

Limited Tender Notification

Reference Number: HNBGU/GEOL/GEOD/ 21-22

Dated 05/03/2022

Sealed tender/quotations are invited for the following items/ instruments from those firms/suppliers registered with HNB Garhwal by office order vide HNBGU/S&P/2020/1167 Dated 01/06/2020 or after 01/06/2020

Sealed tender/ quotations may kindly be sent to: Professor Y P Sundriyal, PI DST Project Department of Geology HNB Garhwal University, Chauras campus Post Office; Kilkilleshwar via Kirtinagar District Tehri- Uttarakhand. Pin Code: 249161

The last date of receiving the sealed quotations/ tenders is **20/03/2022**; no tender/ quotation will be accepted after the above date.

Amount available: Rs. 11.00 lakh

Specifications and items are given below:

- 1. Microscope with an image analyzer, other specifications are provided hereunder**

Upright DIC (Differential Interference Contrast) Microscope with Digital Camera Attachment with the following specification:

Optical System: Universal Infinity corrected optical system.

Illumination: At least 14 watt LED illumination system with a life of 50,000 hours or more. The intensity/brightness should be equivalent to a 12 volt 100 watt halogen bulb.

Upgradability: The quoted microscope should be onsite upgradable to fluorescence with at least 8-position turret; stepwise motorization like motorized fluorescence turret with at least 8 positions, motorized 7-positions or higher nosepiece, motorized stage, motorized focusing, motorized universal condenser etc.

Observation Tube: Should be trinocular widefield, three-way light path distribution (100:0, 20:80 & 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.

Eyepieces: Should be of at least 10X magnification, with diopter adjustment facility in both eyepieces with F.N. 22 or higher.

Nosepiece: Sextuple (6-positions) revolving nosepiece with a slot for analyzer or DIC slider

Objectives: The following Plan Achromat objectives should be quoted:-

1. Plan Achromat 4X/5X (N.A. 0.1 or higher)
2. Plan Achromat 10X Phase (N.A. 0.25 or higher)
3. Plan Achromat spring-loaded 20x Phase (N.A. 0.4 or higher)
4. Plan Achromat spring-loaded 40x phase (N.A. 0.65 or higher)
5. Plan Semi Apochromat/Fluorite spring loaded 100X oil (N.A. 1.30 or higher).

DIC accessories for 40X & 100X should be a standard bid. Objectives with a higher numerical aperture (N.A.) will be preferred.

Stage: Mechanical stage with ceramic coating, with a double slide holding capacity

Universal Condenser: Universal condenser for all microscopy techniques like BF, PH, DIC, Pol, DF, etc with eight or more optical elements with a polarizer in/out for DIC imaging/observation. The polarizer should be freely rotatable (360°), swing in/out the top lens, aperture diaphragm.

Digital Color Camera: Scientific grade colour camera with a resolution of at least 5.0 Mega Pixels, 12-bit or better bit depth, binning of 2x2, 4x4 or better, USB3.0 interface, speed of up to 55 frames per second with true colour reproduction on the computer screen. A compatible C-mount adaptor should be quoted.

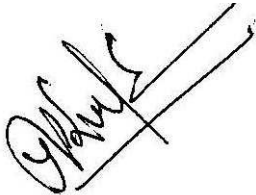
Image Analysis System: Image analysis software for image & movie acquisition with advanced features like annotation, user experience customization, overlay multiple images, Document groups for side-by-side image comparison/live compare, tile view (multiple images in a single data set shown side-by-side), basic measurements, scale bar, objective calibration, capturing data saving (metadata), etc

The quoted microscope, camera & software should strictly be from the same manufacturer.

Data Processing System: Branded computer system with i5 or better processor, 500GB or higher SSD, Genuine Windows 10 64-bit OS, 8 GB or higher RAM, 19" or higher color TFT monitor, keyboard & mouse.

Other Mandatory Conditions:

1. The quoted system should be onsite upgradable to motorization.
2. The quoted microscope, camera & software should strictly be from the same manufacturer.
3. The quoted microscope should be FDA & CE certified



(Professor Y.P. Sundriyal PI DST Project)

Department of Geology

HNB Garhwal University, Chauras Campus

dated: 05/03/2022