

Fire Science Laboratory

Experimental Plan Template

The purpose of this form is to provide a template for students to present an Experimental Plan for approval to their advisor.

The numbers listed below match the steps in [How to Develop an Experimental Plan](#). You should read that first to learn how to develop a plan and then use the following format to present it. The words in italics are helpful hints as to the information that should be in each section. Experimental Plan Template in [Word Format](#).

1. Background

Why am I doing this project ? Who has done similar stuff before ?

2. Objective

What data do I want to get ? How in-depth do I want to be ?

3. Process flow and instrumentation diagram (PID)

Attach a PID (Hand drawn is acceptable) Show how things work together. In what order are things done.

4. PID components

List the components shown in the PID. Explain what you are going to do for waste disposal.

5. Safety issues

List chemicals and materials needed. How will I store, handle and use them ? What are the hazards using these ? Where did I get the information ? What Personal Protective Equipment will I use that will protect me from these hazards. Use table as shown below.

Chemical Material	Required Use	Hazard	Source	PPE Required	Storage & Handling
Methyl Alcohol	Fuel source for igniter wand for LIFT tests	1. Open flame	* NFPA 1234-9	* Safety Glasses * Disp Gloves	* Safety Goggles * Keep container closed
		2. Skin absorption	* Sax Dangerous Chemicals	* Disp gloves	* Keep container closed
Koawool Manufactured by Thermal Ceramics	Thermal protection of thermocouple wires	1. Glass Fiber dust causing respiratory distress	* Manufacturer's Data * Prudent Practices in Lab	* Disposable gloves * Dust masks * Coveralls * Safety Glasses	* Cut under fume hood. * Vacuum excess

6. Failure Possibilities

List failure possibilities of EACH of the PID components and what I will do/have done to minimize failure.

7. Checklist

Attach your checklist. Include pre-test, test and post-test.

8. Checklist Specifics

What is my plan to inform others of testing? How many people are needed to run?

9. Emergency Shutdown

List events that necessitate an immediate shutdown. How will I know when I reach those events ? How can I monitor conditions ? What safety equipment will I use and where is it located ?

10. & 11. Apparatus Checkout

How will I know if all the components work properly ?

12. Team Review

How will the team do a review? How will the team communicate during testing?

13. & 14. Pre-test and test

Explain how I will know that information obtained is valid (i.e., reasonable, makes sense). Will I predict values for comparison?

15. Post-test

List plans to clean up afterwards.