

WIU CENTENNIAL HONORS COLLEGE
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Abstract

Poster

Major Chemistry

Faculty Mentor: Brian Bellott

Examining Fixing Agents for Scanning Electron Microscopy on Biological Samples

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Scanning electron microscopy (SEM) has been an effective way of imaging biological samples for decades. There are numerous well-established methods for preparing samples for examination via SEM. Many of these methods rely on toxic metals such as osmium or toxic organic reagents. These reagents are needed in order to ensure the cells within the tissue remain intact as SEM data is collected under vacuum and without proper treatment the integrity of the sample would be destroyed. This project will focus on other less toxic reagents that can be used to fix biological samples and explore the different drying methods used such as super critical carbon dioxide and hexamethyldisilazane (HMDS). A comparison of the different fixing agents as well as drying agents will be present.