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Mr. Speice

Independent Study and Mentorship

15 February 2019

**Environmental Lab Specialist**

**Assessment 15- Interview**

**Name of Professional:** Kevin Bowman

**Title:** Laboratory Manager

**Company:** Cates Laboratory

**Date of Interview:** 1//31/19

**Works Cited:**

Bowman, Kevin. "Environmental Lab Specialist ." 31 Jan. 2019.

**Assessment:**

The following interview was conducted with Kevin Bowman at Cates Laboratory to understand the fundamentals of environmental testing and certain instruments used in environmental laboratories. By conducting this interview, I had the opportunity to speak to a lab specialist other than a professor of biochemistry and thus provided an alternative perspective of the biochemical career field. This information regarding biochemistry is different than my Final Product proposal over forensic biological chemistry; however, I wanted to explore the environmental applications of biochemistry to further acknowledge how biochemistry plays a

huge role in our health and environment today. In addition, I was able to compare the similarities and differences between an environmental lab, clinical lab, and a university (educational) lab.

First and foremost, Mr. Kevin Bowman carefully explained the variety of commercial laboratory services it provides to its clients. These services include asbestos testing, mold testing, and forensic petrography. However, most of the terms Mr. Bowman used were fairly new to me and therefore Mr. Bowman outlined each type of analyzation process. For example, I was curious about the petrographic analysis. This type of study focuses on a branch of geology that is applied to concrete analysis and rock classification. Cates laboratory test how the rock structure is affected by the pollutants and how it can break down buildings. I was fascinated by this field of science as it helps biochemists analyze how to bioremediate homes and other facilities that have been run down by pollutants. As a result, I was able to connect the information I gained from this interview to my Orginal Work.

Afterward, I asked Mr. Bowman about bulk and air samples and electron microscopic cassettes. I have heard these terms repeatedly from past interviews and research assessments but I never got the gist of what these samples contain. Mr. Bowman described that such samples are mainly used for environmental testing such a mold testing. A bulk sample refers to an actual mold that is visible to the naked eye while an air sample refers to containments not visible to the naked eye and electron microscopic cassettes are instruments that capture these samples.

As the interview continued, I asked Mr. Bowman how he got into the field of testing and research. Mr. Bowman explained that in college he took courses such as microbiology, biochemistry, and medical bacteriology that fueled his interest in this field. I was able to connect

to Mr. Bowman's passion as classes such as biology and chemistry in high school have also sparked my interest in the field of biological chemistry.

After this interview, I was able to understand what a lab specialist perform in an environmental lab and how their work relates to environmental biochemistry. In addition, I began researching how research areas such as forensic petrography could possibly relate to my Final Product proposal. As a result, I have come across questions such as can petrography help determine different stone characterizations of crime scenes and how effective is this method. I hope to answer these questions in the future and also hope to build upon this interview by incorporating Mr. Bowman's interview points in my Final Product.

01/21/19

Interview with Mr. Kevin Bowman at Cates Lab

## Specifics

- asbestos testing: break down of pollutants

- petrographic analysis:

- rock structure

- stone characterization

Why important?

↓  
remediation  
of toxic  
pollutants

→ visible

- Bulk / Air samples

↓  
not visible

→ can capture  
mold samples

- Indoor air quality manager

- instruments: electron microscope  
casset.

## Personal:

- courses → microbiology, biochemistry,  
medical bacteriology

Research → purple to madness

Record Data → online, spreadsheet.