



Sysmex Nederland B.V.
Ecustraat 11
4879 NP Etten-Leur

CALIBRATION CERTIFICATE

Certificate number: 311721101032

Page 1 of 2

Applicant: Promethor Oy
Rautakatu 5 A6
20520 Turku
Finland

Examined instrument:	Make	Type	Serial number
Sound Level Meter	Rion	NL-52	00754075
Microphone	Rion	UC-59	08423
Preamplifier	Rion	NH-25	54144

Calibration date: Feb. 23 2024

Calibration method: Periodic tests were performed on the sound level meter with microphone and preamplifier in accordance with procedures and requirements as specified in IEC 61672-3:2013. Before and after the tests the sound level meter is calibrated with an acoustic reference calibrator (94,1 dB ; 1 kHz) and adjusted if necessary

Performance Class: Class-1

Results: The results of the verification are stated on page 2 of this certificate

Ambient conditions: Static pressure: 98,9 kPa
Air temperature: 21,0 °C
Relative humidity: 49,4 %

Statement: We hereby declare that the results relate only to the calibrated objects as mentioned above under examined instrument

Traceability: The measurements have been executed using standards for which the traceability to (inter)national standards has been demonstrated towards the Raad voor Accreditatie.

Executed :

Etten-Leur, Feb. 23 2024

ing. A.C. Dekkers
Product Application Specialist Calibration

The Raad voor Accreditatie is one of the signatories of the Multilateral Agreement of the European Cooperation for Accreditation for the mutual recognition of calibration certificates.

Reproduction of the complete certificate is allowed. Parts of the certificate may only be reproduced with written approval of the calibration laboratory. This certificate is issued with the reservation that neither Sysmex nor the Raad voor Accreditatie does assume any liability.



Status of the instrument				
Measurement		Upon receipt (Pass/Fail)	Adjusted (Yes/No)	After adjustment (Pass/Fail)
1*	Reading / Long term stability IEC 61672-3:2013 10, 15	Pass	Yes	Pass
2	Self-generated noise IEC 61672-3:2013 11	Pass	No	Pass
3	Frequency response (acoustic), C frequency weighting IEC 61672-3:2013 12	Pass	No	Pass
4	Supplied acoustic calibrator IEC 61672-3:2013 3.6	Refer to separate certificate		
5	Frequency weighting (electrical input), A, C and Lin frequency weighting IEC 61672-3:2013 13	Pass	No	Pass
6	Frequency and Time weighting at 1 kHz A, C and Lin frequency weighting IEC 61672-3:2013 14	Pass	No	Pass
7	Accuracy of the attenuator IEC 61672-3:2013 16, 17	Pass	No	Pass
8	Toneburst F, S, SEL and Cpeak IEC 61672-3:2013 18, 19	Pass	No	Pass
9	Linearity of the indicator IEC 61672-3:2013 16	Pass	No	Pass
10	Overload indication IEC 61672-3:2013 20	Pass	No	Pass
11	High-level stability IEC 61672-3:2013 21	Pass	No	Pass
Measurement uncertainty:				
Measurement 1: Reading under reference conditions: ± 0.3 dB				
Measurement 2: Frequency response: 125 Hz – 2 kHz: ± 0.3 dB, 8 kHz: ± 0.7 dB				
Measurement 4 to 8: Electrical properties: ± 0.15 dB / 0.1 Hz				
The reported uncertainty is based on a standard uncertainty multiplied by a coverage factor $k=2$, which provides a confidence level of approximately 95 %. The standard uncertainty has been determined in accordance with EA-4/02.				
* Refer to table below for detailed results x: Not applicable				

Measurement results before and after adjustment (acoustic calibration)			
Measurement		Upon receipt Deviation (dB)	After adjustment Deviation (dB)
1	Deviation of the reading under reference conditions (at 94,1 dB - 1 kHz). IEC 61672-3:2013 10	0,2	
** After verification of all properties			

Type approval:

The sound level meter submitted for testing successfully completed the periodic tests of IEC 61672-3:2013, for the environmental conditions under which the tests were performed. As evidence was publicly available, from an independent testing organization responsible for approving the results of pattern-evaluation tests performed in accordance with IEC 61672-2:2013, to demonstrate that the model of sound level meter fully conformed to the Class 1 specifications in IEC 61672-1:2013, the sound level meter submitted for testing conforms to the Class 1 specifications of IEC 61672-1:2013.

Type approval source:

PTB Germany nr.: DE-20-M-PTB-0034