

Standard Operating Procedure for Hazardous Electrical Procedures and/or Equipment

I. Briefly describe the project, equipment involved, and expected results of normal operation.

II. Sketch a single-line diagram of the experiment or equipment which illustrates the primary function(s) and component(s) of the system. Include text where helpful.

III. Electrical Hazard Recognition:

Provide the operating parameters of your equipment or those used during the procedure described above (under normal operation conditions).

Electrical Parameters (General):

Parameter	LOWEST	HIGHEST
VOLTAGE [V]		
CURRENT [A]		
POWER [W]		
FREQUENCY [Hz, kHz, MHz]		

For stored energy applications, include the maximum values for storage capacity and stored energy of the equipment.

Electrical Parameters (Stored):

Method (<i>Battery, capacitor, etc.</i>)	
Total Storage Capacity [A·hr; F]	
Max Voltage [V]	
Max Stored Energy [J]	

Does this experiment use any custom or home-built equipment? YES NO

Is testing (e.g., with a multimeter) performed above 50 V or 5 mA? YES NO

Is Lockout/Tagout required for this experiment or equipment? YES NO

[UIUC Electrical Hazard Classification:](#)

IV. Electrical Hazard Mitigation:

For each hazard identified on the previous page, provide steps for how the risk will be reduced. If not possible to reduce risk, explain how the risk will be managed.

HAZARD	RISK MITIGATION

V. Additional Hazard Recognition and Mitigation:

Include pertinent information regarding additional (non-electrical) hazards associated with this procedure. Refer to the American Chemical Society's [tools for hazard assessment](#) as needed.

Chemical:

REAGENT	CONCENTRATION	QUANTITY	GHS HAZARDS

Physical / Mechanical:

HAZARD	LOCATION	MITIGATION	NECESSARY PPE

ADDITIONAL RISK MITIGATION:

For each hazard identified above, provide a narrative of how the risk will be minimized. If not possible to reduce risk, explain how the risk will be managed.

HAZARD	RISK MITIGATION

VI. Electrical Personal Protective Equipment

Is PPE required? YES NO

Required PPE; **circle all that apply:**

Eye protection

Gloves, disposable

Gloves, leather

Lab coat

Flame-resistant (blue) lab coat

Face shield

Hearing protection

Hard hat

Grounding stick/wand (negligible resistance; "soft" grounding)

Discharge stick/wand (some resistance; "hard" grounding)

VII. Other

PROCEDURAL DETAILS: Provide a specific and detailed process description. If appropriate, refer to instrument operating instructions.

OUT-OF-NORMAL EVENTS: Provide a list of several points or types of failures associated with this procedure or equipment. Also include any emergency shutdown procedures.

