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बीरबल साहनी पुराविज्ञान संस्थान

BIRBAL SAHNI INSTITUTE OF PALAEOSCIENCES

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(भारत सरकार के विज्ञान और प्रौद्योगिकी विभाग का एक स्वायत्तशासी संस्थान)  
(AN AUTONOMOUS INSTITUTION UNDER DEPARTMENT OF SCIENCE & TECHNOLOGY, GOVERNMENT OF INDIA)

संख्या  
No .....

दिनांक  
Dated .....

IV/BSIP/SP/2016-17/C-819

25.10.2016

BSIP Web Site

Dear Sirs,

We are in need of an Upright Research Microscope for brightfield, DIC and phase contrast observation alongwith digital Camera system and image analysis software with the specifications attached. You are requested to send us your lowest rate for the same in a sealed cover superscribing "Quotation for Upright Research Microscope" latest by November 14, 2016.

Yours sincerely,

( Dr. R.S. Singh )

Scientist 'G' with additional duties of Registrar

**UPRIGHT RESEARCH MICROSCOPE FOR BRIGHTFIELD, DIC AND PHASE CONTRAST OBSERVATION  
ALONGWITH DIGITAL CAMERA SYSTEM AND IMAGE ANALYSIS SOFTWARE**

<b>Optical system</b>	UIS2 Infinity corrected optical system
<b>Microscope Frame</b>	Focus Vertical stage movement: 25 mm stage stroke with coarse adjustment limit stopper, Torque adjustment for coarse adjustment knobs, Stage mounting position variable, High sensitivity fine focusing knob (minimum adjustment gradations: 1 $\mu$ m) Built-in filters (LBD-IF, ND6, ND25, optional) Dust Cover 6 bottles of Immersion oil 30 cc
<b>Illumination</b>	Built-in Koehler illumination for 12 volts 100 watt transmitted light, Light preset switch, Light intensity LED indicator and 4 nos 12 volts 100watt halogen bulb.
<b>Nosepiece</b>	Coded sextuple revolving nosepiece with a slot for analyzer or DIC slider, including cable clamp
<b>Control unit for coded nosepiece</b>	Control unit for coded function, including AC adapter
<b>Mechanical stage</b>	Ceramic coated surface mechanical stage with right-hand low drive control with rotating mechanism and torque adjustment mechanism alongwith specimen holder for two slides
<b>Universal condenser</b>	Universal condenser with 8 optical element slots with top lens
<b>DIC Prism</b>	DIC Prism for 40X, 60X and 100X
<b>Phase Ring</b>	Phase contrast ring slit for 20X
<b>Observation head</b>	Trinocular observation head having in built diopetre adjustment on one eyepiece tube. Three position light path selector (0:100/80:20/100:0); FOV:22mm
<b>Eyepiece</b>	Widefield eyepiece 10X/22mm (Anti-Fungal Type) Widefield eyepiece 10X/22mm (Anti-Fungal Type); Focusable
<b>Objectives</b>	Plan Achromat objective 10X/0.25, WD 10.6 Plan Achromat phase objective 20X/0.4, WD 1.2 (spring) U Plan Semi Apochromat / Fluorite objective 40X/0.75, WD 0.51 (spring)) U plan semi Apochromat / Fluorite objective 60X/0.9 WD 0.2 with correction collar (spring, c.c. 0.11-0.23) U Plan Apochromatobjective 100X/1.4, WD 0.13 (spring, oil )
<b>Magnification Changer</b>	Magnification changer having position 1X and 2X
<b>Digital camera System</b>	Single chip color CCD camera, Imaging sensor Size 2/3 inch color CCD, Effective pixels 5.05 megapixels (total: 5.24 megapixels), 12 Bit, Scanning method Progressive scanning, Color filter RGB primary color on-chip filters, Recording area 8.4(H) $\times$ 6.62(V) mm, diagonal length 10.73 mm, Maximum recorded pixels 4.7 megapixels (2448 $\times$ 1920), C-mount, Sensitivity Equivalent to ISO 100/200/400 Metering Area Full image / 30% / 1%, Exposure control Auto/Manual, AE lock (enabled when Auto Exposure is selected), Exposure compensation : Area - 2EV to +1EV, +side:1/6EV step, - side1/3EV step (enables when Auto Exposure is selected.), Exposure time Auto:1/20,000s to 2s, Manual: 1/20,000s to 8s, 2448 $\times$ Resolutions: 1920, 1920 $\times$ 1080 (Full HD), 1224 $\times$ 960, 15fps (2448 $\times$ 1920), 22fps (1920 $\times$ 1080), 30fps (1224 $\times$ 960), PC interface: USB 3.0, C-mount adapter with 0.5X lens

Image Analysis Software	<p><b>Layout:</b> User experience customization</p> <p><b>View:</b> Overlay multiple images, Document groups for side-by-side image comparison, Movie playback, Tile view (multiple images in a single data set shown side-by-side).</p> <p><b>Image Acquisition:</b> Snap/movie acquisition, Time-lapse at specified interval.</p> <p><b>Image Processing:</b> Geometry/combine/filter processing.</p> <p><b>Image Analysis:</b> Region and line measurements, Interactive measurement, Object counting (Manual).</p>
Extended Focus Imaging	<p>The software should create a single in-focus image from successive image planes as the focus knob is turned using the Extended Focus Imaging (EFI) function.</p>
Image Recorder	<p>Image Recorder (DELL/HP) intel core i5 Processor, 8GB RAM, 2 TB HDD, USB 3.0 Port, 64 Bit Windows 7 Professional, 21" FHD LED Monitor, Antivirus, Key board, Mouse, 2 kVA UPS, High resolution all in one (Print/Scan/Copy) colour laser printer</p>