negatively affect the functionality of the device (e.g., spillage, cleaning, or transportation). The calibration verification can be done by anyone in less than a minute using the reusable NEMIS L-Check reference probe.

# Principle of operation

The NEMIS L-Check reference probe is a black plastic stick with a LED light at the tip, a socket for a USB charging cable, and a green status light on the top (see images below). The probe emits a well-defined and stable light signal invisible to the human eye for about 5 minutes after charging, then the light emission drops to zero within a few seconds.



# Instructions for use

- Turn on the luminometer and wait for about 10 minutes.
- On the touchscreen, select the "Standard RLU Measurement" protocol.
- Remove the probe from its packaging.
- Clean the white end of the probe with a damp cloth, using only water as cleaning agent. Repeat before each measurement.
- Insert the <u>uncharged</u> L-Check into the tube holder of the luminometer and close the lid. ATTENTION: The probe will only fit correctly into the tube holder if the green status light is oriented to the front (see picture above).
- Press the "START" button and wait for the measurement to complete.
  If the measured value is below 300 RLU, the negative control test is a
  pass. It means that the probe is not emitting any light, the noise level
  of the electronics is within an acceptable range, and no stray light
  penetrates the measurement chamber.

- Remove the L-Check from the luminometer and insert the small plug
  of the provided charging cable into the socket at the top of the probe.
- Connect the large plug of the charging cable to any USB power source. Once connected, the green status light at the top of the probe starts flashing.
- Wait until the green status light stops flashing; this takes about 25 to 60 seconds.
- Disconnect the charging cable from the probe. The status light switches off.
- Insert the <u>charged</u> L-Check again into the luminometer and close the lid
- Perform another RLU measurement. Check the assigned calibration value on the provided certificate of analysis. If the value is within the indicated "accepted verification range" the positive control test is a pass (it means the probe and the luminometer are working correctly).
- ATTENTION: If you perform repeated measurements, recharge the probe before each measurement and clean the white tip in between.
- Remove the probe from the luminometer and return it to its packaging.
- In case the test fails, try the following:
- Inspect the luminometer and the probe for defects.
- Clean the luminometer according to the instructions in section 9.1 of the user manual.
- Install the luminometer at a different location.
- If the test keeps failing, contact techsupport@nemistech.comfor further quidance.

# Maintenance, serviceability, and disposal

The NEMIS L-Check reference probe is designed for indoor use only. The probe should be stored in the packaging provided when not in use. The probe does not contain a battery or other operator serviceable parts. Using harsh chemicals and cleaning agents may damage the probe and degrade its performance. Dispose of in accordance with your local authority regulations for electronic waste.

# **Exclusion of warranty and liability**

NEMIS products are provided on an as-is basis to be used solely in accordance with the respective instructions of use. NEMIS excludes any guarantee of the quality of food, beverage products, or processes tested with its products. NEMIS excludes all liability for damage to its products. However, should any NEMIS product be found to be damaged, NEMIS, at its sole discretion, may choose to either replace or refund the product. To the extent legally possible, NEMIS will not be liable to users or others for any loss or damage, whether direct or indirect, incidental, or consequential, from either proper or improper use of its products.

# **Contact Information**

If you have any questions or require assistance, please refer to the Frequently Asked Questions (FAQ) and other technical resources available online or contact our local representative.



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