# Hellenic Accreditation System

Annex F2/26 to the Certificate No. **263**-8

# SCOPE of ACCREDITATION

of the

**Testing & Calibration Laboratory**

of

## LINK LAB LTD

***for the performance of calibrations***

| Calibration item / Parameters | Range of measurement | Expanded measurement uncertainty (k=2) * | Remarks |
|---|---|---|---|
| Spectrophotometric measurements | | | |
| Visible and ultraviolet spectrophotometers in the range: 230 nm to 650 nm / Absorption | [0,09 AU to 0,19 AU) | 5,0 mAU** | ASTM E 275-08 (2022)<br>(baseline stability, photometric accuracy and precision).<br>Calibration can also be performed on-site. |
| | [0,19 AU to 0,29 AU) | 5,6 mAU | |
| | [0,29 AU to 0,38 AU) | 5,9 mAU | |
| | [0,38 AU to 0,48 AU) | 6,7 mAU | |
| | [0,48 AU to 1,5 AU] | 7,6 mAU | |
| Mass measurements | | | |
| Non-automatic weighing instruments | 1 mg | 1,9 µg | EURAMET/cg-18/v.04 (2015).<br>Using standard weights of OIML class:<br>E1: 1 mg to 100 g. Max grouped load 211 g.<br>E2: 1 mg to 1 kg. Max grouped load 2221 g.<br>F1: 500 g to 5 kg. Max grouped load 11 kg.<br>F2: 10 kg to 20 kg. Max grouped load 30kg.<br>M1: 5 kg to 20 kg. Max grouped load 305 kg. |
| | 2 mg | 1,9 µg | |
| | 5 mg | 1,9 µg | |
| | 10 mg | 2,3 µg | |
| | 20 mg | 2,7 µg | |
| | 50 mg | 3,3 µg | |
| | 100 mg | 4,1µg | |
| | 200 mg | 5,4 µg | |
| | 500 mg | 6,8 µg | |
| | 1 g | 8,1 µg | |
| | 2 g | 11 µg | |
| | 5 g | 13 µg | |
| | 10 g | 20 µg | |

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|---|---|---|---|
| | 20 g | 26 µg | M2: 5 kg to 20 kg.<br>Max grouped load 95 kg.<br>Calibration is performed on-site. |
| | 50 g | 44 µg | |
| | 100 g | 71 µg | |
| | 200 g | 0,16 mg | |
| | 500 g | 0,46 mg | |
| | 1 kg | 0,96 mg | |
| | 2 kg | 2,4 mg | |
| | 5 kg | 9,7 mg | |
| | 10 kg | 55 mg | |
| | 20 kg | 0,12 g | |
| | 50 kg | 2,1 g | |
| | 100 kg | 3,3 g | |
| | 442 kg | 19 g | |
| Temperature measurements | | | |
| Temperature controlled chambers, with volume up to 2000 L, with or without air circulation (ovens & incubators, autoclaves, refrigerators, freezers, climatic chambers) | | | DKD-R 5-7 (9/2018)<br>Calibration can also be performed on-site. |
| | -20 °C to 60 °C | 0,15 °C | Using platinum resistance sensors. |
| | [-80 °C to -20 °C) | 0,40 °C | Using K-type thermocouples.<br>Temperature ranges -80 °C to -20 °C and 180 °C to 350 °C refer to measurements at specific positions within the chamber volume. |
| | [-20 °C to 180 °C) | 0,60 °C | |
| | [180 °C to 350 °C] | 0,60 °C | |
| Temperature controlled chambers, with volume up to 2000 L, with air circulation (ovens & incubators, autoclaves, refrigerators, freezers, climatic chambers) | [350 °C to 400 °C) | 0,60 °C | Internal method O 1011-6 based on DKD-R 5-7 (9/2018), using K-type thermocouples.<br>Method refers to measurements at specific positions within the chamber volume.<br>Calibration can also be performed on-site. |
| | [400 °C to 500 °C] | 1,3 °C | |
| Liquid baths of volume up to 2000 L (water baths, oil baths) | -20 °C to 180 °C | 0,40 °C | Internal method O 1014-4 based on DKD-R 5-7 (9/2018), using K-type thermocouples.<br>Calibration can also be performed on-site. |

| Calibration item / Parameters | Range of measurement | Expanded measurement uncertainty (k=2) * | Remarks |
|---|---|---|---|
| Dissolution and disintegration testers | 35 °C to 40 °C | 0,30 °C | Internal methods:<br>- O 1016-3 (dissolution)<br>- O 1017-3 (disintegration)<br>based on DKD-R 5-7 (9/2018), using platinum resistance thermometer.<br>Calibration can also be performed on-site. |
| Cyclers, block calibrators | -20 °C to 180 °C | 0,40 °C | Internal method O 1015-3 based on DKD-R 5-7 (9/2018), using K-type thermocouples.<br>Calibration can also be performed on-site. |
| Digital / analog direct reading thermometers | | | Internal method O 1010-6 |
| | [-20 °C to 0 °C)<br>[0 °C to 140 °C]<br>(140 °C to 180 °C] | 0,06 °C<br>0,05 °C<br>0,06 °C | Using liquid bath and platinum resistance thermometer. |
| | -25 °C to 140 °C | 0,12 °C | Using dry block calibrator and platinum resistance thermometer.<br>Calibration can also be performed on-site. |
| Total and partial immersion, liquid in glass thermometers | [-20 °C to 0 °C) | 0,06 °C | Internal methods:<br>- O 1012-5 (total immersion)<br>- O 1013-5 (partial immersion)<br>using platinum resistance thermometer.<br>Calibration can also be performed on-site. |
| | [0 °C to 140 °C] | 0,05 °C | |
| | (140 °C to 180 °C] | 0,06 °C | |
| Temperature loggers | [-10 °C to 40 °C] | 0,25 °C | Internal method O 1010-6 using a climatic chamber and platinum resistance thermometer. |
| | (40 °C to 60 °C] | 0,33 °C | |
| Relative Humidity measurements | | | |
| Relative humidity controlled chambers, of volume up to 2000 L (climatic chambers), with air circulation | 20 % to 90 % rh<br>in temperature range:<br>[20°C to 25°C] | 1,6 % rh | EURAMET cg 20 v5.0 (2017)<br>Calibration can also be performed on-site. |
| | 20 % to 90 % rh<br>in temperature range:<br>[25°C to 40°C] | 2,1 % rh | |

| Calibration item / Parameters | Range of measurement | Expanded measurement uncertainty (k=2) * | Remarks |
|---|---|---|---|
| Analog and digital hygrometers | | | Internal comparative method O 1018-3<br>Calibration can also be performed on-site. |
| | [20 % to 50 % rh)<br>[50 % to 70 % rh)<br>[70 % to 90 % rh]<br>at 25 °C | 1,2 % rh<br>1,3 % rh<br>1,6 % rh | Using reference hygrometer in a climatic chamber. |
| | [25% to 60% rh]<br>(60% to 80% rh]<br>at 40 °C | 1,7 % rh<br>2,5 % rh | |
| | 11 % rh<br>33 % rh<br>75% rh<br>at 25 °C | 1,8 % rh<br>2,5 % rh<br>2,9 % rh | Using saturated salt solutions. |
| | [10 % έως 50% rh)<br>[50 % έως 90% rh]<br>in temperature range:<br>[20°C to 30°C] | 1,5 % rh<br>1,6 % rh | Using reference hygrometer and portable humidity chamber. |
| Volume Measurements | | | |
| Piston pipettes | [1 µL to 5 µL) | 3,0 % | ISO 8655-6:2022 |
| | [5 µL to 10 µL) | 0,7 % | |
| | [10 µL to 20 µL] | 0,4 % | |
| | (20 µL to 100 µL] | 0,3 % | |
| | (100 µL to 1000 µL] | 0,2 % | |
| | (1000 µL to 10 mL] | 0,12 % | |
| Laboratory syringes | [1 µL to 5 µL) | 3,0 % | |
| | [5 µL to 20 µL] | 0,7 % | |
| | (20 µL to 100 µL] | 0,4 % | |
| | (100 µL to 1000 µL] | 0,3 % | |
| | (1000 µL to 10 mL] | 0,15 % | |
| Dispensers | 1mL to 50 mL | 0,1 % to 0,04 % | |
| Burettes | 1 mL to 100 mL | 0,065 % to 0,04 % | |
| Volumetric flasks | [10 mL to 50 mL) | 0,07 % | EURAMET cg 19 v3 (2018) |
| | [50 mL to 2000 mL] | 0,04 % | |

| Calibration item / Parameters | Range of measurement | Expanded measurement uncertainty (k=2) * | Remarks |
|---|---|---|---|
| Volumetric Cylinders | 100 mL to 1000 mL | 0,04 % | |
| Glass pipettes | 1 mL to 100 mL | 0,065 % … 0,04 % | |
| Electrical measurements | | | |
| pH-meters / DC voltage | -410 mV to +410 mV | 0,042 mV | Internal method O 1060-2 using voltage simulator. |
| Pressure Measurements | | | |
| Analog and digital relative pressure measuring instruments of direct reading | | | DKD-R 6-1 v3/2014<br>Calibration can also be performed on-site. |
| | [0,6 bar to 6 bar) | 0,027 bar | Gas or liquid pressure medium. |
| | [6 bar to 25 bar] | 0,060 bar | |
| | (25 bar to 400] bar | 3,6 bar | Liquid pressure medium. |
| Frequency Measurements | | | |
| Centrifuges, Mixers / Rotation frequency | [6 rpm to 1200 rpm] | 0,58 rpm | Internal method O 1040-2 using standard tachometer.<br>Calibration can also be performed on-site. |
| | (1200 rpm to 12000 rpm] | 0,90 rpm | |
| | (12000 rpm to 18000 rpm] | 2,0 rpm | |

* *Where the expanded uncertainty (with coverage probability 95 %) is accompanied by the corresponding unit, it is absolute, while where it is not accompanied by a unit, it is relative.*

*The Calibration & Measurement Capability (CMC) includes the measurand, the measurement range and the measurement uncertainty and expresses the smallest measurement uncertainty that can be achieved in a calibration.*

*** Uncertainty values are estimated assuming a spectrophotometer having a digital resolution of 0.1mAU.*

Permanent laboratory premises address: **4th Kristalli Str. & 91st layriou avenue, GR-15354 Glyka Nera, Greece.**
Approved Signatories: **I. Tomaras, K. Kokkonis.**

This Scope of Accreditation replaces the previous one dated Oktober 18th, 2024.
The Accreditation Certificate No. **263**-8, to ELOT EN ISO/IEC 17025:2017, is valid until 12.03.2027.

Athens, Augoust 6th , 2025

Konstantinou Evangelos Apostolos
CEO of ESYD