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Department of Applied Acoustics

NAMAS
TESTING
No. 1262

TEST REPORT

SOUND ATTENUATION

OF HEARING PROTECTORS

BS EN 24869-1 : 1993

ISO 4869-1 : 1990

CLIENT:	INSPEC Laboratories Limited 56 Leslie Hough Way Salford Manchester M6 6AJ
YOUR ORDER NO:	950213/1
TYPE OF HEARING PROTECTOR:	Ear-Plug
MODEL:	MAX - 1
MANUFACTURER:	Howard Leight (Europe) Ltd
DATE RECEIVED:	13 February 1995
DATE OF TESTS:	13 February 1995

Signed: A. Diamond ..... Approved J. McLoughlin .....

A. DIAMOND J. McLOUGHLIN

INTRODUCTION:

BS EN 24869-1 : ISO 4869-1 specifies a subjective method for measuring the attenuation of hearing protectors at the threshold of hearing. This method, including details of the test signals, site, equipment, subjects and procedure, was applied to the samples tested and the results are presented, as required by the Standard, on the following pages of this Report.

For complete details of the method, please refer to BS EN 24869-1 : ISO 4869-1.

TEST SIGNALS, SITE AND EQUIPMENT:

The facilities used for this test are located within the Department of Applied Acoustics at the University of Salford.

TEST SUBJECTS:

The 16 test subjects comprised both males and females and covered a wide age range. All subjects were audiometrically screened in accordance with Clause 4.4.1 of BS EN 24869-1 prior to the test. They also satisfied the requirements of Clauses 4.4.2 and 4.4.3.

FITTING:

Manufacturer's instructions were provided and were followed during the fitting of the hearing protectors. Guidance was also available from the Test Operator.

TEST PROCEDURE:

Two hundred pairs of plugs were supplied by the client, twenty of which had been pre-cleaned, (sixteen for testing and four spares). Each subject randomly selected a pair for practice fitting from the remaining samples. Each test subject's protected threshold was assessed once.

The procedures specified in Clause 4.5 were followed.

RESULTS:

See the attached sheet for the attenuation data for each individual subject.

Model MAX - 1

Attenuation results (values in dB) See below

Test Reference No. HP/95/2/1

		FREQUENCY (Hz)							
Subject	Sample	63	125	250	500	1K	2K	4K	8K
D.S.	1	20	26	26	28	36	40	52	50
M.A.	2	36	40	44	45	38	42	52	46
J.Mc.	3	32	34	36	36	36	32	44	46
S.H.	4	26	28	36	38	37	40	44	52
P.P.	5	22	26	25	30	30	34	46	48
J.W.	6	40	41	39	42	41	30	52	30
P.R.	7	28	32	39	42	40	31	47	46
O.W.	8	20	25	32	34	32	38	45	48
A.T.	9	20	17	24	26	26	36	42	38
A.L.	10	26	22	26	32	30	42	52	48
I.H.	11	28	26	26	28	26	36	44	44
A.S.	12	24	22	30	30	35	40	50	42
L.P.	13	32	30	32	32	35	38	46	48
D.W.	14	26	30	28	32	32	40	46	42
I.B.	15	36	28	28	36	34	42	44	44
C.B.	16	28	39	43	48	42	40	51	54
Mean Attenuation		27.8	29.1	32.1	34.9	34.4	37.6	47.3	45.4
Standard Deviation		6.1	6.8	6.6	6.5	4.8	4.0	3.6	5.7
Assumed Protection		21.6	22.4	25.5	28.4	29.5	33.6	43.7	39.7