

INDIAN INSTITUTE OF TECHNOLOGY KANPUR

Department of Earth Sciences

***REVISED**

Enquiry No: ES/PROJECT/SM/2017-18/02

Date: 19.09.17

Subject: Quotation for supply of RESEARCH POLARIZING UPRIGHT TRINOCULAR MICROSCOPE as mentioned below.

With reference to the subject mentioned above, you are invited to submit the quotation in a sealed cover in order to reach us by **September 25th, 2017** in the form of a hard copy to the address mentioned below. If you have any question please call Dr. Santanu Misra at 0512-2596812, email: smisra@iitk.ac.in.

The prospective suppliers are required to send quotation in two parts in sealed envelopes, as "Technical Bid" and "Financial Bid". The Technical Bid should contain detailed technical specification of the product being offered and should not mention any prices. The Financial Bid should include the detailed price quotation clearly including the cost of the equipment, taxes, service charges if any, shipping and handling charges. **The two separate and sealed envelopes should be clearly marked appropriately as "Technical Bid" and "Financial Bid".**

NOTE: - Kindly write the inquiry no on the top of envelop.

TECHNICAL SPECIFICATIONS FOR RESEARCH POLARIZING UPRIGHT TRINOCULAR MICROSCOPE:-	
Main body	Upright high quality, solid, die cast to provide long life and good mechanical strength. Coaxial focusing control with ball bearing guide way and large knobs. Stand should be equipped for transmitted light as well as reflected light studies. The stand should have a 6 position filter wheel to accommodate neutral density filters 0.015, 0.06 and 0.25. Stabilized electronic power supply for transmitted light and reflected light studies and provided with 12V 100W power supply suitable for 230V 50Hz power supply.
Observation Head	Sidentopf designed (2 different viewing heights) trinocular observation head inclined at 20° (100:0/0:100)
Adapter	For expansion of specimen area by 60mm to be inserted between upper and lower part of the microscope. Expansion to max. sample height of altogether 110 mm.
Nosepiece	Sextuple Revolving Nosepiece should have strain free objectives.
Reflector Turret	4/6 position reflector turret to accommodate reflector modules for bright field, dark-field, polarization
Eyepiece	High quality anti fungus wide-field 10X eyepiece pair with adjusting mechanism, eye guards and one of the eyepieces with crosshair and graticule. Field of View of 23 and above. Interpupillary distance adjustment (55-75mm), dioptic adjustment ring on the left having adjustable dioptic scale of +/-5.
Objectives ¹	Plan achromatic Pol objective suitable for both transmitted light and reflected light for 1.25x, 5X, 10X, 20X, 50X, 100X with free and sufficient working distances between tip of the objective and sample stage for housing and viewing thick polished sections and grain mounted moulds.
Internal Optics	The internal optics should be free of any distortions and should give clear and aberration free images made of Infinity Color Corrected System Optics (ICS)
Polarizer	90° rotatable polarizer
Analyzer	Fixed/rotatable Analyzer
Mechanical Stage	Revolving round stage, 360° rotatable and graduated in 1° increments, least count 0.1° with vernier. Detachable stage slide clips/holder. Stage rotation locks screw. Stage centering knobs. With 45 deg. Click stop

Focus Drive	Co-axial knob provided based on coarse and fine focusing for silk smooth operation. There should be sufficient working distance for movement along Ydirection i.e. between tip of the objective and the sample stage for housing and viewing thick polished sections and grain mounted models. Rack and pinion gears for focus movement, height adjustable relative to top of stage, adjustable screw-stop to limit coarse range to protect specimens.
Illuminations	12V 100W Halogen/ LED for Transmitted light & Reflected light Bright Field, Dark Field, Pol microscopy.
Condenser	Universal bright field condenser (preferably Achromatic Aplanatic Condenser), Iris diaphragm, positioning adjustment and swing out filter holder.
Bertrand Lens	Focusable Bertrand lens, sliding in/out of optical path.
Optical Compensator	Lambda slip (first class red) and ¼ lambda slip.
Photomicrography system and software ²	High resolution and high speed digital CCD camera having chip size 2/3" and Pixel size: 3.45 µm x 3.45 µm, 9 fps or better at 2452 x 2056, 5.0 mega pixel or better, Firewire interface, 12 bit/pixel or better. Software for morphometric measurements.
Accessories	Objective centering tools, instruction manual, dust cover and lens cleaning cloth.
Warranty	Standard warranty to be provided from the date of installation of microscope.
Installation	Installation of complete microscope unit and demonstration of photo micrographic system and its application software should be provided free of cost at our site.
General	All components (hardware and software) should be from a single manufacturer only.

¹ Please separately mention the price of 2.5x objective of similar specifications as optional

² Please separately mention the price of CMOS camera of similar or higher specifications as optional

Terms and Conditions:-

1. Maximum education discount, if any should be offered
2. Validity of quotation should be at least for 60 days
3. Prices should be on CIF and FOB separately (if imported)
4. Each item/component's price should be mentioned separately in the Financial Bid.
5. Prices should include the installation and training cost.
6. Normal payment terms for the Institute will be applicable (90% on delivery of the items and the remaining 10% after satisfactory installation/ inspection).
7. Imaging is one of the main reasons for buying this set-up. Please make sure that the components being quoted produce excellent images. Submit (or send online to the e-mail address mentioned above) a few colour images of rock thin sections (ppl and xpl) obtained from this set-up.
8. Quotation should carry proper certifications like agency certificate, proprietary certificate, etc.

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