PR No. 1000013921 (Rfx No. 6100000298)

Technical Specifications for a complete Dynamic Light Scattering set up with software for analysis

Mandatory Requirements: All items mentioned below are essential for a complete solution. Partial quotation will not be accepted.

Detailed Technical Specifications

Sr.No.	Specification	Details
1.	Measurement type	particle size, molecular weight and zeta potential
2.	Light source	Temperature controlled Laser
3.	Detector	Photodiode detector
4.	Correlator	25ns, 4000 channels
5.	Temperature control	Variable temperature from 5-90°C or better
6.	Temperature control accuracy	± 0.1°C
7.	Scattering angle	Two angles minimum; Forward angle (~13°), and back angle (~173°) or equivalent as long as instrument capabilities are not negatively affected. System should use minimum 3 variable positions for measuring samples from various positions within the cell to minimize multiple scattering effects
8.	NIBS(noninvasive backscatter)	yes
	Sizing(DLS)	
1.	Max. size range(dia)	1nm to 10 microns
2.	Max. conc.	40% w/v
3.	Min. sample volume	≤ 12 µls
4.	Flow cell available	yes
5.	Repeatability	Better than ± 2%
6.	Accuracy	Better than ± 2%
7.	Sensitivity	0.1mg/ml
	Zeta potential (ELS)	
1.	Measured Principle	Electrophoretic light scattering
2.	Zeta potential range	> ± 500 mV
3.	Zeta potential size range	5 nm-100microns or above
4.	Conductivity range	0-200 mS/cm

5.	Min. sample volume	≤ 1000 μls
6.	Max. sample conc.	40% w/v
7.	Repeatability	Better than ± 5%
8.	pH Range	2 - 12
9.	Standard cell	Disposable capillary quartz or polystyrene (dip cell)
	Molecular wt.(ELS)	
1.	Molecular wt. range	1kDa -20MDa
2.	Measured principle	Static light scattering using Debye plot or using Dynamic Light Scattering.
	Output	
1	Particle size	differential/cumulative distributions; values for sizes at given percentages, fits to distribution models
2	zeta potential	plot of zeta potential distribution, mean zeta value
3	molecular weight	mean molecular weight value
	Accessories	
1.	12mm square disposable polystyrene cuvettes with stoppers	Minimum #500
2.	Disposable Zeta Potential cells should be quoted to remove any cross contamination	Minimum #50
3.	Cuvette cell	Two pairs of Quartz cuvette) should be included with the main system
4.	Low volume quartz cuvette	should also be quoted
	Software	
1.	Window based	Yes
	Protein utilities	Yes
2.	Quality factor & report	Yes
3.	Research Software	Yes; The software should have in built diagnostic features like Size Quality Report and Zeta Quality Report with the ability to provide expert advice based on the rate data that has been accumulated. The raw data should be stored and available later for analysis & use with other software modules as well.

	Warranty	1 years
	Upgradability	The software should have adequate provision for incorporating additional features as and when required for getting upgraded effortlessly.
	Delivery Period	Should not be more than 8 weeks

Terms and Conditions:

1. Technical Evaluation will be done on the basis of technical specifications as per our tender notice.

2. Financial bids will be open only for those, who meets all technical specification.

3. Please send the name and contact details of the person to whom company had supplied a similar systems. Committee may ask for the feedback.

4. The supplier must have supplied systems to institutions of national and/or international repute.

5. Payment terms & condition: As per tender documents.

6. Warranty/Guarantee : As per IITB norms

7. Installation, demonstration, and training-sessions at IITB will have to be provided by the manufacturer or the vendor for the quoted system.

8. Quotation should carry proper certifications like authorization certificate from manufacturer, etc.

9. Maximum educational discounts should be applied.

10. The delivery period should be specifically stated. Earlier delivery may be preferred.