## **SPICES BOARD**

SB/QEL/PUR/MUM/LC MSMS/13

22 Aug 2014

On behalf of Spices Board, Ministry of Commerce, Govt. of India, Quotations are invited for supply of the following equipment conforming to the specifications and other requirements given in the Annexure I.

### **QUOTATION NOTICE**

#### LC MS/MS SYSTEM

for

#### Spices Board Regional Quality Evaluation Laboratory, Mumbai

#### Instructions to the Bidder

- 1. <u>Preparation of the Bids</u>: The tenders should be submitted under a two bid system, i.e. Technical bid and Financial bid.
- 2. <u>Delivery of the Tenders</u>: The tender shall be submitted to the designated addressee either by post or by courier so as to reach our office before the due specified date and time. The details are in the Terms and Conditions Section below.
- 3. Opening of the Tenders: The offers/bids will be opened by a committee duly constituted for this purpose. The technical bids will be opened first and it will be examined by a technical committee which will be decided suitability as per our specification and requirement. The financial offer/bid will be opened only for the offer/bids which technically meets all our requirements as per the specification. The bidders, if interested, may participate on the tender opening date and time. The bidder should produce an authorization letter from their company to participate the tender opening. Only one representative will be allowed to participate the tender opening.
- 4. <u>Terms of Delivery</u>: The quoted instrument(s), complete with all accessories and supporting instruments should be supplied, and the installation/ commissioning of the same should be completed as specified Terms and Conditions Section below. A Signed copy of the Terms and Conditions is to be submitted along with the Tender.

Yours faithfully,

Secretary

Spices Board, Kochi-25

#### TERMS AND CONDITIONS OF THE TENDER

The tenders submitted should strictly follow the instructions specified below, failing any of which the tenders would be deemed incomplete and liable for rejection.

1. The last date for the submission of the tender will be on or before 5:00 pm by 15-Sept-2014, at the following Address:

The Deputy Director (Marketing)

Spices Board Regional Office

First Floor, Banking Complex 2, Sector 19 A

Vashi, Navi Mumbai.

Ph: 022 27843093 email: <a href="mailto:sbromumbai@gmail.com">sbromumbai@gmail.com</a>

- 2. The offer/bids should be submitted in a two bid system, i.e. [1] Technical Bid and [2] Financial Bid.
  - a. The Technical Bid should consist of all technical details along with commercial terms and conditions. The bid should be submitted in the format in Annexure I (Technical Specifications), and should provide specific yes / no compliance to each point in the specification. Any additional details should be given in the Remarks column of the format, and all claims of instrument performance as required in the specifications should be substantiated by adequate instrument readouts and data. The Technical Bid should be in a sealed cover superscribed with "Technical Bid LC MS/MS System, Mumbai, August 2014" and addressed to the Deputy Director Marketing (See 1 above).
  - b. Financial bid should indicate item wise price for the item mentioned in Technical Bid. Detailed pricing including all charges for accessories, supporting instruments, items quoted in Indian Rupees, extended warranty, shipping, insurance, taxes, installation charges etc. should be clearly indicated. A signed covering sheet should be attached to the financial bid in the format in Annexure B (Financial Details). The Financial Bid should be in a sealed cover superscribed with "Financial Bid LC MS/MS System, Mumbai, August 2014" and addressed to the Deputy Director Marketing (See 1 above).
  - c. Both the sealed covers of the Technical and Financial Bids should be put into a bigger cover, along with letter of EMD (See 3 below) and sealed. This cover should be superscribed as "Technical and Financial Bids for LC MS/MS System, Mumbai, August 2014 and addressed to the Deputy Director Marketing (See 1 above).
  - d. The tenders will be opened at the Regional Office of Spices Board, Mumbai on 16 Sept-2014 at 10:00 AM. Only the Technical Bids will be opened on this date. The bidders who qualify the in the Technical Bid will be informed of the subsequent date of opening of the Financial Bid.
- 3. EMD: The tender should submit an EMD amount of 2% of the total quoted price along with the tender by way of Demand draft drawn in favour of "Secretary, Spices Board" and payable at Kochi from any nationalized bank valid for six months. The Technical Bid without EMD would be considered as UNRESPONSIVE and will not be accepted. The EMD will be returned without any interest to the unsuccessful bidders immediately after the award of contract.

- 4. Performance Security: The successful bidder has to submit performance security for an amount of 20% of the order value in the form of a bank guarantee from any nationalized bank and should be valid for 60 days beyond the date of completion of all contractual obligations including warranty obligation, and it will be returned after 60 days beyond warranty period.
- 5. If an Indian agent is involved, the following documents must be enclosed:
  - a. Foreign principal's proforma invoice indicating the Commission payable to the Indian Agent and nature of after sales service to be rendered by the Indian Agent.
  - b. Copy of the agency agreement with the foreign principal and the precise relation shop between them and their mutual interest in the business.
  - c. The enlistment of the Indian agent with Director General of Supplies & Disposals under the Compulsory Registration Scheme of Ministry of Finance.
- 6. The offer/bids should be sent only for a machine that is available in the market and supplied to number of customers. A list of customer in India with details is to accompany with the quotations. Quotations for a prototype machine will not be accepted.
- 7. Original catalogue (not any photocopy) with traceability of the quoted model duly signed by the principals must accompany the quotation.
- 8. In case the Technical Specification for the Instrument calls for Performance Data for the quoted model, the same has to be submitted complete in all respects in a booklet form for ready reference. This data has to be generated <u>using the quoted model</u>, by the bidder's own application laboratory in India, as proof of capability to provide application support. In case more than one model is quoted, the performance data for each model should be submitted separately. Generalized application notes or research papers will not be accepted as proof of performance, as these may not comply with the specific requirements of the Instrument. Spices Board reserves the right to witness either the reproduction of the data generated by the bidder's laboratory or to analyse required samples / solutions at the bidders laboratory in case the need arises.
- 9. Delivery Schedule: The bidder should indicate clearly the time required for delivery of the item. In case there is any deviation in the delivery schedule, liquidated damages clause will be enforced or penalty for the delayed supply period will be levied.
- 10. Risk Purchase Clause: In event of failure of supply of the item/ equipment within the stipulated delivery schedule, the Board reserves the right to purchase the item/equipment from the other sources on the total risk of the supplier under risk purchase clause.
- 11. Payment: No Advance payment will be made for Indigenous purchase. Payment shall be made only after satisfactory installation is agreed to wherever the installation is involved.
- 12. Warranty/ Guarantee: The offer should clearly specify the warranty or guarantee period for the machinery or equipment. Charges (if any) for extended warranties as required by the specifications should be clearly indicated (Section III below). In case the technical specification requires

  Comprehensive Warranty, then itemized spares and accessories that come under this warranty should be specified.
- 13. User's List: The offer should include a detailed users list in the format given in Section IV below.
- 14. Late offer: The offers received after the due date and time will not be considered.

- 15. Acceptance and Rejection: Spices Board reserves the right to accept whole or any part of the tender or portion of the quantity offered or reject it in full without assigning any reason.
- 16. Disputes and Jurisdiction: Any legal disputes arising out of any breach of contract pertaining to this tender shall be settled in the court of competent jurisdiction located within the city of Ernakulam ,Kochi.

#### Acknowledgement by the bidder

It is hereby acknowledged that we have gone through all the conditions mentioned above and we agree to abide by them.

SIGNATURE OF TENDERER

SEAL OF THE COMPANY

DATE

#### **Annexure I**

## **Compliance with Technical Specification**

(To be submitted by the Bidder)

**Instrument:** LC MS/MS System

Quotation Reference: SB/QEL/PUR/MUM/LC MSMS/13, dated 22-August-2014

**Location of Supply and Installation:** 

Quality Evaluation Laboratory,

Spices Board,

Third Floor, Banking Complex 2, Sector 19 A

Vashi, Navi Mumbai.

The technical bid is to be submitted in this form, duly signed by the authorized signatory. Any incompleteness in filling up this form, or failure to attach required supporting data or documents, may result in rejection of the quotation.

## **Section I: Details of the Quotation**

Quotation Reference No.

Date of Submission of Quotation

Details of EMD submitted (if any)

Quotation Submitted by

Full Address

Name of Principal Supplier (If not self)

Authorized by the Principal Supplier in India (attach details)

**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

(in case more than one model / combination is quoted, attach separate compliance sheets for each)

All items required for the full-fledged function of an advanced, high sensitive LC MS/MS system, including all software, accessories and supporting instruments as outlined below are to be quoted.

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

**A. HPLC SYSTEM.** All components of the HPLC system should be from the same supplier, and should amenable to control / data acquisition from the MS Software.

#### **Quoted Model:**

	Required Technical Specifications	Complying? (Yes/No)	Remarks	Documentary Evidence enclosed?
1	Quaternary Gradient Pumping System capable of providing precise and controlled flow suitable for an MS/MS system.			-
2	Purging of pumps, 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	Flow rate setting: 0.01ml/min to 10.0 ml/min			-
5	Resolution : 3 nanoliter per step			-
6	Flow rate accuracty: 1% minimum			-
7	Flow rate precision Maximum 0.3% RSD			-
8	Gradient curve selections			-

9	Maximum discharge pressure at least 1000 bar		-
10	Pulsation 0.1 M.Pa		-
11	Safety functions like leak sensor, High pressure and low pressure limits		-
	Auto	osampler	
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 - 12		-
12	Rinsing needle - settable through software, before and after injection		-
13	Operating temperature range 4 - 35°C		-
	De	egasser	
1	Online membrane type degasser		-
2	Minimum 4 lines with facility for 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			-	
	Co	olumns			
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, Waters			-	
	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 - 5 No.			-	
	C-18 5cm x 2.1mm x 3 um - 5 Nos.			-	
	Amino 25cm x 4.6mm x 5um - 2No.				
2	The columns should be supplied with certificates citing batch no, particle size distribution, Inertness, metal sensitivity, hydrophobic index and column performance checks			-	
3	50 Nos. of C-18 guard columns suitable for 5 um and 20 No.s of C-18 guard columns 3 um columns from the same supplier as the columns, should be provided. Incase of replaceable cartridge-type guard columns two separate cartridge holders are also to be quoted.			-	

B. MS/MS SYSTEM. A state-of-the-art, high sensitivity triple quadrupole mass spectrometer.

#### Quoted Model:

- 1. a). Whether the quoted model has minimum 5 successful installation excluding manufacturers /suppliers own laboratories, completed in all respect and in running condition in India . YES/NO
  - b). Please specify the number.

- 2. a). Whether the manufacturer have application laboratory in India with installation of the quoted model, in order to provide required application support. YES/NO
  - b). If Yes Specify the address.

	Required Technical Specifications	Complying? (Yes/No)	Remarks	Documentary Evidence enclosed?
	lo	n Sources		
1	Dual / Orthogonal or off-axis spray or any other equally efficient technology capable of avoiding interferance from solvents and other extraneous matter			-
2	Both 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 vaccum, with automatic shudown 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.			-
	Vacu	uum 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.			-
	Ma	ss Analyzer		·

1	Triple quadrupole MS/MS System	-
2	Mass Range at least 50 - 2000 AMU	-
3	Mass Accuracy 0.01% over the entire mass range	-
4	Mass reasolution - unit resolution over the entire mass range. Minimum 0.5 Da Higher resolution capability is required	-
5	Mass Stability: 0.1 dalton over 24 hours (please provide graphical data)	
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	
8	Should have built in digital syring pump controllable through the MS spftaware	
9	Scan Speed of at least 10,000 daltons / second or above, with user selectible scan speed.	-
10	Minimum MRM dwell time 1 millisecond	-
11	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.	-
12	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 grahical data)	
12	+ve / -ve polarity switching time between alternate MRM scans: 50ms or less	-
13	A high sensitivity, high throughput detector with zero dead time, low noise and high accuracy at low level detections.	-

### **c.** SOFTWARE

Name and Version:

	Required Technical Specifications	Complying? (Yes/No)	Remarks	Documentar y Evidence enclosed?
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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 functions 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:	-
a	Retention-time based programming / monitoring of MRM scans, so that only desired MRMs are monitored in desired retention time ranges	-
b	Fragment interpretation tools	-
С	Automated quantitative data processing features	-
d	Option for naming MRM transitions	-

#### D. SYSTEM PERFORMANCE REQUIREMENTS

The requirements in this section pertain to the working requirements of the system. Any claims made in the compliance statement should be substantiated using the quoted model of the instrument at the applications lab of the supplier/manufacturer. Wherever documentary evidences are required, the reports should necessarily include the instrument output data, graphs and chromatograms. The claims in the compliance statement should be demonstrable at the time of installation. The performance of the instruments should be demonstrated in the presence of Spices Board Officials at the application lab if deemed necessary.

	Required Technical Specifications	Complying? (Yes/No)	Remarks	Documentar y Evidence enclosed?
1	Sensitivity of the instrument: In ESI +ve, MRM transition 609®195 at unit resolution (0.7± 0.1 amu), 1pg on-column HPLC injection of Reserpine should give a S/N ratio of at least 40000:1. (Maximum smoothing allowed is 5 (five)). For ten injections, %RSD should be <5%. Chromatograms to be provided, with details of mobile phase, column and injection volume. Statistical treatment used to determine S/N ratio is to be specified. If any smoothing is used, raw data (ie; with out smoothing) should also be submitted.			

	(Documentary evidence is to be submitted along with quotation)	
2	Analysis of Mycotoxins: A limit of quantitation of Aflatoxin B, B2, G1 and G2 in chilli matrix of at least 0.01 ppb, 10 uL or less injection without using immunoaffinity column cleanup in ESI-MRM mode (This willbe verified at the time of performance evaluation of the instrument)	
3	Analysis of Illegal Dyes: A limit of quantitation of Para Red in chilli matrix of at least 0.01 ppb 10 uL or less injection in ESI - MRM mode (This willbe verified at the time of performance evaluation of the instrument)	
4	Analysis of Pesticide Residues: A limit of quantitation of Methyl Parathion in chilli matrix of at least 0.01 ppb 10 uL or less injection in ESI-MRM mode (This willbe verified at the time of performance evaluation of the instrument)	
5	Pre-configured and optmized methods, with reference standards, for analysis of Pesticide Residues and Mycotoxins (provide details)	-
6	MRM List and product ion spectra for a wide range of compounds including pesticide residues, mycotoxins and synthetic dyes for screening and quantitation (provide details)	-

**E.** ACCESSORIES: All accessories required for the trouble free installation, demonstration and operation of the system should be quoted.

	Required Technical Specifications	Complying? (Yes/No)	Remarks	Documentar y Evidence enclosed?
	Gas	Generators		
1	Gas Generators capable of supplying <u>all</u> <u>necessary gases</u> with the required purity, pressure and flow rate, as required for the LC MS/MS instrumentshould 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 2000 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 apropriate 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.		-		

#### F. TERMS AND CONDITIONS

	Required Technical Specifications	Complying? (Yes/No)	Remarks	Documentar y Evidence enclosed?
1	All items should be quoted CIF Mumbai. All items, including accessories for the instruments should be delivered and installed at the following site of installation:  Spices Board Quality Evaluation Laboratory, Third Floor, Banking Complex 2, Sector 19A, Vashi, Navi Mumbai, Maharashtra			-
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 (See Section II below).			-
4	The quoted model should have a minimum of 5 successful installations in India. The Complete users list for the quoted model in India, with contact addresses, emails and phone numbers should be provided (see Section IIIb below).			

#### <u>Declaration</u> by the bidder

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

SIGNATURE OF TENDERER
SEAL OF THE COMPANY

DATE

Section III: Comprehensive Warranty

LC MS/MS System

In case more than one model / combination is quoted, attach separate sheets for each.

Comprehensive Warranty for Instrument Model :

Required Technical Specifications	Complying? (Yes/No)	Remarks
The warranty period should be 5 Years		
All breakdown of the instrument should be addressed		
within 24 hours by an onsite visit.		
All parts of the instrument, accessories and supporting		
instruments should be covered under the warranty. If any		
accessory / spare part / consumable is <u>not covered under</u>		
the comprehensive warranty, then the itemised list of such		
items, including their prices during the period 2013-14 and		
average lifetime of the items should be provided.		
The equipment should be installed at the proposed site,		
demonstrate the required objective of the test with the		
claimed limit of detection/quantification with the sample		
provided.		
Training should be given to the staff at the site, for the		
operation of the instrument on demand		
Any other Accessories /requirements like UPS,Gas		
cylinders etc.should be quoted and supplied with the		
instrument		
Agency commission: Agency commission if any will be		
paid to the Indian agent in rupees on receipt of the		
equipment and after satisfactory installation.		
Agency commission will not be paid in foreign currency		
under any circumstances. The details should be explicitly		
shown in tender even in case of Nil commission. The		
tender should indicate the percentage of Agency		
commission to be paid to the Indian agent.		

# Section IV: Users List of the Quoted Model in India LC MS/MS System

In case more than one model / combination is quoted, attach separate sheets for each. Additional copies of this page may be used in case the number of users is large.

Users List for MS/MS Model : _	 	

\*Please mention the Operational Status as one of the following: Installed Only / In Operation. Do not include instruments that are not installed or not operational as of the date of opening of the tender.

User Name and Address	Date of Installation	Current Operational Status of the Instrument *	Area of Analysis	Name and Contact Person	Designation	Contact Number	Email

## **Section V: Summary of 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:	
Financial Summary for the Instrument model :	

Price Description		Price	Remarks (if any)
Quoted Currency			
Total Instrument Cost	[a]		
Total cost of Supporting Instruments	[b]		
Comprehensive Warranty Charges	[c]		
Any other charges	[d]		
CIP Mumbai [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]		
Total cost of the Instrument [h] + [i] =	[i]		

<sup>\*</sup> Use the conversion factor as on the date of submission of the quotation.

#### Declaration by the bidder

It is hereby declared that the details given above are correct as pertaining to the quoted model. The formal financial bid is enclosed including all relevant details.

SIGNATURE OF TENDERER
SEAL OF THE COMPANY

DATE

<sup>\*\*</sup> Give full list of items quoted in Indian Rupees separately.