

CORRIGENDUM - II

Ref:- Tender Notice for the procurement of Laboratory Instruments for the Kolkata Lab.

With reference to the above tender document, the **revised technical specifications for requirement of LC MS/MS system** is attached in the pages below (pages 2-9). The quotes for LC MS/MS system have to be submitted as per these requirements.

SCIENTIST-D

LC MS/MS System

Technical Specifications

(To be submitted by the Bidder)

Quotation Reference: SB/QEL/PUR/[Kolkata](#)/Instruments/14 dated 3-2-2017

Location of Supply and Installation:

The Instrument(s) will be required to be delivered and installed at the following locations:

Spices Board Quality Evaluation Laboratory
C/o Project Site, District Headquarter of South 24, Paraganas at Baruipur,
JL No. 48, LR Khatian No. 1311, Mouza-Chakarbar,
PO&PS Baruipur District South 24-Paraganas
West Bengal 700144

The technical bid is to be submitted by filing in Section I and II, duly signed by the authorized signatory in the 'Declaration of the Bidder'. Section III is to be left blank. incompleteness in filling up this form or failure to attach the required supporting data or documents, may result in rejection of the quotation.

Section I: Details of the Quotation

Quotation Submitted By	
Quotation Reference No.	
Date of submission of quotation	
Details of EMD submitted (if any)	
Full Address	
Name of principal supplier (if not self)	
Authorized contact person	
Designation	
Contact details	
List of supporting documents submitted along with the quotation	

Section II: Compliance with Technical Specifications

LC MS/MS System

Against each point in the technical specification, compliance must be marked as YES / NO

	Required Specification	Complying (Yes/No)	Remarks	Documentary Evidence Enclosed?
1	HPLC System			
	All components of the HPLC system should be from the same supplier, and should be amenable to control / data acquisition from the MS Software.			
	Pump			
1	High Pressure Binary Gradient Pumping System			
2	Purging of both pumps independently, manually as well as through software			
3	Suitable for operation as front-end for MS/MS System, compatible with the software controlling the MS/MS System			
4	Flowrate setting: 0.0001ml/min to 10.00ml/min			
5	Resolution : 3 nanoliter per step			
6	Flowrate accuracy: 1% minimum			
7	Flowrate precision Maximum 0.3% RSD			
8	Gradient curve selections			
9	Maximum discharge pressure at least 40 MPa			
10	Pulsation 0.1 MPa			
11	Safety functions like leak sensor, High pressure and low pressure limits			
	Autosampler			
1	Automated operation controllable through MS/MS Software			
2	Automated autosampler purging through software			
3	Total volume sample injection, variable injection volume			
4	Injection volume setting range 0.1ul to 100ul			
5	Vials capacity at least 1.5ml			
6	Number of vials - at least 100			
7	Injection volume accuracy - 0.1% error maximum			
8	Injection volume precision - 0.3% RSD maximum, for 10ul injection			
9	cross-contamination limit - 0.005% maximum			
10	Number of repeat injections - 30 / sample			
11	Operating pH range 1 - 14			
12	Rinsing needle - settable through software, before and after injection			
13	Operating temperature range 4 - 35°C			

	Degasser			
1	Online membrane type degasser			
2	Minimum 5 lines - 4 mobile phases, 1 autosampler rinsing			
	Column Oven			
1	Temperature control from ambient to 85°C			
2	Temperature control precision 0.1°C max			
3	Controllable through MS/MS software			
4	Storage capacity - minimum 3 columns			
5	Safety functions like leak sensor, high temperature cut-off			
	Columns			
1	The following high resolution, end capped columns suitable for analysis of azo dyes and natural products. The columns should be quoted from any of the following two suppliers : Phenomenex (Luna series), Waters (Symmetry series)			
	C-18 5cm x 4.6mm x 5um - 10 Nos.			
	C-18 10cm x 4.6mm x 5um - 5 Nos.			
	C-18 25cm x 4.6mm x 5um - 2 No.			
	C-8 5cm x 4.6mm x 5um - 5 Nos.			
	C-8 10cm x 4.6mm x 5um - 5 Nos.			
	C-8 25cm x 4.6mm x 5um - 1No.			
2	The columns should be supplied with certificates citing batch no, particle size distribution, Inertness, metal sensitivity, hydrophobic index and column performance checks			
3	20 Nos. each of C-8 and C-18 guard columns, from the same supplier as the columns, should be provided. Replaceable cartridge-type guard columns are desirable. In this case, two separate cartridge holders are to be quoted.			
2	MS/MS System			
	Ion Sources			
1	Dual / Orthogonal or off-axis spray or any other equally efficient technology capable of avoiding interference from solvents and other extraneous matter			
2	ESI and APCI probes to be provided, with facility of interchanging easily by the user, and auto-detection of installed probe by the instrument and software.			
3	The source should have self-contained heating system for achieving desired operational temperatures.			
4	Sprayer position should be adjustable in vertical and horizontal directions with adjustment scales for easy optimization.			
5	Facility for visual examination of spray should be available.			
6	The source should be easily removable from the system to facilitate user cleaning without venting the vacuum, with automatic shutdown of system while the source / probe is being removed.			

7	The source should be able to handle 0.5ul/min to 2ml / min flow, without flow splitting.			
8	The source housing should be fully vented to avoid contaminating laboratory air.			
9	All source parameters to be adjustable through software.			
	Vacuum System			
1	A differentially pumped vacuum system, including air-cooled turbomolecular pump, capable of supplying the required vacuum to the instrument. The system should have vacuum safety features to prevent damage to the instrument in case of failure.			
2	All accessories required for the proper functioning of the vacuum system should be supplied.			
	Mass Analyzer			
1	Triple quadrupole MS/MS System			
2	Mass Range at least 10 - 2000AMU			
3	Mass Accuracy 0.01% over the entire mass range			
4	Mass resolution - unit resolution over the entire mass range. Higher resolution capability of minimum 0.5 Da should be desirable.			
5	Mass Stability: 0.1 dalton over 24 hours (please include data in compliance statement)			
6	Collision cell - high pressure collision cell for high sensitivity MRM studies without loss in sensitivity			
7	Scan Types:			
	Full Scan MS			
	Selected Ion Monitoring in both Q1 and Q3			
	Precursor Ion Scan			
	Product Ion Scan			
	Neutral Loss Scan			
	MRM MRM-triggered product ion spectra Scheduled MRM facility is desirable			
8	Minimum Scan Speed 10,000 daltons / second or above, with user selectable scan speed.			
9	Minimum MRM dwell time 1 millisecond			
10	Minimum Number of MRMs: 250 MRMs in a single time period, with no loss in sensitivity for co-eluting components at any one point of time.			
11	No significant crosstalk should be detectable for reserpine at the following conditions : Infusion of 0.2 pg/ul, for MRMs 609/195 and 100/195 at 2 milliseconds dwelltime (please provide graphical data)			
12	+ve / -ve polarity switching time between alternate MRM scans: 50ms			

13	A high sensitivity, high throughput detector with zero dead time, low noise and high accuracy at low level detections.			
	Software			
1	Latest model computer with DVD writer and laser printer, suitable for operation with the software, should be quoted.			
2	The software should be user friendly, capable of controlling the entire function of HPLC and MS/MS, with required licenses for system suitability calculations; all accessories required for its operation should be quoted.			
3	The software should have full-fledged capability of calculating system suitability parameters, both for MS and HPLC.			
4	Full-fledged reporting facility with capability of customized user-designed report formats should be available.			
5	The software should necessarily have the following features:			
	Retention-time based programming / monitoring of MRM scans, so that only desired MRMs are monitored in desired retention time ranges			
	Fragment interpretation tools			
	Automated quantitative data processing features			
	Option for naming MRM transitions			
	System Performance Requirements			
The requirements in this section pertain to the working requirements of the system. Any claims made in the compliance statement (see section 4 below) should be substantiated by documentary evidence, chromatograms, spectra and other relevant data . The data will be reproducible in the laboratory after installation of instrument.				
1	Sensitivity of the instrument: In ESI +ve mode, 1pg on column concentration of reserpine should give 1,50,000:1 RMS or better based on 1 ul injection without smoothing. In ISI -ve mode, 1pg on column concentration chloramphenicol 1,50,000:1 RMS or better based on 1 ul injection without smoothing. Documentary proof to be provided for both the above along with the technical bid.			
2	Analysis of Mycotoxins: A limit of quantitation of Aflatoxin B1 in chilli matrix of at least 0.1 ppb without using immunoaffinity column cleanup with injection of 10ul or less (please provide full method details and chromatograms. Also mention the lowest LOQ achievable.)			
3	Analysis of Illegal Dyes: A limit of quantitation of Para Red in chilli matrix of at least 0.1 ppb (please provide full method details and chromatograms. Also mention the lowest LOQ achievable.)			
4	Analysis of Pesticide Residues: A limit of quantitation of Methyl Parathion in chilli matrix of at least 0.1ppb (please provide full method details and chromatograms. Also mention the lowest LOQ achievable.)			

	Desirable Features			
1	Pre-configured and optimized methods, with reference standards, for analysis of Pesticide Residues and Mycotoxins			
2	MRM List and product ion spectra for a wide range of compounds including pesticide residues, mycotoxins and synthetic dyes for screening and quantitation.			
3	Accessories of the System			
	Gas Generators			
1	Gas Generators capable of supplying all necessary gases with the required purity, pressure and flow rate, as required for the LC MS/MS instruments should be provided. It should be complete with all necessary accessories.			
2	If Gas Generators for a required gas is not available, two cylinders each of all required gases for operation of the system should be provided, to be quoted from local sources for supply at the installation site.			
3	In case external compressors are required for the gas generators, the same should be portable, noiseless and highly durable.			
	Spares and Accessories			
1	All required standards of mass calibration and tuning, and any other material required to make the instrument functional should be provided			
2	Pack of 200 vials, complete with septa and cap, should be included			
3	An ultrasonic bath suitable for cleaning parts of HPLC and LC MS/MS should be included.			
	UPS			
1	A UPS System of Numeric / Aplab Make, with Exide 6EL Tubular Batteries, of appropriate capacity (minimum 10 KVA) and input/output phases as per requirement of the LC MS/MS System, capable of providing a backup time of minimum 4 hours, with comprehensive warranty of minimum 5 years inclusive of battery, should be quoted.			
4	Terms and Conditions			
2	All items should be quoted at CIF Kolkata. A complete compliance statement, stating the status of compliance with each point in the technical specification, should necessarily accompany the quotation. Graphical data and chromatograms should be provided wherever mentioned in the specifications. The compliance against system performance requirements should necessarily include the necessary data, graphs and chromatograms. The claims in the compliance statement should be demonstrable at the time of installation.			

3	A comprehensive warranty for 5 years for the complete equipment including independent accessories like UPS and gas generators should be provided. The warranty should include mass calibration performed yearly with valid PPG solution provided by the vendor. In case of breakdown, service should be available onsite within 24 hours			
4	<p>A minimum of five installations of the quoted model in India should be available.</p> <p>The supplier of the machine should have applications laboratory in India.</p> <p>Complete users list for the quoted model in India, with contact addresses, emails and phone numbers should be provided.</p>			

Please sign the declaration in the next page.

Declaration by the Bidder

It is hereby declared that, the details given above are correct as pertaining to the quoted model, and all data and reports required for substantiation technical claims have been submitted.

SIGNATURE OF TENDERER

SEAL OF THE COMPANY

DATE

Please see section III below for financial bid. **Section III is not to be filled in the Technical Bid.**

Section III: Financial Bid
LC MS/MS System

This sheet is to be attached as a covering sheet along with the formal technical bid of the quoted instrument. In case more than one instrument / model is quoted, separate sheets have to be attached with each quotation.

Financial Summary for the Instrument model : _____

Price Description		Price	Comments (if any)
Quoted Currency			
Total Instrument Cost	[a]		
Total cost of Supporting Instruments	[b]		
Comprehensive Warranty Charges	[c]		
Any other charges	[d]		
CIF Kolkata, Gujarat [a] + [b] + [c] + [d] =	[e]		
Conversion Factor to INR*	[f]		
Total Price in INR [e] x [f] =	[g]		
**Toal cost of Items quoted in INR =	[h]		
Final Price in INR = g + h =	[i]		

* Use the conversion factor as on the date prior to the date of submission of the quotation and mention this date clearly.

** Give full list of items quoted in Indian Rupees separately.

Declaration by the Bidder

It is hereby declared that, the details given above are correct as pertaining to the quoted model, and all data and reports required for substantiation technical claims have been submitted.

SIGNATURE OF TENDERER

SEAL OF THE COMPANY

DATE