

RIVERBANK ACOUSTICAL LABORATORIES

1512 S. BATAVIA AVENUE
GENEVA, ILLINOIS 60134

Alion Science and Technology

630/232-0104
FOUNDED 1918 BY
WALLACE CLEMENT SABINE

TEST REPORT

FOR: Auralex Acoustics
Indianapolis, IN

Sound Absorption Test
RAL™-A04-038

ON: 4 Inch Studio Foam Metro Panels

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CONDUCTED: 10 March 2004

TEST METHOD

The test method conformed explicitly with the requirements of the ASTM Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method: ASTM C423-02a and E795-00. Riverbank Acoustical Laboratories has been accredited by the U.S. Department of Commerce, National Institute of Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP) for this test procedure. A description of the measuring procedure and room qualifications is available separately.

DESCRIPTION OF THE SPECIMEN

The test specimen was designated by the manufacturer as 4 inch Studio Foam Metro panels. The overall dimensions of the specimen as measured were nominally 2.44 m (96 in.) wide by 2.44 m (96 in.) long and 102 mm (4 in.) thick. The specimen consisted of eight (8) pieces. Each piece was 610 mm (24 in.) wide by 1.22 m (48 in.) long. The specimen was tested in the laboratory's 292 m³ (10,311 ft³) test chamber.

The manufacturer's description of the specimen was as follows: 4 inch Studio Foam Metro panels are 2' x 4' x 4" with a random, square-cut pattern in the face that runs along the 4' dimension. The panels are acoustic foam, roughly 1.8 pcf density and are charcoal gray in color. A visual inspection verified the manufacturer's description of the specimen.

The weight of the entire specimen as measured was 9.1 kg (20 lbs), an average of 1.5 kg/m² (0.31 lbs/ft²). The area used in the calculations was 6 m² (64 ft²). The room temperature at the time of the test was 21°C (71±1°F) and 64% relative humidity.

MOUNTING A

The test specimen was laid directly against the test surface.

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THE RESULTS REPORTED ABOVE APPLY ONLY TO THE SPECIFIC SAMPLE SUBMITTED FOR MEASUREMENT. NO RESPONSIBILITY IS ASSUMED FOR PERFORMANCE OF ANY OTHER SPECIMEN.



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TEST RESULTS

1/3 Octave Center Frequency (Hz)	Absorption Coefficient	Total Absorption In Sabins
100	0.24	15.49
** 125	0.31	19.94
160	0.40	25.45
200	0.56	35.96
** 250	0.72	46.02
315	0.98	62.98
400	1.13	72.15
** 500	1.19	76.00
630	1.23	78.79
800	1.24	79.56
** 1000	1.26	80.92
1250	1.26	80.57
1600	1.24	79.42
** 2000	1.22	78.03
2500	1.20	76.83
3150	1.19	76.12
** 4000	1.20	76.62
5000	1.20	77.06

SAA = 1.10

NRC = 1.10

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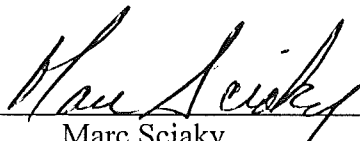
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TEST RESULTS (Continued)

The sound absorption average (SAA) is defined as a single number rating, the average, rounded to the nearest 0.01, of the sound absorption coefficient of a material for the twelve one-third octave bands from 200 through 2500 Hz, inclusive.


The noise reduction coefficient (NRC) is defined from previous versions of this same test method as the average of the coefficients at 250, 500, 1000, and 2000 Hz, expressed to the nearest integral multiple of 0.05.

Tested by



Marc Sciaky
Senior Technician

Approved by



David L. Moyer
Laboratory Manager

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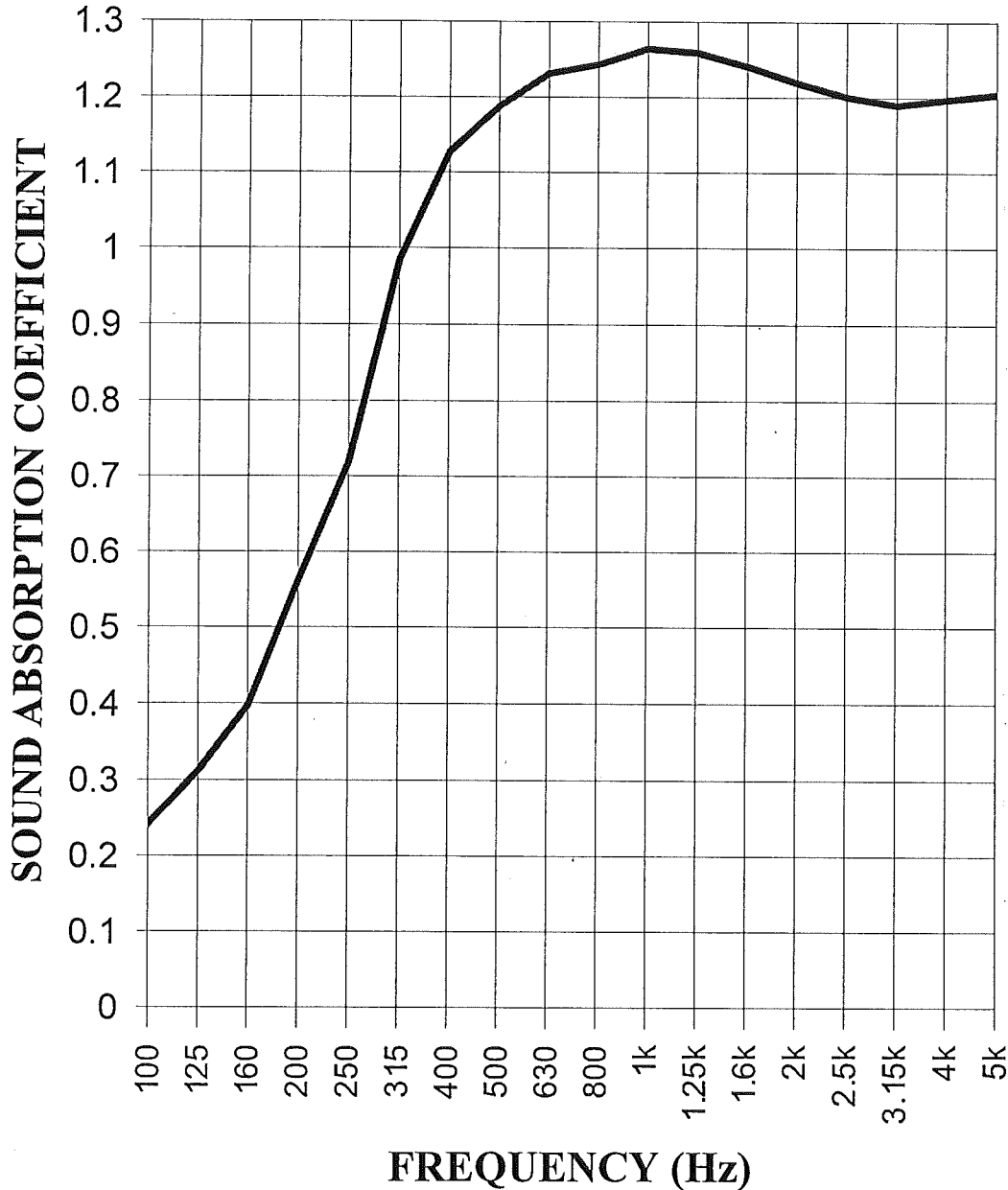


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TEST REPORT

SOUND ABSORPTION REPORT
RAL - A04-038

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SAA = 1.10
NRC = 1.10

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Riverbank Acoustical Laboratories (RAL)TM
 Sound Absorption and Sound Absorption Coefficients
 by the Reverberation Room Method ASTM C 423-02/NVLAP 08/P03

TEST NUMBER: A04-038

TEST DATE: MARCH 10, 2004

CLIENT: Auralex Acoustics
 DESIGNATION: 4 Inch Studio Foam Metro
 DIMENSIONS: 96" x 96" x 4"
 AREA: 64.0 ft²
 WEIGHT: 20 lbs AREA WEIGHT: 0.31 lbs/ft²
 MOUNTING: A EDGE SEAL: Unsealed
 SPECIMEN DETAILS: 8 @ 24" x 48" x 4"

TEST ROOM DETAILS: Room 0 Volume = 10311 ft³ Area = 2864.3 ft²
 FILE NAME: A04_038_040310_A.doc

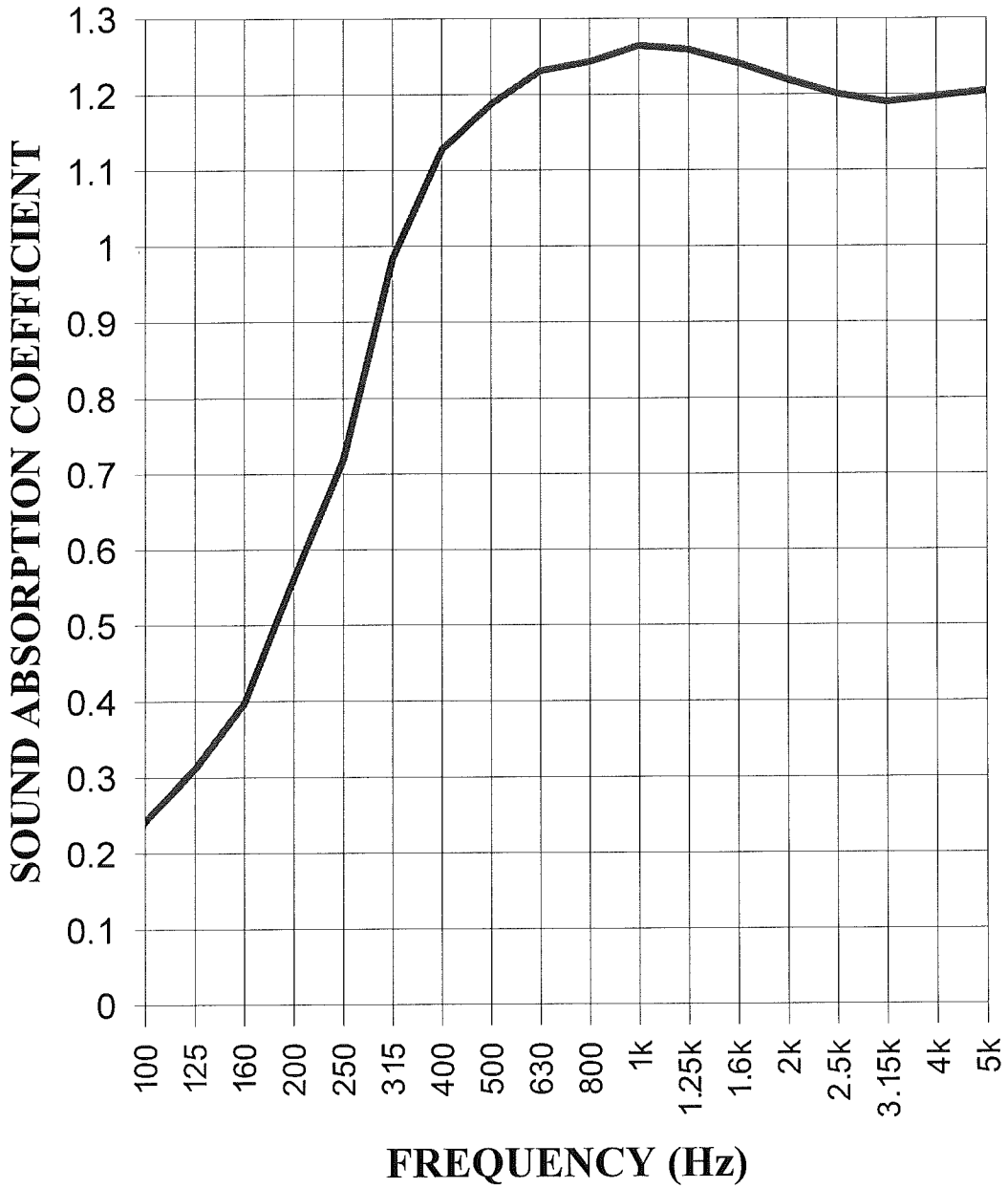
1/3 OCTAVE CENTER FREQ. (Hz)	ABSORPTION COEFFICIENT		TOTAL ABSORPTION (SABINS)
100	0.24198	0.24	15.49
125	0.31154	0.31	19.94
160	0.39769	0.40	25.45
200	0.56189	0.56	35.96
250	0.71904	0.72	46.02
315	0.98404	0.98	62.98
400	1.12736	1.13	72.15
500	1.18749	1.19	76.00
630	1.23111	1.23	78.79
800	1.24319	1.24	79.56
1000	1.26431	1.26	80.92
1250	1.25897	1.26	80.57
1600	1.24093	1.24	79.42
2000	1.21925	1.22	78.03
2500	1.20044	1.20	76.83
3150	1.18941	1.19	76.12
4000	1.19724	1.20	76.62
5000	1.20406	1.20	77.06

SOUND ABSORPTION AVERAGE [SAA] = 1.10
NOISE REDUCTION COEFFICIENT [NRC] = 1.10

Test Conducted by: Marc Sciaky

This single report page and accompanying graph contain the instantaneous raw data as provided to the client after testing of the specimen. This data, although accurate, is incomplete without the full specimen description, mounting details and signature pages. The full report referenced by the RAL test number above should be consulted for further information regarding these results.

SOUND ABSORPTION REPORT
RAL - A04-038



SAA = 1.10
NRC = 1.10

Test Conducted by *Marc Sciaky*
Marc Sciaky