



भारत सरकार/Government of India  
स्वास्थ्य और परिवार कल्याण मंत्रालय/ Ministry of Health and Family Welfare  
प्रधानमंत्री स्वास्थ्य सुरक्षा योजना/PMSSY  
अखिल भारतीय आयुर्विज्ञान संस्थान/All India Institute of Medical Sciences  
मंगलगिरि, आंध्र प्रदेश/Mangalagiri, Andhra Pradesh

[www.aiimsmangalagiri.edu.in](http://www.aiimsmangalagiri.edu.in)

Ref: AIIMSM/40/2024-O/o HOD- Microbiology/ High-end Upright Fluorescence Microscope (with bright field and camera attachment) **Date: 21-02-2025**

## **Call for Objection**

**Subject:** Inviting comments/objection, if any before declaring proprietary article for procurement of “**High-end Upright Fluorescence Microscope (with bright field and camera attachment)**” for the Department of Clinical Microbiology AIIMS Mangalagiri.

Clinical Microbiology Department, AIIMS Mangalagiri has to procure “**High-end Upright Fluorescence Microscope (with bright field and camera attachment)**” through Proprietary Article basis.

The proposal submitted by M/s. Quad Dimensions, Hyderabad are the sole dealer/agents of the sole manufacturer M/s. CARL ZEISS INDIA (Bangalore) Pvt. Ltd., a wholly owned subsidiary of CARL ZEISS MICROSCOPY GmbH, Germany, reputed manufacturer of “Microscopes & Microscopy System” having corporate office at 0740 Jena, Germany and having manufacturing facilities at various locations in Germany (Jena), of this item along with Proprietary Article Certificate are attached & uploaded on Institute website.

The above documents are being uploaded for open information to submit objections, comments if any from any manufacturer/supplier before declaring proprietary article of the said equipment/items to be procured, within 10 days (i.e. 03-03-2025) from the date of issuance/uploading of the notification.

The objection should be raised in the technical compliance sheet as enclosed in Annexure -I, if any Firm claiming suitability of their product with respect to specification mentioned.

The comments should be sent to the office of Procurement Cell, Room no: 2151, Logistic block at AIIMS Mangalagiri in a sealed envelope with above reference on or before 03-03-2025 up to 05:00 PM from the date of uploading on institutional website, failing which it will be presumed that any other manufacture/vendor is having no comment to offer and case will be decided on merits.

**AAO (Procurement)**  
**AIIMS Mangalagiri**

**DEPARTMENT OF MICROBIOLOGY,  
AIIMS MANGALAGIRI**

**Technical Specifications for high-end Upright Fluorescence Microscope (with bright field and camera attachment)**

1. The microscope should be upright having transmitted light path with infinite optical system and full Kohler stand.
2. The microscope body should be equipped with two integrated "snap image button" which allow to acquire images and videos directly from the stand.
3. The microscope should have an automatic mechanical shutter in the transmitted light (TL) path when fluorescence observation is used without requiring to manually insert a slider shutter to block phosphorescence from TL Light Emitting Diode (LED) and have an ECO Mode to maximize system lifespan.
4. The microscope should have an active light manager with freely adjustable light intensity, suitable for all kinds of objectives which once setup does not require individual adjustment of each objective for both TL and reflected light (RL) applications.
5. Transmitted light illuminator in the microscope should be an integrated, high luminosity, encoded LED with 10W, with a color rendering index of at least 95 and an expected lifetime of more than 60,000 hours.
6. The microscope should also have provision to use a 100 W halogen lamp apart from the transmitted light LED, i.e it should be both LED and HAL compatible in one stand.
7. The microscope should be having Bright field, Phase contrast and Fluorescence contrast and be upgradable from brightfield to other transmitted light contrasting techniques such as Dark field, PlasDIC (Differential Interference Contrast) along with simple transmitted light Polarization.
8. The microscope should have a mechanical stage with travel dimensions 75 X 50 mm or better and a dual specimen holder to perform one-hand operation.

05.09.2024  
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9. The reflector turret in the microscope should be manual, revolving (sliding), with at least 6 encoded positions. It should be suitable for reading fluorescence filter position for fluorescence LED light intensity memory functionality (and for metadata information)

10. The nosepiece in the microscope should be manual, revolving, with 6 encoded, DIC Supported positions. It should be suitable for reading objective position for light intensity manager functionality and for scaling information.

11. The microscope should have direct control of external FL light source via microscope stand without external power supply and external control unit.

12. The light source of the microscope should be Solid-State Light source - Type RGB-UV and should be incorporated with 4-channel fluorescence light source with integrated control unit for continuous brightness adjustment, easy switch-ability and adjustable by stand.

a. It should be equipped with the following 4 solid state LED lamps:-

i) Red (625nm) for excitation of Cy5, Alexa 631, TOTO-3 and similar dyes

ii) Green (565nm) for excitation of Cy3, TRITC, DsRed and similar dyes

iii) Blue (470nm) for excitation of eGFP, Fluo4, FITC and similar dyes

iv) UV (385nm) for excitation of DAPI, Alexa 405, Hoechst 33258.

b. The Light intensity changes should be motion control dependent. The light intensity of each fluorescence LED should be individually and continuously adjustable and memorized per objective and per filter set. The memory function should be suitable for single- and multi-bandpass fluorescence filter sets.

c. The LED fluorescence light source should provide a visual status indicator to know which LEDs are in use or active.

13. The microscope should have a suitable filter set consisting of filters DAPI, GFP and CY3

14. The microscope should have binocular phototube with reversed image with 100%-0%/0%-100% splitting possibility between camera port and eyepieces. The inclination angle should be 30° at a field number of 23mm.

15. The Condenser in the microscope should be achromatic-aplanatic 0.9 H D Ph DIC with front lens switchable on the left and right. It should also have a 5-position modulator disk, 4

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centerable positions with Ph1, Ph2, Ph3 and dark field stop 0.75 and 1 bright-field position with aperture stop. Alternative use of up to slit diaphragms PlasDIC should be possible.

16. The microscope should have 5X, 10X Ph1, 20X and Semi Apo grade objectives for 40x/0.75 Ph2 and 100x/1.30 Oil

17. The microscope should be provided with Color camera of 8 Megapixels or better, pixel count – 3840\*2160, exposure range of 0.06 ms to 1 s with a frame rate of 30 fps with a passive cooling system.

a. It should have interfaces – HDMI, USB 3.0 Type C, Ethernet, Micro-D with full 4k resolution in 30 fps.

b. The camera should provide an on-screen display (OSD), that allows to control the camera without an extra controller/computer or software.

c. In the OSD, camera parameters and the image file name should be selected and adjusted via mouse and keyboard.

d. It should have provision to store images conveniently on a USB flash drive.

e. The camera should support both, the operation in stand-alone mode and in combination with a computer and software.

f. The camera should provide multiple setup possibilities to use it in a wireless mode.

18. The Software provided should be able to acquire images through connected and compatible microscopes and should have Multi Channel Module to provide easy solution for acquisition of fluorescence and transmitted light images in independent channels i.e acquisition of up to 4 fluorescence channels + 1 transmitted light channel -multichannel view including image processing and report generation with MCF images.

19. The Software should have provisions for basic measurements and other functions like Direct processing, Manual EDF, Measurement, Panorama, Spectral unmixing, Acquisition Base (time series and multichannel).

20. The microscope should include the above features with 5-year warranty.

21. The following local supplies should be provided along with microscopes:

a. High end Lenovo workstation - AMD Ryzen™ 9 7900 Processor (3.70 GHz up to 5.40 GHz) , Windows 11 Pro 64, Memory : 32 GB DDR5-5600MHz (UDIMM) - (2 x 16 GB), Graphic Card: NVIDIA® GeForce RTX™ 4060 Ti 8GB GDDR6, First Hard

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Drive: 1 TB SSD M.2 2280 PCIe Gen4 Performance TLC, Second Hard Drive: 2 TB 7200rpm HDD 3.5" SATA, Wireless: Wi-Fi 6E 2x2 AX & Bluetooth® 5.1 or above,

Keyboard: USB, Calliope, Black – English, Mouse: USB Calliope Mouse (Black)

b. 32-inch HD Ready smart android LED TV with USB, built in Wi-Fi and HDMI

c. Branded bar code scanner with scan rate of 300 words per second with R-232 and USB Interfaces 1D 2d AND QR

d. Key board & mouse

e. Headset & Webcam

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## P-3 Form

(To be attached with P-2 form for Proprietary items)

AIIMS, Mangalagiri

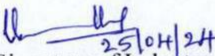
## PROPRIETARY ARTICLE CERTIFICATE

It is certified that the item **HIGH-END UPRIGHT FLUORESCENCE MICROSCOPE (WITH BRIGHT FIELD AND CAMERA ATTACHMENT)** required in the P-2 Form should be purchased from **QUAD DIMENSIONS MICROSCOPY SOLUTIONS**. To the best of my knowledge **QUAD DIMENSIONS MICROSCOPY SOLUTIONS** are the sole Dealer/agents of the sole manufacturer.

No other make/brand will be suitable for our purpose for the following reasons:-

- 6 position encoded nosepiece & reflector turret for software to automatically recognize magnification & fluorescence filter in use
- Automatic mechanical shutter for transmitted light & reflected light fluorescence with light intensity manager
- Snap buttons on microscope stand &
- Upgradable to PlasDIC

These features are important for avoiding errors in image scaling, automatic adjustment of light intensity & recording of images & videos directly → to give better resolution & detection with accuracy for patient care diagnostics.

  
25/04/24  
Signature of Indenter

with Date and Stamp  
MD (Microbiology)  
Associate Professor  
Department of Clinical Microbiology  
All India Institute of Medical Sciences  
Mangalagiri (Andhra Pradesh)

Recommendation by HOD:

Recommended.



**Dr. SUMIT RAI**  
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N.B.: The indenter before recording the above certificate should satisfy himself that the article is genuinely of proprietary nature manufactured under patent laws.





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Bommasandra Industrial Area  
Bangalore – 560099  
INDIA

Tel. : 91-80-43438000

Fax : 91-11-25568103

http : [www.zeiss.co.in](http://www.zeiss.co.in)

### Letter of Authority

Date: 23<sup>rd</sup> April 2024

To  
The Director,  
AIIMS Mangalagiri

Dear Sir/Madam,

Ref: QD\_2304\_Axioscope 5 – ZEISS Axioscope 5 with ZEISS Axioscope 208 Camera

We CARL ZEISS INDIA (Bangalore) Pvt. LTD., a wholly owned subsidiary of CARL ZEISS MICROSCOPY GmbH, Germany, reputed manufacturer of "Microscopes & Microscopy System" having corporate office at 07740 Jena, Germany and having manufacturing facilities at various locations in Germany (Jena), U.K. USA, Byelorussia & China.

do here by declare - "M/s Quad Dimensions, Hyderabad" is the authorized supplier for the above-mentioned microscopes manufactured by us and to subsequently negotiate and sign the contract.

We confirm the M/S Quad Dimensions to be the sole supplier for the above systems in Andhra Pradesh and Telangana.

Thanking you  
Yours sincerely  
For Carl Zeiss India (Bangalore) Pvt. Ltd.



*[Signature]*

*[Signature]*  
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Associate Professor  
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*[Signature]*  
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Mr Kishor Channappa  
Commercial Manager  
ZEISS Research Microscopy Solutions

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Carl Zeiss Microscopy GmbH 07740 Jena,  
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### Carl Zeiss Microscopy GmbH

Carl Zeiss Group

Jena location  
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07745 Jena  
Germany

Phone: +49 3641 64-

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E-mail:

Division/ Dept.: RMS

Your ref.:

Yours of:

Our ref.:

Date: 23.04.2024

Dear Sir/Madam

### Proprietary Nature Certificate

Certified that articles viz., Proposed by M/S Quad dimensions, a business partner of Carl Zeiss India (Bangalore) Pvt. Ltd., a 100% Subsidiary of Carl Zeiss Microscopy GmbH, with Quotation dated 23<sup>rd</sup> April 2024 with reference no: QD\_2304\_Axioscope 5 for "ZEISS Microscope - Axioscope 5 with Axiocam 208 color camera, encoded features, automatic mechanical shutter, ECO mode, Light intensity manager and integrated snap buttons" are proprietary items of M/s. Carl Zeiss Microscopy GmbH, Germany, a Group company of Carl Zeiss, Germany

Upright Research grade Microscope Axioscope 5, being a proprietary technology of M/s. Carl Zeiss Microscopy GmbH, Germany, a Group company of Carl Zeiss, Germany have the below proprietary features:

- 6 Position encoded DIC Nosepiece, 6 Position encoded reflector turret, integrated snap buttons, Light Manager
  - LED and HAL Compatible in one stand, Upgradeable to PlasDIC with patent number: US940511B2
  - Direct control of external FL light source via microscope stand without external power supply and external control unit. The light intensity of each fluorescence LED shall be individually and continuously adjustable and memorized per objective and per filter set. 8 Megapixel Color camera with 4K and 30 FPS with four interfaces.
2. M/s. Carl Zeiss Microscopy GmbH, Germany are the sole manufacturer of these articles.
  3. M/s. Carl Zeiss India (Bangalore) Pvt. Ltd, is a 100% Subsidiary of Carl Zeiss, Germany and its partner M/S Quad Dimensions are responsible for sales and service of our products in Andhra Pradesh, India and Telangana, India
  4. Certified further that no substitute make/ model will serve the purpose and that no other manufacturer can copy or produce these items in part or to to.

Yours faithfully  
Carl Zeiss Microscopy GmbH

Authorized Signatory

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Supervisory Board:  
Dr. Michael Kaschke  
Board of  
Dr. Markus Weber  
Justus Felix Wehmer

Local court Jena, HRB  
VAT Reg No: DE  
Tax number: 50079/47619  
WEEE-Reg.-No.

Deutsche Bank AG Jena  
Account: 6200000000 (BLZ  
SWIFT-BIC: DEUTDE33  
IBAN:  
Commerzbank AG Göttingen  
Account: 624111100 (BLZ  
SWIFT-BIC: COBADEFF260  
IBAN:

Commerzbank AG Heidenheim  
Account: 201114600 (BLZ 63240011  
SWIFT-BIC: COBADEFF632  
IBAN: DE2663240016020114600  
Deutsche Bank AG Heidenheim  
Account: 205008000 (BLZ 63240011  
SWIFT-BIC: DEUTDE33  
IBAN: DE32613200800205008000



**ANNEXURE – I****SPECIFICATIONS**

**Objection should be submitted in following format:**

<b>S. no</b>	<b>Item specification as given</b>	<b>Specification offered by firm</b>	<b>Deviation if any</b>	<b>Remarks</b>