

The following samples were collected from the JFK Library, rooms/areas:

- M04
- M04D
- M04E
- U02
- U02C
- U06

## 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:** Two Sets of Tapelifts  
**REFERENCE:**

### INTRODUCTION

Two sets of three tapelifts each were received for analysis. The tapelifts were labeled as follows.

TAPELIFTS
M04, After Cleaning, 4/19/18
M04E, After Cleaning, 4/19/2018
M04D, After Cleaning, 4/19/2018
U02, One Month After Cleaning, 4/19/2018
U02C, One Month After Cleaning, 4/19/2018
U06, One Month After Cleaning, 4/19/2018

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

The three tapelifts from M04 contained paper fiber, clothing fiber, skin flakes, natural minerals, pollen, starch, algae, abrasive minerals, fly ash, glass fiber, grass phytoliths, charred wood, ink, fungal spores, shoe wear, and cosmetics. There were 5 glass fibers shorter than 500um, and 1 long glass fiber in sample M04E. Health complaints are associated with 13 or more short glass fibers and/or 4 or more glass fibers longer than five hundred micrometers per square inch. The amount of glass fiber present in M04E is below the amount usually associated with health complaints; although for an area that had been recently cleaned it is a concern. The glass fiber present is commonly used in thermal insulation. All of the samples had very low particle loading. The presence of glass fiber in the

environment tends to increase sensitivity to allergens. Pine and Douglas fir pollen were the two most potent allergens in this set of tapelifts.

The tapelifts from U02 contained paper fiber, clothing fiber, skin flakes, natural minerals, starch, pollen, vehicle emissions, abrasive mineral, metal wear, charred wood, cleaning residue, and paint. These samples are not consistent with an occupied environment. All three of these samples are very clean.

#### CONCLUSION

The surfaces in M04 had elevated levels of glass fiber in relation to the amount of particle loading. The glass fibers found are commonly used in thermal insulation. The samples that were from the areas marked "one month after cleaning" were not consistent with occupied environments. All of the samples submitted had very 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  
Heidie Crutcher, Analyst

Signed: ERC  
E. R. Crutcher, Consultant