

Test object:	Manufacturer :	Type :	Serial No.:
Sound level meter :	Norsonic	Nor145	14529241
Microphone :	Norsonic	1227	378208
Preamplifier :	Norsonic	1209	22489
Sound calibrator :	Cesva	CB-5	42457

Cal 022-2022-16278

Customer: Keski-Uudenmaan Ympäristökeskus
Address: Finland
Order No: CO2246003

The measurements are performed according to the IEC 61672-3 Ed. 2.0 (2013).

Acoustical levels are stated relative to 20µPa. Other dB levels are relative values.

The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k, which with the reported effective degree of freedom corresponds to coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with EA publication EA-4/02

Statement of Conformity: (Decision rule from IEC 61672-3:2013.)

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

Indication at the Calibration Check Frequency

The level indication of the sound level meter was controlled using the customers calibrator.

The indicated level was: 93,4 dB. Sensitivity: -26,0 dB rel. 1V/Pa. Preamp correction: -0,4 dB.

This reading should be used henceforth to set up the sound level meter for field use.

Comment : (None)

Environmental conditions:	Pressure :	Temperature :	Humidity :
Reference conditions:	101.325 kPa	23,0 °C	50 %RH
Measurement conditions :	98.60 ±0.20 kPa	22.6 ±1.0 °C	51.7 ±3.0 %RH

Date of calibration: 2022-11-17


Date of issue: 2022-11-17

Engineer


Nils Jørgen Andersen


Norsonic Calibration Laboratory
VAT no.: NO 929 743 040 MVA

Supervisor


Thor Carlsen

Certificate of Calibration

Certificate No.: Cal 022-2022-16278



Test object: Sound Calibrator
Manufacturer: Cesva
Type: CB-5
Serial No.: 42457

Customer: Keski-Uudenmaan Ympäristökeskus

Address: Finland

Order No: CO2246003

All tests are performed according to IEC 60942 : 2003, Annex B.

The stated levels are relative to 20µPa. The distortion value (in %) is the signal to total noise ratio.

The calibrator was placed on top of the reference microphone, only held in place by gravity. At least three repetitions have been performed. No adapter ring was needed to obtain half inch configuration.

	Level	Level stability	Frequency	Frequency stability	Distortion
Nominal	94 dB		1 kHz		
Result (Average):	93,67 dB	0,01 dB	992,21 Hz	0,00 %	0,54 %
Expanded Uncertainty:	0,14 dB	0,02 dB	0,99 Hz	0,10 %	0,32 %

The calibrator level was not adjusted.

Statement of Conformity: No evidence is found showing that this test object is type approved.

The sound calibrator has been shown to conform to the class 2 requirements for periodic testing, described in Annex B of IEC 60942:2003 for the sound pressure level(s) and frequency(ies) stated, for the environmental conditions under which the tests were performed. However, as public evidence was not available, from a testing organization responsible for pattern approval, to demonstrate that the model of sound calibrator conformed to the requirements for pattern evaluation described in Annex A of IEC 60942:2003, no general statement or conclusion can be made about conformance of the sound calibrator to the requirements of IEC 60942:2003.

Date of calibration: 2022-11-17
Date of issue: 2022-11-17

Environmental conditions:	Pressure:	Temperature:	Relative humidity:
Reference conditions:	101,325 kPa	23,0 °C	50 %RH
Measurement conditions:	98,64 ± 0,03 kPa	23,7 ± 1,2 °C	44,6 ± 6,3 %RH

Operator:

Supervisor:


Fredrik Pettersen


Norsonic Calibration Laboratory
VAT no.: NO 929 743 040 MVA


Thor Carlsen

This certificate of calibration is issued by a laboratory accredited by Norwegian Accreditation (NA). NA is one of the signatories to the EA Multilateral Agreement for mutual recognition of calibration certificates (European Co-operation for Accreditation). The accreditation states that the laboratory meets the NA requirements concerning competence and calibration system for all the calibrations contained in the accreditation. It also states that the laboratory has a satisfactory quality assurance system and traceability to accredited or national calibration laboratories. This certificate is only valid for the objects stated, and may not be reproduced other than in full.