



# भारतीय विज्ञान शिक्षा एवं अनुसंधान संस्थान मोहाली

मानव संसाधन विकास मंत्रालय, भारत सरकार द्वारा स्थापित

सैक्टर-81, नॉलेज सिटी, प० ओ० मनोली, एस० ए० एस० नगर, मोहाली, पंजाब 140306

**INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH MOHALI**

(Established by Ministry of Human Resource Development, Govt. of India)

Sector-81, Knowledge city, PO-Manauli, SAS Nagar Mohali-140306, Punjab

PAN No. - AAAAI1781K GSTIN No:- 03AAAAI1781K2ZS

• Phone : +91-172-2240086 & 2240121 • Fax : +91-172-2240124, 2240266 • <http://www.iisermohali.ac.in> • Email: [stores@iisermohali.ac.in](mailto:stores@iisermohali.ac.in)

CPPP/Institute Website

IISERM (1220)19/20Pur

Dated: 25<sup>th</sup> June 2019

## **NOTICE INVITING E-TENDER**

Online tenders are invited on behalf of Director, IISER Mohali in **TWO BID SYSTEM** for the **Supply and Installation of Various Scientific Microscopes for E&ES Teaching Lab** as per technical specification and details given below and BOQ list from the original manufacturer/supplier at CPPP i. e. <https://eprocure.gov.in/eprocure/app>. Tender documents may please be downloaded from the E-procurement portal website <https://eprocure.gov.in/eprocure/app> & Institute website [www.iisermohali.ac.in](http://www.iisermohali.ac.in).

-sd-

(Mukesh Kumar)  
Assistant Registrar (S&P)



# भारतीय विज्ञान शिक्षा एवं अनुसंधान संस्थान मोहाली

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## **E-TENDER NOTICE**

Tender Ref.- IISERM(1220)19/20Pur

Dated :- 25<sup>th</sup> June 2019

### **Critical Date Sections**

Sr.	Description	Date	Time
1.	Tender Publishing Date and time	25 <sup>th</sup> June 2019	6:00pm
2.	Tender Document download start Date & Time	25 <sup>th</sup> June 2019	6:00pm
3.	Bid Submission start Date & Time	25 <sup>th</sup> June 2019	6:00pm
4.	Bid Submission End date and Time	17 <sup>th</sup> July 2019	Upto 11:00am
5.	Tender opening Date and Time	18 <sup>th</sup> July 2019	At 11:30am

Online tenders are invited on behalf of Director, IISER Mohali in **TWO BID SYSTEM** {Technical and commercial separately} for the following item(s) from the original manufacturer/supplier at CPPP i.e. <https://eprocure.gov.in/eprocure/app>. Tender documents may please be downloaded from the E-procurement portal website <https://eprocure.gov.in/eprocure/app> & Institute website [www.iisermohali.ac.in](http://www.iisermohali.ac.in). Tender fee in shape of DD/Banker Cheque of Rs 590/- (Non-refundable) and EMD of Rs 20000/- should be submitted by DD /Banker Cheque/FDR/ Bank Guarantee in favour of the Registrar, IISER Mohali payable at Mohali. However, scanned copy of the both tender fee and EMD should be upload on website along with technical bid part. The hard copy of the same in original to be send to the address mentioned below duly superscribing the supply/work name and reference/ tender ID on the envelope and same must reach before opening the bid and if not received within due date the bid will be rejected sumerly.

### **The Original EMD and Tender Fee should be sent to:**

Assistant Registrar (S&P)  
Indian Institute of Science Education and Research Mohali  
Sector-81, Knowledge City, SAS Nagar, Mohali, Punjab,  
India, Pin: 140306

**Non-receipt of original EMD and Tender Fee will lead to rejection of tender.**

### **Item Details: -**

Sr.	Description	Qty.																												
1.	<p data-bbox="217 181 1050 210"><b><u>Supply and installation of Inverted phase Contrast Research Microscope</u></b></p> <p data-bbox="217 241 497 271"><b><u>Technical Specifications</u></b></p> <p data-bbox="217 288 1366 349">1. <b>Microscope Body:</b> Inverted trinocular microscope with side camera port &amp; Infinity corrected optical system with light distribution between eye piece and camera of 100:0 and vice a versa.</p> <p data-bbox="217 367 1366 427">2. <b>Observation technique:</b> The inverted microscope should be capable for Bright field and Phase contrast observations</p> <p data-bbox="217 445 1366 506">3. <b>Eyepiece:</b> 10X with FOV 22mm and diopter adjustment facilities on both eyes and should be anti-fungus type.</p> <p data-bbox="217 524 1366 584">4. <b>Condenser:</b> Extra-long working condenser (NA 0.3, W.D. 75mm) suitable for bright field and phase contrast up to 100X magnification.</p> <p data-bbox="217 602 1126 631">5. <b>Nosepiece:</b> Quintuple nosepiece to accommodate minimum 5 objectives at a time.</p> <p data-bbox="217 649 1286 678">6. <b>Stage:</b> Attachable mechanical stage with universal holder to accept all types of specimen holders.</p> <p data-bbox="217 696 1366 757">7. <b>Illumination:</b> High intensity uniform distributed (Fly eye lens or similar technology) scientific Grade 5W LED, cool white light, with life time of minimum 50,000 hours.</p> <p data-bbox="217 775 1366 835">8. <b>Objectives:</b> Long working distance objectives with specialized phase contrast, bright field and fluorescence features. The system should be provided with following objectives</p> <p data-bbox="217 853 855 882">a) Achromat 4x (N.A.0.10, W.D 30.0 mm), for Bright Field</p> <p data-bbox="217 900 1062 929">b) Achromat 10x (N.A.0.25, W.D 7.0 mm), for Bright Field and Phase contrast</p> <p data-bbox="217 947 1062 976">c) Achromat 20x (N.A.0.40, W.D 3.5 mm), for Bright Field and Phase contrast</p> <p data-bbox="217 994 1062 1023">d) Achromat 40x (N.A. 0.65, W.D 6.5mm), for Bright Field and Phase contrast</p> <p data-bbox="217 1041 1062 1070">9. <b>Comprehensive Warranty(on-site):</b> Minimum 3 years should be provided.</p> <p data-bbox="217 1088 1110 1117">10. <b>Certification:</b> European Certificate, ISO9001, USFDA, UL, TUV (Any Three)</p> <p data-bbox="217 1135 352 1164"><b>11. Camera</b></p> <table data-bbox="217 1182 863 1939"> <tr> <td><b>Pixels</b></td> <td>20MP (Color)</td> </tr> <tr> <td><b>Sensor Size</b></td> <td>1" (13.06mmX8.76mm)</td> </tr> <tr> <td><b>Pixel Size</b></td> <td>2.4µmx2.4µm</td> </tr> <tr> <td><b>Resolution/Frame Rate</b></td> <td>5440x3648:15FPS 2736x1824:50FPS 1824x1216:60FPS Any Area (ROI)</td> </tr> <tr> <td><b>Exposure Time</b></td> <td>0.1ms~15s</td> </tr> <tr> <td><b>Sensitivity</b></td> <td>462mv with 1/30s 0.21mv with 1/30s</td> </tr> <tr> <td><b>Dynamic Range</b></td> <td>72dB</td> </tr> <tr> <td><b>SN Ratio</b></td> <td>36.5dB</td> </tr> <tr> <td><b>Binning</b></td> <td>1x1, 2x2, 3x3, 4x4</td> </tr> <tr> <td><b>Spectral Range (nm)</b></td> <td>380 nm ~ 720nm (with infrared filter)</td> </tr> <tr> <td><b>Image Data Format</b></td> <td>12 bit RAW Format (12x3 =36 bit RGB)</td> </tr> <tr> <td><b>Quantum Efficiency</b></td> <td>60%</td> </tr> <tr> <td><b>Data Interface</b></td> <td>USB3.0 (B Type)</td> </tr> <tr> <td><b>Compatible</b></td> <td>WIN 7 / 8 / 10 I MAC El Capitan I LINUX Ubuntu 14.04 LTS</td> </tr> </table> <p data-bbox="217 1957 360 1986"><b>12. Software</b></p> <p data-bbox="217 2004 1366 2033">Continuous automatic exposure control; Automatic/manual white balance; Multi-focus (Z-Stacking);</p>	<b>Pixels</b>	20MP (Color)	<b>Sensor Size</b>	1" (13.06mmX8.76mm)	<b>Pixel Size</b>	2.4µmx2.4µm	<b>Resolution/Frame Rate</b>	5440x3648:15FPS 2736x1824:50FPS 1824x1216:60FPS Any Area (ROI)	<b>Exposure Time</b>	0.1ms~15s	<b>Sensitivity</b>	462mv with 1/30s 0.21mv with 1/30s	<b>Dynamic Range</b>	72dB	<b>SN Ratio</b>	36.5dB	<b>Binning</b>	1x1, 2x2, 3x3, 4x4	<b>Spectral Range (nm)</b>	380 nm ~ 720nm (with infrared filter)	<b>Image Data Format</b>	12 bit RAW Format (12x3 =36 bit RGB)	<b>Quantum Efficiency</b>	60%	<b>Data Interface</b>	USB3.0 (B Type)	<b>Compatible</b>	WIN 7 / 8 / 10 I MAC El Capitan I LINUX Ubuntu 14.04 LTS	01
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Multi-fluorescence/channel mode mixing/unmixing; Measurement capabilities; Image/text annotations; Image processing and enhancement; Image combine; Image comparison; Batch conversion; Microscope Control; Professional Segmentation & Count function; Image Stitching; Management visualization and Printing of metadata and image; Saving formats (image) JPEG, TIFF, PNG, BMP etc.

Saving formats (video) AVI, MP4, (H264), MP4 (H265), WMV etc

Time-lapse; Macro manager; High dynamic range viewing; Optical configuration; Layout configuration

Shading calibrations; Multi-camera operation; Merge, crop and image arithmetic; Multipoint experiments/Capture; Individual user profiles; Image Overlapping; Line profile/histogram; Intensity Measurement & Profile; Image analysis; Manual counting, spatial measurements, length, width, area, perimeter, microbar, vector layer, etc.

**13. Computer System**

I5 Processor, 4GB RAM, 500GB HDD, 18.5 ' color Monitor, Keyboard, Mouse, UPS and other accessories

2.

**Supply and installation of Stereo Zoom Microscope with Digital Imaging**

01

**Technical specifications**

Greenough optical system

Trinocular head, 45° inclined, rotatable 360°, IPD 48-75mm, top port for attaching camera

Paired, WF 10X, FOV-20mm, diopter adjustment on one/both EP, multilayered coated, high quality, good contrast, aberration free, aplanatic, lockable

Zoom range: 0.7X to 5.0X, zoom ratio 1:7

Built in adjustable aperture diaphragm, click stops for 0.7x, 1X, 1.5X, 2X, 3X, 4X & 4.5X, 5.0X

Objective: 1X (WD – 80mm), 2X (WD – 20mm)

Coarse and fine coaxial focus system, integrated body with focus system, coarse range 50mm, fine focus 2µm

Rectangular base with halogen/LED light having single side coated mirror for the projecting light in different angles cold source illumination

**Camera system**

Sensor type   sensor square   diagonal:	CMOS   2/3"   12.75 mm, Color
Pixel dimensions:	5.5 x 5.5 µm
Transfer method   shutter mode	Progressive scan   Global shutter
Full sensor resolution	2048 x 1084 pixel
Camera resolution in LIVE mode	Full HD 1920 x 1080 pixel up to 2048 x 1084 pixel (30 fps)
Camera resolution in RECORD mode	Full HD 1920 x 1080 pixel up to 2048 x 1084 pixel (30 fps)
Exposure time min.-max.	52 µs - 2 sec.
Gain	Max. 8
A/D conversion	12 Bit (4096 grey values)
Data interface	USB 3.0, no extra power supply needed
Compatible	WIN 7 / 8 / 10 I MAC El Capitan I LINUX Ubuntu 14.04 LTS

**Software features**

Automatic & Fast exposure control, Live Multifocus Z-stacking, Live Panorama/image stitching, Live Multi-fluorescence, Video Record, 1-Click RBG Channel Overlay, Time-lapse/ Image Series / Automatic .avi movie creation, Real-time histogram

Real-time image enhancements, Measurements with text annotations & arrow marking, Export to external software possible

Individual device configuration, Image comparison,

**Computer System**

15 Processor, 4GB RAM, 500GB HDD, at least 18.5" color Monitor, Keyboard, Mouse, UPS and other accessories

**Comprehensive Warranty(on-site):** Minimum 3 years should be provided.

**Certification:** European Certificate, ISO9001, USFDA, UL, TUV (Any Three)

**3. Supply and installation of Trinocular Polarizing Research Microscope**

**01**

**Technical specifications for Trinocular polarizing research microscope**

1) Research Polarization Microscope stand for inbuilt transmitted light Illumination LED/12v100W Halogen; with adjustable height stop and torque of focusing; Mains cable- inbuilt stabilized power supply 90-250V,50/60Hz

2) Revolving nosepiece 5-fold or more, for pol, centerable 2-step focus drive\_ coarse/fine

Infinity Corrected Optical System Lamp housing with lamp mount for LED/Halogen Illumination, for transmitted light

3) Focusable Bertrand Lens which should be detachable from the optical path; Analyzer-180° rotatable

4) Pol rotating stage, interchangeable, with clamp, 2 verniers 0.1°. with click- stop at every 45° rotation, Trinocular Pol phototube, with fixed photo tube, lens /1x, with 30°

5) Viewing angle, inter- pupillary adjustment 55-75 mm, with constant focus and automatic adjustment of right eyepiece/graticules. Beam splitter pos. vis/ phot: 0/50/100 fixed X-Y Mechanical stage for POL Stage, condenser with NA 0.9

6) Lambda-plate, Quarter Lambda plate & Quartz plate for compensator slot polarizer for transmitted light 360 degree, swing out

7) Eyepiece pair 10x/22 or better (One with reticule for pol)- focusable & adjustable for spectacle wearer

8) PLAN Achromatic Objectives 2.5x, 10x, 20x, 60x/63x,100x (Oil) objective should be pol engraved

9) C- mount adapter

**10) Camera**

<b>Pixels</b>	20MP (Color)
<b>Sensor Size</b>	1" (13.06mmX8.76mm)
<b>Pixel Size</b>	2.4µmx2.4µm
<b>Resolution/Frame Rate</b>	5440x3648:15FPS 2736x1824:50FPS 1824x1216:60FPS Any Area (ROI)
<b>Exposure Time</b>	0.1ms~15s
<b>Sensitivity</b>	462mv with 1/30s 0.21mv with 1/30s
<b>Dynamic Range</b>	72dB
<b>SN Ratio</b>	36.5dB

<b>Binning</b>	1x1,2x2,3x3,4x4
<b>Spectral Range(nm)</b>	380 nm ~ 720nm (with infrared filter)
<b>Image Data Format</b>	12 bit RAW Format (12x3 =36 bit RGB)
<b>Quantum Efficiency</b>	60%
<b>Data Interface</b>	USB3.0 (B Type)
<b>Compatible</b>	WIN 7 / 8 / 10 I MAC El Capitan I LINUX Ubuntu 14.04 LTS

#### 11) Software

Continuous automatic exposure control; Automatic/manual white balance; Multi-focus (Z-Stacking); Multi-fluorescence/channel mode mixing/unmixing; Measurement capabilities; Image/text annotations; Image processing and enhancement; Image combine; Image comparison; Batch conversion; Microscope Control; Professional Segmentation & Count function; Image Stitching; Management visualization and Printing of metadata and image; Saving formats (image) JPEG, TIFF, PNG, BMP etc.

Saving formats (video) AVI, MP4, (H264), MP4 (H265), WMV etc

Time-lapse; Macro manager; High dynamic range viewing; Optical configuration; Layout configuration

Shading calibrations; Multi-camera operation; Merge, crop and image arithmetic; Multipoint experiments/Capture; Individual user profiles; Image Overlapping; Line profile/histogram; Intensity Measurement & Profile; Image analysis; Manual counting, spatial measurements, length, width, area, perimeter, microbar, vector layer, etc.

#### 12) Computer System

15 Processor, 4GB RAM, 500GB HDD, 18.5 “ color Monitor, Keyboard, Mouse, UPS and other accessories

**13) Comprehensive Warranty (on-site):** Minimum 3 years should be provided.

**14) Certification:** European Certificate, ISO9001, USFDA, UL, TUV (Any Three)

#### **NB:-**

- I. The online updated Price BOQ is in INR format. If bidder want to quote other than INR please specify the quoted currency in the technical bid/part and fill the amount in same updated BOQ.
- II. Please bifurcate the price on shipping terms i, e, Ex-works -> FCA/FOB -> CIP/CIF in price BOQ and specify the same in technical bid without price.
- III. **Kindly specify the weight of the product including weight of packing for assessment of Freight charges.**

#### **SUBMISSION OF TENDER**

- I. All bid/ tender documents are to be uploaded online at Central Public Procurement portal i.e. <https://eprocure.gov.in/eprocure/app> only and in the designated cover/ part on the website against tender ID. Tenders/ bids shall be accepted only through online mode and no manual submission of the same shall be entertained except tender fee and EMD. Late tenders will not be accepted.
- II. The online bids shall be opened at the office of the Assistant Registrar (P&S), IISER Mohali, on above given date and time. If the tender opening date happens to be on a holiday or non-working day due to any other valid reason, the tender opening process will be attended on the next working day at same time and place. IISER Mohali will not be responsible for any error like missing of schedule data while downloading by the Bidder.
- III. The bidder shall upload the tender documents duly filled in and stamped by the authorized signatory on each and every page. Tender not submitted/uploaded in the prescribed form and as per the tender terms and conditions shall be liable for rejection.
- IV. The bidder shall upload scanned copy of the PAN Card, GST number duly signed and stamped. **Also bidders applying against ‘MSME/NSIC Certificate’ issued by appropriate Authority, should ensure**

**that the certificate attached is relevant to the area of service/supply. For example, If the tender is for “supply & installation of Desktop” the certificate should be issued for activity/area of “Computer supply and services activities etc” otherwise bid will be REJECTED without notice.**

- V. E-procurement system ensures locking on the scheduled date and time. The system will not accept any bid after the scheduled date and time of submission of bid.

#### **INSTRUCTIONS**

1. The Online bids should be submitted directly by the original manufacturer/supplier, If quotation is submitted/filled by any representative/agent/dealer then they must upload a authority certificate from the principal company for quoting the price otherwise such quotation will be rejected.
2. The quantity mentioned in this inquiry is and shall be deemed to be only approximate and will not in any manner be binding on the Institute. Before the deadline for submission of the online bid, IISER Mohali reserves the right to modify the tender document terms and conditions. Such amendment/modification will be notified on website against said tender ID.
3. The rates offered should be FOR Chandigarh/Mohali in case of firms situated outside Chandigarh/Mohali, and free delivery at the Institute premises in case of local firms. Supplier from outside India should mention the Ex-works/FOB/FCA/CIF/CIP price clearly. Conditional tenders will be summarily rejected.
4. In case of Ex-godown terms the amount of packaging forwarding freight etc. should clearly be indicated by percentage or lump sum amount. Institute has policy not to make any advance payments towards any purchase, Letter of credit can be opened if required.
5. THE INSTITUTE IS EXEMPTED FROM EXCISE AND CUSTOM DUTY under notification no-TU/V/RG/-CDE(1062)/201 CUSTOM DT.30.08.2016.
6. Tax: This Institute is not exempted from the payment of GST. The current rate (i.e. percentage of GST should be clearly indicated included or excluded) wherever chargeable. Please also provide/upload the copy of PAN card, GST number duly self-attested.
7. Concessional GST is applicable for all the items purchased for Research labs vide Ministry of Finance, notification no. 45/22017 dated 14.11.2017 and 47/2017 dated 14.11.2017.
8. Bidder/s quoting in currency other than **Indian Rupee (INR)** should explicitly mention the currency in which tender quoted wherever applicable in Technical Bid along the tender documents.
9. The delivery period should be specifically stated. Earlier delivery will be preferred.
10. The firms are requested to provide/upload detailed description and specifications together with the detailed drawings, printed leaflets and literature of the article quoted. The name of the manufactures and country of manufacture should also invariably be stated. In the absence of these particulars, the quotation is liable for rejection.
11. Validity of offer: 90 days. The minimum warranty period will be one year where not specified along with Technical specification from date of satisfactory installation should be mentioned and firm and also should replace all manufacturing defect parts/ whole item under warranty without any extra cost including clearance, freight, taxes. If the Instrument needs to be taken out of the Institute for repair, Indemnity Bond of equivalent value has to be submitted by Indian Agent/Dealer. Security deposit/ Bank Performance Guarantee @ 10 % of the value of supply order as per norms may be sought from the firms.
12. The right to reject all or any of the quotation and to split up the requirements or relax any or all the above conditions without assigning any reason is reserved by the IISER Mohali. For any corrigendum and addendum please be checked the website <https://eprocure.gov.in/eprocure/app> and <http://www.iisermohali.ac.in>
13. Disputes, if any, shall be subject to jurisdiction in the court of Mohali only.

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(Mukesh Kumar)  
Assistant Registrar (S&P)