UNIVERSITY OF KANSAS - LAWRENCE CAMPUS
LABORATORY SAFETY MANUAL
PART V - LASER SAFETY PLAN

Section 1) Introduction to the Laser Safety Plan

1.1) Elements of the KU Laser Safety Plan

The KU Laser Safety Plan consists of the following components:

1.1.1) The requirements, conditions, and procedures of the "University's Safety and Health Manual" apply to all university personnel, students and visitors and are, therefore, part of the Laser Safety Plan.

1.1.2) The requirements, conditions, and procedures of Part I: General Laboratory Safety Plan marked apply to all laboratory users/occupants in laboratories with lasers and are, therefore, part of the Laser Safety Plan.

1.1.3) The requirements, conditions, and procedures of this part (Part V) apply to all laboratory users/occupants in laboratories with non-exempt lasers. For Laser Safety Levels III and IV additional requirements, conditions, and procedures based upon the characteristics of the laser system may be necessary for the use of such lasers. See Section 3.9.3 of this Part.

1.1.4) This Part V in conjunction with the items specified in 1.1.1, 1.1.2, and 1.1.3, above, make up the University's Laser Safety Plan.

1.2) Laser Safety Considerations

Lasers emit intense coherent electromagnetic radiation that is potentially dangerous to the eye and skin. The laser operator must also comply with safety requirements that address electrical, fire and chemical hazards associated with the operation of the laser. The KU laser safety plan is designed to provide for the safety of all laboratory users/occupants and visitors. It is based on the latest edition of the American National Standards Institute, Inc. (ANSI) Z136.1, "American National Standard for the Safe Use of Lasers," which is the generally accepted safety standard for laser use.

Part V is intended to provide specific requirements and guidelines based on ANSI Z136.1 to provide for the safety of laser operators and other individuals likely to be exposed to laser hazards. In practice, the hazard classification of a laser is first determined, and then the appropriate controls are applied taking into account the laser environment and the potential for excessive exposure of laboratory users/occupants and visitors. Training and medical surveillance requirements are also included.

Note: When chemical hazards are associated with laser use, the Chemical Safety Plan (Part II) of the Laboratory Safety Plan is automatically applicable and Authorized Users shall be trained in both components.

Part V-Chapter 8 contains a glossary of terms that are common in laser usage and applications.

1.3) Organization of Part V

1.3.1) Laser Safety-specific operating procedures and/or emphasized universal safety standard operating procedures are addressed in Part V-Chapter 2.

1.3.2) Laser Safety-specific aspects of hazard communication and control are addressed in Part V-Chapter 3.

1.3.3) How to obtain authorization for use of lasers at Laser Safety Levels III and IV is described in Part V-Chapter 3 section 3.9.

1.3.4.) Laser Safety-specific information and training requirements are outlined in Part V-Chapter 4.

1.3.5) Medical factors that may need to be considered for Laser Safety are listed in Part V-Chapter 5.

1.3.6) Disposal of laser-associated hazardous wastes and/or transfer of laser ownership are addressed in Part V-Chapter 6.

1.3.7) Laser Safety-specific recordkeeping is addressed in Part V-Chapter 7.

1.3.8) Appendices for the various chapters in this Laser Safety Plan are provided in Part V-Chapter 8.

1.4) Summary of KU Laser Safety Plan Requirements

Requirement	Laser Classes (defined in Part V 3.9)
Manufacturer's Warning label	1, 2, 3a, 3b, 4
Warning sign	2, 3a, 3b, 4
Registered with LS Office	2, 3a, 3b, 4
Laser Safety Training	3a, 3b, 4
Laser Safety Operating Procedures	3b*, 4
Medical Surveillance	3b*, 4

(*if invisible to the eye, and if cw laser, visible beams > 15 mW power)