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# Michael & Associates, Inc.

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Hearing Protective Device Test Report Number Q4140A Revision 0

Vicsa Steelpro Colombia SAS

Attn: Mr. Alexander Vasquez

KM 7 Autopista Medellin LT 49 Bodega 1-2

Parque Empresarial Celta

Funza, Cundinamarca, Colombia

Date of Report: 8/29/16

Date of testing: 8/8/16-8/26/16

Date of Sample Receipt: 8/4/16



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 Vicsa Steelpro Colombia SAS Jumbo muff-type hearing protector (test ID Q4140A). 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 1-8. 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.

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.

Kevin Michael, Ph.D.

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President

8/29/16

Date

### Individual and Summary Attenuation Data for **Hearing Protective Devices**

Position: Over-the-head Test Method: ANSI S3.19-1974

Manufacturer: Vicsa Steelpro Colombia SAS Date: 8/29/16

Model:	Jumbo	•					Test ID	#	Q4140A
	•			FREQU	ENCY IN I	HERTZ			
SUBJECT	125	250	500	1000	2000	3150	4000	6300	8000
	21	24	40	41	36	35	34	36	37
1	21	23	35	35	36	37	35	34	37
	22	23	37	39	36	37	38	33	36
	24	25	36	43	40	42	40	34	34
2	25	25	35	44	40	43	38	32	33
	21	23	34	44	44	44	38	32	33
	22	26	36	40	35	41	38	35	35
3	24	26	35	38	39	40	39	36	36
	25	26	37	43	37	41	43	35	35
	17	21	34	38	36	36	34	32	34
4	17	22	31	37	36	35	34	31	33
	17	24	30	36	35	37	32	32	33
	28	31	42	41	41	37	39	35	39
5	25	28	41	42	38	35	39	36	39
	27	28	39	42	38	38	38	35	40
	19	27	37	43	36	39	35	36	36
6	16	27	39	47	37	37	36	35	37
	22	27	39	45	34	39	33	33	35
	21	24	37	42	35	36	31	34	34
7	20	23	35	40	37	36	34	33	34
	22	25	36	41	37	35	33	32	34
	24	24	38	39	36	36	35	36	36
8	23	25	40	38	35	36	37	36	35
	23	25	38	39	37	39	35	37	35
	25	23	33	41	42	37	37	35	33
9	25	26	35	40	37	36	38	33	33
	20	25	32	42	38	38	39	32	34
	20	25	34	36	37	35	40	34	33
10	21	21	35	37	37	35	39	36	34
	19	25	34	36	37	35	38	35	34
MEANS	21.8	24.9	36.2	40.3	37.2	37.5	36.6	34.1	35.0
STD. DEV.	3.1	2.1	2.9	3.0	2.2	2.5	2.8	1.7	2.0

NRR = 28 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:

Vicsa Steelpro Colombia SAS

Date:

8/29/16

Model:

Jumbo

Test ID:

Q4140A

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	21.8	46.7	3.1
250	24.9		2.1
500	36.2		2.9
1000	40.3		3.0
2000	37.2	187.8	2.2
3150	37.5		2.5
4000	36.6		2.8
6300	34.1	69.1	1.7
8000	35.0		2.0

Test Item: Q4140A



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).

Kevin L. Michael, Ph.D.

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8/29/16

President





### **EC TYPE-EXAMINATION CERTIFICATE: 2838**

Product description: -

Hearing Protection – Ear Muffs

Product identification: -

Jumbo

Manufacturer: -

Vicsa Safety Comercial Limitada Panamericana Norte 5151 Conchali, Santiago IMSPEC Chile.

When assessed and examined against harmonised standard EN352-1:2002 is found to be in conformity with Council Directive 89/686/EEC and associated amendments, relating to personal protective equipment.

Signed .....

Date: 18<sup>th</sup> January 2016

Julie C. Jones, Certification Manager

For and on behalf of INSPEC International Ltd. 56 Leslie Hough Way, Salford, Gt Manchester M6 6AJ England (Notified Body No: 0194)

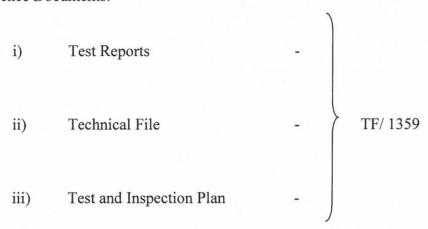
Certification remains valid until 18th January 2021, providing compliance with INSPEC's terms and conditions is maintained.

Original date of issue: 18th January 2016

For terms and conditions of issue, see page 2

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Reference Documents: -



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## **CERTIFICATION INDEX**

Item	Status	Issued	Amendment	
Pages 1 to 4	Valid	160118	Initial issue	

## **CERTIFICATION SCHEDULE**

		FFS

MODEL SIZE RANGE MODE SNR TYPE

JUMBO small, medium, large Over-the-Head 33 Replaceable cushions

EC Certificate: 2838 Page 4 of 4 Revision: 160118