Hazard Analysis
Measuring Microstructure Changes During Thermal Treatment

Team #30, ReSprint
Edwin Do
Joseph Braun
Timothy Chen
Abdul Nour Seddiki
Tyler Magarelli

Table 1: Revision History

Date	**Developer(s)**	**Change**
Oct 13, 2022	Abdul Nour Seddiki	Integrated the Template + Added System Boundaries and Components
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Contents

[You are free to modify this template. —SS]

1 Introduction

[You can include your definition of what a hazard is here. —SS]

2 Scope and Purpose of Hazard Analysis

3 System Boundaries and Components

This hazard analysis is conducted on the system that consists of the following components:

1. Thermally treated samples
2. The current source
3. A thermometer
4. The nano-voltmeter
5. Interfaces between above devices and control computer
6. The control computer
7. The software application that will be installed on the control computer

These components comprise the system in question. And they each are also considered the boundaries for this system. Some of the components mentioned are not controllable by ReSprint team, such as the thermally treated samples and all of the measurement devices and hardware including the current source, the thermometer, the nano-voltmeter, the communication interfaces and the control computer. Therefore, the only component controllable by ReSprint team is the software application and its sub-systems.

4 Critical Assumptions

The following is a list of assumptions to protect ourselves during the development of ReSprint from unforeseen hazards:

- Thermal treated samples will be contained in a safe area away from the control computer and operator.
- Curret source device will be used as intended and will not be misuse by the operator.
- Wires will not come loose during operation by the operator.

- Data collected from the samples will be saved correctly on the control device.
- Plugs and wires are attached correctly into the devices and control computer.

5 Failure Mode and Effect Analysis

[Include your FMEA table here —SS]

6 Safety and Security Requirements

[Newly discovered requirements. These should also be added to the SRS. (A rationale design process how and why to fake it.) —SS]

7 Roadmap

[Which safety requirements will be implemented as part of the capstone timeline? Which requirements will be implemented in the future? —SS]