

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, LIBRARY BLDG.

Micro Log In **203326**
 Total Samples 2
 Date Sampled 03/09/2015
 Date Received 03/10/2015
 Date Analyzed 03/10/2015

SAMPLE INFORMATION	ASBESTOS STRUCTURE COUNT	CALCULATED ASBESTOS STRUCTURE CONCENTRATION	
CLIENT ID	ASBESTOS TYPE	Str. per mm ²	Str. per cc
R1147447-030915-P1	CHRYSTOLE <input style="width: 30px; text-align: center;" type="text" value="0"/>	< 19	< 0.0046
MICRO ID 203326-01	GRUNERITE (AMOSITE) <input style="width: 30px; text-align: center;" type="text" value="0"/>		
Time 375	RIEBECKITE (CROCIDOLITE) <input style="width: 30px; text-align: center;" type="text" value="0"/>		
LPM 4.30	TREMOLITE <input style="width: 30px; text-align: center;" type="text" value="0"/>		
Liters 1612.5	ACTINOLITE <input style="width: 30px; text-align: center;" type="text" value="0"/>		
DESCRIPTION	ANTHOPHYLLITE <input style="width: 30px; text-align: center;" type="text" value="0"/>		
DECON	TOTAL ASBESTOS <input style="width: 30px; text-align: center;" type="text" value="0"/>		
DEMO/ABATEMENT			
(REANALYSIS OF PCM 203303-01)			
COMMENTS NO ASBESTOS DETECTED			
Total Asbestos	Grid Squares	Field Filter Data	Analytical Sensitivity
0	5	Type MCE	0.0046 Str. per cc
Grid Square Area 0.0103 mm ²		Diameter 25 mm	Quantitation Limit
Area Analyzed 0.0515 mm ²		Collection Area 385 mm ²	0.0171 Str. per cc
			Operating Parameters
			TEM Magnification 15,000-20,000
			SAED Photo No. / ID

Technical Supervisor: 3/10/2015 Analyst: FPR
 Frank Raviola, M.S. 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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 Date Sampled **03/09/2015**
 Date Received **03/10/2015**
 Date Analyzed **03/10/2015**

SAMPLE INFORMATION	ASBESTOS STRUCTURE COUNT	CALCULATED ASBESTOS STRUCTURE CONCENTRATION	
CLIENT ID	ASBESTOS TYPE	Str. per mm ²	Str. per cc
R1147447-030915-P4	CHRYSOTILE <input style="width: 30px; text-align: center;" type="text" value="0"/>	< 16	< 0.0044
MICRO ID 203326-02	GRUNERITE (AMOSITE) <input style="width: 30px; text-align: center;" type="text" value="0"/>		
Time 326	RIEBECKITE (CROCIDOLITE) <input style="width: 30px; text-align: center;" type="text" value="0"/>	Asbestos Structures Subdivided By Length	
LPM 4.30	TREMOLITE <input style="width: 30px; text-align: center;" type="text" value="0"/>	Length	No.
Liters 1401.8	ACTINOLITE <input style="width: 30px; text-align: center;" type="text" value="0"/>	S/mm ²	S/cc
DESCRIPTION	ANTHOPHYLLITE <input style="width: 30px; text-align: center;" type="text" value="0"/>	0.5 - 5 μm	0 < 16.0 < 0.0044
CB AT MEDIA SVCS. DEMO/ABATEMENT (REANALYSIS OF PCM 203303-04)	TOTAL ASBESTOS <input style="width: 30px; text-align: center;" type="text" value="0"/>	≥ 5 μm	0 < 16.0 < 0.0044

COMMENTS
 NO ASBESTOS DETECTED

Total Asbestos	Grid Squares	Field Filter Data	Analytical Sensitivity	Operating Parameters
0	6	Type MCE	0.0044 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 0.0618 mm ²		Collection Area 385 mm ²	0.0164 Str. per cc	

Technical Supervisor: Frank Raviola, M.S. 3/10/2015 Date Reported Analyst: FPR

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ENVIRONMENTAL

PM - S. Steiner
Steff@rgaenv.com
fax: 510.899.7051

PM - K. Schroeter
karin@rgaenv.com
fax: 510.899.7063

PM - K. Pilgrim
ken@rgaenv.com
fax: 510.899.7053

PM - T. Kattchee
tedd@rgaenv.com
fax: 510.899.7070

PM - B. Gils
bob@rgaenv.com
fax: 510.899.7050

PM - M. Bryant
marlin.bryant@rgaenv.com
fax: 510.899.7062

203326 ~~203303~~
PCM AIR SAMPLE DATA SHEET
* PCM Analysis HEM Altera / 24Hrs
* NIOSH 7400A
PAGE 1 OF 1

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, OVC, Library Bldg.

RGA Project #: R1147447 Sampled By: V. Anscoff Sampling Date: 3/9/15

Sample(s) Sent To: RGA EMSL Other: MAC 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):** _____ ***

①	SAMPLE ID: <u>R1147447-030915-P1</u>	TIME ON: <u>0735</u>	TIME OFF: <u>1350</u>
	SAMPLE LOCATION: <u>Decor</u>	FLOW RATES: <u>4.3</u> (LPM)	
	WORK ACTIVITY: <u>Demo/abatement</u>	TOTAL MINUTES: <u>375</u>	VOLUME: <u>1,612.5</u> (L)
		Number of Fibers _____	Number of Fields _____
		AIRBORNE FIBER CONC. = _____ fibers/cc	
*X	SAMPLE ID: <u>R1147447-030915-P2</u>	TIME ON: <u>0736</u>	TIME OFF: <u>1357</u>
	SAMPLE LOCATION: <u>North NAM discl.</u>	FLOW RATES: <u>4.3</u> (LPM)	
	WORK ACTIVITY: <u>Demo/abatement</u>	TOTAL MINUTES: <u>375</u>	VOLUME: <u>1,612.5</u> (L)
		Number of Fibers _____	Number of Fields _____
		AIRBORNE FIBER CONC. = _____ fibers/cc	
*X	SAMPLE ID: <u>R1147447-030915-P3</u>	TIME ON: <u>0830</u>	TIME OFF: <u>1356</u>
	SAMPLE LOCATION: <u>CB @ entry con/lobby</u>	FLOW RATES: <u>4.3</u> (LPM)	
	WORK ACTIVITY: <u>Demo/abatement</u>	TOTAL MINUTES: <u>326</u>	VOLUME: <u>1,401.8</u> (L)
		Number of Fibers _____	Number of Fields _____
		AIRBORNE FIBER CONC. = _____ fibers/cc	
2X	SAMPLE ID: <u>R1147447-030915-P4</u>	TIME ON: <u>0829</u>	TIME OFF: <u>1355</u>
	SAMPLE LOCATION: <u>CB @ Media Svc.</u>	FLOW RATES: <u>4.3</u> (LPM)	
	WORK ACTIVITY: <u>Demo/abatement</u>	TOTAL MINUTES: <u>326</u>	VOLUME: <u>1,401.8</u> (L)
		Number of Fibers _____	Number of Fields _____
		AIRBORNE FIBER CONC. = _____ fibers/cc	
	SAMPLE ID: _____	TIME ON: _____	TIME OFF: _____
	SAMPLE LOCATION: _____	FLOW RATES: _____ (LPM)	
	WORK ACTIVITY: _____	TOTAL MINUTES: _____	VOLUME: _____ (L)
		Number of Fibers _____	Number of Fields _____
		AIRBORNE FIBER CONC. = _____ fibers/cc	

Relinquished By: V. Anscoff Signature: VA Date/Time: 3/9/15
 Received By: _____ Signature: _____ Date/Time: 7.9.15 6:30p
 Relinquished By: _____ Signature: _____ Date/Time: _____
 Received By: _____ Signature: _____ Date/Time: _____