

(Ministry of Commerce and Industry, Govt of India)
Sugandha Bhavan, NH By-pass, Palarivattom, Kochi -682 025.

QEL/Mum/1/Qtn/11-12

24-6-11

QUOTATION NOTICE

Sealed competitive quotations in the name of Secretary, Spices Board, Sugandha Bhavan, Cochin; are invited from the suppliers of reputed brands of the following **Lab Equipments** required for the Board's Lab at Cochin and Mumbai. The items should be supplied and installed at respective Laboratories .

The rate for the equipments with all necessary accessories and spares as detailed in the specification should give break up of **cost, excise duty/sales tax/VAT, packing and forwarding charges, freight, insurance etc (as applicable)**. If the rates quoted do not include sales tax/excise duty or any other taxes/charges, the same should be specifically stated.

Sl. No	ITEM**	Place of supply	Number
1	Microwave Digester	Spices Board , Quality Evaluation Laboartory, Banking complex-II Plot No. 9 & 10, Vashi, Navi Mumbai-400 703	2
2	HPLC with Fluorescence & Diode Array Detectors	Spices Board , Quality Evaluation Laboartory, Banking complex-II Plot No. 9 & 10, Vashi, Navi Mumbai-400 703	1

*For detailed specification see annexure -I &II

The cover containing the quotation should be super scribed "**Quotation for Lab Equipments**). **Due by 20-7-2011** and should be send to **The Secretary, Spices Board, Sugandha Bhavan, NH By-pass, P.B No.2277, Palarivattom, Kochi -682 025.**

Late quotations will not be accepted. The quotations will be opened in the presence of bidders or their authorized representative who may be present at the venue and time.

Last date & time for the receipt of quotations	20-7-2011 (5 PM)
Date & time of opening the quotations	21-7-2011 (10:00 AM) (next day)
EMD	2% of quoted value by DD drawn in favour of Secretary, Spices Board payable at Cochin, wherever the cost of the equipment is above Rupees One Lakh.
Mode of payment	After the installation of the equipment at the site.

Quotation should give detailed specifications of equipments on offer, brand name, terms & conditions of supply, guarantee/warranty period, after sales service details, delivery period, the customer list including name of contact persons with telephone No./E-Mail ID etc. A statement of compliance with specifications should accompany the quotation. Onsite training of personnel if required, is to be conducted immediately after installation of the equipment.

The quotations should be submitted at its lowest rate along with statement of compliance with technical specification. Clarification if any, can be had from Senior Scientist (QC), Quality Evaluation Laboratory, Spices Board or e-mail to ssqc@indianspices.com or sbqelkochi@gmail.com

The delivery of the equipment shall be made at Board's Lab at **Cochin** and **Mumbai** respectively within 30 days on receipt of the supply order from Spices Board. If however, it is not possible to effect delivery by the due date, the date by which the delivery of the equipment can be effected may also be stated.

Full payment will be made only after satisfactory installation of the equipment at the site. (For details please refer to the Terms & Conditions)

The Spices Board reserves the right to accept the quotation in full or in part or to reject without assigning any reason.

Secretary

Encl. annexure-No.I

TECHNICAL SPECIFICATIONS

Microwave Digester

- 1 Capable of carrying out complete, reproducible and fast digestion / extraction work for Analysis of heavy metals in spices and other food products using AAS technique.
- 2 Built-in methods library, with adequate documentation, for extraction of heavy metal residues from various sample types as per pre-set standard procedures like EPA / ISO. The instrument should be able to handle extractions of heavy metals at ppb-ppm levels.
- 3 At least 1400W power, with variable power settings for small or highly reactive samples
- 4 Built-in forced air cooling system. Fast cooling to reduce cycle time.
- 5 Continuous un-pulsed microwave power delivery, without power surges, to achieve even digestion
- 6 At least 10 reaction vessels capable of use at the same time, chemical resistant and suitable for acid digestion work, with capacity up to 100ml. Optional handling of varying sample amounts should be provided.
- 7 The cavity should be stainless steel and multilayer PTFE coated
- 8 Integrated filtration devices enabling direct connection to the extraction vessels to obtain the extract.
- 9 Designed for unattended operation after loading samples
- 10 Temperature range up to 200°C at 40 bar with electronic display, feedback and settings.
- 11 Pressure range up to 70 bar with electronic display, feedback and settings.
- 12 Reaction vessels and pressure / temperature sensors should facilitate easy cleaning / replacement.
- 13 The reaction vessels must have immersion temperature probes as well as remote IR sensor
- 14 System should be capable of simultaneous pressure sensing in all vessels.
- 15 Complete operational control and monitoring through control panel on the instrument.
- 16 Capable of complete control, monitoring, data generation and event logging through external software control from PC.
- 17 Detailed information on pressure and temperature for all the reaction vessels during the reaction process should be available as software readout.
- 18 Sturdy and chemical-resistant body capable of withstanding harsh laboratory environments.
- 19 Built-in safety systems to protect against rapid temperature and pressure changes during digestion, including auto cut-off and alarm.
- 20 All accessories required for easily calibrating the pressure and temperature sensors, with the required software support, should be provided.

Accessories

- 1 All spares and accessories required for maintaining the entire Microwave Digester System for a period of five years should be quoted. Itemized breakup list of the spares should be provided.

Terms and Conditions

- 1 A complete compliance statement, stating the status of compliance with each point in the technical specification, should necessarily accompany the quotation.
- 2 A comprehensive warranty (spares) for 5 years for the complete equipment should be provided. Any breakdown of the systems during the warranty period has to be resolved in 48 hours.
- 3 Complete users for the quoted model list in India, with contact addresses, emails and phone numbers should be provided

TECHNICAL SPECIFICATIONS

Pump

- 1 Binary Gradient Pumping System
- 2 Purging of both pumps independantly, manually as well as through software
- 3 Suitable for nano, micro and semi-micro separations
- 4 Flowrate setting: 0.001ml/min to 10.00ml/min
- 5 Resolution : 3 nanoliter per step
- 6 Flowrate accuracty: 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 and controllable through Software
- 2 Total volume sample injection, variable injection volume
- 3 Injection volume setting range 0.1ul to 100ul
- 4 Vials capacity at least 1.5ml
- 5 Number of vials - at least 100
- 6 Injection volume accuracy - 0.1% error maximum
- 7 Injection volume precision - 0.3% RSD maximum, for 10ul injection
- 8 cross-contamination limit - 0.005% maximum
- 9 Number of repeat injections - 30 / sample
- 10 Operating pH range 1 - 14
- 11 Rinsing needle - settable through software, before and after injection
- 12 Operating temperatuer range 4 - 35 C

Degasser

- 1 Online membrane type degasser
- 2 Minimum 4 lines - 4 mobile phases, inbuilt facility for autosampler rinsing
- 3 degassed flowline capacity 380ul

Column Oven

- 1 Temperature control from 4 - 85C
- 2 Temperature control precision 0.1C 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:

C-18 5cm x 4.6mm x 5 μ m - 5 Nos.

C-18 10cm x 4.6mm x 5 μ m - 5 Nos.

C-18 25cm x 4.6mm x 5 μ m - 2 Nos.

C-18 10cm x 4.6mm x 5 μ m - 5 Nos.

C-18 25cm x 4.6mm x 5 μ m - 2 Nos.

C-18 Guard Columns - 15 Nos

C-8 Guard Columns - 10 Nos.

Diode Array Detector

- 1 Light source - D2 and/or W lamps
- 2 Number of Diode elements - minimum 512
- 3 Wavelength range 190nm - 800nm
- 4 Bandwidth 1.2nm
- 5 Slit width 8 nm
- 6 λ precision : 1 nm
- 7 λ accuracy : 0.1 nm
- 8 Should support Contour plot, Peak Purity, Spectrum Library features

Fluorescence Detector

- 1 Light source: Xenon lamp
- 2 Wavelength range - 200nm 650nm
- 3 Dual wavelength simultaneous monitoring
- 4 Spectral bandwidth 20nm
- 5 Wavelength accuracy +/- 0.2nm

Software

- 1 The software should be capable of controlling all parts of the HPLC system. Both diode array and fluorescence detectors should be capable of independent operation.
- 2 Multi-system capable. Licences required for adding additional systems/modules should be installed.
- 3 Capable of acquiring data from a minimum of 4 channels from the LC System.
- 4 Easy data processing, system suitability tests
- 5 Full-fledged reporting facility with customized report designers should be available.
- 6 Ability to simultaneously monitor the diode array and fluorescence detectors connected in series is desirable.
- 7 Method development features in software will be desirable

Computer and Printer

- 1 Latest model computer with DVD writer and laser printer compatible with software to be quoted.

Derivatization Unit for Aflatoxin

- 1 A suitable derivatization unit for Aflatoxin B1, B2 G1 and G2, capable of achieving a detection limit of at least 0.5 ppb of all four Aflatoxins in fluorescence detector, should be quoted.
- 2 The derivatization unit should be portable, with minimum maintenance / user intervention and capable of uninterrupted operation without any requirement of solvent systems.
- 3 The unit may be based on either electrochemical or photochemical technique.

Accessories

- 1 All required standards of calibration standards for the HPLC detectors, and any other material required to make the instrument functional should be provided
- 2 Pack of 100 vials, complete with septa and cap, should be included
- 3 One each of spare Xenon and D2 lamps should be provided
- 4 Spare Solvent filters (0.25 micron), 10 Nos, and Spare Autosampler Syringe, 1 No, of the same type supplied with the system.

Terms and Conditions

- 1 A complete compliance statement, stating the status of compliance with each point in the technical specification, should necessarily accompany the quotation.
- 2 A comprehensive warranty (spares) for 5 years for the complete equipment should be provided. Any breakdown of the systems during the warranty period has to be resolved in 48 hours.
- 3 Major users for the quoted model list in India, with contact person's addresses, emails and phone numbers should be provided