

ATC ASSOCIATES, INC. - TEM ANALYSIS

Lab Sample No. 60696

Client Spl. No. MBHS-B>6-10/3-04

Instrument I.D. EM 10 CRX

Screen Magnification 16,400X

Acc. Voltage 80 kV

LAB GROUP #: 5650 - 10/09/01

Filter Type MCE 25 mm

Filter Area 385 mm²

Grid I.D. 444

IGD Area 0.01124 mm²

No. GO to be Analyzed 4

Operator WIP

Disk No.

Comments

13.147 Struct. Corrad. to 70 g/mm²

GO.	No.	Coord.	Structure No.	Structure Type				Length		I.D. of Structure				N or ✓	EDS (Nonasb. Elements)
				F	B	C	M	>0.5 um < 5 um	> 5um	Chrys.	Amphibole	Nonasb.	Ambig./ND		
24	1	1	180												
	2	5	-												
25	3	5	-												
	4	P	-												

Photo No. (from 1 in 5 asbestos-containing samples)

Struct. = > 0.5um & > 5:1 Aspect Ratio

N= Not Observed (EDS spectrum or diffraction pattern)

✓= Positive diffraction pattern properties conforming to laboratory identification criteria observed.

For chrysotile: 0.75nm spacing for (020) reflections.

0.53nm spacing for the layer line repeat, streaking of (110) and (130) reflections.

For amphibole: 0.53nm layer line repeat, and approx.

3.5 ratio of non-twinned layer line spot spacing to layer line repeat distance (0.53nm).

✓= EDS spectrum conforming to laboratory identification criteria observed.

F= Single Fiber (1-3 intersections = 1-3 fibers)

B= Bundle (>3 fibers <1 fiber diameter apart)

C= Cluster (>3 intersections)

M= Matrix

NSD= No Structures Detected

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Identify all structures using EDS

Grid acceptance:

<50% undissolved filter, overlapped or folded

<10% particulate coverage >50% coverage

at least 20 unfolded or overlapped grid squares

<5% holes or opaque areas

Check diffraction for asbestos structures up to 70g/dm² (1st 4)

Store all unrepeat spectra

Unused portion of filter

Avoided portion of filter (2mm wide)

Portion of filter subject to examination

25mm filter

Stopping Rules: >50 s/G.O. or in 1st 4 G.O.

Totals

	F	B	C	M	> 5um
Chrysotile					
Amphibole					
Ambiguous					
Non-asbestos					
Non-identified					

AMPHIBOLES

Amosite

Crocidolite

Anthophyllite

Tremolite

Actinolite

ATC ASSOCIATES, INC. - TEM ANALYSIS

LAB GROUP #: 5650 - 10/09/01

Lab Sample No. 60713

Filter Type MCE 25 mm

Operator

Client Spl. No. MBHS-B-6-10/9-21

Filter Area 385 mm²

Instrument I.D. EM 10 CRX

Grid I.D. 744

Disk No.

Screen Magnification 15,400X

(GO) Area 0.01124 mm²

Comments

Acc. Voltage 80 kV

No. GO to be Analyzed 4

(3.147 Struct. covered to 70 s/mm²)

GO.	No.	Coord.	Structure No.	Structure Type				Length		I.D. of Structure				N or ✓	EDS (Nonasb. Elements)
				F	B	C	M	≥ 0.5 um < 5 um	> 5um	Chrys.	Amphibole	Nonasb.	Ambig./ND		
915	1	158	MSD												
	2	58	-												
96	3	51	-												
	4	51	-												

Photo No. (from 1 in 5 asbestos-containing samples) Identify all structures using EDS Check diffraction for asbestos structures up to 70s/mm² (1st 4) Store all unrepeat spectra

Struct. = > 0.5um & > 5:1 Aspect Ratio

N= Not Observed (EDS spectrum or diffraction pattern)

✓ Positive diffraction pattern properties conforming to laboratory identification criteria observed.

For chrysotiles: 0.7nm spacing for (020) reflections, 0.53nm spacing for the layer line repeat, streaking of (110) and (130) reflections.

For amphiboles: 0.53nm layer line repeat, and approx. 3.5 ratio of non-twinned layer line spot spacing to layer line repeat distance (0.53nm).

✓ EDS spectrum conforming to laboratory identification criteria observed.

F= Single Fiber (1-3 intersections = 1-3 fibers)

B= Bundle (>3 fibers <1 fiber diameter apart)

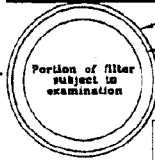
C= Cluster (>3 intersections)

M= Matrix

NSD= No Structures Detected

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Grid acceptance:

<50% undissolved filter, overlapped or folded
<10% particulate coverage >50% coverage
at least 20 unfolded or overlapped grid squares
<5% holes or opaque areas

Unavoided portion of filter (2mm wide)

AMPHIBOLES

Amosite
Crocidolite
Anthophyllite
Tremolite
Actinolite

Totals

	F	B	C	M	> 5um
Chrysotile					
Amphibole					
Ambiguous					
Non-asbestos					
Non-identified					

