

Laboratory Location

Campbell Associates Ltd

5b Chelmsford Road Industrial Estate
GREAT DUNMOW, Essex, GB-CM6 1HD



Certificate of Calibration and Conformance

Certificate number: **U43250**

Test Object: **Sound Calibrator**

Producer: **Svantek**

Type: **SV30A**

Serial number: **10818**

Customer: **Noiseair Consultants**

Address: **Pitts Farm, Cuddington Heath, Malpas,
Cheshire. SY14 7AJ.**

Contact Person: **Phil Lodge.**

Order No: **Contract 22580**

Measurement Results	Level dB	Level Stability dB	Frequency Hz	Distortion %
Measurement 1	114.11	0.02	1000.02	0.46
Measurement 2	114.11	0.01	1000.02	0.46
Measurement 3	114.11	0.01	1000.02	0.47
Result (Average):	114.11	0.01	1000.02	0.46
Expanded Uncertainty:	0.1	0.02	1	0.25
Degree of Freedom:	>100	>100	>100	>100
Coverage Factor:	2	2	2	2

The stated level is relative to 20 μ Pa. The level is traceable to National Standards. The stated level is valid at reference conditions. The following correction factors have been applied during the measurement

Pres:0.0001 dB/kPa Temp:0.005 dB/ $^{\circ}$ C Humi:0.00125 dB/%RH Load volume: 0.00027 dB/mm³

Conditions	Pressure kPa	Temperature $^{\circ}$ C	Humidity %RH
Reference conditions	101.325	23	50
Measurement conditions	102.716 \pm 0.042	23 \pm 0.2	35.2 \pm 2.0

The reported expanded uncertainty of measurements is based on a standard uncertainty multiplied by the coverage factor of k=2, providing a level of confidence of approximately 95%. Where the degrees of freedom are insufficient to maintain this confidence level, the coverage factor is increased to maintain this confidence level. The uncertainty has been determined in accordance with UKAS requirements.

Records: K:\C A\Calibration\Nor-1504\Nor-1018 CalCal\Current Year\SVANSV30A_10818_M1.nmf

Preconditioning

The equipment was preconditioned for more than 4 hours in the specified calibration environment.

Method

Calibration has been performed as set out in the current version of CA Technical procedure TP01

Calibration Dates:

Received date:	31/01/2023	Reviewed date:	09/02/2023
Calibration date:	08/02/2023	Issued date:	09/02/2023

Technicians: (Electronic certificate)

Calibrated by: *Michael Tickner*

Reviewed by: *Jenny Crawford*

This certificate is issued in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service. It provides traceability of measurement to the SI system of units and/or to units of measurement realised at the National Physical Laboratory or other recognised national metrology institutes. This certificate may not be reproduced other than in full, except with the prior written approval of the issuing laboratory.

Doc ref: Calb-Cert-Master-V3-05

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Continuation of Certificate number: U43250

Reference Microphone: WSM8 (A) - GRAS-40AG.147852

Measurements

The calibrator has been tested as described in the following annexes to BS EN IEC60942:2003 Sound Calibrators; B3.4 for sound pressure level, B3.5 for frequency, B3.6 for total distortion and A4.4 for short term stability of the pressure level.

Instruments and Program

A complete list of instruments, hardware and software that have been used for this calibration is available from the calibration laboratory

Comments

94dB spot check = 94.12dB. Note this is not UKAS data.

Statement of Conformance and Calibration

As public evidence was available*, from a testing organisation responsible for approving the results of pattern evaluation tests, to demonstrate that the model of sound calibrator fully conformed to the requirements for pattern evaluation described in annex A of BS EN IEC 60942:2003, the sound calibrator tested is considered to conform to all the class 1 requirements of that BS EN IEC 60942:2003.

*This evidence is held on file at the calibration laboratory.

Notes:

The sound pressure level generated by the calibrator in its ½ inch configuration was measured five times and averaged by a WS2P working standard microphone for class 1 or 2 devices or a LS2P reference microphone for class 0 or LS devices as specified in the International Standard BS EN 61094-4. The results of three replications and the mean of the measurements obtained are given in the measurement results table of this certificate. The frequency and distortion were measured in a similar manner. The figures in BOLD are the final results; a small correction factor may need to be added to the sound pressure level quoted here if the device is used to calibrate a sound level meter that is fitted with a free field response microphone. See manufacturer's handbooks for full details of this and other corrections that may be applicable.

Observations:

Decision Rule:

The decision rules have been applied in accordance with the procedure as described in BS EN 60942:2003

This certificate relates only to the items tested above.

** End of Certificate **