Hellenic Accreditation System

Annex F2/20 to the Certificate No. **383**-6

SCOPE of ACCREDITATION

of the

Calibration Laboratory

of

Analytical Instruments S.A.

Calibration item/ Parameters	Range of measurement	Expanded measurement uncertainty (k=2)*	Remarks
Spectrophotometric measurements			
Visible and ultraviolet spectrophotometers	Visible spectrum 0 to 1.5 AU	8.1 mAU	According to guides: - ASTM E 275-08(2022) - European Pharmacopoeia method 2.2.25 Absorption Spectrophotometry, Ultraviolet and Visible (Edition 11) Range of measurement: 230 nm to 400nm (ultraviolet) and 400nm to 700 nm (visible). The scope includes Plate Reader spectrophotometers (Elisa). Calibration is also performed on-site
	UV spectrum 0 to 1.5 AU	5.8 mAU	
Temperature measurements			
Analog & digital thermometers of direct reading	-20°C to 200°C	0,16°C	According to COFRAC guide: LAB GTA 08:2023 Using liquid bath and platinum resistance thermometer
	0°C	0,09°C	According to COFRAC guide: LAB GTA 08:2023 Using ice-water bath and platinum resistance thermometer
	200°C to 350°C	0,92°C	According to COFRAC guide: LAB GTA 08:2023 Using dry block calibrator and platinum resistance thermometer
Climatic and isothermal chambers, ovens, refrigerators, furnaces, incubators, freezers /	-20°C to 100°C	0,47°C	According to guides: - EN 60068-3-5:2018 - DKD-R 5-7:2018

Calibration item/ Parameters	Range of measurement	Expanded measurement uncertainty (k=2)*	Remarks
Internal volume up to 2000 l	100ºC to 200ºC	0,70ºC	using thermocouples type K (methods A,B,C) Range 200ºC to 350ºC is covered only by method C Calibration is also performed on-site
	200ºC to 350ºC	1,2ºC	
Relative humidity measurements			
Relative humidity chambers with air circulation systems of internal volume up to 2000 l (climatic chambers)	[35 to 95) % RH at 25ºC	1,7 % RH	According to guide DKD-R 5-7:2018 (methods A,B,C)
	[35 to 95) % RH at 40ºC	2,05 % RH	
Mass measurements			
Non-automatic weighing instruments	10 g	$3{,}5 \cdot 10^{-6}$	According to guide EURAMET cg18 (v4.0) 2015 Available standard weights E2 OIML class: 1 mg to 200 g, 50 g, 100 g, 2 x 500 g, 3 x 1000 g, 2000 g Calibration is performed on site
	20 g	$2{,}3 \cdot 10^{-6}$	
	50 g	$1{,}1 \cdot 10^{-6}$	
	100 g	$9{,}0 \cdot 10^{-7}$	
	200 g	$8{,}9 \cdot 10^{-7}$	
	500 g	$9{,}3 \cdot 10^{-7}$	
	1000 g	$9{,}0 \cdot 10^{-7}$	
	2000 g	$9{,}0 \cdot 10^{-7}$	
	5000 g	$9{,}1 \cdot 10^{-7}$	
	5500 g	$9{,}0 \cdot 10^{-7}$	
Volume measurements			
Piston operated pipettes	20 µl to 100 µl	0,50 %	According to guides: - ISO 8655-6: 2022 - ISO/TR 20461:2023
	100 µl to 1000 µl	0,25 %	
	1 ml to 10 ml	0,15 %	

** Where the expanded uncertainty (with 95 % coverage) 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 measured quantity, the measurement range and the measurement uncertainty, expressing the minimum measurement uncertainty which can be achieved in a calibration.

Permanent laboratory premises address: **9, Tzavella Str., 152 31 Chalandri.**
Approved Signatories: **Charalampos Perdikis, Ioannis Papadopoulos.**

This Scope of Accreditation replaces the previous one dated 21.03.2024.
The Accreditation Certificate No. **383**-6, to ELOT EN ISO/IEC 17025:2017, is valid until 23.09.2028.

Athens, 02.05.2024

Christos Nestoras
CEO of ESYD