



LUND UNIVERSITY  
DIABETES CENTRE

## GENERAL RULES AND INFORMATION

- Before running the LSM 800 for the first time you need to obtain a "drivers license".
- Always book time in the on-line calendar
  - Note your name and group
  - Users are allowed to book max. 4 hours/day/user
- Please do not use mascara when working with the microscope as mascara damages the lenses of the eye pieces
- Do not connect USB memory sticks or external harddrives to the computer, to transfer your data use NovellClient

### **Contact person:**

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## OVERVIEW

### Laser lines:

- 405 nm (5mV)
- 488 nm (10 mV)
- 561 nm (10 mV)
- 640 nm (5 mV)

### Detectors:

- 2 variable PMTs
- 1 GaAsP detector

### Objectives:

- 5x
- 10x
- 20x
- 63x OIL

### Fluorescence filters:

- DAPI  
Ex. 365 (G)  
Em. 445/50 (BP)
- FITC  
Ex. 450-490 (BP)  
Em. 515 (LP)
- TRITC  
Ex. 546 (BP)  
Em. 590 (LP)

### Methods:

- Transmitted light
- DIC
- Epi-fluorescence
- Airy Scan



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## SWITCHING ON THE LSM 800

1. Set **System** switch to "1" (systems rack to the left)
2. Set **Components** switch to "1" (systems rack)
3. Set the **main** switch for the computer to "1" (on the table to the left of the microscope)
4. Turn **laser module** key clockwise to "1" (systems rack)  
Note "Laser ON" will be lit for 1 min then go out again
5. Start the **computer**
6. Start the ZEN **software**
7. Start **compressor** (if needed) see "Vibration damped table"

## SWITCHING OFF THE LSM 800

1. Switch off **compressor** (if used)
2. Exit the ZEN **software**
3. Switch off the **computer**
4. Turn **laser module** key counter-clock-wise to "0" (systems rack)
5. Set the **main** switch for the computer to "0"
6. Set **Components** switch to "0" (systems rack)
7. Set **System** switch to "1" (systems rack)



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## IMMERSION OIL

- Only use immersion oil with the 63x objective!
- Use only the "Immersol 518 F" immersion oil

### **Cleaning 63x objective after immersion oil use:**

- a) Wipe the lens of the objective with a dry piece of lens tissue to get rid of excess oil.
- b) Moisten some lens tissue with 99 % ethanol and use this to clean the lens of the objective
- c) Use another piece of dry lens tissue to remove any remaining ethanol

## AIRY SCAN

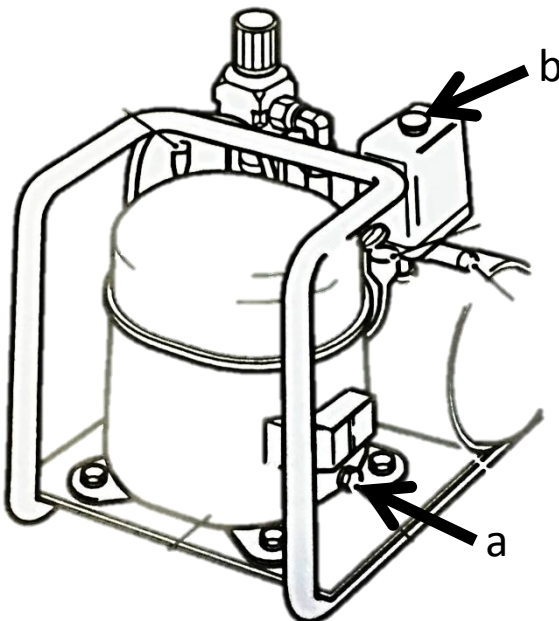
- Only optimized for the 63x objective
- Turn on the compressor
- Remove the DIC sled (located above the objective) before running an Airy Scan
- Put the DIC sled in its cover (small black plastic box) after removing it from the microscope to prevent scratches

## VIBRATION DAMPED TABLE

When running an Airy scan or scanning at high magnification and/or long scan times it may be necessary to turn on the compressor to minimize the impact of vibrations from the environment.

The compressor is placed on the floor under the microscope table

- a) Check the oil level (see arrow a), if low contact Anna (0733548086)
- b) Switch on the compressor by turning the black switch (see arrow b) to "1"
- c) Do not forget to switch off the compressor when done



a) OIL FILL LEVEL

