

**University of Texas Health Science Center at San Antonio
Standard Operating Procedures for
Sweptfield Confocal
Optical Imaging Core Facility
STRF 252, Greehey Campus
Laser Control Area
July 24, 2013**

Prepared by Exing Wang

Laser Custodian:

Exing Wang

Name Printed

Signature

Date

Laser Safety Officer:

Jennifer Cerecero

Name Printed

Signature

Date

INTRODUCTION

The Sweptfield confocal (the middle booth) contains the following lasers:

Class Make

3B Diode (405 nm)

3B Solid state (488 nm)

3B Solid state (561nm)

3B Diode (640 nm)

All lasers and their power supplies are integrated into a wheeled unit that is placed on the floor under the anti-vibration table. The output is connected to the Nikon Ti microscope via a fiber optic cable.

Primary Laser Custodian:

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Authorized Primary Users

A list of authorized users is on file with Environmental Health and Safety. This list will be updated as frequently as needed.

Incidental Personnel

In addition to the authorized primary users, incidental personnel may be in the room at the time of the experiment. These personnel are not trained on the system, nor have they gone through the laser safety program. They will be observing only and not involved in the operation of the system. They will not be in the room during any alignment or maintenance of the lasers.

Normal Laser Operation

Nikon Sweptfield confocal contains the following lasers:

Class	Type	Make	S/N	Wavelength	Power output
3B	Diode	Agilent	N1245AL14	405nm	<100mW
3B	Solid State	Agilent	N1245AL24	488 nm	<100mW
3B	Solid State	Agilent	N1245AL34	561 nm	<100mW
3B	Diode	Agilent	N1245AL44	640 nm	<100mW

All the visible lasers are connected to the Nikon Ti microscope via a fiber optic cable. All lasers and their power supplies are integrated into a wheeled unit that is placed on the floor under the anti-vibration table. The S/N for the integrated unit is N1245B ATO-3598 SER US51360103.

The lasers are used as the excitation sources for confocal microscopy.

Eyewear

Wavelength specific eyewear will be used by field service engineers during alignment.

Alignment Hazard Control

All lasers are aligned by service engineers and are not adjusted by users or facility staff.

Laser Hazard Control

1. Access to laser control room is restricted to trained personnel. The room is secured by a card-access door reader. All access is approved by the campus police.
2. The entire system is enclosed by laser proof curtain.
3. Operation of all Class 3B lasers is only accessible through the system software. Computer access is restricted to trained users with unique login names and passwords.
4. A "Laser in Use" warning sign is mounted above the entrance of the enclosed system booth.
5. All lasers are enclosed with no open beam throughout the path.
6. All users are trained in the operation of the Sweptfield confocal and the proper use and care for the lasers.

Primary users are trained in the operation of the Sweptfield confocal and the proper use care for the lasers.

Authorized User Signatures

The operating procedure is reviewed and understood by each authorized laser user during initial training on the system.