Global Tender Notification for procuring a "Cryoplunger system for automated vitrification of macromolecules" at the Indian Institute of Science, Bangalore.

Dear Sir/Ma'am 24/09/2023

Sub: Request for quotations for a Cryoplunger system for automated vitrification of macromolecules

This is a global tender towards procuring an automated cryoplunger system towards vitrification of biological macromolecules on CIP Bengaluru, Basis. This is GTE exempt item as per the OM Np. 4/1/2023-PPD. Your quotation should clearly indicate the terms and conditions of the quotations, delivery schedule, entry tax, payment terms, warranty coverage etc. The quotation should be submitted in two parts following the two cover system: Part I (Technical bid) and Part II (Commercial bid) and both should be submitted in a sealed envelope. Technical bid should be exactly same as commercial bid except that prices are not shown in technical bid. Technical bid should have item wise compliance report of all specifications. The commercial bid should have pricing for each of the items quoted in the technical bid. Commercial bid should include Incoterms from the bidder. Prices quoted should be inclusive of all taxes / duties. The prices quoted should be inclusive of delivery of the items to the site and installation at site and should include both rupee and US dollar quotes. The last day for submitting the bid is October 21st, 2023. The offer should be valid for a period of at least 60 days from the last date for submission of quotes. The following would be the technical specifications sought for the instrument.

Technical specifications.

1. Vitrification system should be automated for vitrification (rapid cooling) of aqueous samples.
2. The process of blotting, plunging EM grid into cryogen and vitrification should be automated after setting up the liquid cryogen container and sample application.
3. The unit should have a controlled environmental/climatic chamber with humidity control, which allows clear visibility of the chamber interior and has access for inserting pipette for sample application for both left and right-handed users.
4. The cryoplunging process should be reproducible and the tools should enable high throughput of vitrified samples, with a user-friendly graphical user interface.
5. The control panel should be integrated into the cryo-plunging system.
6. The unit should allow application of small sample volumes that can be applied manually. It should be possible to control sample application times, flexible wait times and blot times through the instrument software.
7. The instrument should allow blotting on both sides of the grid. The unit should also be programmable for multiple blotting of sample grid.

8. The adjustable parameters should include temperature, humidity, the number of blotting actions, and other time settings such as pre- and post-blotting wait times.
9. Grid transfer from the cryo-plunger should be either automatic or semi-automatic to avoid sample contamination.
10. The unit must be able to control the temperature from 4°C to 60°C.
11. The unit should be able to sense relative humidity (RH) and reach up to 99% or more.
12. The unit should include automated controls for quick and smooth insertion of sample EM grid into container with liquid ethane for optimal vitrification and minimal contamination.
13. It should have the option for saving experimental conditions that can be retrieved later for specific samples.
14. Standard accessories required to use the system such as compatible tweezers, blotting pads, blotting paper, cryogen container(s), grid boxes, touch screen pen should be provided along with the equipment. It is preferable if additional spares of accessories are also included.
15. Basic tools required for routine maintenance of the plunging apparatus such as screwdrivers, spare ethane holder should also be provided.
16. Bidder should provide free service if there is a routine upgradation or software installation is required. It is also preferable if the bidder provides/includes proper servicing of the instrument on a time-to-time basis.
17. System should be supplied with minimum of 3 years of warranty and an annual maintenance for an additional 2 years.
18. Additional accessories like a glow discharge unit that will facilitate use of the cryo-plunging system can be included as optional items in the bid.
19. The participating vendors/firms should be able to provide proven record of installation and usage of the same system at cryo-EM related research labs or facilities globally and within India. Details of application support structure in India (and Bangalore) must be provided.
20. The technical bid should have a table containing technical compliance to allow instruments to match the required specifications.

Installation: The machine along with accessories should be installed in MBU, IISc and made fully functional by the company or through its authorized agents. The machine acceptance will involve trouble free operation and demonstration of the capability of the system for which necessary consumables to be supplied along with the system.

System maintenance: Bidder should provide the free service if there is a routine up gradation or software installation is required. It is also preferable that providing company/bidder should take care of the proper servicing of the instrument on a time-to-time basis.

Important: Please note that systems with proven record for usage in cryo-electron microscopy labs in India are desirable. Provide the users list (Worldwide and in India) and the Service and Application support structure in India (Bangalore).

The documents may be addressed to the Chairman, Molecular Biophysics Unit (Kind attention: Dr. Aravind Penmatsa), Indian Institute of Science, Bangalore 560 012. Last date for receiving queries: October 21st , 2023. Please email penmatsa@iisc.ac.in

The last date for submission of bids is October 21st, 2023.

Thank You,

Sincerely,

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