

कीटनाशक सूत्रीकरण प्रौद्योगिकी संस्थान

Institute of Pesticide Formulation Technology (IPFT)

(An Autonomous Institution)

Department of Chemicals & Petrochemicals,

Ministry of Chemicals & Fertilizers

Sector-20, Udyog Vihar, Gurgaon – 122 016 (Haryana)



T E N D E R

FOR

SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF
LABORATORY INSTRUMENT

FOR

INSTITUTE OF PESTICIDE FORMULATION TECHNOLOGY
SECTOR – 20, UDYOG VIHAR
GURGAON – 122 016 (HARYANA)

DOCUMENT – I

Invitation to Tender

General Condition of Tender

Special Condition of Tender

Technical Specifications

INVITATION TO TENDER

Dear Sir / Madam,

Reference No. : IPFT / PLAN / 2013-14 / MAJOR-EQUP / 2013 / 1

Description of Work : Supply, Installation, Testing & Commissioning of Lab Instruments for Institute of Pesticide Formulation Technology at Sector 20, Opposite Ambience Mall, NH-8, Udyog Vihar, Gurgaon-122016, Haryana.

With reference to your letter dated we enclose here with blank tender forms.

Please note that :

(a) Tenders are to be submitted in two bids in sealed envelopes.

Envelope No. 1 : Containing covering letter, invitation to tenders, terms & conditions of tender, Technical specifications and EMD.

Envelope No. 2 : Containing Commercial Bid.

Please quote separately for each instrument (both envelope No. 1 & 2).

The name of the **Equipment** for which tender are submitted, shall be **written clearly on the sealed cover**. Tender shall be received in the Office of the Director, IPFT at Sector – 20, Opposite Ambience Mall, NH-8, Udyog Vihar, Gurgaon – 122 016, Haryana upto 2.30 PM on 23.05.2014. The tender received after the due date and time is liable to be rejected.

(b) The tender will be opened on **23.05.2014** at 3.00 PM in the Office of the Director, IPFT at Sector – 20, Opposite Ambience Mall, NH-8, Udyog Vihar, Gurgaon 122016, Haryana in the presence of those tenderers or their agents who may choose to be present.

(c) Any particulars or information regarding the proposed supply can be obtained from the Office of the Director, IPFT at Sector – 20, Opposite Ambience Mall, NH-8, Udyog Vihar, Gurgaon 122016, Haryana on any working day during office hours.

(d) The tender should be accompanied by necessary Earnest Money in the form of Crossed Demand Draft / Banker's Cheque in favour of **Institute of Pesticide Formulation Technology** payable at Gurgaon .

(e) No interest will be payable on Earnest Money.

(f) Tender forms are not transferable.

(g) The tender should remain valid for acceptance for a period of six months from the date of opening the tender.

(h) Relevant information/certificate called for in the enclosed instruction sheet should be annexed to the tender promptly. Non-receipt of any information or certificates with tender, may entail rejection of the tender.

(i) Canvassing in any form will entail disqualification.

Thanking you,

Yours faithfully,

(Dr. S.K. Raza)
Director
Institute of Pesticide Formulation Technology (IPFT)
Gurgaon – 122 016 (Haryana)

SUBMISSION OF TENDER

From :

M/s

.....

.....

To,

The Director
Institute of Pesticide Formulation Technology
Sector – 20, Opp. Ambience Mall, NH-8
Udyog Vihar, **Gurgaon – 122 016 (Haryana)**

1. I / We hereby tender for execution of the **Works of Supply, Installation, Testing & Commissioning of _____ for Institute of Pesticide Formulation Technology at Sector 20, Opp. Ambience Mall, NH-8, Udyog Vihar, Gurgaon-122016, Haryana as per TENDER DOCUMENT** within the time schedule of completion of work for jobs, as separately signed and accepted by me/us, at the schedule of rates quoted by me/us for the whole work in accordance with Notice/Letter inviting Tender, Terms & Conditions, Schedule of Rates, Specifications for materials and workmanship, time schedule of completion of job and other documents and papers all as detailed in the Tender Documents.
2. It has been explained to me/us that the time stipulated for jobs and completion of Works in all respects and in different stages mentioned in the “Time Schedule” of completion of jobs and signed and accepted by me/us is the essence of the contract. I/We agree that in the case of failure on my/our part to strictly observe the time of Completion mentioned for jobs or any of them and to the Final Completion of work in all respects accordingly to the schedule set in the said “Time Schedule” of completion of jobs, I /We shall pay compensation to IPFT as per the provisions and stipulations contained in General Conditions of Contract and I/We agree to recovery being made as specified therein. In exceptional circumstances, extension of time which shall always be in writing may, however be granted by the Director at his entire discretion for some items of work, and I/We agree that such extension of time will not be counted for the extension of completion dates stipulated in the said “Time Schedule” of completion of jobs.
3. Should this tender be accepted, I/We hereby agree to abide by and fulfill all terms and conditions referred to above and in default thereof, to forfeit and pay to IPFT such sums of money as are stipulated in conditions contained in General Tender Notices and other Tender Documents.
4. I / We hereby pay the Earnest Money of Rs./- (Rupees only) by Demand Draft / Banker’s Cheque No. dated in favour of **“Institute of Pesticide Formulation Technology”** payable at **Gurgaon**.

I/We enclose herewith evidence of my/our experience of execution of works of similar nature and magnitude carried out by me/us in the prescribed Performa.

Dated the day of.....

Yours faithfully,
Signature of the Tenderer
with seal of the firm

Name and designation of authorized
Person signing the tender on behalf
of the Tenderer

PART - I

GENERAL CONDITION OF TENDER

1. We are interested in material of indigenous manufacture or of foreign make available from ready stock.
2. In case of imported material, mention the price of goods as FOB basis and stating packing/forwarding/documentation charges etc. (each one) separately, if applicable. Insurance and airfreight charges upto IGI Airport, New Delhi should be mentioned separately. If exact value is not known, approximate charges may be mentioned. **Where there is no mention of packing, forwarding, freight, insurance charges offers shall be rejected as incomplete.** Based on previous supplies to various customers, please mention chargeable weight of the final consignment, in commercial bid. This will help us to calculate approx. freight charges, in case FOB order is placed with you. Foreign manufacturers should quote in foreign currency.
3. In case of **imported material**, the dispatch of the goods should be preferably through Air-India. In case the facility of Air-India is not available in your country, specific mention to this effect should be mentioned in your proforma invoice. The port of shipment should be the country of origin. Trans-shipments and part shipments are not permitted
4. In case of **imported material**, indicate the percentage of Indian Agency commission, which shall be payable in Indian Rupees directly by us to the authorized Indian Agent, after installation, testing and commissioning of the instrument. In case Indian Agent submits the quotation, valid authorization letter must accompany the same from principals.
5. One Agent cannot represent two suppliers or quote on their behalf for a particular equipment.
6. The validity of the offer should not be less than 180 days.
7. A Demand Draft / Banker's cheque as EMD amount drawn in favour of Institute of Pesticide Formulation Technology payable at New Delhi / Gurgaon, must be enclosed with the Technical Bid and photocopy of the same to be enclosed with commercial bid. All tender received without EMD shall be summarily rejected. Micro & Small Enterprises (MSEs) registered with NSIC will be allowed exemption from payment of tender document fee, EMD and submission of Performance Bank guarantee in accordance with the rules/policies of the Govt. of India. Firms registered with Government/PSU's are not exempted from payment of EMD.
8. Operation / Maintenance Manual and IQOQ data sheet to be supplied along with the equipment.
9. Copy of the latest price list, applicable in India, must be enclosed with your offer (in Commercial Bid only).
10. Please ensure the quoted price is not more than the price offered to any other customer in India to whom this particular item has been sold, particularly to Government Organization.
11. Enclose with your offer a certificate that the equipment is of latest technology and will not be obsolete and accessories & spare parts will be supplied as and when required.

12. It may be confirmed that essential spare parts of this equipment are available in India with your Indian Agent along with the Engineer for after sale service of equipment. It should be noted that the installation of the equipment has to be carried out immediately.
13. Provide the list of users in India, particularly Govt. Organization. Also enclose performance certificate, if available.
14. The offer must be submitted in two separate envelopes, one containing Technical bid along with EMD and second containing Commercial bid, duly sealed from outside and kept in an envelop. The outer envelope must specify the technical/ commercial bid, as the case may be. It may be noted that in case of non-compliance of any of these conditions, the offer is liable to be rejected.
15. The commercial bid must mention the prices of all items asked for individually and then summed up at last i.e. package deal for all items which are essential for the system as per our tender upto Ex-works / FOB or FOR / CIF should be mentioned. Optional items asked for can be submitted separately in the commercial bid.
16. Pre-installation requirement if any, should invariably be mentioned clearly. Installation/Training will be the full responsibility of the supplier/Indian Agent. If any short-shipment etc. are noticed, the same will be arranged immediately with all charges to this effect to be borne by Supplier / Indian agent. The refund of EMD will become due only after satisfactory receipt and installation of the equipment.
17. **The last date of receipt of tenders is May 23, 2014.** The technical bids will be opened on due date in the office of Director – IPFT in the presence of representatives of tenderer, if any, by a committee. Late / Delayed tenders shall not be opened and returned back to the bidders. Request for postponement is not likely to be entertained.
18. The Technical Bid and Price Bid in two separate sealed cover should be put in a third cover superscripting as under :

Tender Enquiry No. : IPFT / PLAN / 2013-14 / MAJOR-EQUP / 2013 / 1

Date of Opening : 23.05.2014

Name of Equipment : _____

To,

**THE DIRECTOR
INSTITUTE OF PESTICIDE FORMULATION TECHNOLOGY
SECTOR – 20, UDYOG VIHAR,
OPP. AMBIENCE MALL, NH-8,
GURGAON – 122 016 (HARYANA)**

19. In case of indigenous supplies, the rates quoted should be on FOR Destination basis including insurance and freight pre-paid.
20. In case of indigenous supplies, the rates of Sales Tax (in full), Excise Duty etc. should be clearly indicated. Form C & D is not applicable to us.
21. The date of delivery should be strictly adhered to otherwise the Director, IPFT reserves the right not to accept delivery in part or full and claim liquidated damages of 1% per week subject to maximum of 10% of the total value of supply order.

22. In case of indigenous material, payment will be made by Account payee cheque after successful installation, testing and commissioning of the equipment.
23. In case of imported material, payment will be made through Letter of Credit. All the bank charges outside India will be borne by the beneficiary.
24. Printed conditions of the quotation shall not be binding on us.
25. Quotation must be clearly written or typed without any cutting or over-writing; All cutting/over-writings must be initialed and stamped.
26. If the items are not covered under Open General License (OGL) of exim policy, the same may also be mentioned clearly to obtain prior Special Import License (SIL) from DGFT, otherwise demurrage accrued due to delay in the clearance of consignment will be your responsibility.
27. Kindly mention approx. weight of the consignment, to calculate freight charges etc. through our consolidation, if required (Applicable in case of imported instrument).
28. If the vendor has supplied identical or similar equipment to other Government Labs/Institute the details of such supplies for the preceding three years shall be given together with the prices eventually or finally paid (price to be disclosed in commercial bid).
29. All correspondence in this regard must bear our reference number, failing which queries cannot be answered to.
30. Conditional tenders shall not be accepted.
31. Enclose the Compliance Statement in the following format along with technical bid : failing which offer will be treated as incomplete and is liable to be ignored.

Format of Compliances Statement

<i>Tender Enquiry Specifications</i>	<i>Specifications Offered</i>	<i>Compliance to Tender Enquiry Specifications : Whether Yes or No</i>	<i>In case of Non-compliance, deviation from Tender Enquiry Specifications to be included in un-ambiguous terms.</i>

32. The acceptance of the quotation/offer will rest with the Director, IPFT, who does not bind himself or accept the quotation and reserves the right to himself to reject or partially accept any or all the quotations received, or to any condition without assigning any reason.

33. JURISDICTION :

This contract shall be subjected to the jurisdiction of the Courts of Haryana only.

34. ARBITRATION :

All disputes or difference whatsoever which shall at any time arise between the parties hereto in relation to or connected with this contract (other than those in respect of which

the decision of DIRECTOR is by this CONTRACT expressed to be final and binding) shall after written notice by either party to the CONTRACT to the other and to the Appointing Authority herein before mentioned be referred for adjudication to a sole arbitrator to be appointed as herein after provided.

For the purpose of appointing the Sole Arbitrator referred to above, the Appointing Authority (Director – IPFT) will send within thirty days of receipt of the notice, to the SUPPLIER a panel of three persons name who shall all be presently unconnected with the organization for which the WORK is executed.

The SUPPLIER shall on receipt of the names as aforesaid, select any one of the persons named to be appointed as a sole Arbitrator and communicate his name to the Appointing Authority within thirty days of receipt of names. The Appointing Authority shall thereupon without any delay appoint the said person as the Sole Arbitrator. If the SUPPLIER fails to communicate such selection as provided above within the period specified, the Appointing Authority should make the selection and appoint the selected person as the Sole Arbitrator.

If the Appointing Authority fails to send to the SUPPLIER the panel of three names as aforesaid within the period specified, the supplier shall send to the appointing Authority a panel of three names of persons who shall all be unconnected with either party. The Appointing Authority shall on receipt of the names as aforesaid select as one of the persons named and appoint him as the Sole Arbitrator. If the Appointing Authority fails to select the person and appoint him as the Sole Arbitrator within 30 days of receipt of the panel and inform the SUPPLIER accordingly, the SUPPLIER shall be entitled to appoint one of the persons from the panel as the Sole Arbitrator the communicate his name to the Appointing Authority.

If the Arbitrator so appointed is unable or unwilling to act or resigns his appointment or vacates his office due to any reason whatsoever, another Sole Arbitrator shall be appointed as aforesaid.

The WORK under the CONTRACT shall, however, continue during the Arbitration proceedings and no payment due or payable to the SUPPLIER shall be withheld on account of such proceedings.

The Arbitrator shall be deemed to have entered on the reference on the date he issues notice to both the parties fixing the date of the first hearing.

The Arbitrator may, from time to time, with the consent of the parties, enlarge the time for making the publishing the award.

The venue of arbitration shall be in Haryana.

The fee, if any, of the Arbitrator shall, if required to be paid before the award is made and published, be paid half and half by each of the parties. The costs of the reference and of the award including the fee, if any, of the Arbitrator shall be in the discretion of the Arbitrator who may direct to and by whom and in what manner, such costs or any part there of shall be paid and may fix or settle the amount of costs to be so paid.

The award of the Arbitrator shall be final and binding on both the parties. The provisions of the Indian Arbitration and Conciliation Act, 1996 or any statutory modification or re-enactment thereof and the rules made there under and for the time being in force, shall apply to the arbitration proceeding under this clause.

PART – II

SPECIAL CONDITION OF CONTRACT :

In addition to the General Conditions of contracts contained in Portion I above, the following special conditions shall apply to contracts for supply of plant/machinery/manufactured equipment. These special conditions where they differ from the general conditions in part I shall override the latter.

FINAL TEST :

The final tests as to performance and guarantee shall commence immediately after completion of installation.

REJECTION OF DEFECTIVE CONSIGNMENT :

If the completed instrument or any portion thereof before it is finally accepted is found to be defective or fails to fulfill the requirements of the contract. The purchaser shall give supplier notice setting forth the details of such defects or failure and the supplier shall forthwith rectify the defective instrument to be replaced in place of plant or alter the same to make it comply with the requirements of the contract. Should the supplier fail to do so within a reasonable time the Purchaser may reject and replace at the cost of the supplier, whole or any portion of the plant as the case may be, which is defective or fails to fulfill the requirements of the contract. Such replacement shall be carried out by the purchaser within a reasonable time and at reasonable price and where reasonably possible to the same specifications and under competitive conditions. The supplier shall be liable to pay to the Purchaser the extra cost if any of such replacement delivery and or/or erected as provided for in the contract, such extra cost being the difference between the price paid by the purchaser, under the provisions above mentioned for such replacement and the contract price for them. Supplier shall refund to Purchaser any sum paid by the Purchaser to the supplier in respect of such defective instrument to be replaced in place of instrument.

WARRANTY :

The supplier has to provide warranty for a period as specified in the technical specification after the instrument has been put into operation. The supplier shall be responsible for any defects that may develop under conditions provided for by the contract and under proper use, arising from faulty materials, design or workmanship in the plant or from faulty erection of the instrument by the supplier, but not otherwise and shall rectify such defects at his own cost when called upon to do so by the purchaser who shall inform in writing such defects.

If it becomes necessary for the supplier to replace or renew any defective portions of the instrument for the purpose of rectification under the clause, the provisions of this clause shall apply to the portions of the plant so replaced or renewed till the end of the above mentioned period. If any defects be not rectified within reasonable time, the purchaser may proceed to get the work done at supplier's risk and expenses but without prejudice to any other rights which the Purchaser may have against the supplier in respect of such defect.

GUARANTEE FOR SPARE PARTS :

The supplier shall undertake that before going out of production of the spare parts he will give adequate advance notice to the Purchaser so that the latter may order his requirement of spares in one lot if he so desires.

The supplier shall further guarantee that if he goes out of production of spare parts, then he will make available blue-prints, drawings of spare parts and specifications of materials at no cost to the Purchaser, if and when required in connection with the equipment to enable Purchaser to fabricate or procure spare parts from other sources.

The provision of the clause shall remain effective and binding upon the supplier even after the completion or expiration of the contract and till the instruments supplied under the contract is in use by the Purchaser.

TRAINING :

The supplier has to provide complete training at site for operation (including trouble shooting) of the instrument.

EMD DETAILS
For Laboratory Instruments

<i>Sr. No.</i>	<i>Items</i>	<i>Qty. (in No.)</i>	<i>EMD (in Rs.)</i>
1.	Fluid Bed Spray Granulator	01	44,000.00
2.	Low Compaction Extruder	01	40,000.00
3.	Wet Grinding Mill with Chilling System	01	90,000.00
4.	Higher Shear Mixer	01	20,000.00
5.	GC-MS/MS	01	1,80,000.00
6.	HPLC	01	80,000.00

TECHNICAL SPECIFICATION OF LABORATORY INSTRUMENTS

1. Fluid Bed Spray Granulator :

- (a) Batch Size : 200 gm or more.
- (b) Product Container : Useful volume : above 200 ml
Container should be made of transparent plastic/SS316L grade or better quality with portion of toughened a glass/ transparent plastic to ensure visibility of process.
- (c) Spray Nozzle : Binary (Two Fluid) nozzle for atomizing liquids with nozzle aperture size 0.4 to 1.0mm.
- (d) Controls & Display : Air pressure, filter blowing pressure and temperature.
- (e) Filter Cleaning : By air purging / blowing.
- (f) Peristaltic Pump & Compressor : The equipment has to be supplied peristaltic pump and compatible air compressor.
- (g) Power : A/C Single/ three phase 220-240V.
- (h) Warranty / Extended Warranty : 03 (three) years from the date of installation and final acceptance.

2. Low Compaction Extruder :

- (a) Batch Size : 50-250 gm.
- (b) Screen Size (Perforation) : 0.5mm and above.
- (c) Contact Parts : Stainless steel 316 grade or better.
- (d) Hopper : Mounted above extrusion assembly. Material of construction- stainless steel.
- (e) Extrusion Assembly : Rollers transferring the materials on sieve. The provision of changing the sieve of required size. Material of construction - stainless steel-316 grade or better.
- (f) Extrusion Sieves : Sieves of 0.5mm, 0.8mm, 1mm, 1.2mm and 1.5mm should be supplied with the equipment.
- (g) Gear Box & Motor : Noise reduction gear box and speed variator. Motor-0.5HP or more.
- (h) Control Panel : Digital RPM display and on/off button.
- (i) Power : A/C Single/ three phase 220-240V
- (j) Warranty / Extended Warranty : 03 (three) years from the date of installation and final acceptance.

3. Wet Grinding Mill with Chilling System :

- (a) Capacity of grinding : 100-700 lit/hr.
- (b) Grinding media : Zirconium silicate/toughened glass beads.
- (c) Grinding chamber volume : 25-30 liter.
- (d) Main motor drive : 20-30 KW, A/C Three phase 400-440 V, 50Hz with VFD, speed up to 1500 rpm or more.
- (e) Material of Construction : Machine parts in contact with product are made up of SS or better quality.
- (f) Cooling Water Circulation : More than 800lit /hr.
- (g) Suitable cooling / chiller system having capacity more than 800lit /hr, & cooling water temperature 5⁰C or less to be supplied with the Mill.
- (h) Pump : Compatible pump to feed slurry into mill.
- (i) Grinding media to be Supplied with the Mill : 150 lit zirconium silicate/ toughened glass of appropriate size (0.8-1.2 mm).
- (j) Agitator discs : Material of construction of disc is PU/ SS
- (k) All necessities electrical cables and connecting pipe lines between mill to chiller & product pump to be provided by supplier.
- (l) Control & Display : Rising pump, Feed pump, Mill, Temperature & Agitator Speed (rpm).
- (m) A set of maintenance Toolbox, Operation manuals and required consumable parts like extra set of dices, seals etc to be supplied with mill.
- (n) Engineering Work : Erection and commission of mill, control system and its accessories to be installed (including all civil, electrical work) by the supplier at IPFT pilot plant and demonstrate the functioning of mill.
- (o) Warranty / Extended Warranty : 03 (three) years from the date of installation and final acceptance.

4. Higher Shear Mixer :

- (a) Capacity : The capacity should be suitable for making batches 150-1000 litre.
- (b) Impeller disc diameter 150-200 mm, with interchangeable work head.
- (c) Mixer unit mounted with suitable hydraulic stand for lowering and raising the mixer (length adjusted to suit vessel).
- (d) Driving speed up to 3000 rpm with variable speed controller.
- (e) Material of Construction : Machine parts in contact with product are of shaft and mixer discs made up of SS 316L grade or of better quality.
- (f) Control and Display : Operating speed (rpm).
- (g) Power supply is A/C Three phase 400-440 V, 50Hz with appropriate relay system and necessities electrical cables etc.
- (h) A set of maintenance toolbox, Operation manuals and extra sets of interchangeable working heads & screens, down & up thrust Propeller, bushes etc to be supplied with Mixer.
- (i) Compatible two mixing vessels of 300 lit & 1000 lit (make- SS) along with discharge valve at bottom of vessel to be supplied with mixer.
- (j) Engineering Work : Erection and commission of mixer, control system and its accessories to be installed (including all civil, electrical work) by the supplier at IPFT Pilot Plant and demonstrate the functioning of mixer.
- (k) Warranty / Extended Warranty : 03 (three) years from the date of installation and final acceptance.

5. **GAS CHROMATOGRAPHY TANDEM MASS SPECTROMETRY (GC-MS/MS) :**

GC should be capable of installing at least two injectors and three detectors in addition to MS.

A. Oven :

1. Capable of housing at least 2 columns.
2. Temperature : 450 °C or more.
3. Heating rate: from 50 to 450 °C within 5 min.
4. Cooling down rate : from 450 to 50 °C within 4.5 min.
5. Set point : 0.1°C or less.
6. Temperature programming facility.
7. Ramps : 20 or more.
8. Max. ramp rate : 120 °C/min or more.

B. Injection Port (two) :

a) Capillary Port (Split / Splitless)

1. Facility to fit 50 µm to 530 µm columns.
2. Pressure range : 140psi or more.
3. Maximum temperature: 400 °C or more.
4. Separate heating zone.
5. Digital display of gas flow, temperature etc.
6. Electronic pneumatic control (EPC)/ Electronic flow control (EFC)/Advance Flow Controller (AFC).
7. Temperature setting through computer software.
8. Split ratio range 1:1 to 7000:1.

b) Programmable Temperature Vaporizer (PTV)

1. Temperature ramped split / splitless and large volume injection modes.
2. Electronic pressure/ flow control.
3. Pressure setting range 0 to 100psi or more.
4. Split ratio range 1:1 to 7000:1.

c) Auto Sampler

1. Auto sampler tray for 40 vials or more.
2. User installable.
3. Sample tray positioned away from GC to prevent heating of samples.

d) Backflush

Column end or mid column backflush should be offered.

C. MSMS System :

1. Mass range : m/z upto 1050 or more.
2. Mass resolution : minimum 0.7 amu.
3. Mass axis stability : ± 0.1 amu over 24 hours.
4. Linear Dynamic range(electronic) : minimum 10^5 .
5. Scan rate : more than 6000 amu/sec.
6. Ionization modes : EI/PCI/NCI. Ion source should have heating capacity of 350°C or more.
7. CI : must be capable to operate with different reagent gasses & electronic flow control for reagent gasses.
8. Scan Modes : Precursor, Product, Neutral loss, SIM, SRM, MRM and full scan.
9. SRM/MRM Speed : minimum of 600 transactions / sec.
10. Minimum MRM dwell time of 1millisecons.
11. Collision cell gas pressure must be electronically controllable.
12. Collision energy must be variable.
13. Installation checkout sensitivity must be better than –
 - a) EI full scan for Octafluoronaphthalene at 1 pg (S/N 300:1)
 - b) EI MRM for Octafluoronaphthalene at 100 fg (S/N 7000:1)
 - c) NCI SIM for Octafluoronaphthalene at 10fg (S/N 100:1)
 - d) PCI (methane as a reagent gas) MS/MS for Benzophenone at 100 fg (50:1)
14. Turbomolecular pump : Air cooled turbomolecular pumps, Average capacity across the quadrupole should be 280 L/sec or more.
15. Noise reduction cover for fore line pump.

D. Chromatography Software/Workstation Instrument Control Software :

1. Windows OS (7 or higher).
2. Capable of working both online and offline for data acquisition and manipulation.
3. GC and MSMS system should be integrated with the same workstation for simultaneous settings and programming.
4. Provision of Auto tune (to optimize MS parameters automatically) and Manual tune (tuning programs).
5. Standard libraries NIST 2013 or latest version, & Wiley 2013 or latest version, MRM database pesticide library, Special libraries of Pesticides latest version, Spectral interpretation software should be included in the offer.

E. PC with Printer :

Data Station : Intel core i5/i7 processor, 2.0 Ghz or more, 4GB RAM DDR-III, 500 GB hard disk, light scribe compatible DVD writer, 22" LCD display, Windows 7 ultimate, MS-Office professional 2013, Chemdraw Pro 13.0, Colour Printer cum scanner cum copier.

F. Suitable online UPS system for complete back up of the GC-MSMS system :

Suitable online constant voltage (220 volts) 20 KVA UPS with minimum 4 hour backup at full load with maintenance free Exide battery provided with rack.

G. Start up Kit :

1. Installation kit must be included.
2. Gas purification panel with following cylinders (with gas purity certificate) and appropriate dual stage steel diaphragms regulators (one for each type of gas) :
Helium ($\geq 99.9995\%$) – 2 No.
Argon (99.999%) – 2 No.
Methane (99.999%) – 2 No.
Isobutane (99.999%) – 1 No.
3. Copper/SS tubing, nuts and ferrules for all the gases.

H. Accessories and Consumables :

1. Syringe for manual and auto sampler injection (20 No. each).
2. Auto sampler vials : 500 vials with screw cap.
3. Vespel graphite ferrules for capillary columns (0.25 mm i.d) injector end and interface end (20 No. each).
4. Septa for injector (50 No.).
5. Appropriate nuts to fit capillary columns to the injector and MS interface (10 each).
6. Inlet liner for Splitless, Split (with glass/quartz wool at optimum position) and PTV (with glass/quartz wool at optimum position) (10 No. each).
7. O-ring for injector liner (20 No.)
8. Split vent trap (2 No.)
9. Gold seal or equivalent injector seal, if present (10 No.)
10. EI Filaments (10 No.)
11. CI Filaments (10 No.)
12. Column cutter (2 No.)
13. Gas tube cutter.
14. Oil mist trap for pump (1 No.).
15. Tool kit.
16. GC-MSMS Column (95% Dimethyl polysiloxane, 5% phenyl, extremely low bleed suitable for GC-MSMS system) – 5 No.

I. Warranty :

Three years warranty from the date of installation and final acceptance and two years AMC after warranty period should be offered.

J. Training :

On-site training (minimum of one week) to two scientists in application and maintenance of the equipment at manufacturer's site.

Optional Items :

a) Head Space

1. The system should be also supplied with an automated loop based headspace sampler of 10 vials or more and oven heating capacity of 1 vial at a time or more.
2. The temperature range should be 50° to 200°C or broader.
3. The Headspace sampler should be based on heated transfer line technique
4. The liquid and the headspace sampler should be controlled through the Chromatography control software.

b) Quechers Kit

Extraction kits as per AOAC method, Dispersive kit for clean-up purpose
– 1000 No. of tubes each.

6. HIGH PERFORMANCE LIQUID CHROMATOGRAPHY (HPLC) :

A. Binary Pump :

- a) Flow rate : 0.001 to 20.000 mL/min. in 0.001mL/min. increment.
- b) Flow precision : 0.1% RSD.
- c) Flow accuracy : $\pm 1\%$.
- d) Max operating pressure : 6000psi.
- e) Flow calibration : Programmable.
- f) Plunger guiding system : Floating, self aligning mount.
- g) Operating pressure limits : Programmable high and low pressure limits, user selectable in psi, bar, kPa.
- h) Pulse free solvent delivery.
- i) Automatic seal wash and auto priming.
- j) The pump should have GLP features like maintenance feedback for continuous tracking of instrument usage with user settable limits and feedback messages.

B. Auto Sampler :

- a) Capacity : 100 vials.
- b) Loop volumes : 5, 10, 20, 100 and 500 ul; 10mL loop for prep option.
- c) Dispenser syringe : 500 ul or 2500 ul as optional.
- d) Supplied with syringes for all loop volumes.
- e) Vial detection : Missing vial/well plate detection by sensor.
- f) Wash solvent : Integrated wash solvent bottle.

C. Column Oven :

Ambient to 80°C or more.

D. Degasser :

Suitable online degasser.

E. Photo Diode Array Detector :

- a) Wavelength Range : 190-800nm.
- b) Wavelength Accuracy : ± 1 nm.
- c) Wavelength Repeatability : ± 0.1 nm.
- d) Photodiodes should be 512 or more.
- e) Optical resolution : 1.2 nm or better.
- f) Linearity range : $\leq 5\%$ at 2 AU, propylparaben at 257nm.
- g) Base line noise : 10×10^{-6} Au, 10nm cell at 254nm.
- h) Drift : $\leq 1.0 \times 10^{-3}$ /Au/hr/°C, dry cell 254nm.
- i) Data acquisition rate : Upto 80Hz.
- j) Light source : Deuterium lamp with 2000 hour warranty.

F. Fluorescence Detector :

- a) Wavelength Range : 200-890 nm.
- b) Excitation Emission wavelength Range : 210 – 900 nm.
- c) Light Source : Xenon lamp, 150W

- d) Sensitivity : Raman Peak or Water <800, Flowcell -8mL capacity.
- e) Measurement Range : 0.001 – 100000.
- f) Emission units : 0.001 – 10000.
- g) Warranty : 2000 hrs.

G. Post Column Derivatizer :

Suitable Post Column Derivatizer for Carbamate and Glyphosate analysis.

H. Fraction Collector :

- a) No. of Fractions : 80 tubes or more.
- b) Automated peak detection and collection, using an analog detector input of the LC System permits fully automated collection of only the peak(s) of interest.
- c) A divert valve allows collection of peaks without extraneous solvent and/or unwanted peaks (which divert to waste), maximizing fraction collection efficiency and overall preparative LC system Productivity.
- d) Temperature range : ambient.
- e) Integrated fraction collector with heads, racks, collection tubes etc.

I. Chromatography Software / Workstation Instrument Control Software :

- a) All the components of the Instrument should be integrated with the same workstation for simultaneous settings and programming.
- b) Capable of working both online and offline for data acquisition and manipulation.

J. PC with Printer :

Data Station : Intel core i5/i7 processor, 2.0 Ghz or more, 4GB RAM DDR-III, 500 GB hard disk, light scribe compatible DVD writer, 22” LCD display, Windows 7 ultimate or higher OS, MS-office professional 2013, A4 printable heavy duty laser printer.

K. Accessories and Consumables :

- a) Syringe for manual and auto sampler injection (2 each of 10, 25, 50, 100 & 500 µl).
- b) Auto sampler vials : 500 vials with screw cap.
- c) Appropriate ferrules for column installation (50 No.).
- d) Guard Cartridges (10 No.).
- e) Guard Cartridge holder (2 No.).
- f) Tool kit.
- g) Columns :
 - Analytical Column C8 (250 x 4.6 mm x 5µ) – 1 No.
 - Analytical Column C18 (250 x 4.6 mm x 5µ) – 2 No.
 - Analytical Column Phenyl (250 x 4.6 mm x 5µ) – 2 No.
 - Semi Prep Column 10 mm id C18 and C8 – 2 No. each

L. Warranty :

Three years warranty from the date of installation and final acceptance and two years AMC after warranty period should be offered.

कीटनाशक सूत्रीकरण प्रौद्योगिकी संस्थान

Institute of Pesticide Formulation Technology (IPFT)

(An Autonomous Institution)

Department of Chemicals & Petrochemicals,

Ministry of Chemicals & Fertilizers

Sector-20, Udyog Vihar, Gurgaon – 122 016 (Haryana)



T E N D E R

FOR

SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF

LABORTORY INSTRUMENTS

FOR

INSTITUTE OF PESTICIDE FORMULATION TECHNOLOGY

SECTOR – 20, UDYOG VIHAR

GURGAON – 122 016 (HARYANA)

DOCUMENT – II

COMMERCIAL BID

**BILL OF QUANTITIES
FOR SUPPLY, INSTALLATION, TESTING AND COMMISSIONING
OF LABORTORY INSTRUMENT**

<i>Sr. No.</i>	<i>Items</i>	<i>Unit</i>	<i>Rate in Figures and in Words</i>	<i>Amount (in Rs.)</i>
1.	Fluid Bed Spray Granulator			
2.	Low Compaction Extruder			
3.	Wet Grinding Mill with Chilling System			
4.	Higher Shear Mixer			
5.	GC-MS/MS			
6.	HPLC			

Photocopy of the Demand Draft / Banker's Cheque No. dated
for Rs. towards EMD is enclosed.

Note : Kindly quote for all the items as specified in the technical specifications.

Yours faithfully,

Signature of the Tenderer
with seal of the firm

कीटनाशक सूत्रीकरण प्रौद्योगिकी संस्थान

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TENDER NOTICE

(TE No. : IPFT/Plan/2013-14/Major-Eqpts/2013/1)

Director, IPFT invites sealed tenders for the purchase of the following instruments :

<i>Sr. No.</i>	<i>Description of Items</i>	<i>Qty. (in No.)</i>	<i>EMD (in Rs.)</i>
1.	Fluid Bed Spray Granulator	01	44,000.00
2.	Low Compaction Extruder	01	40,000.00
3.	Wet Grinding Mill with Chilling System	01	90,000.00
4.	Higher Shear Mixer	01	20,000.00
5.	GC-MS/MS	01	1,80,000.00
6.	HPLC	01	80,000.00

Tender documents together with the terms & conditions and specifications in respect of the above items can be downloaded from our official website www.ipft.gov.in and also obtained from the Office of Director – IPFT on all working days between 10.00 AM to 3.00 PM on cash payment of Rs. 500/- (Non-refundable). The last date of submission of tender document is upto 2.30 PM on **23.05.2014** and will be opened on the same day at 3.00 PM. Director, IPFT reserves the right to reject any or all the tenders items without assigning any reason, whatsoever.

DIRECTOR
IPFT, GURGAON