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Hearing Protective Device Test Report Number Q5002A Revision 0

OPSMEN Tech Co. Ltd.
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Guangzhou, 510370
Guangdong, China

NVLAP®
TESTING
NVLAP LAB CODE 100427-0

Technician: Eileen Kline

Date of Report: 7/9/18
Date of testing: 6/25/18-7/6/18
Date of Sample Receipt: 6/22/18

Attenuation measurements have been performed according to the American National Standards Institute (ANSI) Specifications, ANSI S3.19-1974, using the experimenter-fit protocol, on the OPSMEN Tech Co. Ltd. Earmor M31electronic muff-type hearing protector (test ID Q5002A). The specified threshold measurement data were obtained using ten normally-hearing listeners, six male and four female. These listeners were selected from a standby group of about 35 volunteers who regularly serve as listeners for measurements of this kind.

The measurements were made in a room designed for this purpose. All acoustic characteristics of the room meet the requirements outlined in ANSI S3.19-1974. The ambient noise levels in this room are below the limits specified in ANSI S3.19-1974, and open ear thresholds are used on a continuing basis to monitor the background noise levels. An automatic recording attenuator was used to record both open and occluded ear thresholds.

Each of ten subjects was tested three times at each of nine test frequencies. The attached Tables show grand mean attenuation values in decibels (dB) for each test signal along with group attenuation values. Standard deviations (S.D.) for the 30 different attenuation determinations for each test signal are also given. The results presented in this report pertain to the samples tested only.

Michael & Associates is accredited by the National Institute of Standards and Technology (NIST) National Laboratory Accreditation Program (NVLAP) for tests performed according to ANSI S3.19-1974, ANSI S12.6-2016, AS/NZ S1270:2002 and EN352 parts 1-8. These accreditation criteria encompass the requirements of international standard ISO 17025. This report may only be reproduced or transmitted electronically in its' entirety. This report shall not be used to claim product endorsement by NIST, NVLAP or by any agency of the U.S. Government. All measurement equipment are calibrated with instrumentation traceable to the NIST. Accreditation documentation can be viewed at www.michaelassociates.com/data/documents/NVLAP-2017.pdf.

Use these laboratory-derived attenuation data for comparison purposes only. The amount of protection afforded in field use is often significantly lower depending on how the protectors are fitted and worn.

KMichael
Kevin Michael, Ph.D., President

7/9/18
Date

Individual and Summary Attenuation Data for Hearing Protective Devices

Test Method: ANSI S3.19-1974 Position: Over-the-head
Manufacturer: OPSMEN Tech Co. Ltd. Date: 7/9/18
Model: Earmor M31 Test ID: Q5002A

	Attenuation in dB Center Frequency in Hz								
SUBJECT	125	250	500	1000	2000	3150	4000	6300	8000
	14	17	29	36	36	35	36	45	46
1	14	17	29	32	35	37	41	49	47
	14	18	29	30	36	35	41	48	47
	13	19	24	36	43	44	48	43	48
2	14	17	26	38	41	46	48	44	50
	15	19	24	37	41	47	52	43	50
	15	16	29	41	40	45	46	47	49
3	12	15	30	38	39	45	50	49	49
	15	15	24	36	39	45	49	50	51
	22	25	31	29	33	40	50	46	48
4	16	22	25	30	35	44	51	46	47
	21	24	34	35	36	45	48	49	47
	16	23	30	38	37	47	47	51	56
5	18	22	27	33	36	45	47	50	54
	20	24	25	36	36	45	46	51	55
	18	17	23	30	32	43	46	50	49
6	13	15	24	29	36	43	47	51	49
	15	16	24	30	33	44	45	50	50
	14	18	25	31	37	38	47	43	49
7	15	21	29	34	41	40	48	48	51
	14	19	27	33	39	42	43	43	51
	18	15	23	28	36	43	44	47	48
8	16	19	25	30	38	45	43	46	50
	19	21	21	33	38	45	47	47	48
	18	20	23	32	32	44	44	48	46
9	17	17	27	31	34	45	46	47	46
	17	17	25	33	33	44	47	47	46
	17	17	23	34	34	44	46	47	41
10	16	19	24	35	34	45	48	47	41
	15	17	24	34	34	45	48	45	40
MEANS	16.0	18.6	26.0	33.3	36.4	43.2	46.2	47.3	48.3
STD. DEV.	2.5	3.0	2.9	3.3	3.0	3.3	3.3	2.5	3.6

NRR = 22 dB Headband force = 4.8 lbs

Use these laboratory-derived data for comparison purposes only. The amount of protection afforded in field use is often significantly lower depending on how the protectors are fitted and worn.

Manufacturer: OPSMEN Tech Co. Ltd. Date: 7/9/18
Model: Earmor M31 Test ID: Q5002A
Position: Over-the-head

Measurements were made according to American National Standards Institute Specifications ANSI S3.19-1974.

Center Frequency in Hz	Mean Attenuation in dB	Group Attenuation in dB	Standard Deviation in dB
125	16.0	34.6	2.5
250	18.6		3.0
500	26.0		2.9
1000	33.3		3.3
2000	36.4	185.1	3.0
3150	43.2		3.3
4000	46.2		3.3
6300	47.3	95.5	2.5
8000	48.3		3.6

Test Item: Q5002A

These data were obtained through measurements made at the laboratories of Michael & Associates, Inc., State College, PA , USA. Michael & Associates, Inc., is accredited to test to ANSI S3.19-1974, ANSI S12.6-2016, ANSI S12.42-2010, EN352 parts 1-8 and AS/NZ S1270:2002 by the National Institute of Standards and Technology (NIST) National Voluntary Laboratory Accreditation Program (NVLAP).

Kevin L. Michael, Ph.D. Date 7/9/18
President