

ज्ञापांक 1253/451266.../आपूर्ति

95-1-8-2019

पुलिस महानिदेशक का कार्यालय, बिहार, पटना

पटना, दिनांक- 24/12/19

सेवा में,

निदेशक,

सूचना एवं जनसम्पर्क विभाग,

बिहार, पटना।

विषय- अल्पकालीन निविदा आमंत्रण सूचना सं०-35/2019-20 के प्रकाशन के संबंध में।

निदेशानुसार उपर्युक्त विषय के संबंध में अल्पकालीन निविदा आमंत्रण सूचना सं०-35/2019-20 की प्रतियाँ भेजते हुए अनुरोध है कि इसे राज्य एवं राज्य से बाहर के प्रमुख समाचार पत्रों में (अंग्रेजी एवं हिन्दी) के अगले दो संस्करणों में प्रकाशित कराने की कृपा की जाय साथ ही पी०आर०डी० वेबसाइट पर भी प्रसारित करने की कृपा की जाय।

इस निविदा आमंत्रण सूचना का प्रकाशन किन-किन समाचार पत्रों में किया गया इसकी सूचना देने की कृपा की जाय।

अनु०-यथोपरि।

पुलिस महानिरीक्षक के सहायक (क्यू०),
बिहार, पटना

प्रतिलिपि:-

1. आई०टी० मैनेजर, पुलिस महानिदेशक का कार्यालय, बिहार, पटना को कृपया सूचनार्थ। कृपया इसे आज ही वेबसाइट पर अपलोड किया जाय। साथ ही Indian Trade Journal, Kolkata के अंक में प्रकाशन हेतु Government of India, the Controller of Publications, Civil Lines, Delhi : 110 054, (Tel No. 011-23812527, FAX : 011-23817846), Email Id-sk.mondal.dgcis@nic.in के पतेपर भी अनिवार्य रूप से भेजा जाय।
2. Government of India, the Controller of Publications, Civil Lines, Delhi : 110 054, (Tel No. 011-23812527, FAX : 011-23817846), Email Id- sk.mondal.dgcis@nic.in को कृपया सूचनार्थ एवं आवश्यक क्रियार्थ प्रेषित। अनुरोध है कि उक्त निविदा का प्रकाशन Indian Trade Journal, Kolkata के अंक में करने की कृपा की जाय।

पुलिस महानिरीक्षक के सहायक (क्यू०),
बिहार, पटना

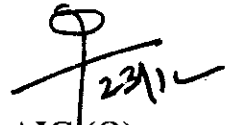
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Police Headquarters, Bihar, Patna
Notice Inviting Short Tender No.-35/2019-20

1. Name of the Department: Office of Director General of Police, Bihar, Patna.
2. Last date & time for the acceptance of the short tender : **13**/01/2020, Till 02:00 PM
3. Date & time fixed for the opening of the short tender : **13**/01/2020, At 04:00 PM
4. Place fixed for receiving & opening the tender : Office of Director General of Police, Bihar, Patna.
5. Details of Job:

S.N.	Item name	Quantity
1	Solvent Extractor	01
2	GC-MS	01
3	Muffle Furnace	01
4	Digital Density Miter	01
5	Furming Hood	01
6	Automatic Distillation System	01
7	Deep Freezer (-20C)	01
8	Water Bath	01
9	Hot Place	04

Specifications and other terms & conditions of the tender may be obtained in person from this office or may be downloaded from the website www.prdbihar.gov.in or www.biharpolice.bih.nic.in.


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Bihar, Patna

Terms & Conditions of Short Tender No.-35/2019-20

1. The tender should be submitted in two parts: (i) Technical Bid and (ii) Financial Bid, duly sealed in two separate envelopes super-scribed as "Technical Bid" and "Financial Bid".
2. All relevant papers/ E.M.D./certificates/specifications etc. of items should be enclosed in the Technical Bid.
3. The rates of the items shall be quoted in the Financial Bid only.
4. All charges like IGST/CGST/SGST etc. shall be clearly mentioned in the Financial Bid and the net rate (in figures and words) including all taxes and duties must also be quoted. Vague offers like indicating taxes "as applicable" will not be accepted.
5. The rates of the items shall be quoted in the Financial Bid in two parts :
(i) With AMC (Annual Maintenance Contract) and (ii) Without AMC
6. There should be no cutting, over writing or correction on the rates.
7. The technical and financial bids for each item should be submitted separately in separate envelopes. The technical and financial bids for more than one items submitted together in the same envelope shall not be accepted.
8. If the financial bid is submitted in the same envelope containing the technical bid then also it shall be summarily rejected.
9. The technical and financial bids should be put in two separate sealed envelopes and the envelopes should be marked Short Tender No-35/2019-20 (Technical Bid) and Short Tender No-35/2019-20 (Financial Bid) along with the name and address of the firm. The sealed envelopes containing the technical and the financial bids should be sent in another sealed envelope which should be marked as Short Tender No-35/2019-20. **This envelope should not bear the name and address of the firm.**
10. Income Tax Returns of last three years, a photocopy of GST registration number of the participating firm and turn-over of any two of the previous three financial years should be submitted with the technical bid. It should be specifically mentioned whether IT return has been filed manually or electronically.
11. The turnover of the firm for the last reported financial year should be at least equal to the amount of the supply order which is being issued. A copy of the profit and loss Account of the firm for any two of the previous three financial years, certified by a Chartered Accountant should be submitted along with the tender. If the tenderer is authorized dealer or authorized supplier of manufacturing firm, then the certified details of the turnover of authorizing firm may be accepted. Tender specific authorization from the OEM must be submitted, but in certain cases where authorization from OEM is not required, the Technical-cum-User committee (T.U.C.) shall decide about exemption (if any) on a case-by-case basis; citing appropriate reasons for the same.
12. If there is some discount in the price of any item, it should be deducted from price itself and such discounts should not be quoted separately.
13. If the product is available on DGS & D rate contract, then a copy of the contract must be attached and pricing be done including all taxes.
14. A copy of the test report for the product issued by any established and recognized private Laboratory or by agency accredited by the Government should be attached with the technical bid. However if required, the Technical-cum-User committee (T.U.C.) can take decision regarding exemptions/relaxations (if any), citing appropriate reasons.
15. In case of Bullet Proof/Bullet Resistant items, test report of TBRL or any Government Approved/Recognized Laboratory is compulsory.

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16. Firms participating in this tender shall also submit duly sworn affidavit to the effect that " this firm has not been black listed/debarred by any Government or Semi Government or Private Agency and no sister concern of this firm is participating in this tender."
 17. Firms participating in this tender shall also submit the self attested list of users of its equipments.
 18. All items shall be received at Central Clothing Store, Patna; therefore price should be quoted FOR Central Clothing Store, Phulwari Sharif, Patna.
 19. Firms will have to deposit a sum of Rs. 50,000/- (Fifty Thousand) only as an earnest money deposit in the form of Bank Draft duly pledged in favor of the undersigned along with the quotations. The small scale units located in Bihar shall not be liable to deposit earnest money. Exemption from submitting E.M.D. will also be available to those who are registered with the Central Purchase Organization/State Purchase Organization and National Small Industries Corporation (NSIC).
 20. Technical Bids will be opened on scheduled date and time in the office chamber of Police Headquarter. Representatives of the firms competing in the tender may remain present at the time of opening of the technical bid.
 21. The technical bids will be opened first and placed before the Technical Committee of the Police Headquarters, Bihar. If the technical bids are found satisfactory as per tender conditions, it will be put before Central Purchase Committee of the Police Headquarters, Bihar. The firms may be required to participate in the demonstrations of the quoted product and discussions with this committee.
 22. Any paper/document will not be accepted after opening the tender.
 23. Successful firm will have to enter into an agreement after depositing a sum of 5% of the total value of the order as security money in the form of Bank Guarantee duly pledged in favor of undersigned.
 24. The firm will be required to provide satisfactory after-sales service after the delivery of the product.
 25. The firm will be required to supply all the items within the stipulated time frame as mentioned in the purchase order.
 26. Payment for the delivered items will be made only after the acceptance report of the Inspection Committee of the Police Headquarters, Bihar.
 27. The firm whose quotation is approved by the Central Purchase Committee of the Police Headquarters, Bihar, shall be invited to enter into an agreement with the undersigned.
 28. It is expected to submit the duly filled chart attached herewith, along with the technical bid if not the tender shall be summarily rejected.
 29. Indexing of the requisite documents must be done and submitted along with the technical bid.
 30. Hands on training for 3 weeks of the equipment must be imparted to the user group by the firm after successful installation.
 31. Director General of Police Bihar, Patna reserves the right to reject any or all the quotations partially or fully, without assigning any reason thereof.
 32. The Quantity indicated may increase or decrease at the time of issuing purchase order.
 33. The bids must be include the data sheet of individual item.


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Bihar, Police.

Automated Solvent extraction system Instrument and accessories :

Application: Automated sample preparation using advanced system of accelerated solvent extraction using high temperature, high pressure with parallel extraction cells of variable volume for multiple solid and semi-solid samples, integrated solvent mixing system; parallel evaporation and condensing unit; compatible with solid phase extraction module for aqueous matrices to comply with EPA 3545A method for pressurized fluid extraction of pesticides and other environmental analysis along with all accessories. Extracts should be automatically filtered and ready for direct injection or final cleanup. Microwave assisted solvent extraction unit is also desirable for solvent extraction of pesticides and acid extraction/ digestion of samples for trace element analysis as per EPA and ASTM methods. The systems should also be applicable for food analysis, pharmaceuticals and extraction of natural products.

A] Accelerated Solvent Extraction System :

Oven: Should accept sample cell sizes of 10, 22, 34, 66 and 100 mL for different application needs with provision for automatic placement of cells into oven and returning cell back to tray after extraction; The system should require less than 50 mL solvent for a 20g sample; Vertical cell orientation with solvent flow from top to bottom; Temperature control up to 200°C or better.

Pump: Fluid delivery pressure: 10 MPa (1500 psi) or better; Pump flow: 50 mL/ minute or better; Automatic pressure sensor and pressure relief during heat-up.

Fluid Sensors: IR sensors to detect fluid level during extract collection.

Display and Keyboard: Menu operated LCD display method with editing and storage facility.

Extraction Cells: Seven capacities: 22, 66, and 100 mL cells with finger-tight cell caps compression seal for high-pressure closure

Extraction Cell Tray: 24 cell positions; Two rinse positions with automatic home position sensing should perform multiple extractions per cell.

Scheduling programme: Should have provision for programme scheduling for automated method optimization.

Software: Software for Chromatography Data System is desirable

Collection Vials: Sufficient nos. of 60 mL and 250 mL vials (12 nos. each) with lids containing solvent-resistant septa should be provided.

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Collection Vial Tray: 26 position tray insert for 60 mL vials and 19 position tray for 250 mL bottle positions plus two bottle position for rinse/waste collection tray compatible with 250 mL bottles.

Extraction Fluids: Should be Compatible with a wide range of organic and aqueous solvents with provision for mixing or selection of minimum three different solvent sources

The system should include starter kit containing collection vials/bottles, extraction cell filters, extraction cell seals and o-rings and sufficient nos. of extraction cells and operating software

High Performance Laboratory Refrigerator (2 Nos.): For preservation of sample extracts and also for analytical standards for chromatographic and spectroscopic analysis with the following features.

Microprocessor based controller; Space saver cabinet; Capacity: 300-350 L; Single glass door; Adjustable Shelves: 4 nos.; Temperature Range: +1°C to +8°C, Preset to +4°C (auto defrost) with graphic thermometer for easy viewing of normal, high or low temperature condition; LED Interior Lighting with switch (on glass door cabinets); Automatic Defrost System; air circulation for uniform temperature at all shelf levels; remote alarm facility; should be operated at 230 Volt

Essential Accessories

1. Guarantee- one year
2. Comprehensive warranty for entire system next 2 years
3. Non comprehensive AMC for next 3 years. Please provide year wise AMC offer.
4. CMC for next 2 years, please provide year wise CMC offer (including service charges or any other taxes if applicable).
5. Complete operational trainings to be provided to working analysts at site.
6. All related and essential accessories are to be quoted.
7. At least 10 day's onsite training after installation should be provided.
8. Spare parts for two years/Requisite must be supplied with the system for smooth operation.
9. Installation, commissioning at the end user site - free of cost.
10. UPS- 10KVA Online UPS with minimum 1hours backup to be quoted.
11. Suitable computer, color printer and all other related accessories to be quoted.

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Technical Specification- Muffle Furnace

1. PID Temperature Controller
2. Cold rolling steel spraying exterior
3. Elements embedded in walls of the chamber to provide, high temperature uniform heating and long service life.
4. Light weight insulating brick, Fibre cotton are used as thermal insulation material to ensure good heat insulation, to promote heat storage capacity, to shorten heating up the time and to reduce power loss and power consumption.
5. Maximum Temperature -1000°C.
6. Power Wattage-2.5KW or better.
7. Inner Dimension (W*D*H)- 225*120*100
8. Outer Dimension (W*D*H)- 600*400*480
9. One year warrenty.

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Specification for Fume Hood

Sl. No.	Characteristic	Specification
	Dimensions	Overall Dimensions : 1500mm W x 1000mm D x 2400mm H (with base Cabinet)
		Fume Hood Dimension : 1500mm W x 1000mm D x 1600mm H
		Inside Fume Hood working Dimension : 1300mm W x 650mm D x 1100mm H
	Design Basis	Floor Mounted.
	Design Structure	Aerodynamic.
	Face Velocity	90 – 100 FPM/0.5 meters. Per. Sec. (Average at 12" Sash opening Fume Hood)
	Air Volume	1200 CFM (Designed for Full door opening)
	Airflow Type	Auto Bypass high constant volume Type (for Non AC labs Environment)
	Colour Combination	White and Blue
	Powder coating	Pre-tested with 8 tank chemical processes and powder coated with highly chemical resistant epoxy colours having dry film thickness of 50 to 60 microns. Passed all conformity performance tests like salt test etc. as per IS standards.
	Materials of Construction of Superstructure	Body made of Powder Coated MS CRCA sheet. 1.0 mm thickness for all sheet metal panelling 1.2 mm for back pillars 1.2 mm for front corner post
	Construction (Interior)	Chemical & heat resistant, fire retardant, smooth finish, easily cleanable panels made out of durable FRP integral integral work walls (6 mm thick). ASTM flame spread index, < 25. Entire internal structure is boltless and fixed with premium quality 3M adhesive.
	Active kinetic exhaust system	Interstitial 3-point suction system (for light, normal & heavy fumes) with baffle to ensure smooth and immediate exhaust of fumes.
	Work Top	Chemical resistant splash & spillage proof dished 'Jet Black Granite' worktop (18/19 mm thick). Skirting of 15 mm from all sides for no chemical spillage.
	Airfoil	Aerodynamic Design, Horizontal fixed airfoil mounted on the worktop made of, SS 304 Grade powder coated (1.2mm).
	Sink, Water Tap and Drain arrangement	1 No. PP Sink will be fixing Work top and sealed with silicon sealant for drainage with water tap on right back side of worktop. Sink will have a trap for waste collection. Dim: 100 mm X 200mm. 1 No. remotely operated Water Valve with Gooseneck Type Faucet.
	Wet & Dry Service fittings	Remotely operated Colour coded Brass Needle Valves for fine control over utilities. (as per DIN 12920 norms) total 2 Nos.

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Sl. No.	Characteristic	Specification
		Service valves with SS braided hose with 6 mm internal dia, withstands up to 15 kgf pressure and brass fittings for gas connection s. (1 LHS + 1 RHS) 1 for Nitrogen (PU) 1 for vacuum (Teflon)
	Sash (shutter)	Vertical rising counter-balanced sash. Toughened Float Glass sash (5 mm thick). Smooth and light sash operation. Clear open able height = 750 mm.
	Illumination	1 No. Flu orescent light set (40 watts) with vapour proof fittings for proper illumination instantly approx. 800 LX at working area. Inner chamber and the light is separated by a toughened glass of 4 mm .
	Apparatus Holding Grid	Grid will be made up Duralumin powder coated 12.7mm diameter rod or PP Rod. Net size will be 150 mm x 150 mm squire. It will fix the entire length of fume hood back portion. The distance of Grid will be 150mm from back side of Fume Hood.
	Electrical Utilities	Electrical Socket Qty. - 2 Nos. make Havells or ISI mark reputed brand (230 v, 6/16A, 50Hz). 1 No. - Havells make MCB. 1 No. ON/OFF Dol type starter for Motor. 1 No. Light switch will be fix front fascia of fume hood.
	Built-in Starter	Starter will be mounted in fume hood. It will be special design to control Blower and Motor. "Siemens" make.
	Blower Type	Centrifugal Blower FRP lining body. Capacity of blower is sufficient for maximum distances of 10 meters.
	Power Required	Three Phase, 440V.
	Motor Brand	Crompton/ Bharat Bijlee 1 HP, Three Phase, 2800 RPM.
	Coupling	Direct.
	Balancing	Dynamically
	Doly	Exhaust
	Air Volume	1200 CFM
	Static Pressure	2" W.G.
	Impeller	Fully moulded PP impeller
	Exhaust Duct	Rigid PVC duct pipe of 150 mm dia with suitable elbow for a length of 5 meters will be supplied with the system. Extra materials like Exhaust Chimney with weather cowl, bends flanges, brackets etc.
	Noise Level	Noise Level Less than 60 db.
	Level Adjusting Screw	For adjust the fume hood level \pm 10mm, 4 Nos. SS adjustable screw will be fix at the bottom of the fume hood.
	Chemical Storage base Cabinet (ventilated & on Castors)	Base cabinet will be ready to receive the fume hood at its top. You will get the following features: <ul style="list-style-type: none"> Complete made up 1mm thick CRCA sheet with highly corrosion resistant epoxy powder coating, 50 - 60 micron thickness. One removal type Horizontal partition for store chemicals. Double skin hinged door with polyamide hinges chemical resistance hassle free operation. It will be fixed outside of base cabinet. <p>Overall Dimension: 750 mm W x 540 mm D x 655 mm H Qty. - 2 Nos.</p>

Specification of Triple Quadrupole GC-MS/MS System

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Triple Quadrupole GC-MS/MS System :-

A High Sensitive Triple Quadrupole GC-MS/MS System for forensic residue analysis in forensic matrix with following specifications.

One Vendor Solution: Both the Gas Chromatograph and Triple Quad Mass spectrometer must be manufactured, supplied and installed by a single vendor to provide a seamless integration between the GC and MS

Service and Support: Both the Gas Chromatograph and Mass Spectrometer must be fully supported by the supplier to provide a seamless instrument diagnostics between the GC and MS. At least 10 years spares support need to be provided

GC features: GC should have provision for installing multiple detectors & injectors as per requirement. The system should be completely controlled through a data station consisting of a computer and GC software

GC Oven: High performance GC oven temperature control from ambient temperature +4 °C to 450 °C; GC oven should support 20 oven ramps with 21 plateaus or more, Negative ramps should be allowed; System should have Gas saver mode to reduce gas consumption without compromising performance; Cooling down from 450°C to 50°C in less than 4 minutes; Retention time repeatability: <0.0008 min; Peak area repeatability: <1.0% RSD

Injectors - Split / Splitless injector :Qty -1

Split / Split less injector for capillary Columns with Septum Purge functions.

Must be suitable for all capillary columns, 50 µm to 530 µm id.

Split ratio range: 10000:1 must be available to avoid column overload.

Maximum temperature up to 400°C or better

Efficient carrier gas saver function built-in to reduce gas consumption during standby without affecting performance.

Must have electronic septum purge flow control to eliminate carry-over.

Programmable Temperature Vaporizing Injector with Back Flush :Qty -1

Programmable Temperature Vaporizing Injector with complete injector & electronic gas control featuring constant and programmable Flow modes

Suitable for all capillary columns (50 µm to 530 µm id)

Maximum Temperature = 400°C; Minimum Temperature = -20°C

Quotation for proper cylinder (CO2 or N2) has to be done

Split ratio up to 10000:1 or better

Able to control of split flow and Purge flow from 0 to 50 ml/min

Suitable for on column injection for low abundant analytes.

Injection Syringe: Should supply Syringe (10 microlitre) for auto sampler injection (10 No. or more).

All in one automated Liquid, Headspace upgradable to Solid Phase Micro Extraction Sampler with X-Y-Z movement :

For analysis of samples of Flavor profiling in food & beverages, VOC in fruit juices, fruit and vegetables, Pesticides in food, Caffeine in tea, coffee, Off-flavor in food beverages, Terpenoids in herbs, essential oils, Phenols, volatiles, flavors in tobacco, Pheromones etc.

Three directional robotic sample handling apparatus. The system configuration capable of multiple injection modes, swapping from one configuration to other without manual human intervention.

The auto sampler must be controlled through LAN in remote or suitable technology.

The auto sampler control (method, sequences etc.) must be possible within the Chromatography Data System in use, without any external software needed.

Auto Sampler (liquid) Auto Sampler: 100 vial liquid sample holding capacity 1.5 ml or 2 ml Sample injection volume: 0.5 to 10 µl Cross contamination: <10⁻⁴

Headspace Sampler mode :

Head space sampler with minimum 50 vial capacity or more Vial Volume -20/22 mL

Syringe Temperature: 50 °C to 150 °C in 1 °C steps or more Incubation Oven Capacity: 6 vials or more

Incubation Oven Temperature Range: 50 °C to 200 °C in 1 °C steps with Agitation or more

Headspace Crimper & decapper should be quoted.

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Mass Spectrometer :

- The quadrupoles pre-rods filter or any other equivalent technique to minimize the influence of contamination and thus increases the sensitivity the main quadrupole.
- Q2 Collision Cell should have efficient ion acceleration ensuring zero crosstalk. N2 or Argon to be used in collision cell
- Collision cell should not require any expensive gases like Helium.
- The helium Ion Burn/Quenching Neutral removal process should happen before the main analytical quadrupole.
- It must be able to perform calibration manually as well as auto-tune It must have scan cycle of up to 100 scans/sec in order to obtain highly precise data for fast GCMS

Mass Range : 10 to 1050 amu with unit mass resolution over the entire mass range

Resolution : ≤ 1 amu or better

Mass stability : 0.1 amu over 24 hrs

Dwell Time : 0.5 msec or better

Scan Speed : 20,000 amu/sec

Interface Temperature : 50 DEG C to 350 DEG C

Ion source Temperature Variable between 150~ 350 0C **Filament Dual** (Automatic Switching during analysis)

Ion Source : should be Free from any form wired connection, easy to clean, easy to maintain off-axis ion source, with suitable facility to carry out helium ion burn in source before the main quadrupole.

Should have dual filaments in all ionization modes. Source with Programmable heating at 350 °C or better

- It should have accurate regulation of emission current up to 350 μ A or more with improved regulation at low current.
- It should have Integrated, dual filament assembly mounted with the same geometry with improved filament lifetime and effective regulation of emission current across the available emission current range.
- The User definable electron energy should be adjustable from 0-150 eV or more
- It should have constant calibration gas pressure for optimum system tuning.
- The GC transfer line temperature should be programmable up to 400 °C or more.
- The system should have suitable technology to prevent neutrals to gain entry into the main analytical quadrupole.
- The system should have the upgradation facility for no vent to change the column as well as source cleaning without venting the vacuum of MS
- Upgradation with high sensitive source to achieve an IDL < 0.2 fg for highly sensitive application.

Direct Injection of Samples : The system should have provision and option of direct infusion or injection of samples without using the GC or its column under any circumstances.

Maximum MRM/SRM Speed : 800 MRMs/Sec or more

Collision cell : The collision energy must be adjustable in the range of 0 – 60 eV

Detection System : The detection system may be electron multiplier or better technology

Instrument Detection Limit :

0.5fg or less 5 fg/ μ L OFN, acquired in EI SRM/MRM mode. (reference specification)

Linear dynamic range : 10^7 or better

Mass acquisition mode : MS Mode: full scan (FS), SIM and FS/SIM simultaneous within a single sample injection

MS/MS Mode: full scan (FS), MRM/SRM and FS/MRM/SRM simultaneous within a single sample injection The instrument control must have the ability to alternate between Full Scan MS and SRM/MRM/SIM target analysis on successive scans. Vacuum system Air-cooled Turbo Molecular Pump of a

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minimum capacity of 240L/Sec and above Fore line/Rotary Pumps with oil mist Filter 30ml/min for initial Vacuum build-up
Should have leak check facility.

EI scan sensitivity Signal-to-noise (S/N) : >1500 at m/z 272 for 1pg OFN in EI scan.

EI MRM sensitivity: Signal-to-noise (S/N): 8000 or more for the transition from m/z 272 to m/z 241 for 100fg OFN in EI MRM

Data Management System / Software: User friendly software must be provided for seamless control of the system and should have software controlled Auto tune or manual tune to enable quick start up for quantitative analysis.

Flame Ionization Detector :

- Wide Range for GC with Auto reignition facility with temperature range of 450°C
- Minimum Detection Limit: <1.4 Pg C/s or better
- Dynamic Range 10⁷ (±10%) or better

MS library: Latest version of NIST 2017 ms library/database for 500 pesticides or more must be provided; Library for antibiotics and other chemicals (viz. Mycotoxins, antioxidants, alkaloids, etc.) is also desirable.

Suitable Pesticides analyzer kit with database for over 1800 SRM Transition and Pre Installed methods for Food analytes should be offered.

Computer System: Suitable branded PC (Window Workstation with a 22" Monitor) with inbuilt software & tested for fool proof operation to operate the instrument with Laser Jet Printer

Gas cylinders : High Purity Helium-Qty2, High Purity Nitrogen-Qty-2, High Purity Hydrogen-Qty2, High Purity Zero air-Qty2, Argon Gas filled cylinders Double Stage SS Diaphragm Regulator for the gases, Gas Purification Panel for All gases to be offered.

GC Capillary Columns : Two suitable non polar column for forensic analytes and blood alcohol analysis. One for suitable capillary columns for metabolites.

Housing, Installation and Demonstration:

The minimum facility (Tables, Electrical & gas panel fittings, The GC-MS/MS system should be installed free of cost. Onsite Demonstration & Training of the system by the application specialist to our Lab Personal followed by issuance of training certificates to the trainees. Arrangement for free of cost advanced training (including travelling, accommodation for two laboratory persons) is desirable.

Warranty & System Calibration: At least 5 years onsite warranty should also be quoted along with the offer; System calibration should be done once in every year with issue of calibration certificate as per ISO: 17025 during the warranty and CMC period.

Performance certificate: Performance certificate from at least 5 users of reputed organizations is to be attached along with technical bid.

Essential Accessories

1. Guarantee- one year
2. Comprehensive warranty for entire system next 2 years
3. Non comprehensive AMC for next 3 years. Please provide year wise AMC offer.
4. CMC for next 2 years, please provide year wise CMC offer (including service charges or any other taxes if applicable).
5. Complete operational trainings to be provided to working analysts at site.

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6. All related and essential accessories are to be quoted.
7. At least 10 day's onsite training after installation should be provided.
8. Spare parts for two years/Requisite must be supplied with the system for smooth operation.
9. Installation, commissioning at the end user site - free of cost.

10. UPS- 10KVA Online UPS with minimum 1 hours backup to be quoted.

11. Suitable computer , color printer and all other related accessories.

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Specifications for Automatic Distillation Apparatus (Item No. - (2))

Technical Specification for Auto Distillation Equipment As per test method ASTM D 86 D850, D1078, IP 123 and ISO 3405, IS 1448: part 18 is as per following.

Auto Distillation Units should be a compact self-contained Instruments with liquid coolant free cooling system, delivered with all accessories to immediately begin testing. It should include one number each of the following: 125 ml flask, 100 ml receiver, vapor probe with centering device, heater plates 38 and 50 mm, Flask connection silicon tubes, receiver cap and condenser cleaner.

The Equipment should have the facility to calculate Cetane Index as per D 4737 and D 976 and Driveability Index according to D 4814.

User Interface: Large 10" graphic TFT-LCD color touch screen and Alpha Numeric key pad with dedicated function keys and solvent proof protection. The distillation analyzer should have connectivity ports such as USB ports, HDMI and Bluetooth/Wifi to connect to mouse, keyboard, printer and monitor without any need of a PC.

Flask Heating System: Low mass and low voltage non-contact heater with self-positioning heating system and automatic heater lifting and lowering. Heating coil should not be in contact with the flask to avoid any damage to the flask. Fully automatic initial heat settings, distillation rate regulation and final heating regulation, to start test select the group and push start button.

Condenser Temperature range 0 to 80°C programmable constant temperature, temperature ramping or special temperature profile, instantaneously ready at switch on, automatic cooling via peltier cooling and switch between groups within 5mins. Receiver chamber should be capable of maintaining programmable temperature from 0 to 60°C and also should measure the charge volume before distillation.

The analyzer volume measurement system should have image capture based optical sensor technology with +/- 0.1ml accuracy and +/- 0.01ml Resolution.

The analyzer should have facility to detect temperature of the flask and LED system to indicate the operator.

The analyzer should have facility to detect right flask attached to the condenser line.

Instrument should be able to perform manual distillation with ASTM thermometer and manual heating control.

The pt100 sample vapor temperature probe should be wireless and easy to connect. It should have the facility to adjust the probe position in the flask without removing from the flask.

The door and the heating element in the heating chamber should move automatically without any manual intervention.

The offered instrument should have a built-in calibrated atmospheric pressure sensor and humidity sensor.

The analyzer should have built in fire extinguishing system with Optical fire sensor, and will automatically shut down the heater and other power devices in case of fire. The instrument should also detect whether the inert gas is connected or not.

The equipment should have Sensors to monitor and alert operators for the following cases: a) absence or improper placing of temperature probe in distillation flask b) Absence of distillate receiver cylinder c)

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Absence of distillate drop plate d) Wrong heater base plate e) condenser not cleaned f) Receiver Chamber door open e) flask not in position. The software should have function to disable the above sensors.

The analyzer software should have Temperature and Volume calibration functions and should store the calibration data with Last Calibration date, due and frequency of calibration etc. The software should have provision to record error log.

Supplier should supply below consumables and spares necessary for trouble free operation of the distillation analyzer.

Distillation Flask 125ml: 10 Nos.

Measuring cylinder with metal base: 5 Nos

Sample pt100 sensor: 1 Nos

Heater Plate 38mm & 50 mm: 2 Nos. Each

Boiling Stones: minimum 200g

Condensor Cleaning wire with plugs: 1 Nos

Drip Plate: 1 Nos.

Condensor stopper: 5 Nos.

CRM Gasoline & Diesel: 250ml each

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Technical Specification for Automatic Density Meter with Autosampler

- Automatic Density Meter should determine the density and Specific Gravity of liquid sample by Oscillating U tube Method.
- The temperature of the sample should automatically be maintained at 20°C by built-in Peltier thermostat. Temperature measuring range from 0 to 100 °C and accuracy: 0.001°C
- Density measuring accuracy should be $\pm 0.000005 \text{ g/cm}^3$ and Density Measuring Range Should be 0 to 3 g/cm^3 , Repeatability: 0.000001 g/cm^3 ,
- System should have features to check filling process and have full range of viscosity correction, compatible with low and high viscous sample.
- System should be upgradable for determining alcohol concentration directly in sugar based liquor, Vodka, Rum, Tequila, Beer, Wine and spirits without need for distillation.
- Density meter should equipped with facility to measure alcohol concentration in Wine, Cider, Whisky, Cognac, Vodka, Gin, Rum, Tequila, all kinds of beer and beer mix drinks, Molasses and Wash without distillation.
- Instrument should have facility to send notification automatically when a service interval, check interval or audit trail interval is due.
- Instrument should be equipped with 4 x USB, Ethernet, VGA, CAN, RS-232 interfaces.
- Instrument should be upgradable to measurement turbidity, pH and Color in one measuring cycle directly out of bottle.
- Easy-to-use data processing software: Microsoft Excel add-in for reading out measurement data should be part of the standard supply.
- System should be equipped with preinstalled built-in sample changer.
Sampling: Measurement of up to 24 samples in one cycle where one sample is displaced by the other.
Sample loading: Plain Displacement
Modes: Displacement by generating bubbles in initial pump phase
Displacement by pumping back and forth in initial pump phase.

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- The display should be 10.4" touchscreen that uses projected capacitive technology (PCT/PCAP).
- Instrument should automatically detect filling errors or gas bubbles in the filled in sample without need for manual check. It should alert the operator of potential measurement deviations and document the incident.
- The picture of entire U-tube with filled in sample should get stored in the memory for later review and verification. This picture should be printed directly onto the every measurement report.

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Specification of Hot Plate

- ❖ Rectangular shape
- ❖ Size – 30 x 11 inch
- ❖ Temperature 250 o C
- ❖ Heating Plate – Cast iron
- ❖ Controller – Energy Regulator
- ❖ Power supply – 220-230 Volts, 50 Hz
PID controls
Stain less steel heating plate
Digital Temperature display

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SPECIFICATION

Stirred Water Bath

- 1) It should have Full SS GMP construction with seamless inner tank
- 2) It should have PID Temperature controller with soak timer and end of cycle alarm
- 3) It should have independent over-temperature self resetting safety cut-off with alarm
- 4) It should have uniformity $\pm 0.1^{\circ}\text{C}$
- 5) It should have Resolution 0.1°C
- 6) It should have stirring achieved by an efficient, continuously rated, self cooling motor with SS shaft and propeller of anti corrosive material
- 7) One Year warrenty.

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DEEP FREEZER

Item No. 15

110

SPECIFICATIONS

LOW FREEZER (-20°C) – Low Freezer - UPRIGHT TYPE-CE Marked

DESIGN:

Exterior	Outer cabinet made of stainless steel AISI 304 grade
Interior	Inner tank made of stainless steel AISI 304 grade.
Shelves/ Trays	Thick epoxy plastic coated Steel shelves, adjustable
Doors	Double external doors for convenient use.
Sub-doors	Four sub-doors made of stainless steel.
Insulation	Non-CFC, high density, Polyurethane Foam insulation of 75mm thickness.
Heater Line	Hot line around the front of the cabinet to prevent moisture condensation.
Castors	Equipment mounted on Heavy duty swivel castors with brakes.

REFRIGERATION: (Non-CFC, Non-HCFC)

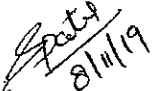
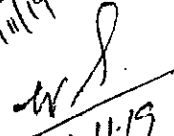
Compressor	Heavy duty hermetically sealed compressor.
Refrigerant	Non-CFC, eco-friendly refrigerant.
Condenser	Air-cooled condensation system, aided by continuous rated motor fan.
Cooling coil	High purity (99.9%) copper cooling coil all around the inner cabinet.

CONTROL SYSTEM: (Microprocessor Based)

Controller	Microprocessor based temperature control system.
Display	Digital LED display of set and process temperature.
Alarms	Audio-visual alarms for High/Low temperature (deviation).
Probe	Fast response, NTC sensor for accurate temperature measurement.

OTHER FEATURES:

Safety	Refrigeration system with over-load protectors and MCB tripper.
Stabilizer	Automatic Voltage Stabilizer with time delay restart
Calibration	Temperature calibration traceable to National standards.


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