## LABORATORY REPORT

TO: Chad Johnson EWU, EH+S 002 Martin Hall Cheney, WA 99004

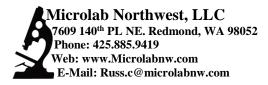
PHONE: (509) 359-6455 FAX: (509) 359-4690 E-MAIL: djohnson@ewu.edu SUBJECT: Particle Identification SPECIMEN: Five Sets of Tapelifts REFERENCE: JFK

### INTRODUCTION

Five sets of three tapelifts each was received for analysis.

Sample ID	Description	Analysis/Date		
		Collected		
M17	Windowsill	PI 7/30/19		
Ref 1	Reference Desk Mont Station R Side Wood			
Ref 2	Reference Desk Mont Station L Side Wood			
M08A	Front of Landscape Wall Mont PI 7/30/19			
M18-3	Tracey Rice Keyboard			
M18-2	Windowsill			
M04	Front of Table Next t. Phone	PI 7/31/19		
M04B	Top of File Cab	PI 7/30/19		
M04 E	Top of Brown Table			
M 23-1	Top of Bookshelf Window SidePI 7/30/19			
M23-2	Paul Rodman Cube Wall			
M23-3	Tabletop Near Sink			
M23A	Top of File CabPI 7/30/19			
M23C	Top of Desk Shelf			
M23 D-1	Top of Desk Shelf			
M23 D-2	Bookshelf 3 Shelf Down			

The tapelifts were placed on clean microscope slides and immersed in acetone for about two hours and then removed. The slides with the tapelifts were rinsed with clean acetone as they were removed from the immersion tank. The tapelifts were allowed to dry for twenty minutes in a laminar flow Clean Work Station and then mounted using a synthetic resin (Shurmount). The completed mounts were analyzed using analytical light microscopy. The materials identified are listed in decreasing order of frequency, the most common materials first. The significance of a material's location in the



list is not necessarily related to its health impact because some materials have a greater health impact at low levels than other materials do at high levels.

#### RESULTS

Sample	Description	Glass	Particle Summary
ID		Fibers	
M17	Windowsill	3	Skin Flakes, Clothing Fibers, Plant Debris, Phytoliths, Natural Minerals, Starch, Cosmetics, Pollen,
Ref 1	Reference Desk Mont Station R Side Wood	2	Skin Flakes, Clothing Fibers, Plant Debris, Phytoliths, Starch
Ref 2	Reference Desk Mont Station L Side Wood	0	Skin Flakes, Clothing Fibers, Plant Debris, Phytoliths, Paper Fibers, Natural Minerals
M08A	Front of Landscape Wall Mont	0	Skin Flakes, Clothing Fibers, Bird Feather Barbules, Plant Debris, Starch
M18-3	Tracey Rice Keyboard	0	Clothing Fibers, Skin Flakes, Paper Fibers, Natural Minerals, Cosmetics, Natural Minerals
M18-2	Windowsill	2	Clothing Fibers, Skin Flakes, Paper Fibers, Natural Minerals, Paint
M04	Front of Table Next t. Phone	0	Natural Minerals, Skin Flakes
M04B	Top of File Cab	1	Skin Flakes, Natural Minerals, Metal Wear
M04 E	Top of Brown Table	0	Skin Flakes, Ink, Clothing Fibers, Natural Minerals
M 23-1	Top of Bookshelf Window Side	0	Paper Fibers, Cotton Fibers, Plant Debris
M23-2	Paul Rodman Cube Wall	1	Paper Fibers, Cotton Fibers
M23-3	Tabletop Near Sink	1	Cotton Fibers, Natural Minerals
M23A	Top of File Cab	0	Skin Flakes, Resin, Metal Wear
M23C	Top of Desk Shelf	19	Clothing Fibers, Natural Minerals, Insect Debris
M23 D-1	Top of Desk Shelf	14	Skin Flakes, Paper Fibers, Natural Minerals
M23 D-2	Bookshelf 3 Shelf Down	2	Skin Flakes, Clothing Debris, Plant Debris, Natural Minerals

Particles typically seen on these tapelifts included skin flakes, paper fiber, clothing fiber, natural minerals, plant parts, tire wear, starch, pollen, plant material, fungal spores, cosmetics, feather barbules, wear metals, ink, silica phytoliths, and glass fiber.

Nine out of the twelve samples contained a total 45 short glass fibers (less then 50microns in length). Sample M23 D-1, M23C and M17 did not meet the 2 glass fibers per square inch clearance requirement. 13 short glass fibers and 4 long glass fibers per square inch is associated with health complaint. All the samples contained normal to low particle loading.

## CONCLUSION

Nine out of the twelve samples contained a total 45 short glass fibers (less then 50microns in length). Sample M23 D-1, M23C and M17 did not meet the 2 glass fibers per square inch clearance requirement. The glass fiber in these samples are consistent with fibers found in acoustic ceiling tile. All the samples contained normal to low particle loading.



Thank you for this opportunity to be of service. If I can provide any further assistance, please contact me.

Signed: <u>Heidie Crutchen</u> Signed: <u>PC</u> Heidie Crutcher, Analyst E. R. Crutcher, Consultant

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PHONE: (509) 359-6455 FAX: (509) 359-4690 E-MAIL: djohnson@ewu.edu SUBJECT: Particle Identification SPECIMEN: Two Sets of Tapelifts REFERENCE: JFK

### INTRODUCTION

Two sets of three tapelifts each was received for analysis.

Sample ID	Description	Analysis/Date Collected		
		Collected		
M 55	Women's Bathroom Sink Countertop	PI 7/30/19		
M 52/34	Women's Bathroom Sink Countertop			
Cir-1	In Front of Comp Mont by Hand Station	PI 7/30/19		
Cir-2	On Top of Survey Box Front Counters			
M02A	On Top of Glass Display			

The tapelifts were placed on clean microscope slides and immersed in acetone for about two hours and then removed. The slides with the tapelifts were rinsed with clean acetone as they were removed from the immersion tank. The tapelifts were allowed to dry for twenty minutes in a laminar flow Clean Work Station and then mounted using a synthetic resin (Shurmount). The completed mounts were analyzed using analytical light microscopy. The materials identified are listed in decreasing order of frequency, the most common materials first. The significance of a material's location in the list is not necessarily related to its health impact because some materials have a greater health impact at low levels than other materials do at high levels.

#### RESULTS

Sample	Description	Glass	Particle Summary
ID		Fibers	
M 55	Women's Bathroom Sink	0	Paper Fibers
	Countertop		
M 52/34	Women's Bathroom Sink	0	Clothing Fibers, Minerals
	Countertop		
Cir-1	In Front of Comp Mont by	0	Paper Fibers, Clothing Debris, Skin Flakes
	Hand Station		
Cir-2	On Top of Survey Box Front	0	Clothing Fibers, Tire Wear, Natural Minerals, Paper
	Counters		Fibers, Plant Debris, Skin Flakes, Fungal Spores,
			Pollen
M02A	On Top of Glass Display	0	Skin Flakes, Clothing Fibers, Starch, Tire Wear,
			Natural Minerals, Phytoliths, Ink

Particles typically seen on these tapelifts included skin flakes, paper fiber, clothing fiber, natural minerals, plant parts, tire wear, starch, pollen, plant material, fungal spores, cosmetics, feather barbules, wear metals, silica phytoliths, and glass fiber.

None of the samples we analyzed contained glass fiber. All the samples contained normal to low particle loading.

### CONCLUSION

None of the samples we analyzed contained glass fiber. All the samples contained normal to low particle loading.

Thank you for this opportunity to be of service. If I can provide any further assistance, please contact me.

Signed: \_\_\_\_

Heidie Crutcher, Analyst Signed: <u>PC</u> E. R. Crutcher, Consultant