

LASER STANDARD OPERATING PROCEDURE

The University of Connecticut Laser Safety Program

Please complete the following form to request the use of a Class 3b or Class 4 laser. You must submit completed forms for review via email to amy.c@uconn.edu or print and send a hard copy to RADIATION SAFETY, 3102 Horsebarn Hill Rd., U-4097, Storrs, CT 06269-4097. Please keep a copy for your records. Upon completion of review, a final signed copy will be returned to the applicant.

1. PRIMARY LASER RESEARCHER (PLR):

DEPARTMENT:

Campus Location:

2. LASER DATA:

Type:

Wavelength(s):

Classification:

Manufacturer:

Model:

Serial #:

Location Building:

Room:

UConn Laser #:

Beam Diameter:

Beam Divergence:

Pulsed:

Q-Switched:

Max. Energy per pulse:

Pulse Duration:

Repetition Rate:

Continuous Wave:

Max. Power:

3. LASER SAFETY CONTACT INFORMATION:

Emergencies: 911

PLR Campus Phone:

PLR Alternative Phone:

Department of Environmental Health & Safety Laser Safety Officer (LSO): Amy Courchesne

LSO Campus Phone: 860-486-3613

Notify the Laboratory PLR and University LSO of all laser-related injuries.

4. LASER SAFETY PROGRAM:

Reference the University of Connecticut Laser Safety Manual for the following:

- Responsibilities of the Laser Safety Committee, Laser Safety Officer, Primary Laser Researcher (PLR), and Laser Users.
- Training requirements.
- Class 3b and Class 4 laser registration and disposal/transfer requirements.
- Medical screening (eye examination).
- Personal Protective Equipment (PPE), including protective eyewear.
- Standard Operating Procedures (SOPs).
- Signage and labeling requirements.
- Non-radiation hazards.

5. LASER APPLICATION SUMMARY (complete a short summary of intended laser use):

6. HAZARDS PRESENT:

Check off applicable hazards below. Please comment on **each hazard** present in the space provided. Describe the hazard and how it will be addressed, if applicable. **If additional space is required please continue on the additional sheet provided in Section 10.**

Yes No Open/accessible laser beam.

Yes No Laser operations at eye level (standing or sitting).

Yes No Ultraviolet radiation/blue light exposure.

Yes No Non-beam related reflective surfaces (e.g. computer monitors, etc.) in vicinity of laser/laser beam(s).

Yes No Stray beam(s)

Yes No Exposed high voltage power supplies.

Yes No Exposed capacitors.

Yes No Collecting optics (e.g. microscopes, telescopes, etc.)

Yes No Fumes/vapors.

Yes No Plasma radiation.

Yes No Compressed gases.

Yes No Hazardous chemicals.

Yes No Hazardous waste.

Yes No Fire/Combustible Materials.

Yes No Poor housekeeping.

Yes No Other:

7. CONTROLS:

Please check the controls present. If No or N/A is selected for a particular control, please provide additional detail or explanation in the space provided. **If additional space is required please continue on the additional sheet provided in Section 10.**

Yes No N/A Entryway controls established (Engineered or Administrative).

Yes No N/A Control Area designated and appropriately posted.

Yes No N/A Nominal Hazard Zone (NHZ) established.

Yes No N/A Laser master switch (key or computer code). Key removed from laser system when not in use.

Yes No N/A Laser beam enclosure utilized.

Yes No N/A Laser beam enclosure interlocks operational.

Yes No N/A Laser housing cover interlocks operational.

Yes No N/A Appropriate beam attenuators (stops/dumps) utilized.

Yes No N/A Laser secured to base.

Yes No N/A Laser associated equipment secured to base.

Yes No N/A Protective barriers (e.g. curtains, partitions).

Yes No N/A UConn Laser Safety Manual available.

Yes No N/A Alignment Procedure Established

Yes No N/A Researcher conducted laser maintenance (routine adjustments etc. not to include servicing).

Yes No N/A Emergency off/stop (i.e. panic button) identified.

Yes No N/A Rapid egress and emergency access satisfactory.

Yes No N/A Personal Protective Equipment (PPE)

Yes No N/A Non-beam hazards addressed satisfactorily.

Yes No N/A Training requirements completed for all lab personnel.

8. EYEWEAR CRITERIA: (Discard damaged or unfit eyewear!)

Please check off the appropriate eyewear criteria.

Yes No Sufficient pairs available.

Yes No Eyewear specific to laser wavelength(s).

Yes No Optical Density (OD) appropriate for all ranges of laser energy/power operations.

Yes No Proper fit.

Yes No Free of damage and or excessive scratches.

LASER EYEWEAR USE CHART

For this laser:			Wear this eyewear:			
Type of Laser	Wavelength (nm)	Notes	Designation/Manufacturer	Wavelength attenuated (nm)	Optical Density (OD)	Notes

9. OPERATING PROCEDURES:

If additional space is required please continue on the additional sheet provided in Section 10.

- Initial preparation of lab environment and laser for normal laser operation (e.g. key position, interlock activated, outside warning signal on, identification of personnel, operational log, etc.):

- Alignment procedure:

- Target area preparation:

- Operational procedure (power settings, Q-switched mode, pulse rate, other):

- Shutdown procedure:

- Special procedures (e.g. servicing, maintenance, safety tests, interlock bypass, etc.):

- Emergency shutdown procedure:

- Hazardous waste disposal procedures (if applicable):

10. ADDITIONAL SHEET

Please use this sheet only if space provided above does not allow for a complete response.

11. LABORATORY PERSONNEL LISTING:

Laser Users: **Training Complete**

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

11. _____

12. _____

13. _____

14. _____

15. _____

Laser Non-users: **Training Complete**

1. _____

2. _____

3. _____

4. _____

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6. _____

7. _____

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12. _____

13. _____

14. _____

15. _____

12. LASER USER SOP REVIEW:

I have read this Standard Operating Procedure, understand the contents, and will utilize this procedure each time I use this laser or laser system.

Name (print)	Signature	Date
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

- **This SOP shall be:**
 - **Read and understood by laser users prior to their initial use of the listed laser.**
 - **Reviewed by all laser users following any modifications to the laser or laser system that affects operational parameters.**
 - **Reviewed annually by all laser users.**
- **This SOP must be readily accessible and available for reference by laser users.**
- **Modifications to this SOP must be reviewed and approved by both the PLR and the LSO.**

PLR REVIEW:

Date:

Name:

Signature:

LSO REVIEW:

Date and signature below documents Radiation Safety Office review with no exception taken to the information provided.

Date:

Name: Amy Courchesne

Signature: