CONFOCAL MICROSCOPE

Instrument Details:

Make: Zeiss

Modal: LSM 700

Specifications:

Microscopes

Stands: Upright: Axio Imager.Z1m, M1m and Axio Scope mot for LSM
Inverted: Axio Observer.Z1m SP (side port)
Z drive: Axio Imager: Step motor, smallest increment 10 or 25 nm
Axio Observer: DC motor with opto-electronic coding, smallest increment 10 nm
XY stage (option): Motorized XY scanning stage with Mark & Find (XYZ) and Tile Scan (Mosaic Scan) functions
Objectives: More than 40 reflected-light objectives: EC Epiplans, EC Epiplan-Neofluars, EC Epiplan-Neofluars, EC Epiplan-Apochromats, LD Epiplans, LD EC Epiplan-Neofluars
Accessories: High-resolution AxioCam microscope camera

Scanning module:

Scanner: Two independent galvanometric scanning mirrors with ultra-short line and frame flyback

Scanning resolution: 4x1 to 2048x2048 pixels, continuously adjustable

Scanning speed: 13x2 speed stages, Up to 5 frames/s with 512x512 pixels (max. 154 frames/s with 512x16 pixels)

Scanning zoom: 0.5x to 40 xs, variable in increments of 0.1

Scanning rotation: Freely rotatable around 360°, variable in increments of 0.1°

Scanning field: Field diagonal of 18 mm (max.) in the intermediate image plane, homogeneous illumination of image field

Pinhole: Motorized master pinhole, diameter continuously adjustable

Detection: One or two confocal channels (reflection/fluorescence), one optional external transmitted-light channel with DIC capability, each with high-sensitivity PMT detector, spectral increment 1 nm

Data depth: Selectable between 8 bit, 12 bit or 16 bit

Laser inserts:

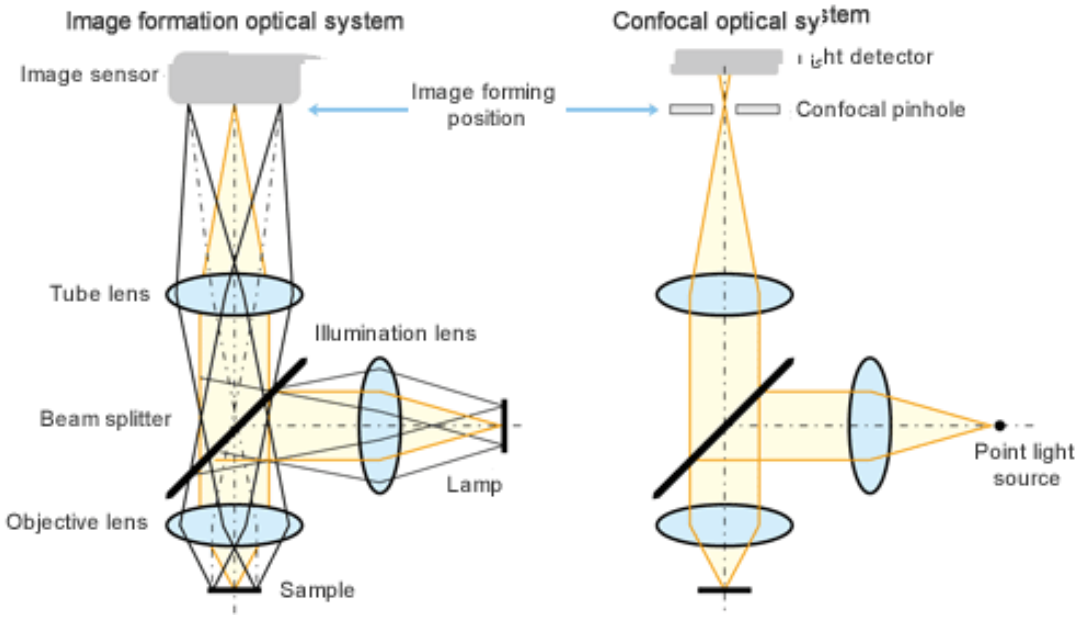
Laser inserts (VIS, V) : Pigtail-coupled solid-state laser with polarization-preserving single-mode fiber; up to 4 V/VIS laser directly connectable to the scanning module; laser lines 405 nm 5 mW or 445 nm 5 mW; 488 nm 10 mW; 555 nm 10 mW; 639 nm 5 mW (at fiber end) Fast (pixel-exact) customized and variable intensity adjustment of all laser lines (direct modulation) Automatic shutdown of laser when not in use

Electronics module Control computer:

Real-time electronics integrated in PC; communication with user PC via PCI express; Control of microscope, lasers, scanning module and additional accessories, data acquisition and synchronization; Over sampling acquisition for best sensitivity and doubled SNR; possibility of online data-analysis during acquisition

PRINCIPLE:

The LSM 700 is a light microscopy system which uses laser light in a confocal beam path to capture defined optical sections of your material sample and combine them into a three-dimensional image stack.



Applications:

1. Resonant scanning
2. fluorescence resonance energy transfer
3. FRAP fluorescence recovery after photo bleaching
4. Co localization

Confocal LSM 700 Charges including GST:

CELLOMICS:

Sl. No	Equipment	Services offered	Sample types	Sample Concentration/ Volume	Cost (In Rupees plus 18% GST)	
					Academia	Corporate
1	**Confocal Microscope** **LSM 700**	Fluorescence, Live cell imaging, time lapse and FRET, FRAP	Fixed slides OR Chamber slides	NA	Rs. 1,600 + Rs. 288 GST = Rs. 1,888 per hour	Rs. 3,000 + Rs. 540 GST = Rs. 3,540 per hour

PAYMENT:

External Users: Information

1. Academic Institutions:

User can come personally and bring a letter from the Guide/HOD on the Institution's Original Letter Head along with the Registration Form and Demand draft. The letter must clearly indicate whether the samples are for Research or Consultancy purposes. The letter

should be addressed to Mr. Vinod Kumar Mishra Staff Scientist, Head, Sophisticated Equipment Facility(SEF) Centre For DNA Fingerprinting and Diagnostics(CDFD) Hyderabad Email- sefcdfd@cdfd.org.in, vkmishra@cdfd.org.in

2. Industry& Non-Government Agencies:

User can come personally and bring a letter signed by an authorized signatory of their Institution on Original Letter Head along with the Registration Form and Demand draft. The letter should be addressed to Mr. Vinod Kumar Mishra Staff Scientist, Head, Sophisticated Equipment Facility(SEF) Centre For DNA Fingerprinting and Diagnostics(CDFD) Hyderabad Email- sefcdfd@cdfd.org.in, vkmishra@cdfd.org.in

Tariff for external users: Basic charges including GST* (as applicable)

*GST rate as on 1.8.2017

General instructions to the users

Payment Mode: Payment should in the form of a Demand Draft (DD) drawn in favour of The DIRECTOR CDFD HYDERABAD.

1. User should provide contact details to collect the data after the sample analysis is complete.
2. The experimental data provided is only for research / development purposes. These cannot be used as certificates in legal disputes.
3. Samples will not be analyzed till payment is received.

CENTER FOR DNA FINGERPRINTING AND DIAGNOSTICS

SOPHISTICATED EQUIPMENT FACILITY

UPPAL, HYDERABAD

CONFOCAL MICROSCOPY IMAGING –REQUISITION FORM

NAME			**DATE :**
NAME OF GROUP / SUPERVISOR			
INSTITUTION	**a) CDFD [ ]**	**b) Academic [ ]**	**c) Industry[ ]**
TYPE OF IMAGING	**a) Fixed [ ]**	**b) Z-stacking [ ]**	**c) Live – Cell Imaging[ ]**
No. of. SLIDES		**No. of. CHAMBERS:**	
FLUORESCENT DYES USED	**1)**	**Excitation / Emission range:**	
	2)	**Excitation / Emission range:**	
	3)	**Excitation / Emission range:**	
E-mail / PHONE			
DECLARATION	**This is to certify that these samples do not contain Radioactive material** **Signature**		

This is to submit that Content of this report is meant for our information only and we will not use the content of this report for advertisement, evidence, litigation or quote as certificate to third party.

Signature of Student **Signature of the Group Head**