

MICRO ANALYTICAL LABORATORIES, INC.

TEM AIRBORNE ASBESTOS ANALYSIS



1023
 Terracon Consultants, Inc.
 1466 66th Street
 Emeryville, CA 94608

PROJECT:
JOB NO. R1147447
DEMO / ABATEMENT DVC,
PLEASANT HILL

Micro Log In **203196**
 Total Samples 2
 Date Sampled 03/05/2015
 Date Received 03/05/2015
 Date Analyzed 03/05/2015

SAMPLE INFORMATION	ASBESTOS STRUCTURE COUNT	CALCULATED ASBESTOS STRUCTURE CONCENTRATION													
CLIENT ID <div style="border: 1px solid black; padding: 2px; margin: 5px 0;">R1147447-030515-P3</div> MICRO ID 203196-01 Time 450 LPM 4.30 Liters 1935.0 DESCRIPTION LIBRARY BUILDING MAIN ENTRANCE LOBBY C.B DEMO / ABATEMENT (REANALYSIS OF PCM 203183-03)	ASBESTOS TYPE CHRYSOTILE <input type="text" value="0"/> GRUNERITE (AMOSITE) <input type="text" value="0"/> RIEBECKITE (CROCIDOLITE) <input type="text" value="0"/> TREMOLITE <input type="text" value="0"/> ACTINOLITE <input type="text" value="0"/> ANTHOPHYLLITE <input type="text" value="0"/> TOTAL ASBESTOS <input type="text" value="0"/>	Str. per mm² <div style="border: 1px solid black; padding: 5px; margin: 5px 0;">< 24</div>	Str. per cc <div style="border: 1px solid black; padding: 5px; margin: 5px 0;">< 0.0048</div>												
		Asbestos Structures Subdivided By Length													
		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">Length</th> <th style="width: 10%;">No.</th> <th style="width: 10%;">S/mm²</th> <th style="width: 10%;">S/cc</th> </tr> </thead> <tbody> <tr> <td>0.5 - 5 μm</td> <td style="text-align: center;">0</td> <td style="text-align: center;">< 24.0</td> <td style="text-align: center;">< 0.0048</td> </tr> <tr> <td>≥ 5 μm</td> <td style="text-align: center;">0</td> <td style="text-align: center;">< 24.0</td> <td style="text-align: center;">< 0.0048</td> </tr> </tbody> </table>	Length	No.	S/mm ²	S/cc	0.5 - 5 μm	0	< 24.0	< 0.0048	≥ 5 μm	0	< 24.0	< 0.0048	
Length	No.	S/mm ²	S/cc												
0.5 - 5 μm	0	< 24.0	< 0.0048												
≥ 5 μm	0	< 24.0	< 0.0048												

COMMENTS
 NO ASBESTOS DETECTED

Total Asbestos	Grid Squares	Field Filter Data	Analytical Sensitivity	Operating Parameters
0	4	Type MCE	0.0048 Str. per cc	TEM Magnification 15,000-20,000
Grid Square Area	0.0103 mm ²	Diameter 25 mm	Quantitation Limit	SAED Photo No. / ID
Area Analyzed	0.0412 mm ²	Collection Area 385 mm ²	0.0178 Str. per cc	

Technical Supervisor: Frank Raviola, M.S. 3/5/2015 Analyst: FPR
 Date Reported

Micro Analytical Laboratories, Inc. is accredited for airborne asbestos analysis under NVLAP Lab Code 101872-0. NVLAP accreditation is limited to laboratory analyses. Analyses follow the analytical procedures of the U.S. EPA's "Interim Transmission Electron Microscopy Method" (1987), 40 CFR Part 763, Appendix A to Subpart E. Sampling parameters may differ from the AHERA method. Micro Analytical Laboratories, Inc. is not responsible for data collected by non-laboratory personnel. Results reported in both "Structures per cc" and "Structures per mm²" depend on the volume of air samples as measured by non-laboratory personnel, and are not covered by our NVLAP accreditation. Concentrations and limits expressed in "Structures per mm²" are applicable only to samples with volumes of 1199 or more liters (AHERA Method, 1987). Variability due to different airborne fiber distributions, whether on different portions of the same filter or from different filters from the same sampled area, may be significant. Analytical sensitivity is the airborne concentration represented by each asbestos structure counted in the area analyzed; it is not the same as the detection limit. Specific characterization of non-asbestos particles is not applicable to this analysis. This report must not be used to claim product endorsement by NIST or any other U.S. Government agency. Unless otherwise indicated on this report, all required Quality Control samples have been determined to be in control prior to releasing these analytical results. Duplicate QC samples have lower analytical sensitivities. Unless otherwise stated in this report, all samples were received in acceptable condition for analysis. Note: due to software limitations, the number of reported significant figures does not necessarily reflect the uncertainty of the analysis. This report shall not be reproduced except in full without the approval of Micro Analytical Laboratories, Inc., and pertains only to the samples analyzed.

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SAMPLE INFORMATION	ASBESTOS STRUCTURE COUNT	CALCULATED ASBESTOS STRUCTURE CONCENTRATION			
CLIENT ID	ASBESTOS TYPE	Str. per mm ²	Str. per cc		
R1147447-030515-P4	CHRYSTOLE 2	49	0.0097		
MICRO ID 203196-02	GRUNERITE (AMOSITE) 0				
Time 450	RIEBECKITE (CROCIDOLITE) 0				
LPM 4.30	TREMOLITE 0				
Liters 1935.0	ACTINOLITE 0				
DESCRIPTION	ANTHOPHYLLITE 0	Asbestos Structures Subdivided By Length			
MEDIA SUCS ROOM CB	TOTAL ASBESTOS 2	Length	No.	S/mm ²	S/cc
DEMO / ABATEMENT		0.5 - 5 μm	2	49.0	0.0097
(REANALYSIS OF PCM 203183-04)		≥ 5 μm	0	< 24.0	< 0.0048
COMMENTS					
ASBESTOS IDENTIFIED AS CHRYSTOLE					
Total Asbestos	Grid Squares	Field Filter Data		Analytical Sensitivity	
2	4	Type	MCE	0.0048 Str. per cc	
Grid Square Area	0.0103 mm ²	Diameter	25 mm	Quantitation Limit	
Area Analyzed	0.0412 mm ²	Collection Area	385 mm ²	0.0178 Str. per cc	
				Operating Parameters	
				TEM Magnification 15,000-20,000	
				SAED Photo No. / ID	

Technical Supervisor:

Frank Raviola, M.S.

3/5/2015

Date Reported

Analyst:

FPR

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PCM AIR SAMPLE DATA SHEET

PCM Analysis 203196 PAGE 1 OF 1
NIOSH 7400A

SAMPLE ID CODE

Job Code - mmddyy - Sample Type - Sample # (11422-022405-P-1)

Job Code: Numeric Code from RGA Project #
mmddyy: month day year (022405)
Sample Type: A-Area, P-Perimeter, B-Baseline, C-Clearance, BL-Blank Sample #: 1, 2, 3, ...

Project Name/Address/Building No.: Demo/abatement VUC, Pleasant St 4

RGA Project #: R1147447 Sampled By: N. Awot Sampling Date: 3/5/15

Sample(s) Sent To: RGA EMSL Other MAR TAT: Rush 24Hrs 3-5 Days

ANALYZED BY RGA (NAME): _____ DATE: _____

FAX OR E-MAIL REPORT TO: SEE ABOVE PROJECT MANAGER (PM)

***ADDITIONAL REPORT RECIPIENT(S): _____

RUSH!

SAMPLE ID: R1147447-030515-P1 TIME ON: 0715 TIME OFF: 1445
 SAMPLE LOCATION: Room FLOW RATES: 4.3 (LPM)
 TOTAL MINUTES: 450 VOLUME: 1,935 (L)
 WORK ACTIVITY: Demo/abatement Number of Fibers _____ Number of Fields _____
 AIRBORNE FIBER CONC. = _____ fibers/cc

SAMPLE ID: R1147447-030515-P2 TIME ON: 0716 TIME OFF: 1446
 SAMPLE LOCATION: No. NAM discl. FLOW RATES: 4.3 (LPM)
 TOTAL MINUTES: 450 VOLUME: 1,935 (L)
 WORK ACTIVITY: Demo/abatement Number of Fibers _____ Number of Fields _____
 AIRBORNE FIBER CONC. = _____ fibers/cc

01

SAMPLE ID: R1147447-030515-P3 TIME ON: 0717 TIME OFF: 1447
 SAMPLE LOCATION: Library Bldg, main entrance FLOW RATES: 4.3 (LPM)
Lobby C.B. TOTAL MINUTES: 450 VOLUME: 1,935 (L)
 WORK ACTIVITY: Demo/abatement Number of Fibers _____ Number of Fields _____
 AIRBORNE FIBER CONC. = _____ fibers/cc

02

SAMPLE ID: R1147447-030515-P4 TIME ON: 0718 TIME OFF: 1448
 SAMPLE LOCATION: Media Serv Room CB FLOW RATES: 4.3 (LPM)
 TOTAL MINUTES: 450 VOLUME: 1,935 (L)
 WORK ACTIVITY: Demo/abatement Number of Fibers _____ Number of Fields _____
 AIRBORNE FIBER CONC. = _____ fibers/cc

SAMPLE ID: _____ TIME ON: _____ TIME OFF: _____
 SAMPLE LOCATION: _____ FLOW RATES: _____ (LPM)
 TOTAL MINUTES: _____ VOLUME: _____ (L)
 WORK ACTIVITY: _____ Number of Fibers _____ Number of Fields _____
 AIRBORNE FIBER CONC. = _____ fibers/cc

Relinquished By: N. Awot Signature: NA Date/Time: 3/5/15
 Received By: _____ Signature: Karen Date/Time: 3/5/15
 Relinquished By: _____ Signature: _____ Date/Time: 3:42
 Received By: _____ Signature: _____ Date/Time: _____