Michael & Associates, Inc.

2766 W. College Ave Suite 1
State College, PA 16801

814-234-7042 phone
814-235-1381 fax
Email: Kevin@michaelassociates.com
URL: www.michaelassociates.com

Hearing Protective Device Test Report Number Q3744A Revision 1
Shanghai Langfeng Industrial Co., Ltd Date of Report: 8/17/15
Room 910, Building 6, Luxiang road 111, Shanghai, China
Date of testing: 8/8/15-8/14/15

Date of Sample Receipt: 8/6/15

NVLAP®

Lab Code 100427-0

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 Shanghai Langfeng Industrial Co., Ltd. EM-5003 Noise Guard X earmuff (test ID Q3744A). 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 S12.6-2008, AS/NZ S1270:2002 and EN352 parts 1-10. 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 approval, certification or endorsement by NIST, NVLAP or by any agency of the U.S. Government. All measurement equipment are calibrated with instrumentation traceable to the NIST.

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.

Calvin Michael, MSS, Director of Operations

8/12/15
Date

Individual and Summary Attenuation Data for Hearing Protective Devices

Test Method: ANSI S3.19-1974 Position: Over-the-head
Manufacturer: Shanghai Langfeng Industrial Co., Ltd Date: 8/17/15
Model: EM-5003 Noise Guard X Test ID # Q3744A

FREQUENCY IN HERTZ

SUBJECT	125	250	500	1000	2000	3150	4000	6300	8000
	12	15	27	37	36	37	45	41	44
1	9	18	27	41	39	38	41	41	41
	10	16	25	41	40	37	37	42	42
	15	18	29	38	38	38	40	43	42
2	17	19	31	38	41	36	42	43	41
	14	18	26	35	41	37	40	41	39
	17	19	27	37	42	44	42	45	44
3	17	18	25	39	41	43	42	47	44
	17	20	27	39	41	43	44	44	44
	22	16	24	37	36	37	45	45	44
4	15	18	25	36	36	40	42	46	45
	13	16	23	40	36	43	44	45	43
	18	25	21	36	34	37	45	40	39
5	13	18	22	33	32	34	39	39	37
	24	22	29	32	35	34	43	40	43
	16	18	28	39	38	39	39	44	43
6	18	25	30	41	40	37	41	41	41
	15	17	26	39	39	39	33	44	40
	13	21	27	41	35	36	45	41	44
7	14	18	25	35	38	39	42	41	42
	17	22	30	44	34	42	41	39	44
	26	21	27	40	36	41	46	44	45
8	23	20	27	35	36	41	45	46	49
	23	21	29	38	39	40	46	43	50
	15	15	25	38	36	35	51	46	39
9	13	14	22	38	43	38	53	46	40
	14	15	23	35	38	36	49	48	40
	17	17	27	45	39	41	45	45	47
10	17	17	30	43	38	40	45	45	45
	21	18	30	44	39	42	46	47	47
MEANS	16.5	18.4	26.5	38.4	37.9	38.7	43.2	43.3	42.9
STD. DEV.	4.1	2.8	2.6	3.1	2.6	2.8	3.9	2.5	3.1

NRR = 23 dB Headband force = 2.6 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.

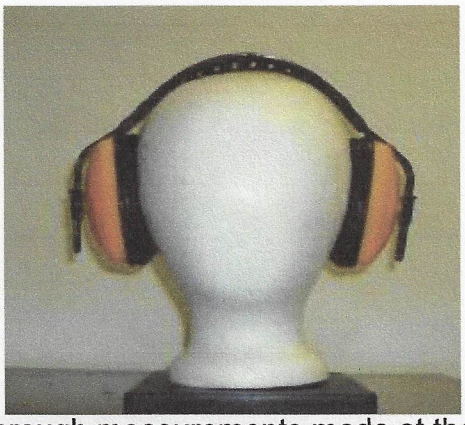
Manufacturer: Shanghai Langfeng Industrial Co., Ltd
Model: EM-5003 Noise Guard X
Position: Over-the-head

Date: 8/17/15
Test ID: Q3744A

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	16.5	34.9	4.1
250	18.4		2.8
500	26.5		2.6
1000	38.4		3.1
2000	37.9	184.6	2.6
3150	38.7		2.8
4000	43.2		3.9
6300	43.3	86.2	2.5
8000	42.9		3.1

Test Item: Q3744A



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 S12.6-2008, 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).

Calvin Michael, MSS
Director of Operations

Date 8/12/25