

INDIAN INSTITUTE OF TECHNOLOGY KANPUR
Department of Chemical Engineering

Enquiry No.: IITK/CHE/RKG/2013-2014/01

Opening Date: 21/08/2013

Closing Date: 28/08/2013

Sub.: Purchase of DLS instrument for Particle Size and Zeta Potential Analysis

We are interested in purchase of DLS instrument for Particle Size and Zeta Potential Analysis, having following configuration. Our organization is an educational institute of the repute and liable to get education discount from manufacturer, please specify it, separately. Please send sealed quotation, to undersigned, for the same.

S. No.	Name	Quantity	Description
1.	DLS instrument for Particle Size and Zeta Potential Analysis	1	<ol style="list-style-type: none"> 1. Instrument principle should be based on dynamic light scattering 2. Particle size measurement range should be in between 5 nm to 5 μm 3. Minimum Sample volume requirement: 20 microlitre 4. Size Measurement Angle: 90° 5. Concentration capability to measure particle Size should be 0.6 ppm of 100 nm latex of maximum 5% wt/vol. 6. Zeta Potential measurement should be based on PALS (Phase analysis light scattering) principle only. 7. Zeta potential range should be \pm350 mV or more 8. Size range for zeta potential: 4 nm to 95 microns 9. Conductivity range: 0 to 290 mS/cm 10. Concentration capability to measure Zeta Potential Should be up-gradable to measure up to 40% 11. Internal Sample temperature control facility should be available. 12. Temperature control range should be 0 to 90 deg C with accuracy better than \pm0.5Deg C with an Optional upgradeability to measure up to 120 °C 13. The system must use a digital correlator with a minimum sample time of 25ns, a maximum delay time of over 4000s and a maximum number of channels greater than 3000 or more 14. Low power laser should be 4mW power or higher with auto attenuation feature. (As per ISO 13321, to avoid any thermal convection you need to have a low power laser.) 15. Measurement Angle should be 90 degree angle meeting ISO dynamic light scattering standard 16. Detector should be high sensitivity APD detector. 17. Optics should have solid surface charge measurement facility. 18. Standard Software should include capability to measure and report size, zeta potential, Molecular Weight and their distribution along with Trend Analysis methods. It should use standard algorithms such as NNLS, CONTIN and Cumulant etc. 19. The software should have facility to export measured data and result into ASCII format, so that data can be further processed. The software should have capabilities to carry out protein studies and its state such as melting point study / crystal screening.

		<p>20. Autotitrator should be included with the instrument to automate the measurement of size & zeta potential as a function of pH, conductivity or additive concentration. Online Degasser and size exclusion attachment along with Autotitrator will be desirable.</p> <p>21. System should preferably be upgradeable for flow mode operation with SEC to enable connection of 1 or 2 external detectors & a remote measurement start. The optics must be fully pre-aligned with no user adjustment required.</p> <p>22. Sample Cells should include glass cuvette (one in number), disposable cuvettes (100 number), disposable cuvettes for zeta potential measurement, zeta potential standard for the verification of the system should be provided with the system</p> <p>23. Optional sample cell should include solid surface charge measurement cell and High Concentration Zeta Potential Cell able to measure samples with concentration up to 40% without the need of dilution</p> <p>24. List of Installations: The vendor should supply list of installation (minimum 5, in last two year) in India of the same model quoted against this enquiry.</p> <p>25. The Vendor should have application labs in India with desired instrument facility for application support/method development/Pre demonstration purpose.</p> <p>26. Instrument should have gel permeation chromatography attachment facility, to measure molecular weight of organic as well as biological molecules.</p>
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Note:

1. Your quotation shall contain Authorization Letter from manufacturer.
2. Technical and financial details should be in separate envelope. In the document for technical bid, mention in tabular form the compliance to each of the above specifications.
3. All quotations must reach undersigned on or before 28/08/2013 at 1500 hrs.
4. Quotation must be valid for 90 days.
5. Delivery period should not be more than **8 weeks**.
6. IITK is exempted from excise/custom duty.
7. Send complete detail of the product(s).
8. Warranty/Guarantee should be clearly mentioned.
9. Payment terms will be as per IIT Kanpur rules.
10. The rate quoted should be inclusive of sales tax and other taxes including freight charges (if any).
11. All prices are to be FOR IIT Kanpur.
12. The Institute reserves the right of accepting or rejecting any quotations without assigning any reason thereof.

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