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PREBID REPORT

The Prebid meeting for Tender No : GEM/2025/B/6993200 dated 15/12/2025 was held online **on 24/12/2025 from 03.00 PM onwards** for GeM Custom bidding for the **Supply, installation and commissioning of Particle size analyzer.**

The report of the meeting is as mentioned below.

Sl. No	Query Raised By	Reference Document	Query raised	IIT, Indore Response
1	Anton Paar India Pvt Ltd	**Laser Source:** Semiconductor Laser diode wavelength 532 nm with max power output 10 mW. Higher than 10 mW not preferred.	**Justification:** In a Dynamic Light Scattering (DLS) instrument, the system should have the capability to automatically adjust laser power in accordance with the laser wavelength and sample characteristics. Since scattering intensity depends on factors such as particle size, concentration, refractive index, and the laser wavelength used, automatic power optimization is essential to maintain an appropriate signal level. So instrument laser source, its wavelength & power is completely dependent on instrument design. - Automatic adjustment of laser power as per wavelength and sample requirement ensures: - Consistent and optimal scattering intensity across different sample types - Avoidance of detector saturation or weak signal conditions - Improved measurement accuracy, repeatability, and reproducibility - Reduced operator intervention and method-dependent variability **Recommended changes: Semiconductor Laser diode wavelength 525 nm to 675 nm with power output of 10 mW or higher.**	**ACCEPTED** Semiconductor Laser diode wavelength **525 nm to 675** nm with power output of 10 mW or higher.
2	Anton Paar India Pvt Ltd	**Detector:** The system must use a Pholomultiplier Tube (PMT) detector as standard.	**Justification:** Each manufacturer designs its instrument based on its own optical architecture and measurement philosophy, and therefore detector type and configuration vary from brand to brand. Not all instruments employ the same kind of detectors, yet they may deliver equivalent or superior measurement performance in terms of accuracy, resolution, and reproducibility. **Recommended changes: The system must use a Photomultiplier Tube (PMT) OR Avalanche Photo Diode (APD) detector as standard.**	**ACCEPTED** The system must use a Photomultiplier Tube (PMT) **OR Avalanche Photo Diode (APD)** detector as standard.

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3	Anton Paar India Pvt Ltd	**Particle Size Measurement specifications:Scattering Angle:** The instrument should have ability to measure particle size, Using 90 degree & backscatter 173 degree. System should have provision to select automatic & manual both angles.	**Justification:** As per the tender specifications, the instrument demanded is a three-angle system, wherein side and back angles are provided for particle size measurement and the forward angle is used for zeta potential measurement. In such a configuration, restricting particle size measurement to only two angles is technically unjustified when the instrument is inherently equipped with three independent detection angles. A three-angle particle size measurement system offers greater versatility, accuracy, and robustness across a wide range of sample types, including dilute, concentrated, mono-modal, and poly-dispersed systems. Utilizing all available angles for particle size analysis enables better handling of challenging samples such as highly scattering, weakly scattering, or multi-component systems, thereby improving data reliability and measurement confidence.Therefore, the instrument should be capable of utilizing all three angles for particle size measurement, rather than limiting size analysis to only two angles. This ensures full utilization of the instrument's optical design, aligns with the intent of the tender specifications, and provides flexibility to handle diverse sample matrices encountered in routine and advanced research applications. **<u>Recommended changes</u>: The instrument must have ability to measure particle size using Back angle (173 to 178 degree), Side angle (90 degree) & Forward angle (13 to 17 degree) for Size measurement only. System should have provision to select automatic & manual all three angles.**	**ACCEPTED** The instrument should have ability to measure particle size, Using **Back angle (173 to 178 degree), Side angle (90 degree) & Forward angle (13 to 17 degree).** System should have provision to select automatic & manual both angles.
4	Anton Paar India Pvt Ltd	**Zeta Potential Measurement specifications**: Measurement Angle: Fixed angle of 17 degrees.	**Justification:** Zeta potential measurement is typically performed at a forward scattering angle; however, the exact measurement angle varies by manufacturer based on their proprietary optical design, electrode configuration, and signal optimization approach. Different manufacturers use different forward angles (for example, 12°, 15°, 17°, 18°, or equivalent effective angles) while still complying with established electrokinetic measurement principles.Therefore, specifying a fixed forward angle of exactly 17 degrees makes the requirement manufacturer-specific and unintentionally restricts fair participation.Technically important is the performance outcome—accurate, reproducible zeta potential measurement over the specified particle size and zeta potential range—rather than adherence to a single angular value. **Recommended changes: Measurement angle must be in 13-17 degree.**	**ACCEPTED** Measurement Angle: Should be in thae range of 13 to17 angle degrees
5	Anton Paar India Pvt Ltd	**Zeta Potential Measurement specifications** Sample Volume: ~100µl for disposable cell	**Justification:** Zeta potential measurement using a disposable cell inherently requires a sufficient sample volume to ensure proper electrode immersion, stable electric field generation, and adequate scattering signal. Insufficient sample quantity can lead to poor signal-to-noise ratio,	**ACCEPTED** ~ 700 µl or less for disposable cell

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			unstable electrophoretic mobility values, and reduced accuracy and reproducibility of results. **Recommended changes: ~ 700 µl or less for disposable cell**	
6	Anton Paar India Pvt Ltd	**Correlator**: Number of correlator channel should be 512. System less than 512 correlator channels will not be accepted.	**Justification:** The number of correlators required in a particle size / zeta potential instrument is inherently dependent on the overall system architecture, including the optical layout, detector configuration, signal processing methodology, and data acquisition strategy adopted by the manufacturer. Different instrument designs may use single, dual, or multiple correlators while achieving equivalent or superior performance.Therefore, specifying a fixed or minimum number of correlators in the tender is design-dependent and manufacturer-specific, and does not directly correlate with measurement accuracy, resolution, or reliability. Technically more relevant is the instrument's demonstrated performance, **Recommended Changes: Number of correlator channel should be 240 or more.**	**ACCEPTED** Number of correlator channel should be 240 or more.

All prospective/willing bidders are requested to take note of this report as part of the Tender document. All other terms and conditions of the tender remain unchanged.

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Assistant Registrar (R&D MMS)

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