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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[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

[These assumptions that are made about the software or system. You should minimize the number of assumptions that remove potential hazards. For instance, you could assume a part will never fail, but it is generally better to include this potential failure mode. —SS]

5 Failure Mode and Effect Analysis

[Include your FMEA table here —SS]

6 Safety and Security Requirements

Safety Requirements

SFR-1. Graphics shall avoid changing of brightness at rapid rate to take account for users prone to seizures.

SFR-2. Colours should avoid brightness that can be damaging to users' eyes.

SFR-3. Untrained users should not need to interact with any electronic equipment to avoid potential injury.

Security Requirements

SCR-1. Interface shall prevent any modifications or injections of measurements from the user.

SCR-2. Only authorized users are allowed to mnodify concealed calculations, settings and/or parameters.

7 Roadmap

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