

Birbal Sahni Institute of Palaeosciences

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No. III/S&P/BSIP/ Dr. A.T. & Dr. P.S.K./ C-917

Reminder

Date: 09.12.2019

Convener, Website Committee,
BSIP, Lucknow

Dear Sir,

This Institute being recognized Research & Development Unit under Department of Science & Technology, Govt. of India, proposes to import the following items for the research work, kindly send the proforma invoice in triplicates for the same immediately:- Import-Export Items code number may be mentioned in the Proforma Invoice, which is required by our bankers in case of advance payment, Freight., Insurance etc will be paid in India in Indian rupees:-

<u>Description</u>	<u>Quantity</u>
High Resolution Microscope with Digital Image Analysis System (Details at back)	Two

Proprietary Certificate of above may be attached.

Terms & Conditions

- PRICE** : F.O.R. Lucknow covering Insurance from warehouse to warehouse by AIR / SEA FREIGHT / REGISTERED AIR MAIL PARCEL POST having validity not less than 120 days.
- DELIVERY** : Delivery date must be specifically mentioned in the Proforma Invoice.
- PROFORMA** : It should please be sent in triplicate so as to reach the undersigned on or
- INVOICE** : before **31.12.2019**
- STATUTORY**: Indian Foreign Exchange control Rules and Regulations do not permit inclusion in **OBLIGATION** the F.O.R. value, the commission, discount, or like rebate allowed by Foreign Suppliers / Manufacturers payable to their Indian Agents. Such Commission / Discount etc., if any, should please be specified separately in your proforma invoice to enable us to remit the same in Indian Rupees to your Indian Agents, whose complete name and address must be mentioned.

Yours sincerely,

(Sandeep Kumar Shivhare)

Registrar

Specification for Upright DIC Microscope with Digital Cooled Camera and Image analysis software

1. **Frame:** Ergonomic design microscope with modular frame. On-site upgradable to step-wise motorization (like motorized 6-positions or higher DIC nosepiece, motorized 7-positions or more universal condenser, motorized 6-positions or higher fluorescence turret, motorized stage, motorized focusing, etc) and DIC.
2. **Optical System:** Infinity corrected optical system.
3. **Observation Tube:** Should be trinocular wide field, FN 22, three way light path distribution (100:0, 20:80/50:50 & 0:100) for simultaneous viewing and imaging of the specimens, inclined at 30 degree or less for improved observation efficiency, provided with paired widefield eyepieces.
4. **Eyepieces** of at least 10X magnification, with diopter adjustment facility with field of view of 22mm or higher.
5. **Transmitted illumination:** The microscope should have an ergonomic stand with at least 100 Watt Halogen or LED transmitted light source equivalent to 100 Watt Halogen.
6. **Nose Piece:** Six or more position objective nosepiece with DIC/ polarizer attachment slot
7. **Condenser:** 8 Position Universal condenser with N.A.1.1or Higher for all microscopy techniques like DIC, Phase etc.
8. **Stage:** X and Y rectangular mechanical stage motion control on right hand side with capacity to hold two slide glasses at a time. The stage should be ceramic coated.
9. **Objectives**
 - i. Plan Achromat 4X/5X (N.A. 0.10 or more),
 - ii. Plan Achromat 10X (N.A. 0.25 or more),
 - iii. Plan Semi Apochromat/ Fluorite Phase contrast 20X (N.A. 0.50 or more),
 - iv. Plan Semi Apochromat/ Fluorite 40X (N.A. 0.75 or more),
 - v. Plan Semi Apochromat/ Fluorite 60X (N.A. 0.90 or more)
 - vi. Plan Semi Apochromat/ Fluorite 100 X oil (N.A. 1.3 or more)
10. **Attachments:** DIC attachment for 40x, 60x and 100x objectives with Polariser and analyser and multi-position Magnification changer.
11. **Digital Cooled CMOS Camera:** Both color and fluorescence imaging should be possible with the system: 20.7 Mega Pixels Dual Mode Camera with Global Shutter, Large Sensor size : 1/1.2 inch, Large Pixel size : 5.86 x 5.86 μm , A/D Conversion : 12 bit, Cooling system : Peltier Device, Auto exposure facility, Camera mount : C-mount, Automatic adjustment of exposure time to capture crisp fluorescence images, At high magnifications helps the user to keep a track of their location within the sample.
12. **Image analysis software:** Software should able to Overlay multiple Image, Document group for side by side Image comparison, Movie Playback, Tile View, Snap/Movie acquisition, Geometry Combine filter processing, Region and Line Measurement, Interactive measurement, Object count (Manual) etc
13. **Data Analysis Workstation:** Computer systems with configuration: i5 processor, with 4 GB RAM, 500GB or higher HDD, 22" HD monitor with original and suitable Operating System along with suitable UPS and Color laser printer.