

Open tender notification for the procurement of “Multiplex Protein Array System based on xMAP Technology” for the Animal BSL-3 facility in Centre for Infectious Diseases of the Indian Institute of Science, Bangalore

Last date of submission of tenders: 29.07.2022

(TENDER FROM DOMESTIC VENDORS)

Date: 08.07.2022

To whom it may concern

This is a Request for Quote (RFQ) from domestic (India-based) manufacturers or from foreign/ International Original Equipment Manufacturer (OEM) or their Indian authorized distributor for the supply of **“Multiplex Protein Array System based on xMAP Technology”** as a part of a tender for the Centre for Infectious Diseases Research at the Indian Institute of Science.

Please send your quotation valid for 90 days for the supply of equipment described below.

Your quotation should clearly indicate the terms and conditions of the quotations, delivery, delivery schedule, entry tax, payment terms, warranty coverage, etc.

The tender should be submitted in two separate sealed envelopes – one containing the “Technical Bid” and the other containing the “Commercial bid”, both of which should be duly signed and must reach the undersigned on or before 17:00 hours of 29th July 2022

The compliance table should include all the items and in the same order. The first column should describe your compliance in a “Yes” or “No” response. If “No” the second column should state, the extent of the deviation. The “third” column should state the reasons for the deviation if any. The fourth column can be used to compare your solution with that of your competitors or provide details as requested in the technical requirements below.

Specification for Multiplex Protein Array System based on xMAP Technology

96-well microplate based open system with multiplexing capabilities for different applications.

- Instrument should support different protocol for Human, Mouse and Rat assays.
- Instrument should be based on xMAP technology for quantifying upto 100 different analytes from a single well at a time.
- System should support both magnetic and non-magnetic beads.
- System should support most of the Cytokine Assay either one at a time or in multiplex for calculating variety of parameters in a single run and should also support different panels like autoimmune panel, Inflammation panel, Hematopoiesis panel etc.
- System should also support Phosphoprotein testing one at a time or multiplex for different kinases used in signal transduction studies.
- Immunoglobulin panels for IgG1, IgG2, IgG4 and all angiogenesis, acute phase and diabetic panel should be available.
- All other consumables for cytokines single or in multiplex, Phosphoprotein testing, and amine coupling with blank beads must be quoted in optional.
- System should have two needle-height adjustment options to accommodate various plate types – Filter plates and PCR plates.
- Instrument should come with handheld magnetic washer for washing of magnetic beads.
- Instrument should also be supplied with plate shaker for plate washing and computer for instrument control, plate run and data analysis.

- Should have x-plex platform for designing of pre-mixed custom panels.
- Blank magnetized polystyrene beads along with amine coupling kit must be available with the vendor for developing in-house assays.
- Calibration and Validation kit (and not Verification kit) should be provided with the system for IQ/OQ and monthly validation of Optics, Fluidics, Classifier and Reporter channel for ensuring the instrument is running as per specification. Relevant technical notes/document must be attached stating the use and application of validation kit as mentioned above.
- Instrument must be supplied with a MCV plate for trouble free system start up, calibration & validation; also a Reservoir for automating the washing and shut down procedure before and after the experiment

Lasers

Reporter Laser	532 nm, >10mW Frequency doubled diode
Classification Laser	635 nm, 10mW Diode

Detector

Reporter channel detection	PMT with 14 bits resolution
Classification channel detection	Photodiodes with 12 bit resolution

Software

- Single software platform for data acquisition, data analysis and maintenance of instrument.
- Performs automated instrument Calibration, Validation and maintenance.
- Should be capable of exporting data to text, XML, and Excel files in column or 96-well formats.
- Should have an integrated Excel-based analysis application designed for genotype (including SNP) and Present vs. Absent analysis.

- Should have simplified input for values of standards with automatic addition of new lots for reducing set-up time.
- Should have automated data processing with automatic setting of appropriate dynamic range and identification of data points outside this range.
- Should allow change in DD gates after the completion of run for accommodating kits manufactured by other vendors.
- Should have option for 21 CFR part 11 compliance for security edition
- Enables user to manipulate reader sensitivity – high PMT voltage for low concentration range using the most sophisticated curve fitting algorithms available
- Should have weighted five parameter 5PL logistic equation developed by Brendan Scientific, the leader for ELISA analysis.
- Should have total 6 options for curve fitting (linear and logistic)
- Should include recovery analysis to report accuracy of curve fitting
- Should display Unknowns, Controls and Upper and Lower Limits of Quantitation in the standard curve.
- Should allow running of more than one protocol simultaneously, on one plate.
- Should allow import of new panels from a CSV or text file.
- Should have data normalization feature using multiple internal controls (housekeeping genes) for gene expression applications.
- Assemble data from many instrument runs.
- Label and compare biological replicates.

- Perform simplified statistical tests for comparing biological replicates.
- Create scatter plots, box and whisker plots, and bar graphs.
- Review results in simple heat map.
- Present customized results automatically in common format.
- Export results in publication quality formats.

- The Instrument control software should come with integrated data analysis package. No export to third party software necessary for data Analysis

- Data Analysis package including automatic and simultaneous calculation of unknown sample concentrations, standard deviation and coefficient of variation percentage for duplicate samples, and recovery values for standard curves (assessment of “goodness of fit”) should be included.
- Full menu of additional regression methods including 4PL, cubic spline, linear, and point-to-point curve fitting.

- Real-time data acquisition permitting display of multiplex data as it is generated, including bead map, single parameter histogram, bead flow rate, and median fluorescence intensity values for all analytes in each well should be available.

- Raw data is collected should be displayed well by well rather than at the conclusion of the read, allowing for data recovery should an unexpected event occur.

- Rerun/Recovery mode allows for complete rerun of all or a portion of samples.

- System monitoring of instrument functionality with error flags and available pause function enabling user intervention and troubleshooting in case of problems with low bead count, aggregated beads, classification efficiency, region selection, or platform temperature.
- “One-click” data export to Excel providing tab-delimited version of Bio-Plex generated data.
- Calibration, Validation and Instrument Operations Logs automatically generated, providing documentation of system maintenance, performance and operation, enabling enhanced troubleshooting.
- Calibration is available at optional “high PMT” setting for maximum system sensitivity.
- Validation Report feature for generating hard copy quality control and IQ/OQ (installation qualification/operational qualification) documentation.
- Grouping function simplifies analysis of data for which standards are not available, e.g., nucleic acid-based bead assays, providing automated ratiometric data output.

Specifications for the Plate Shaker:

- **Plate Shaker:** Compact, universal small shaker suitable for shaking tasks with all small vessels and microtiter plates, Wide range of attachments & Attachment detection

Type of movement	orbital
Speed min (adjustable)	200 rpm
Speed range	0 - 3000 rpm
Speed display	scale
Timer	yes

Time setting range	1/60 - 999 min
Operating mode	timer and continuous operation
Touch function	yes
Working with microtiter plates	yes
Number of microtiter plates	1

Specifications for the Desktop

Type	: All in One
Processor	: Intel i5 11th gen
RAM	: 16GB DDR4
SSD	: 256 GB
HDD	: 1 TB
Display	: 27-inch FHD
OS	: Windows10
Accessories	: Wireless keyboard and Mouse

Terms and other conditions:

The quote should come only from Indian Original Equipment Manufacturer (OEM) or their Indian authorized distributor or from the original manufacturer.

The quotations should be on FOR-IISc Bangalore basis in INR only.

The quotations should be submitted in two bids system, i.e., technical bid, and commercial bid.

The technical bid must include all details of technical specifications of the instrument along with commercial terms and conditions masking only the price component. Bill of materials, brochures, technical datasheets, and any other document may be enclosed to help the evaluation of the technical bid. Please also include warranty terms and any other information on upgradation terms in the technical bid.

The commercial bid must include the price of the instrument in Indian currency indicating break up of: Installation, commissioning, and training charges, including any incidental expenses if any.

The price of every line item in the commercial bid should be quoted along with the total quoted price for the instrument to be operational (fixed and ready to use) in our facility.

Both the Technical and Commercial bid should be put in separate sealed envelopes, and put together in another cover stating, **“Multiplex Protein Array System based on xMAP Technology”** and should reach us on or before 17:00 hours 2022

The validity period of the quotation should be 90 days

The vendor should have a good track record of having previously supplied at least 5 Fluorescence-Activated Cell Analysers or Sorters in India in the last two years (please furnish details)

The vendor should provide local content declaration in terms of percentage of material locally procured and imported as per the OM No P-45021/2/2017-PP(BE-II) dated 16 sep 2020.

There should be more than 50 installations of the system in the country and principal Company should be operational in India for sales and after sales support in terms of service and training.

The equipment should be installed and validated by the service engineer from principal company only and not certified engineers from third party vendors.

Instrument should be supplied with 3 years of warranty.

Instrument should be supplied with 1 assay kit with following analytes G-CSF, GM-CSF, IFN- γ , IL-1 β ,IL-2,IL-4,IL-5,IL-6,IL-7,IL-8,IL-10,IL-12 (p70),IL-13,IL-17A,MCP-1 (MCAF),MIP-1 β ,TNF- α for analyzing human samples.

If the goods are found to be defective, they must be replaced or rectified at the cost of the supplier within 30 days from the date of receipt of written communication from us. If there is any delay in replacement or rectification, the warranty period should be correspondingly extended.

The purchaser reserves the right to accept or reject any bid and to annul the bidding process and reject all bids at any time period to the award of construct without thereby incurring any liability of the affected bidder or bidders

Please submit the proposal to the following address: The Convenor, Centre for Infectious diseases Research, Indian Institute of Science, C. V. Raman Avenue, Bangalore 560012.