



Heather Forgione
Axiom Partners, Inc.
545 Salem St.
Wakefield MA 01880

Project Reference: 01288.003
Laboratory Batch #: 1614724
Date Samples Received: 02/17/2016
Date Samples Analyzed: 02/17/2016
Date of Final Report: 02/18/2016

SAMPLE IDENTIFICATION:

Twelve (12) samples from High School project were submitted by Chris LaPorte on 2016/02/17

This bulk sample(s) was delivered to Optimum Analytical Consulting, LLC (Optimum) located in Salem, New Hampshire for asbestos content determination.

ANALYTICAL METHOD:

Analytical procedures were performed in accordance with the U.S. Environmental Protection Agency (EPA) Recommended Method for the Determination of Asbestos in Bulk Samples by Polarized Light Microscopy and Dispersion Staining (PLM/DS)(EPA-600/M4-82-020, EPA-600/ R-93-116). This report relates only to those samples analyzed, and may not be indicative of other similar appearing materials existing at this, or other sites. Quantification of asbestos content was determined by Calibrated Visual Estimation. Optimum is not responsible for sample collection activities or analytical method limitations. The laboratory is not responsible for the accuracy of results when requested to physically separate and analyze layered samples.

In any given material, fibers with a small diameter ($<0.25\mu\text{m}$) may not be detected by the PLM method. Floor tile and other resinously bound material may yield a false negative if the asbestos fibers are too small to be resolved using PLM. Additional analytical methods may be required. Optimum recommends using Transmission Electron Microscopy (TEM) for a more definitive analysis.

Optimum will retain all samples for a minimum of three months. Further analysis or return of samples must be requested within this three month period to guarantee their availability. This report may not be reproduced except in full, without the written approval of Optimum Analytical and Consulting, LLC.

Use of the NVLAP and AIHA Logo in no way constitutes or implies product certification, approval, or endorsement by the National Institute of Standards and Technology or the American Industrial Hygiene Association.

Detection Limit $<1\%$, Reporting Limits: CVES = 1% , 400 Point Count = $.25\%$, 1000 Point Count = 0.1% ; Present or Absent are observations made during a qualitative analysis.

This report is considered preliminary until signed by both the Laboratory Analyst and Laboratory Director or Supervisor. If you have any questions regarding this report, please do not hesitate to contact us.

Jamie L. Noel
Laboratory Director

Kristina Scaviola
Laboratory Supervisor



OPTIMUM

Analytical and Consulting, LLC

85 Stiles Road, Suite 201, Salem, NH 03079 Phone: (603)-458-5247

BULK SAMPLE ANALYSIS REPORT POLARIZED LIGHT MICROSCOPY

PLM (EPA-600/M4-82-020, EPA-600/ R-93-116) NVLAP Lab Code: 101433-0

CLIENT: Axiom Partners, Inc.
ADDRESS: 545 Salem St.
CITY / STATE / ZIP: Wakefield MA 01880
CONTACT: Heather Forgione
DESCRIPTION: PLM Analysis
LOCATION: High School

ORDER #: 1614724
PROJECT #: 01288.003
DATE COLLECTED: 02/17/2016
COLLECTED BY: Chris LaPorte
DATE RECEIVED: 02/17/2016
ANALYSIS DATE: 02/17/2016
REPORT DATE: 02/18/2016
ANALYST: Jamie Noel

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1614724-001 021716-47-01A	Cafeteria 12"x12" Brown Floor Tile,	LAYER 1 100%	Chrysotile	2%	Cellulose Fiber Binder/Filler	1% 97%
Total % Asbestos:				2.0%	Total % Non-Asbestos: 98.0%	
1614724-002 021716-47-01B	Cafeteria 12"x12" Brown Floor Tile, Positive Stop	LAYER 1 100%				
1614724-003 021716-47-02A	Cafeteria 12"x12" Brown Floor Tile Adhesive, Black	LAYER 1 100%	Chrysotile	3%	Cellulose Fiber Binder/Filler	2% 95%
Total % Asbestos:				3.0%	Total % Non-Asbestos: 97.0%	
1614724-004 021716-47-02B	Cafeteria 12"x12" Brown Floor Tile Adhesive, Black Note: Positive Stop	LAYER 1 100%				
1614724-005 021716-47-03A	Room F21 9"x9" Olive Green Floor Tile,	LAYER 1 100%	Chrysotile	8%	Cellulose Fiber Binder/Filler	1% 91%
Total % Asbestos:				8.0%	Total % Non-Asbestos: 92.0%	
1614724-006 021716-47-03B	Room F21D 9"x9" Olive Green Floor Tile, Positive Stop	LAYER 1 100%				
1614724-007 021716-47-04A	Room F21 9"x9" Olive Green Floor Tile Adhesive, Black	LAYER 1 100%	Chrysotile	2%	Cellulose Fiber Non-Fibrous Material	1% 97%
Total % Asbestos:				2.0%	Total % Non-Asbestos: 98.0%	
1614724-008 021716-47-04B	Room F21D 9"x9" Olive Green Floor Tile Adhesive, Black Note: Positive Stop	LAYER 1 100%				



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ANALYST: Jamie Noel

REPORT OF ANALYSIS

Laboratory ID Sample No.	Sample Location Description	Layer No. Layer %	Asbestos Type	(%)	Non-Asbestos Components	(%)
1614724-009 021716-47-05A	Room Between F21D and F21 12"x12" White w/ Black Spots Floor Tile,	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1614724-010 021716-47-05B	Room Between F21D and F21 12"x12" White w/ Black Spots Floor Tile,	LAYER 1 100%	None Detected		Cellulose Fiber Binder/Filler	1% 99%
Total % Asbestos:			No Asbestos Detected		Total % Non-Asbestos: 100.0%	
1614724-011 021716-47-06A	Room Between F21D and F21 12"x12" White w/Black Spots Floor Tile Adhesive, Tan/Black	LAYER 1 100%	Chrysotile	2%	Cellulose Fiber Non-Fibrous Material	1% 97%
Total % Asbestos:			2.0%		Total % Non-Asbestos: 98.0%	
1614724-012 021716-47-06B	Room Between F21D and F21 12"x12" White w/Black Spots Floor Tile Adhesive, Tan/Black Note: Positive Stop	LAYER 1 100%				

**Analyst
Signatory:**

Jamie Noel

NVLAP[®]
Lab Code: 101433-0



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AXIOM PARTNERS
979 MAIN STREET
WAKEFIELD, MA 01880
PHONE: 781.213.9198
FAX: 781.213.6992

LABORATORY ORDER #: 1614724

Sample(s) received in good condition? [Y] [N]
 Discernable field blank submitted? [Y] [N]

Asbestos Analysis - Chain of Custody Form

Sampled by: <u>CHRIS LAPORTE</u>	Date Collected: <u>02.17.2016</u>
Project Name: <u>HIGH SCHOOL</u>	
Project ID/Number: <u>01288.003</u>	<u>Sminassian</u>
Special Lab Instructions: Positive stop; email results to <u>hfor@axiomenv.com</u> and <u>hfor@axiomenv.com</u>	

TURNAROUND TIME - If turnaround time is not chosen standard turnaround time applies (6 + Days)

☒ 3 Hours ☐ 6 Hours ☐ 12 Hours ☐ 24 Hours ☐ 48 Hours ☐ 72 Hours ☐ 4 Days ☐ 5 Days ☐ 6-10 Days

TYPE OF ASBESTOS ANALYSIS: EPA 600/R-93/116

SAMPLE NO.	SAMPLE DESCRIPTION	SAMPLE LOCATION	COMMENTS
021716-47-01A	12"x12" BROWN FLOOR TILE	CAFETERIA	
01B	" "	"	
021716-47-02A	12"x12" BROWN FLOOR TILE ADHESIVE	"	
02B	" "	"	
021716-47-03A	9"x9" OLIVE GREEN FLOOR TILE	ROOM F21	
03B	" "	ROOM F21D	
021716-47-04A	9"x9" OLIVE GREEN FLOOR TILE ADHESIVE	ROOM F21	
04B	" "	ROOM F21D	
021716-47-05A	12"x12" WHITE w/BLACK SPOTS FLOOR TILE	ROOM BETWEEN F21D AND F21	
05B	" "	" "	
021716-47-06A	12"x12" WHITE w/BLACK SPOTS FLOOR TILE ADHESIVE	" "	
06B	" "	" "	

Relinquished: Heather R. Forgione Date: 02.17.16 Time: 1705
 Received: Christy Kimbark Date: 2/17/16 Time:
 Relinquished: Date: Time:
 Received: Date: Time: