ANNEXURE: I

TECHNICAL BID PROFORMA

Item Name: Mass Photometer

1.0 Bidder Eligibility Criteria I

S.No	**Bidder Eligibility Criteria-I (Public Procurement – Preference to Make in India)**	**Class I / Class II**	**Local Content value**	**Reference, Page No.**
I	'Class-I local suppliers' 'Class-II local suppliers' and Non Local Suppliers as defined under DIPP, MoCI Order No. P- 45021/2/2017-PP (BE II) dated 16th September 2020 and other subsequent orders issued therein.			

2.0 Bidder Eligibility Criteria II

S.No	**Bidder Eligibility Criteria-II (Eligibility/pre-qualification criteria)**	**Complied/Not Complied**	**Reference, Page No.**
1.	The bidder/OEM should have supplied at least 5 similar items to Indian or Foreign academic or R&D organizations in the last 10 years, PO copies or installation certificates along with contact details of end user need to be submitted as the proof of supply. IIT Madras reserves its right to verify the claims submitted by the bidder and the feedback from the previous customers will be part of technical evaluation.		
2.	**As the facility is getting installed at IITM and adequate expertise is being developed, it will be necessary to conduct measurements of MP for several samples at other facilities. This must be facilitated by the vendor.**		
3.	**The vendor must have trained engineers available in India well-versed with the instrumentation. Details of Engineers need to be submitted along with Technical Bid.**		

3.0 Technical Compliance:

Mass photometry (MP) is a label-free, single molecule analysis technique which measures the light scattered by a single particle at a glass-water interface with potential sensitivity to obtain accurate masses of macromolecules, biomolecules (in their native state), and nanoparticle aggregates at high-resolution, composed of table-top compact active vibration isolation system, softwares for data collection, visualization and refinement with high-precision, additional instrumentation, starter kit of sample carrier slides and sample well cassettes with alignment tool, tweezers, and magnetic slide holders, along with accessories for uninterrupted functioning, inclusive of warranties and maintenance control ensuring three years of continuous operation, to be installed and maintained at IIT Madras campus with the support of a trained operator and a service personnel.

S No.	Specifications	Parameters	Complied/Not Complied	Reference, Page No.
1.	Mass photometer: mass range,	30 kDa – 5 MDa, Mass precision ± 2% or lesser Mass error ± 5% or lesser (single measurement)		
2.	Resolution (FWHM)	25 kDa @ 66 kDa, 60 kDa @ 660 kDa		
3.	Concentration range and sensitivity	100 pM – 100 nM, Sensitivity: << 1 ng of protein		
4.	Wavelength	475-490 nm		
5.	Field of view	4 x 11 µm (@ 500 Hz) up to 12 x 17 µm (@ 135 Hz) Pixel size: 12 nm		
6.	Active vibration isolation system	Compact active vibration isolation system as a tabletop unit - Isolation performance: min. 2 dB (94.4%) at 5 Hz, 40 dB (99.0%) beyond 10 Hz		
7.	Softwares	Acquisition software and analysis software		
8.	Sample preparation kit	Everything required to get started on a mass photometry instrument - boxes of sample carrier slides and sample well cassettes to support 100-120 sample measurements, and a mechanism to affix the sample well cassette precisely and reliably to the sample carrier slide: • 2 boxes of ready-to-use sample carrier slides (10 slides/box) • 20 sample well cassettes (6 sample wells/cassette) • Additional sample preparation package (ready-to-use sample carrier slides and sample well cassettes to support 300 sample measurements: 6 boxes of carrier slides and 50 sample well cassettes (6 sample/wells/cassette) • alignment tool, tweezers, and magnetic slide holders • Immersion oil		
9.	Manuals	Operation and service manuals to be supplied		
10.	Training	Training is to be provided for initially two technicians/scientists at the installation site so that they are trained on the most recent developments in hardware and software. Availability of trained staff in India to be demonstrated.		
11.	Availability of technical expertise in India	Technical expertise on operation and maintenance to be available in India and must be available at the site within 24 hours, once the problem is reported.		

12.	Suggested software	AcquireMP (acquisition) and DiscoverMP (analysis)		
13.	Computers and monitors	Computers and monitors for data collection and display for both acquisition and analysis of the data, with the specification of control computer (Core i7, 16 GB RAM, at least 256 GB SSD, a minimum of 2 TB HD, Windows 10/ 11) including keyboard and mouse and 24" or larger monitor. An anti-vibration table.		
14.	Licensed software for users	Licensed software for data visualization and analysis to be made available to users including one license for acquisition software and 6 licenses for analysis software		

Additional requirements			
1	Comprehensive warranty for 3 years.		
2	Maintenance Contract: Operational services should be provided for 2 years after warranty.		
3	Software updates, if any, to be provided free of cost.		
4	Installation and training to be provided.		
5	Instrument to operate smoothly in Indian conditions		
6	**The vendor must demonstrate the availability of high-quality data from instruments quoted against this tender.**		
7	**The vendor and associates must be authorized to represent all the sub-systems quoted.**		
8	**The vendor must train two PhD students or staff at the factory or customer site on all aspects of single particle analysis**		
9	**The vendor must supply a quotation for standard consumables such as 'Additional sample preparation package' for the extended used of the instrument after the supplied consumables are over.**		

SIGNATURE OF BIDDER ALONG WITH SEAL OF THE COMPANY WITH DATE