



ASBESTOS TEM LABORATORIES, INC.

**EPA Interim Method
Polarized Light Microscopy
Analytical Report**

Laboratory Job # 121-002

1409 Fifth Street
Berkeley, CA 94710
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1016 GREG STREET, SPARKS, NV 89431
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ASBESTOS TEM LABORATORIES, INC

Accredited by
U.S. Dept. of Commerce

NVLAP
CA DOHS ELAP

Feb-07-03

Mr. Jack Anderson
ABC Consultants
5499 West "A" Street
Burlingame, CA 94111

RE: LABORATORY JOB # 121-002
Polarized light microscopy analytical results for 29 bulk sample(s) with 15 sample split(s)
Job Site: A: 1st Floor
Job No.: ABC-123

Enclosed please find the bulk material analytical results for one or more samples submitted for asbestos analysis. The analyses were performed in accordance with EPA Method 600/R-93/116 or 600/M4-82-020 for the determination of asbestos in bulk building materials by polarized light microscopy (PLM). Please note that while PLM analysis is commonly performed on non-friable and fine grained materials such as floor tiles and dust, the EPA method recognizes that PLM is subject to limitations. In these situations, accurate results may only be obtainable through the use of more sophisticated and accurate techniques such as transmission electron microscopy (TEM) or X-ray diffraction (XRD).

Prior to analysis, samples are logged-in and all data pertinent to the sample recorded. The samples are checked for damage or disruption of any chain-of-custody seals. A unique laboratory ID number is assigned to each sample. A hard copy log-in sheet containing all pertinent information concerning the sample is generated. This and all other relevant paper work are kept with the sample throughout the analytical procedures to assure proper analysis.

Each sample is opened in a class 100 HEPA negative air hood. A representative sampling of the material is selected and placed onto a glass microscope slide containing a drop of refractive index oil. The glass slide is placed under a polarizing light microscope where standard mineralogical techniques are used to analyze and quantify the various materials present, including asbestos. The data is then compiled into standard report format and subjected to a thorough quality assurance check before the information is released to the client.

Sincerely Yours,

Lab Manager
ASBESTOS TEM LABORATORIES, INC.

--- These results relate only to the samples tested and must not be reproduced, except in full, with the approval of the laboratory. This report must not be used to claim product endorsement by NVLAP or any other agency of the U.S. Government. ---

POLARIZED LIGHT MICROSCOPY ANALYTICAL REPORT

EPA Method 600/R-93/116 or 600/M4-82-020

Page: 1 of 5

Contact: Mr. Jack Anderson	Samples Indicated: 29	Report No. 35663
Address: ABC Consultants	Reg. Samples Analyzed: 29	Date Submitted: Feb-07-03
5499 West "A" Street	Split Layers Analyzed: 15	Date Reported: Feb-07-03
Burlingame, CA 94111	Job Site / No. A: 1st Floor	
	ABC-123	

SAMPLE ID	%	ASBESTOS TYPE	OTHER DATA	DESCRIPTION
			1) Non-Asbestos Fibers 2) Matrix Materials 3) Date/Time Collected 4) Date Analyzed	FIELD LAB
ABC-123-02/04: A-WLBD-100-1 Lab ID # 121-002-001	<1%	Chrysotile	1) 1-5% Cellulose	Gypsum Wallboard System
			2) 95-99% Gyp, Calc, Mica, Qtz, Opq	
			3)	
			4) Feb-07-03	1-5% Chrysotile-in Mud
ABC-123-02/04: A-WLBD-100-2 Lab ID # 121-002-002	<1%	Chrysotile	1) 1-5% Cellulose	Gypsum Wallboard System
			2) 95-99% Gyp, Calc, Mica, Qtz, Opq	
			3)	
			4) Feb-07-03	1-5% Chrysotile-in Mud
ABC-123-02/04: A-WLBD-100-3 Lab ID # 121-002-003	<1%	Chrysotile	1) 1-5% Cellulose	Gypsum Wallboard System
			2) 95-99% Gyp, Calc, Mica, Qtz, Opq	
			3)	
			4) Feb-07-03	1-5% Chrysotile-in Mud
ABC-123-02/03: AFLTL12X-101-1 Lab ID # 121-002-004A		None Detected	1) 1-5% Cellulose	Beige w/ Streaks Vinyl Floor Tile 12x12
			2) 95-99% Calc, Bndr, Other m.p.	
			3)	
			4) Feb-07-03	Floor Tile-Beige
ABC-123-02/03: A-FLTL12X-101-1 Lab ID # 121-002-004B	1-5%	Chrysotile	1) None Detected	Beige w/ Streaks Vinyl Floor Tile 12x12
			2) 95-99% Tar, Bndr, Calc, Other m.p.	
			3)	
			4) Feb-07-03	Mastic-Black
ABC-123-02/03: A-FLTL12X-101-1 Lab ID # 121-002-004C		None Detected	1) None Detected	Beige w/ Streaks Vinyl Floor Tile 12x12
			2) 99-100% Calc, Bndr, Mica, Other m.p.	
			3)	
			4) Feb-07-03	LevelCompound-Off-White
ABC-123-02/03: A-FLTL12X-101-2 Lab ID # 121-002-005A		None Detected	1) 1-5% Cellulose	Beige w/ Streaks Vinyl Floor Tile 12x12
			2) 95-99% Calc, Bndr, Other m.p.	
			3)	
			4) Feb-07-03	Floor Tile-Beige
ABC-123-02/03: A-FLTL12X-101-2 Lab ID # 121-002-005B	1-5%	Chrysotile	1) None Detected	Beige w/ Streaks Vinyl Floor Tile 12x12
			2) 95-99% Tar, Bndr, Calc, Other m.p.	
			3)	
			4) Feb-07-03	Mastic-Black
ABC-123-02/03: A-FLTL12X-101-3 Lab ID # 121-002-006A		None Detected	1) None Detected	Beige w/ Streaks Vinyl Floor Tile 12x12
			2) 99-100% Calc, Bndr, Other m.p.	
			3)	
			4) Feb-07-03	Floor Tile-Beige
ABC-123-02/03: A-FLTL12X-101-3 Lab ID # 121-002-006C		None Detected	1) None Detected	Beige w/ Streaks Vinyl Floor Tile 12x12
			2) 99-100% Calc, Bndr, Mica, Other m.p.	
			3)	
			4) Feb-07-03	LevelCompound-Off-White

Detection Limit of Method is Estimated to be 1% Asbestos Using a Visual Area Estimation Technique

Lab Manager _____

Analyst _____

ASBESTOS TEM LABORATORIES, INC. 1409 FIFTH STREET, BERKELEY, CA 94710 (510) 528-0108
With Offices in Reno, NV (775) 359-3377

POLARIZED LIGHT MICROSCOPY ANALYTICAL REPORT

EPA Method 600/R-93/116 or 600/M4-82-020

Page: 2 of 5

Contact: Mr. Jack Anderson	Samples Indicated: 29	Report No. 35663
Address: ABC Consultants	Reg. Samples Analyzed: 29	Date Submitted: Feb-07-03
5499 West "A" Street	Split Layers Analyzed: 15	Date Reported: Feb-07-03
Burlingame, CA 94111	Job Site / No. A: 1st Floor	
	ABC-123	

SAMPLE ID	% ASBESTOS TYPE	OTHER DATA	DESCRIPTION
		1) Non-Asbestos Fibers 2) Matrix Materials 3) Date/Time Collected 4) Date Analyzed	FIELD LAB
ABC-123-02/04: A-FLBBD-102-1 Lab ID # 121-002-007A	None Detected	1)5-10% Fiberglass 2)90-95% Plast, Foam, Bndr, Glue 3) 4) Feb-07-03	Beige Baseboard Baseboard-Beige
ABC-123-02/04: A-FLBBD-102-1 Lab ID # 121-002-007B	1-5% Chrysotile	1)None Detected 2)95-99% Tar, Bndr, Calc, Other m.p. 3) 4) Feb-07-03	Beige Baseboard Mastic-Black
ABC-123-02/04: A-FLBBD-102-2 Lab ID # 121-002-008A	None Detected	1)5-10% Fiberglass 2)90-95% Plast, Foam, Bndr, Glue 3) 4) Feb-07-03	Beige Baseboard Baseboard-Beige
ABC-123-02/04: A-FLBBD-102-2 Lab ID # 121-002-008B	1-5% Chrysotile	1)None Detected 2)95-99% Tar, Bndr, Calc, Other m.p. 3) 4) Feb-07-03	Beige Baseboard Mastic-Black
ABC-123-02/04: A-FLBBD-102-3 Lab ID # 121-002-009A	None Detected	1)5-10% Fiberglass 2)90-95% Plast, Foam, Bndr, Glue 3) 4) Feb-07-03	Beige Baseboard Baseboard-Beige
ABC-123-02/04: A-FLBBD-102-3 Lab ID # 121-002-009B	1-5% Chrysotile	1)None Detected 2)95-99% Tar, Bndr, Calc, Other m.p. 3) 4) Feb-07-03	Beige Baseboard Mastic-Black
ABC-123-02/04: A-MIWPTY-103-1 Lab ID # 121-002-010	1-5% Chrysotile	1)None Detected 2)95-99% Calc, Bndr, Other m.p. 3) 4) Feb-07-03	Window Putty Putty-Off-White
ABC-123-02/04: A-MIWPTY-103-2 Lab ID # 121-002-011	1-5% Chrysotile	1)None Detected 2)95-99% Calc, Bndr, Other m.p. 3) 4) Feb-07-03	Window Putty Putty-Off-White
ABC-123-02/04: A-MIWPTY-103-3 Lab ID # 121-002-012	1-5% Chrysotile	1)None Detected 2)95-99% Calc, Bndr, Other m.p. 3) 4) Feb-07-03	Window Putty Putty-Off-White
ABC-123-02/03: A-CLTL1X1-104-1 Lab ID # 121-002-013	None Detected	1)40-60% FiberGlass, Cellulose 2)40-60% GlassFrgs, GlassFoam, Bndr 3) 4) Feb-07-03	OffWhite Pinhole Ceiling Tile 1X1 Ceiling Tile-Off-White

Detection Limit of Method is Estimated to be 1% Asbestos Using a Visual Area Estimation Technique

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POLARIZED LIGHT MICROSCOPY ANALYTICAL REPORT

EPA Method 600/R-93/116 or 600/M4-82-020

Page: 3 of 5

Contact: Mr. Jack Anderson	Samples Indicated: 29	Report No. 35663
Address: ABC Consultants	Reg. Samples Analyzed: 29	Date Submitted: Feb-07-03
5499 West "A" Street	Split Layers Analyzed: 15	Date Reported: Feb-07-03
Burlingame, CA 94111	Job Site / No. A: 1st Floor	
	ABC-123	

SAMPLE ID	% ASBESTOS TYPE	OTHER DATA	DESCRIPTION
		1) Non-Asbestos Fibers 2) Matrix Materials 3) Date/Time Collected 4) Date Analyzed	FIELD LAB
ABC-123-02/03: A-CLTL1X1-104-2 Lab ID # 121-002-014	None Detected	1)40-60% FiberGlass, Cellulose 2)40-60% GlassFrgs, GlassFoam, Bndr 3) 4) Feb-07-03	OffWhite Pinhole Ceiling Tile 1X1 Ceiling Tile-Off-White
ABC-123-02/03: A-CLTL1X1-104-3 Lab ID # 121-002-015	None Detected	1)40-60% FiberGlass, Cellulose 2)40-60% GlassFrgs, GlassFoam, Bndr 3) 4) Feb-07-03	OffWhite Pinhole Ceiling Tile 1X1 Ceiling Tile-Off-White
ABC-123-02/03: A-CLTL2X4-106-1 Lab ID # 121-002-016	1-5% Chrysotile 1-5% Amosite	1)None Detected 2)90-98% Calc, Bndr, Other m.p. 3) 4) Feb-07-03	OffWhite Textured Ceiling Tile 2X4 Ceiling Tile-Off-White
ABC-123-02/03: A-CLTL2X4-106-2 Lab ID # 121-002-017	1-5% Chrysotile 1-5% Amosite	1)None Detected 2)90-98% Calc, Bndr, Other m.p. 3) 4) Feb-07-03	OffWhite Textured Ceiling Tile 2X4 Ceiling Tile-Off-White
ABC-123-02/04: A-FLBBD-107-1 Lab ID # 121-002-018A	None Detected	1)None Detected 2)99-100% Calc, Bndr, Other m.p. 3) 4) Feb-07-03	Green Baseboard Baseboard-Green
ABC-123-02/04: A-FLBBD-107-1 Lab ID # 121-002-018B	None Detected	1)None Detected 2)99-100% Tar, Opq, Qtz, Other m.p. 3) 4) Feb-07-03	Green Baseboard Mastic-Black
ABC-123-02/04: A-FLBBD-107-2 Lab ID # 121-002-019A	None Detected	1)None Detected 2)99-100% Calc, Bndr, Other m.p. 3) 4) Feb-07-03	Green Baseboard Baseboard-Green
ABC-123-02/04: A-FLBBD-107-2 Lab ID # 121-002-019B	None Detected	1)None Detected 2)99-100% Tar, Opq, Qtz, Other m.p. 3) 4) Feb-07-03	Green Baseboard Mastic-Black
ABC-123-02/04: A-FLTL9X-108-1 Lab ID # 121-002-020	5-10% Chrysotile	1)None Detected 2)90-95% Calc, Bndr, Other m.p. 3) 4) Feb-07-03	Green Vinyl Floor Tile 9x9 Floor Tile-Green
ABC-123-02/04: A-FLTL9X-108-2 Lab ID # 121-002-021	5-10% Chrysotile	1)None Detected 2)90-95% Calc, Bndr, Other m.p. 3) 4) Feb-07-03	Green Vinyl Floor Tile 9x9 Floor Tile-Green

Detection Limit of Method is Estimated to be 1% Asbestos Using a Visual Area Estimation Technique

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POLARIZED LIGHT MICROSCOPY ANALYTICAL REPORT

EPA Method 600/R-93/116 or 600/M4-82-020

Page: 4 of 5

Contact: Mr. Jack Anderson	Samples Indicated: 29	Report No. 35663
Address: ABC Consultants	Reg. Samples Analyzed: 29	Date Submitted: Feb-07-03
5499 West "A" Street	Split Layers Analyzed: 15	Date Reported: Feb-07-03
Burlingame, CA 94111	Job Site / No. A: 1st Floor	
	ABC-123	

SAMPLE ID	% ASBESTOS TYPE	<u>OTHER DATA</u>	DESCRIPTION
		1) Non-Asbestos Fibers 2) Matrix Materials 3) Date/Time Collected 4) Date Analyzed	FIELD LAB
ABC-123-02/04: A-FLCPMS-109-1 Lab ID # 121-002-022	None Detected	1) None Detected 2) 99-100% Calc, Tar, Other m.p. 3) 4) Feb-07-03	Orange/Yellow Carpet Mastic CarpetMastic-Orange/Yellow
ABC-123-02/04: A-FLCPMS-109-2 Lab ID # 121-002-023	None Detected	1) None Detected 2) 99-100% Calc, Tar, Other m.p. 3) 4) Feb-07-03	Orange/Yellow Carpet Mastic CarpetMastic-Orange/Yellow
ABC-123-02/05: A-FLTL12X-110-1 Lab ID # 121-002-024A	None Detected	1) None Detected 2) 99-100% Calc, Bndr, Other m.p. 3) 4) Feb-07-03	Lt. Grey Vinyl Floor Tile 12x12 Floor Tile-Grey
ABC-123-02/05: A-FLTL12X-110-1 Lab ID # 121-002-024B	None Detected	1) None Detected 2) 99-100% Tar, Opq, Qtz, Other m.p. 3) 4) Feb-07-03	Lt. Grey Vinyl Floor Tile 12x12 Mastic-Black
ABC-123-02/05: A-FLTL12X-110-2 Lab ID # 121-002-025A	None Detected	1) None Detected 2) 99-100% Calc, Bndr, Other m.p. 3) 4) Feb-07-03	Lt. Grey Vinyl Floor Tile 12x12 Floor Tile-Grey
ABC-123-02/05: A-FLTL12X-110-2 Lab ID # 121-002-025B	None Detected	1) None Detected 2) 99-100% Tar, Opq, Qtz, Other m.p. 3) 4) Feb-07-03	Lt. Grey Vinyl Floor Tile 12x12 Mastic-Black
ABC-123-02/05: A-FLTL12X-110-3 Lab ID # 121-002-026A	None Detected	1) None Detected 2) 99-100% Calc, Bndr, Other m.p. 3) 4) Feb-07-03	Lt. Grey Vinyl Floor Tile 12x12 Floor Tile-Grey
ABC-123-02/05: A-FLTL12X-110-3 Lab ID # 121-002-026B	None Detected	1) None Detected 2) 99-100% Tar, Opq, Qtz, Other m.p. 3) 4) Feb-07-03	Lt. Grey Vinyl Floor Tile 12x12 Mastic-Black
ABC-123-02/05: A-FLTL12X-111-1 Lab ID # 121-002-027A	None Detected	1) None Detected 2) 99-100% Calc, Bndr, Other m.p. 3) 4) Feb-07-03	Dk. Grey Vinyl Floor Tile 12x12 Floor Tile-Grey
ABC-123-02/05: A-FLTL12X-111-1 Lab ID # 121-002-027B	None Detected	1) None Detected 2) 99-100% Tar, Opq, Qtz, Other m.p. 3) 4) Feb-07-03	Dk. Grey Vinyl Floor Tile 12x12 Mastic-Black

Detection Limit of Method is Estimated to be 1% Asbestos Using a Visual Area Estimation Technique

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POLARIZED LIGHT MICROSCOPY ANALYTICAL REPORT

EPA Method 600/R-93/116 or 600/M4-82-020

Page: 5 of 5

Contact: Mr. Jack Anderson	Samples Indicated: 29	Report No. 35663
Address: ABC Consultants	Reg. Samples Analyzed: 29	Date Submitted: Feb-07-03
5499 West "A" Street	Split Layers Analyzed: 15	Date Reported: Feb-07-03
Burlingame, CA 94111	Job Site / No. A: 1st Floor	
	ABC-123	

SAMPLE ID	% ASBESTOS TYPE	OTHER DATA	DESCRIPTION
		1) Non-Asbestos Fibers 2) Matrix Materials 3) Date/Time Collected 4) Date Analyzed	FIELD LAB
ABC-123-02/05: A-FLTL12X-111-2 Lab ID # 121-002-028A	None Detected	1) None Detected 2) 99-100% Calc, Bndr, Other m.p. 3) 4) Feb-07-03	Dk. Grey Vinyl Floor Tile 12x12 Floor Tile-Grey
ABC-123-02/05: A-FLTL12X-111-2 Lab ID # 121-002-028B	None Detected	1) None Detected 2) 99-100% Tar, Opq, Qtz, Other m.p. 3) 4) Feb-07-03	Dk. Grey Vinyl Floor Tile 12x12 Mastic-Black
ABC-123-02/05: A-FLTL12X-111-3 Lab ID # 121-002-029A	None Detected	1) None Detected 2) 99-100% Calc, Bndr, Other m.p. 3) 4) Feb-07-03	Dk. Grey Vinyl Floor Tile 12x12 Floor Tile-Grey
ABC-123-02/05: A-FLTL12X-111-3 Lab ID # 121-002-029B	None Detected	1) None Detected 2) 99-100% Tar, Opq, Qtz, Other m.p. 3) 4) Feb-07-03	Dk. Grey Vinyl Floor Tile 12x12 Mastic-Black
Lab ID #		1) 2) 3) 4)	
Lab ID #		1) 2) 3) 4)	
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Detection Limit of Method is Estimated to be 1% Asbestos Using a Visual Area Estimation Technique

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