Indian Institute of Technology Kanpur

CENTRE FOR NANOSCIENCES

Enquiry Number: CNS/2017-18/09 Dated: 20-02-2018

Closing date: March 27, 2018

Sub.: Inquiry for the supply of: "3D BIOPRINTER WITH ACCESSORIES"

Sealed quotes (technical bid and price bid separately sealed) are invited for the above-mentioned laboratory products as per the specifications given below.

A Specifications for 3D Bioprinter

- Bench top, portable, Pneumatic and Thermoplastic Extrusion and Ink-jet based bioprinting system.
- 3D Bioprinter should have multiple print heads for simultaneous printing of 3 or more materials.
- 3D Bioprinter should be bench top design to be used inside the cGMP laminar hood with dimensions range of 400-450 x 300-360 x 450-500 mm.
- 3D Bioprinter should have build volume for 100-130 x 70-90 x 50-80 mm, with a built-in HEPA14 filter system
- 3D Bioprinter should have layer resolution in the range of 1-10 µm.
- 3D Bioprinter should have high positioning precision of 1 µm.
- Should have equipped facility for using range of hydrogels with viscosity ranging from 0.001 to 400Pa.S.
- 3D Bioprinter should be delivered with external portable compressor that can deliver up to 450 kPa.
- Should have pressure range set from 5 to 700 kPa.
- Should have print bed with temperature controlling unit in the range of 5-60 °C.
- Should have UV curing facility to use vast range of hydrogels –365 and 405 nm, compatible with other wavelengths. 285, 350, 450 and 500 nm
- Should have intelligent Print heads, easily swappable with temperature control unit (with heating and cooling) in the range of 4-130°C, and thermoplastic head upto 250°C, inkjet head, HD cameras, etc.
- Should have flexibility with range of needle diameters.
- Should have built in HEPA H14 filter system and a 275 nm uv light for ensuring chamber sterility.
- Should have 7-10 inch touch screen display for easy reading & display of temperature & pressure parameters.
- Power Requirements: 24 V DC @ 6-8 amps
- AC input: 100 – 240 V, ~2 amps, 50 – 60 Hz

- Operating voltage 230V, 60 Hz
- Should be equipped with Stepper motor technology and capable of stand-alone operation.
- Chamber should be designed as per ASME standards/ PED directives 97/23EEC & should also comply with ISO 9001:2008.
- Should be made from wear-resistant high grade material
- Should not exceed >25 kg in weight
- Should have back up laptop compatible to all operating systems (Windows (XP 32 bit/7+), Ubuntu Linux (12.04+), Mac OS X (10.6 64 bit/10.7+).
- Must support file types with extensions - .stl, .obj for patient CT scan data conversion.
- Should have in built Software Bundle: Repetier Host, Slic3r, for converting patient data.
- Provided with USB port or SD Card for connecting to external memory device.
- Should have internet accessibility by USB, WiFi, Ethernet for automatic software updates.
- Should be provided with operating & service manual.
- Should be provided with 1 year of warranty.
- Tender will be accepted only after intensive demonstration of similar quoted model.

B Accessories

1 Bioinks

- Bioinks should be provided for initial optimization and printing.
- The bioinks should be suitable for printing different cells such as bone cells, liver cells etc.

2 IVC cage rack

- Suitable for cage loading from one side for 30 nos. IVC
- Frame structure, supply & exhaust air headers with air distribution system in SS 304 construction
- Castor wheels with SS 304 casing and special grade nylon wheels, 2 nos. free moving & 2 Nos. lockable

3 IVC Cage Assembly size C, in polysulphone const. 35 nos.

- Overall dimensions: L 425 x W 266 x H 235 mm
- Cage lid with supply air port, exhaust air port & water
- bottle port with self-closing isolators, 0.2 micron breather
- filter, filter retainer ring & locking clamps & Card Holder
- Water bottle in PSU const. with SS cap with nipple
- Cage grill in SS 304 construction with nylon gasket
- Overall dimensions: L 425 x W 266 x H 235 mm

4 Laminar air hood with dual entry

- Overall Dimension: L 1350(+165) x W 760 x H 1920 mm
- Overall Construction: Steel body finished with epoxy coating
- Work Surface and Arm Rest: Stainless Steel (304)

- Air Velocity at outlet of HEPA Filter: Variable, 0.3 to 0.4 mps
- Supply air Pre-filters: 520 x 380 x 20 mm – 3 nos.
- Supply air HEPA filter: 1150 x 550 x 66 mm with guard screen
- Exhaust air Pre-filter: 1000 x 300 x 20 mm
- Exhaust air HEPA filter: 1150 x 550 x 66 mm
- Power Supply: 220 V Single Ph. 50 Hz. AC
- Castor wheels: 125 dia, 4 nos.
- Standard accessories: - Power cord with 16 Amp. 3 pin plugs
- 2 nos. - 5 Amp. 3 pin power outlets

Terms & Conditions:

Your quote should mention/include the following:

- Maximum discount if any should be offered and mentioned.
- Quoted price should include the cost for installation, warranty, AMC and required accessories
- Validity of the quote at least for 90 days.
- FOB (indicating port of shipment) and CIF (New Delhi) values should be quoted separately if import is required. For quotes in INR, the price quote should be for delivery at Kanpur.
- The quote should cover insurance for transport up to Kanpur.
- Indian agency commission if applicable (should be certified by the principal if no agency commission is applicable) in case of import.
- Authorization certificate from the principal if you are a local agent.
- Terms and conditions for the payment, including the banker's name of the principal and the account number, if any, for electronic transfer.
- Payments terms: 100% after successful installation and commissioning.
- Technical literature to support your product (in technical bid).
- Users' list with contact address in technical bid.
- Concessional rate of GST (@5%) will be applicable with reference to Notification No. 45/2017- Central Tax (Rate) dated 14/11/2017 for Indian manufactures. We will provide relevant certificate for this purpose. On import items for research purpose presently the GST applicable is 0% (zero).
- Mere compliance is not sufficient; the technical details must be supported by detailed technical datasheets of the offered product(s)
- The Institute reserves the right of accepting and rejecting any quotations without assigning any reason.
- Kindly send technical and financial bid separately in sealed envelopes.

Note: Only principal manufacturers or authorized representatives are requested to send the quote along with proper certificates. The envelope should be marked as "Quote for 3D BIOPRINTER WITH ACCESSORIES"

Quotation must reach to the following address before 5 PM on or before closing date:

Prof. Ashok Kumar
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Kanpur 208016 (UP), INDIA