

**GOVERNMENT OF ARUNACHAL PRADESH  
OFFICE OF THE DIRECTOR GENERAL OF POLICE  
POLICE HEADQUARTERS: ITANAGAR**

NO.PHQ (PROV)- 30/2025-26

Dated Itanagar, the 17<sup>th</sup> February, 2026.

**TENDER NOTICE – CUM – TERMS AND CONDITIONS**

On behalf of the Governor of Arunachal Pradesh, the Director General of Police, Arunachal Pradesh invites Sealed Tender under two-bid system (Technical Bid & Financial Bid) from manufacturers, authorized agents, dealers, or suppliers of reputed firms for entering into a contract for the supply & installation of FSL Equipments for DNA/Cyber Forensic and Narcotic Divisions under Nirbhaya Scheme during the year 2025-26. For details please visit our website-www.arunpol.nic.in.

**1. Description of items to be procured / Approx. Cost of tender / Earnest money required etc.:**

SL No	Description of items to be procured	Approx. Cost of tender	Earnest money required	Tender Fee (Non-refundable)
1.	Procurement & installation of FSL Equipments for DNA/Cyber Forensic and Narcotic Divisions under Nirbhaya Scheme during the year 2025-26 (items details along with specifications attached at <b>Annexure- ‘A’</b> )	<b>Rs. 2,59,37,565/-</b> <b>Note:</b> However, subjected to the availability of fund release by the MHA, Gol.	Rs.5,20,000/-	Rs. 1,000/- <b>Note:</b> To be deposited through eGras Portal of Govt. of Arunachal Pradesh in favour of AIGP (E), PHQ, Itanagar

**2. Critical date sheet:**

Sl.	Particulars	Date	Time
1	Date of publication of Tender	<b>18/02/2026</b>	
2	Bid submission start date	From the date of publication onward	
3	Bid submission end date	<b>11/03/2026</b>	<b>1100 hrs</b>
4	Submission of Tender fees (cost of tender documents)	Tenderers who wish to obtain tender document from PHQ, Itanagar, must submit a copy of challan paid through the eGras Portal of Govt. of Arunachal Pradesh in favour of AIGP (E), PHQ, Itanagar.	
5	Date of Technical bid opening	<b>11/03/2026</b>	<b>1130 hrs</b>

**3. The Tender documents must be provided in two (02) covers:**

**4. Cover-1 (Technical BID):** It shall contain scanned copies of eligibility information as under:

- (a) Tender Fee deposited receipt (paid through eGras Portal of Govt. of Arunachal Pradesh in favour of AIGP (E), PHQ, Itanagar under the Head of Account “0055-Police”).
- (b) Technical bid along with its specifications leaflet, brochure, catalogue / literature, if any, of each tendered item.



- (c) Tender documents duly completed and signed but without any indication of the rates "Quoted".
- (d) Earnest Money must be attached in the form of TDR / FDR / Demand Draft / NSC / KVP etc. from Nationalized Bank / Post offices duly pledged in favour of Asstt. Inspector General of Police (E), PHQ, Itanagar. The firms registered under MSME are exempted for earnest money for the items mentioned in the MSME certificate. They must submit and attested copy of MSME registration certificate.
- (e) Copy of PAN Card (attested by Gazetted Officer).
- (f) Copy of firm registration (attested by Gazetted Officer).
- (g) Copy of firm GST Registration (attested by Gazetted Officer).
- (h) Copy of Valid Trading license (attested by Gazetted Officer) issued by competent authority for the tendered items.
- (i) Copy of Current and valid Certificate/ Letter of authority from the Original Manufacturer for the tendered items.
- (j) Copy of Financially soundness certificate / Bank Solvency Certificate of current financial year.
- (k) Undertaking regarding non-blacklisting of the firm on non-judicial stamp paper of Rs.100/- by Notary or Magistrate.
- (l) All the tender papers must be serialized / numbered, and an index / checklist must be submitted at the beginning of the tender papers indicating the pages of the relevant documents. Tenders without index / checklist shall be summarily rejected.
- (m) A Separate Technical Compliance Statement against each tendered items should be enclosed along with the Technical Bid, clearly specifying any deviation for all specifications mentioned in the tender **Annexure- 'A'** on the firm's letterhead.
- (n) The rates should be quoted F.O.R (Freight on Road) up to PTC, Banderdewa. The firm must write "Yes" in the checklist/index of technical bid.
- (o) 10 (Ten) years' service and spare parts support after the warranty period should be provided on a payment basis. In this regard, an undertaking must be submitted by the participating firms.

**5. Cover-2 (Financial BID):** It shall contain documents on "Financial Bid / Price Bid" only.

- (a) Rates must be written clearly in figures as well as in words, showing GST separately in Indian currency.
- (b) Offers with such stipulation like "as applicable" will be treated as vague and the bid may be rejected.
- (c) Financial Bid will be opened only for those bidders who have been declared technically qualified by the Technical/Specification Evaluation Board/Committee.
- (d) The date of opening of Financial Bid will be intimated to the firms found technically qualified.



## GENERAL INSTRUCTIONS:

1. The tenders received after scheduled date & time will not be entertained. The tenderers or their representative may remain present at the time of opening of tenders to show original documents for cross verification, if required.
2. There should be no cutting or overwriting.
3. The Tenderer / Firm who fails to fulfill the eligibility conditions will be summarily rejected.
4. The Tenderer must clearly mention the origin/ manufacture of the equipment being supplied. In line with Government of India Policies order. Imported items should be declared and categorized appropriately.
5. Import Clearance Responsibilities related to customs clearance, import duties, logistics, and inland transportation shall be borne by the Indian distributor/ dealer.
6. The offered equipment and all related components must comply with relevant Indian statutory, safety and environmental regulations.
7. Firms must submit all documents (as mentioned in cover-1) including the EMD, cost of Tender documents, to the office of Assistant Inspector General of Police (E), Police Head Quarters, Itanagar, Arunachal Pradesh on or before **11/03/2026 at 1100 hrs.** The experience certificate (if any) must contain the name, designation, address, Phone No., Mail ID of issuing officer. The certificate should be countersigned by concerned OFFICE HEAD/DEPT. HEAD.
8. In case tender opening day is declared as holiday or bandh call at Itanagar, the tenders shall be received up to next working day till 1100 hrs. and opened on the same day at 1130 hrs.
9. Rates must be written clearly in figures as well as in words, showing GST Separately.
10. The bidders should keep checking the website for any addendum / corrigendum to the notice/ Bidding documents till the date of submission of bids and the bidder should incorporate the same in his bid documents.
11. Conditional bids and the bids not meeting the qualifying criteria on the date of receipt of bids shall be summarily rejected.
12. Before submission of bids, bidders must ensure that scanned copies of all necessary documents have been attached with bid.
13. The department will not be responsible for delay in submission due to any reason(s).
14. All the required information for the bid must be filled and submitted.
15. The details of EMD and other documents specified in the tender documents should be same as submitted (scanned copies), otherwise tender will be summarily rejected.
16. **Conditions:** The goal of the Procurement & installation of FSL Equipments for DNA/Cyber Forensic and Narcotic Divisions under Nirbhaya Scheme during the year 2025-26 is to complete the design, implementation and installation of the system and to achieve full production operations within 12 weeks after contract award or as soon as technical feasible.
17. If the tenderer who fails to supply the material/ perform the task assigned to him in the purchase order, within the period prescribed for such delivery specified above, the AIGP (E), or other competent authority, shall be entitled at his discretion to the actions as under Graded **liquidated damages** for delay in the delivery of all or any good or performance of services will be liable for as under:
  - i. For first 30 days @ 1% of the value of the goods.
  - ii. For next 60 days @2% of the value of the goods.

- iii. For delay above 2 month/ over & up to 4 months @ 4% of the value of the goods.
- iv. Beyond 4 months and up to 6 months @ 5% of the value of the goods & on expiry of 6 months the contract would automatically get nullified and Security Money Deposit would be forfeited.
18. The tender papers containing full details with specifications and terms and conditions can be obtained from Dy. Superintendent of Police (Provisioning), PHQ Itanagar, on showing of Payment receipt of Rs. 1,000/- (Non-refundable) in favour of the Asstt. Inspector General of Police (E), PHQ, Itanagar, Arunachal Pradesh paid through eGras Portal of Govt. of Arunachal Pradesh on any working day from 0930 hrs. to 1600 hrs w.e.f. **18/02/2026 to 10/03/2026**. The tender documents may also be downloaded from our website. The tenderers downloading the documents from website are also required to submit a copy of challan of Rs. 1,000/- as tender fees in favour of the Asstt. Inspector General of Police (E), PHQ, Itanagar, Arunachal Pradesh paid through eGras Portal of Govt. of Arunachal Pradesh. No other mode of payment will be accepted.
19. The technical information provided with the references must demonstrate or support the capability of the proposed technology to satisfy the identification functionality and performance requirements of this solicitation tender.
20. Successful tenderers will be required to deposit 5% of the total value of the articles to be supplied as performance security money within 10 days from the date of issue of letter of acceptance of tender. The successful tenders will have to enter into a "DEED OF AGREEMENT" stipulating the Terms and Conditions of the contract.
21. Non fulfillment of any or all the Terms & Conditions of Contract, performance security deposit and EMD of the successful tenderer will be forfeiture and supply order issued to the firm shall be cancelled.
22. Rates should be quoted F.O.R FSL, PTC, Banderdewa (A.P) and rates quoted other than F.O.R FSL, PTC, Banderdewa (A.P) shall not be accepted. No packing or forwarding charges will be allowed. The rate of GST (as applicable) may be charged/quoted by the tenderers and the amount be clearly mentioned for all items. The rate should be quoted in Indian currency both in figure and words clearly. Tenders must be legible and clear in all respects else the tenders shall be liable to be rejected.
23. Tenders should be addressed to the undersigned by designation and not by name. The separate sealed envelope containing all the tender documents (i.e. two separate Covers (i) Technical Bids and (ii) Financial Bid) should be subscribed as "Tender for supply & installation of FSL Equipments for DNA/ Cyber Forensic and Narcotic Divisions under Nirbhaya Scheme at PTC Banderdewa during the year 2025-26 for Arunachal Pradesh Police and sent by Registered Post / Speed Post / Courier Service or put in the Tender Box kept in the office of the undersigned (Provisioning Branch) on any working day from 0930 hrs to 1600 hours. ***The tenders received after scheduled date & time will not be entertained.***
24. Any breakage or loss of items will be at the supplier's risk.
25. Delivery of the stores will have to be completed within 90 days from the date of issue of supply order. In case of failure to supply the items in time, violation of any provision of Deed of Agreement, the firm is liable to be blacklisted.
26. If any item is found damaged or otherwise unacceptable at the time of delivery/inspection, the supplier will be required to remove the same from PTC Banderdewa, Arunachal Pradesh at their own cost within 15 days. The demonstration of the items shall be conducted at the time of acceptance by the Board of Officers. The items not found as per specifications shall be rejected.

27. Payment will be made to the supplier directly on completion of supplies / installation and after acceptance/ inspection by the Govt. constituted Board.
28. The Director General of Police, Arunachal Pradesh, Itanagar reserves the right to reject the lowest or all or any of the tenders without assigning any reason thereof.
29. The Director General of Police of Arunachal Pradesh, Itanagar shall have the right to ask the firms to demonstrate their items before the items are accepted.
30. List of equipments/items with description & specification is enclosed at Annexure- "A". The quantities mentioned in the enclosure are all approximation and subject to variation as per actual availability of funds.
31. Tenders will remain valid upto 12 months from the date of publication of this tender.
32. All items to be supplied shall be under warranty as mentioned in Annexure-A against each items/ equipments from the date of acceptance.
33. In case of any dispute, the legal jurisdiction will be at Itanagar, Arunachal Pradesh.
34. In case of any query, the tenderers may contact at following phone no./mail ID.

Officers	Telephone	E-mail ID
Asstt. Inspector General of Police (E), PHQ, Itanagar	94360-40005(Mobile)	cc-polita.arn@nic.in
Dy.SP (Prov),PHQ, Itanagar	76428-21135(Mobile)	cc-polita.arn@nic.in

**Note: In view of the Govt. policy of "Vocal for Local" and "Atma Nirbhar Bharat" to encourage local entrepreneurs vide No. FIN/E-30/2017/675 dated 19/08/2020, the firm registered within Arunachal Pradesh can only participate in the tender process.**

  
 Asstt. Inspector General of Police (E)  
 Police Head Quarters, Itanagar  
Arunachal Pradesh  
 Asstt. Inspector General of Police (E)  
 Police Head Quarters, Itanagar  
 Arunachal Pradesh

**Technical Specification for FSL Equipments for DNA/Cyber Forensic and Narcotic Divisions under Nirbhaya Scheme during the year 2025-26.**

1. DNA DIVISION			
Sl. No.	Items/ Equipments	Technical Specification	Quantity
1.	PCR Kits	<p><b>Item Name: PCR Kit</b> Should include master mixes, polymerases, reagents, beads, reverse transcriptase, buffers, and kits for standard PCR procedures that do not require high specificity, fidelity, sensitivity, precise quantification, or yield.</p>	1 No.
2.	DNA sequencing kits	<p><b>Item Name: DNA Sequencing Kits</b></p> <ul style="list-style-type: none"> <li>• Industry-leading coverage uniformity and recovery rate for library construction</li> <li>• Rapid and flexible enzymatic library construction methodology</li> <li>• Optimized use with both the Ion PGM™ and the Ion Proton™ Systems</li> <li>• Fast workflow, with completion of library preparation in as little as 2 hours</li> <li>• No physical shearing device requirement, saving time and cost</li> </ul> <p>A Single-Day Workflow: The Next Stage in a Sequencing Revolution With a turnaround time of as little as 2 hours, the Ion Xpress™ Fragment Library Kit shortens the Ion sequencing workflow to a single workday, making comprehensive analyses of your sample(s) of interest possible in less time than ever before. Furthermore, Ion Xpress™ Plus fragment libraries exhibit greater coverage uniformity and higher recovery rates across diverse sample types than other library construction methodologies, so you can be confident of generating the best data in the shortest time.</p> <p>Ion Torrent Sequencing Made Simpler, Faster, and More Affordable Ion Shear™ Plus DNA fragmentation technology, included in the Ion Xpress™ Plus kit, obviates the need for costly physical shearing devices for most applications and requires as little as 100 ng of sample, accelerating your path to semiconductor sequencing. This flexible technology provides users the ability to adjust the resulting DNA fragment size to accommodate a range of sequencing read lengths depending on their project requirements. This technology is also amenable to automated library preparation systems such as the AB Library Builder™ System to provide quick answers when you need them most. Ion Shear™ Plus DNA fragmentation technology is not included in the Ion Plus kit. Use the Ion Plus kit if physical shearing methods are preferred.</p> <p>Quantity 10 Reactions Sample Type DNA Technique Post-Light™ Ion Semiconductor Sequencing Template Compatibility Genomic DNA Workflow Step Library Generation Format Kit Sequencing Type Genome and DNA Sequencing</p>	1 No.
3.	DNA Extracting kits	<p><b>Item Name: DNA Extracting Kits</b> Genomic DNA extraction kits, reagents, and supplies for sensitive and scalable purification. The products should include plasmid mini prep and maxi prep kits, PCR purification kits, genomic DNA purification kits, and plasmid purification kits.</p>	1 No.

4.	Dry bath	<p><b>Item Name: Dry Bath</b></p> <p>Digital dry baths, which offer a range of configurations with interchangeable modular blocks for a variety of application needs. Designed for basic to advanced applications with a max temperature of 130°C, a timer and available in 1, 2 and 4 block sizes. In a range of configurations to hold 1, 2 and 4 interchangeable modular blocks to accommodate a variety of vessels and applications.</p> <ul style="list-style-type: none"> <li>• Digital controls and display of time and temperature</li> <li>• Advanced internal temperature sensing probe for outstanding temperature accuracy and control</li> <li>• Precise temperature control with PID circuit</li> <li>• Temperature calibration allows the user to offset the temperature to desired value</li> <li>• Timer allows the user to accurately monitor the heating time</li> <li>• Wide range of interchangeable aluminium alloy heat blocks provide versatility and allow for easy cleaning and disinfecting</li> <li>• Powder-coated steel body construction ensures durability</li> <li>• Built-in over-temperature protection device ensures sample and user safety</li> <li>• Temperature deviation adjustment</li> </ul> <p>Applications:</p> <ul style="list-style-type: none"> <li>• Sample preparation</li> <li>• Enzyme preservation</li> <li>• Enzyme-substrate reactions</li> <li>• DNA amplification</li> <li>• Electrophoresis gel degeneration</li> <li>• Serum coagulation</li> </ul> <p>Required Accessory:</p> <ul style="list-style-type: none"> <li>• Unit must be ordered with block(s) Range of configurations to hold 1, 2 and 4 interchangeable modular blocks to accommodate a variety of vessels and applications.</li> <li>• Digital controls and display of time and temperature</li> <li>• Advanced internal temperature sensing probe for outstanding temperature accuracy and control</li> <li>• Precise temperature control with PID circuit</li> <li>• Temperature calibration allows the user to offset the temperature to desired value</li> <li>• Timer allows the user to accurately monitor the heating time</li> <li>• Wide range of interchangeable aluminum alloy heat blocks provide versatility and allow for easy cleaning and disinfecting</li> <li>• Powder-coated steel body construction ensures durability</li> <li>• Built-in over-temperature protection device ensures sample and user safety</li> <li>• Temperature deviation adjustment</li> </ul> <p>Applications:</p> <ul style="list-style-type: none"> <li>• Sample preparation</li> <li>• Enzyme preservation</li> <li>• Enzyme-substrate reactions</li> <li>• DNA amplification</li> <li>• Electrophoresis gel degeneration</li> <li>• Serum coagulation</li> </ul>	1 No.
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		<p>Required Accessory:</p> <ul style="list-style-type: none"> <li>Unit must be ordered with block(s)</li> </ul> <p>Specification:</p> <p>Certifications/ Compliance CE, cULus, RoHS</p> <p>Controller Type PID digital</p> <p>Dimensions (L x W x H) 318 x 200 x 100 mm (12.5 x 7.9 x 3.9 in.)</p> <p>Frequency 50/60 Hz</p> <p>Fuse 250V 2.5A</p> <p>Heating Rates ≤ 20 min. 30° to 130°C</p> <p>Height (English) 3.9 in.</p> <p>Height (Metric) 100 mm</p> <p>Includes Dry Bath, Block Lifter</p> <p>Length (English) 12.5 in.</p> <p>Length (Metric) 318 mm</p> <p>Lighting LED</p> <p>No. of Blocks 2 (sold separately)</p> <p>Plug Type CN, EU, UK</p> <p>Temperature Accuracy ≤ ± 0.5°C</p> <p>Temperature Uniformity ≤ ± 1°C</p> <p>Timer 0 to 99:59 min or continuous</p> <p>Type Dry Block Heater</p> <p>Warranty 2 Year, Replacement</p> <p>Weight (English) 7.28 lb.</p> <p>Weight (Metric) 3.3 kg</p> <p>Width (English) 7.9 in.</p> <p>Width (Metric) 200 mm</p> <p>Material Powder-coated Steel</p> <p>Relative Humidity &lt; 80%</p> <p>Temperature Range (Metric) Ambient +5° to 130°C (Ambient at 25°C)</p> <p>Voltage 200/240 V</p>																			
5.	Temperature controlled water bath	<p><b>Item Name: Temperature Controlled Water Bath</b></p> <table border="1"> <tr> <td>Chamber Material</td> <td>Stainless Steel</td> </tr> <tr> <td>Controller Type</td> <td>Digital</td> </tr> <tr> <td>Description</td> <td>10L General Purpose Water Bath</td> </tr> <tr> <td>Capacity (Metric)</td> <td>10 L</td> </tr> <tr> <td>Certifications/Compliance</td> <td>UL, CE</td> </tr> <tr> <td>Temperature Range</td> <td>Ambient to 100°C</td> </tr> <tr> <td>Display</td> <td>Monochrome LCD</td> </tr> <tr> <td>Heating Capacity</td> <td>800 w</td> </tr> <tr> <td>Includes</td> <td>Clear Polycarbonate Gable Cover and Rubber Duck</td> </tr> </table>	Chamber Material	Stainless Steel	Controller Type	Digital	Description	10L General Purpose Water Bath	Capacity (Metric)	10 L	Certifications/Compliance	UL, CE	Temperature Range	Ambient to 100°C	Display	Monochrome LCD	Heating Capacity	800 w	Includes	Clear Polycarbonate Gable Cover and Rubber Duck	1 No.
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		<p>Material Epoxy Powder -coated Steel</p> <p>Temperature Presets 4</p> <p>Temperature Stability <math>\pm 0.1^{\circ}\text{C}</math></p> <p>Temperature Uniformity <math>\pm 0.2^{\circ}\text{C}</math></p> <p>Dimensions (L x W x H) 15.5 x 15.1 x 9.2 in. (393 x 383 x 233 mm)</p> <p>Electrical Requirements 120/230V 50/60 Hz</p> <p>Amperage 6.0-7.0 / 2.8-3.4 (120V/230V)</p>	
6.	Analytical Balance	<p><b>Item Name: Analytical Balance</b></p> <p><u>SPECIFICATIONS:</u></p> <p>Readability   Scale interval (d) 0.1 mg</p> <p>Maximum capacity (Max) 220 g</p> <p>Weighing system EMC</p> <p>Repeatability</p> <p>At 5% load, typical value <math>0.08 \pm \text{mg}</math></p> <p>At approx. maximum load <math>0.1 \pm \text{mg}</math></p> <p>Typical value Linearity deviation</p> <p>Limits <math>0.2 \pm</math></p> <p>Typical value <math>0.06 \pm \text{mg}</math></p> <p>Sensitivity drift between <math>1.5 \pm \text{ppm/K}</math></p> <p>+10 °C and +30 °C</p> <p>Tare maximum capacity (subtractive) &lt;100% of maximum capacity</p> <p>Temperature change 1.5 K</p> <p>Time interval. h</p> <p>Accuracy class I</p> <p>Verification scale interval (e) 1 mg</p> <p>Minimum load (Min) 10 mg</p> <p>Optimum minimum initial weighing 0.082g Typical minimum initial weighing 0.16g</p> <p>Typical measurement time <math>\leq 2.0\text{s}</math></p> <p>Typical stabilization time <math>\leq 1.5\text{s}</math></p> <p>External calibrated test weight 200g</p> <p>Accuracy class in accordance With OIML R111-1</p> <p>Weighing pan size <math>\varnothing 90\text{mm}</math></p> <p>Weighing chamber height 240mm</p> <p>Net weight, approx. 6.20 kg</p> <p>Gross weight, approx. 8.00 kg</p>	1 No.

7.	Mechanical Shaker	<p><b>Item Name: Mechanical Shaker</b> Should Provide smooth, accurate and orbital mixing of various vessels in the lab</p> <ul style="list-style-type: none"> <li>• Speed range: 50 – 500 rpm</li> <li>• Precise speed control:</li> <li>• ±1 rpm (≤100rpm)</li> <li>• ±1% (101 - 450rpm)</li> <li>• Orbit Diameter: 10mm</li> <li>• Max Load up to 4.5 kg</li> <li>• 2 Timer modes: Continuous, Timer</li> <li>• Multi-platform choices for loading all sizes vessels in the labs.</li> </ul> <p><u>Specification:</u> Amperage40 VA Controller TypeLED Dimensions (D x W x H) Interior383 x 284 x 130 mm (15.1 x 11.2 x 5.1 in.) Dimensions (LxW) Platform310 x 284 mm (12.2 x 11.2 in.) Dimensions (L x W x H)487 x 387 x 264 mm (19.2 x 15.2 x 10.4 in.) DisplayLED Frequency50/60 Hz Height (English)5.1 in. Height (Metric)130 mm Humidity Range20 to 85% Load Bearing Capacity (English)9.92 lb. Plug TypeEU, UK, CN Plug Product TypeDigital Mini Rotator Shipping Weight (English)36.2 lb. Shipping Weight (Metric)16.4 kg Speed Control Accuracy±1 rpm (≤100 rpm), ±1% (101 to 500 rpm) Timer Range1 min. to 99:59 hr., Continuous Certifications/Compliance CSAus, CE, RoHS Load Bearing Capacity (Metric)4.5 kg ModelDigital Mini Rotator Orbit10 mm Speed Range50 to 500 rpm Voltage230 V</p>	1 No.
8.	Handheld Forensic Light source with UV and IR capability along with photographic filters	<p><b>Item Name: Handheld Forensic light source with UV and IR Capability along with photographic filters</b></p> <p>Illuminate evidence with precision using Forensic Light Source Kit. Crafted for meticulous investigation, this comprehensive toolkit should equip forensic experts with a range of high-intensity light sources tailored for diverse examination needs. Unveil hidden traces, fingerprints, bodily fluids, and more with unmatched accuracy. From UV to infrared, the kit should offer versatile wavelength options, ensuring thorough scrutiny across various crime scenes. Portable and user-friendly, it should empower forensic teams to conduct efficient on-site analysis, enhancing investigative outcomes. With cutting-edge technology and ergonomic design, the Forensic Light Source Kit should stand as an indispensable asset for forensic professionals, unraveling the mysteries concealed within the shadows of evidence.</p>	1 No.

9.	UV Sterilizer chamber	<p><b>Item Name: UV Sterilizer chamber</b>  U.V. CHROMATOGRAPHY: Inspection cabinet for viewing and detecting separated substances on T.L.C. layers fitted with long wave (365nm) U.V. Lamp to be used on 220V/50Hz AC.</p>	1 No.
10.	Bio-safety cabinet	<p><b>Item Name: Biosafety Cabinet</b></p> <p><u>Specifications:</u>  Depth (English) Exterior31.5 in.  Depth (Metric) Exterior80 cm  Energy Consumption (Operating Set Point)200 W  Energy Consumption (Reduced Flow Mode)70 W  For Use With (Application)For Research Only  Height (English)61.8 in.  Height (Metric)156.8 cm  IncludesAdjustable Stand, UV, Armrests  Plug TypeIndia  Sash Opening (English)10 in.  Width (English) Exterior51.2 in.  Width (English) Interior47.2 in.  Width (Metric) Exterior130 cm  Width (Metric) Interior120 cm  Certifications/ComplianceNSF  Chamber MaterialSmartCoat  Model1500 Series A2  Noise Level&lt;63 dBA  Power Consumption200 W  Product TypeType A2 Biosafety Cabinet  Receptacles2 Single  Sash Opening (Metric)25 cm  Volume (Metric) Exhaust582 m<sup>3</sup>/hr.</p>	1 No.
11.	Fume hood	<p><b>Item Name: Fume Hood</b>  Size: 3'x2'x2'  Description:  Fume Hood (complete) 220-240V 50Hz, should be recommended for Forensic laboratories.  Fume exhaust hoods should be designed to contain and exhaust toxic, obnoxious or otherwise harmful vapors, mist etc. A motor blower system generates negative pressure within the enclosure extracting the contaminated air from the work area and expels it into the atmosphere.</p> <p><b>SELF-EXHAUSTING FUME CABINET:</b></p> <ul style="list-style-type: none"> <li>○ Fabricated out of best quality thick board laminated with mat finished MICA sheet.</li> <li>○ Inner chemical resistant epoxy painted, working floor covered with S.S. Sheet.</li> <li>○ A sliding sash made of aluminium frame, which move vertically up and down, with counter balanced weight capable of stopping at ant desired height.</li> <li>○ Fluorescent lights, Sink and water inlet/outlet are provided in the chamber.</li> <li>○ A cupboard and drawer should also be provided at the bottom.</li> </ul>	1 No.

12.	-80 °C Deep freezer	<p><b>Item Name: - 80°C Deep freezer</b>  Get Connected  Connect remote monitoring solution enabling to keep track of the equipment anytime, anywhere. The system supports independent sensors to monitor the instrument, should also be connected via serial port directly to the instrument, harnessing the on-board telemetry data, alarms, and events. All information should be able to transmitted to the Connect cloud platform which should have 24/7 access to the information via Instrument Connect's web- and mobile-based applications.  DLCKTULTS101 — Ultra-low temperature freezer  *Each kit includes a Device Link Connect system, 1-year basic monitoring subscription, power cable, commissioner USB, mounting hardware and an applicable serial or USB cable.  Independent Device Link Connect Sensors</p> <ul style="list-style-type: none"> <li>• DLCSKTEMP001 — Device Link Connect PT100 (-200°C to +600°C) temperature sensor and Smart-Cable adapter</li> <li>• DLCSKCURT001 — Device Link Connect current transducer (0-50A) with Smart-Cable adapter</li> <li>• DLCPTDOOR001 — Door Switch</li> </ul> <p>Footnotes:  1. Internal data comparing 11.2 kWh/day to UXF600 = 14.9 kWh/day. Data on file.  2. Typical freezer test data based on internal testing in ambient temperature at 20°C; Typical standard validation protocol of ±10°C.</p> <p>Access Security Key Lock Standard, Padlock Compatible  Amperage6.5 Amp  Backup SystemsCO2 or LN2 Optional  Casters4  Chart Recorder Optional  Color Gray  Condenser Type Fan-forced  Data OutputsRS485/4-20mA output/Dry Contacts  Defrost Manual  Depth (English) Exterior38.5 in.  Depth (English) Interior28.3 in  Depth (Metric) Exterior97.7 cm  Depth (Metric) Interior71.9 cm  Display HIC Interface, 7-Segment Display with capacitive touch screen  Door Opening Recovery15 minutes  Drawers None  Electrical Requirements230V, 50 Hz, 1 Phase  Energy Usage10.4kWh/day  Exterior Finish Powder-coated Steel  For Use With (Application)Storage of General (non-flammable) Laboratory Materials  For Use With (Equipment)Storage racks  Frequency50 Hz  Height (English) Exterior78 in.  Height (English) Interior51.2 in.  Height (Metric) Exterior1981 mm  Height (Metric) Interior1300 mm</p>	1 No.
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		<p>Hinge Side Left          Holds 40,000 sample vials          Includes Shelves, power plug          Inner Doors 4          Insulation Vacuum, Foam          Interior Painted steel          Length (English) Exterior 38.5 in.          Length (English) Interior 28.3 in.          Length (Metric) Exterior 978 mm          Length (Metric) Interior 719 mm          Min. Clearance 30 cm          No. of Racks 16          No. of Racks per Kit 4          Operating Modes Standard Mode          Peak Variation at -80C +5.7/-3.5          Phase One          Ports Yes          Probe Type Single RTD (1000 ohm Platinum RTD)          Rack Capacity 16          Refrigerant R290/R170+R290 Mix          Set point Security Yes          Shipping Weight (English) 687 lbs.          Shipping Weight (Metric) 312 kg          Smart View Compatibility Yes          Typical Lifetime 10 years          Vial Capacity 40,000          Warm up Time -80 C to -50C 271 minutes          Warranty 5 years parts          Water Cooled No water cooling          Weight (English) 595 lbs.          Weight (Metric) 270 kg          Width (English) Exterior 28.3 in.          Width (English) Interior 23.1 in.          Width (Metric) Exterior 719 mm          Cabinet Material Cold-rolled Steel          Capacity (English) 19.4 cu. ft.          Capacity (Metric) 549 L          Certifications/Compliance CE          Chamber Material Cold-rolled Steel          Compressor H-drive          Door Style Latched Pull-out Swing          Monitoring Options Available separately          No. of Doors 1 (1 compartment)          Plug Type EU          Shelves 3          Style 312 kg          Temperature Range -50°C to -86°C          Voltage 230 Vs</p>	
13.	Drying cabinet	<p><b>Item Name: Drying Cabinet</b>          The outer should be made of mild steel, with powder coated paint. Inside stainless steel. The door should have glass window. The temperature can be</p>	1 No.

		controlled from 5°C above ambient to 60°C ± 1°C. Built in L-shape prismatic thermometer. The humidity should be controlled by humidity stat from atmospheric humidity up to 90% ± 3%.	
14.	Tissue Lyser	<p><b>Item Name: TISSUE LYSER</b></p> <p><u>Specification :</u></p> <ul style="list-style-type: none"> <li>• Weight: Approx. 7 kg,</li> <li>• Width: 150 mm,</li> <li>• Depth: 270 mm,</li> <li>• Height: 280 mm,</li> <li>• The power supply of the Tissue Lyser LT is compatible with voltages of 100–240 V</li> <li>• Disruption principle: -High-speed shaking of samples in 2 ml micro centrifuge tubes with stainless steel or glass beads</li> <li>• Protocol/main application on this instrument: - Sample preparation/sample disruption</li> <li>• Features: -Simultaneous disruption of up to 12 samples. Compact instrument with small footprint. Coolable adapter to prevent biomolecule degradation. Reproducible results with all sample types. Compatible with all laboratory workflows.</li> <li>• Technology: - Bead Mill</li> <li>• Kits compatible with instruments: - All kits for purification of DNA and RNA</li> <li>• Typical run time: - 40 sec - 5 min, depending on protocol</li> </ul> <p><b>STAINLESS STEEL BEADS, 5 MM (200) (Cat 69989)</b></p> <ul style="list-style-type: none"> <li>• Should provide stainless steel beads and tungsten carbide beads for use in</li> <li>• Sample disruption with TissueLyser systems.</li> <li>• High-speed shaking of sample material and a single bead in a Collection Micro tube or 2 ml micro centrifuge tube for a few minutes allows rapid and efficient disruption of the sample.</li> </ul> <p>For easy dispensing of beads into tubes, TissueLyser Bead Dispensers should also be available.</p>	1 No.
15.	Mini Spin	<p><b>Item Name: Mini Spin</b></p> <p>Product Overview:</p> <p>The mini centrifuge should be designed to give maximum speed and flexibility in a minimized footprint. It should have compact, ergonomic design to fit on any workstation and is comfortable and easy for anyone to operate. Safety features help ensure it will not operate when the lid is open, a rotor is jammed, or the unit is out of balance. Should be Ideal for most protocols requiring fast spins (12,500rpm / 9,800 xg), and appropriate for PCR, microfilter cell separation, and HPLC protocols.</p> <p>Features:</p> <ul style="list-style-type: none"> <li>• Small footprint for efficient use of lab space</li> <li>• Easy operation, with back-lit, customizable display that can be set for rpm or RCF</li> <li>• Designed for quick and pulse spins</li> <li>• Able to perform fast spins with RCF requirements up to 9,800xg</li> <li>• Quiet operation, low vibration</li> </ul>	1 No.

		<ul style="list-style-type: none"> <li>• Safety features including imbalance and tilt safety cut-out, as well as safety interlock lid designed to prevent opening while rotor is turning</li> <li>• Includes 2 rotors to accommodate 0.2, 0.5, 1.5, 2.0 mL microcentrifuge tubes and PCR strip tubes</li> <li>• Tool-free, quick rotor exchange</li> </ul> <p>Specifications:  Certifications/Compliance: CSA, CE, UL  Description: mySPIN 12 Mini Centrifuge  Dimensions: (HWD)4.4 x 6.7 x 8 in. (11.4 x 17.1 x 20.3 cm)  Electrical Requirements: 110/240 V 50/60 Hz  Frequency: 50/60 Hz  Includes: 12 x 1.5/2.0mL rotor, 32 x 0.2mL rotor (singles or 4 x 8 strip), 0.2mL adapters (set of 12), 0.5mL adapters (set of 12), Universal power adapter 110-240V 50/60 Hz with 4 interchangeable plug types  Net Weight: 3.1lb. (1.41 kg)  Noise Level: 51-53 dB(A)  Rotor: 2 Rotors to Accommodate 0.2, 0.5, 1.5, 2 mL Microcentrifuge Tubes, PCR</p> <p>Strip Tubes  Run Time: 1sec to 30min (1sec increments); Quick Spin  Standards: IEC 61010-1, IEC 61010-2-020  Temperature Range: Ambient temperature  Type: Bench top Centrifuge  Voltage: 115 V  Warranty: 2 Years  Capacity: 12 x 2 mL  Max. RCF9,800 x g  Max. Speed12,500 rpm</p>	
16.	Hot air oven	<p><b>Item Name: Hot Air Oven</b></p> <ul style="list-style-type: none"> <li>➤ Capacity (Metric): 65L</li> <li>➤ Temperature (Metric): 50°C to 250°C</li> <li>➤ Type: Gravity Convection</li> <li>➤ No. of Shelves: 2 supplied/13 max.</li> <li>➤ Temperature Stability: ±0.4°C</li> <li>➤ Timer: ON / OFF</li> <li>➤ Dimensions (D x W x H) Interior: 16.3 x 12.9 x 18.9 in.(41.5 x 32.8 x 48 cm)</li> <li>➤ Dimensions (L x W x H): 22.2 x 20.9 x 28.3 in. (56.5 x 53x 72 cm)</li> <li>➤ Length (English): 22.2 in.</li> <li>➤ Length (Metric): 56.5 cm</li> <li>➤ Width (English): 20.9 in.</li> <li>➤ Width (English) Interior: 12.9 in.</li> <li>➤ Width (Metric): 53 cm</li> <li>➤ Width (Metric) Interior: 32.8 cm</li> <li>➤ Height (English): 28.3 in.</li> <li>➤ Height (English) Interior: 18.9 in.</li> <li>➤ Height (Metric): 72 cm</li> <li>➤ Height (Metric) Interior: 48 cm</li> <li>➤ Depth (English) Interior: 16.3 in.</li> </ul>	1 No.

		<ul style="list-style-type: none"> <li>➤ Depth (Metric) Interior: 41.5 cm</li> <li>➤ Electrical Requirements: 230 V 50/60 Hz</li> <li>➤ Voltage: 230 V</li> </ul>	
17.	Mix Mate	<p><b>Item Name: Mix Mate</b> Gain variable speed and temperature control with Thermal Mixer, which comes with a choice of blocks for microtubes and microplates.</p> <ul style="list-style-type: none"> <li>• Heating and cooling capability to cover a wide range of applications</li> <li>• Compact size with quiet operation</li> <li>• Convenient packages that include a Thermal Mixer with a Block Mixer Features</li> <li>• Fast heat-up and cooling times and quick to reach specified mixing speed</li> <li>• Temperature control range : 15°C below ambient to 100°C</li> <li>• Temperature setting range : +4°C to 100°C</li> <li>• Shaking speed : 250 to 1400 rpm</li> <li>• Temperature stability : ±0.1°C</li> <li>• Even mixing across the thermoshaker block</li> <li>• Excellent uniformity across the block</li> <li>• Digital timer with sound alarm : 1 min to 96 hours</li> <li>• Temperature calibration function – compensate for differences in the thermal behavior of different tubes and samples</li> <li>• Choice of 5 interchangeable blocks</li> <li>• LCD Display indicates the set and actual time of operation, mixing speed, and temperature</li> <li>• Heating/Cooling and mixing functions can be run independently of each other.</li> </ul>	<b>1 No.</b>
18.	Gel electrophoresis system	<p><b>Item Name: Gel electrophoresis system</b> System should come with 7 X 7cm, 7 X 10cm ,15 X 10 cm and 15 X 15cm tray and suitable combs</p> <ul style="list-style-type: none"> <li>• Must have an option to accommodate 15X15 cm, 15X20cm, 15X25 cm trays also for larger gels in the same system to eliminate the need for a separate system for maxi gels.</li> <li>• Cell size: 18 X 40.5 X 9.4 cm.</li> <li>• A mini gel unit comes bundled with the system.</li> <li>• System must include electrophoretic chamber, UV transparent trays, casting gates, gel caster, etc.</li> <li>• System come with two 1.5 mm thick fixed height combs (15 and 20 well) and option for other combs for each gel tray of varied specifications.</li> <li>• UV transparent trays have integrated fluorescent ruler.</li> <li>• System has IEC1010 or equivalent electrical safety certification.</li> <li>• The quoted system has minimum 50 installations in India supported by Installation list.</li> </ul> <p>POWER SUPPLY:-</p> <ul style="list-style-type: none"> <li>• Programmable Output range: <ul style="list-style-type: none"> <li>• 10 – 300V, fully adjustable in 1V steps</li> <li>• 4 – 400mA, fully adjustable in 1mA steps</li> </ul> </li> </ul>	



		<ul style="list-style-type: none"> <li>• Maximum Power: 75W</li> <li>• Built-in timer range – 0 – 999min, fully adjustable.</li> <li>• Output Terminal: Four (04) pair recessed banana jacks in parallel.</li> <li>• Pause / Resume function: Yes, Display: 3-digit LED</li> <li>• Operating Conditions: 0 – 40°C; 0 – 95% humidity</li> <li>• Regulatory certification – EN-61010, ISO &amp; CE Certified.</li> <li>• Safety Features: <ul style="list-style-type: none"> <li>- No-load detection</li> <li>- Sudden load change detection</li> <li>- Over-load / short-circuit detection.</li> </ul> </li> </ul>	
19.	Microtome	<p><b>Item Name: Microtome</b></p> <p><u>Specification</u></p> <ul style="list-style-type: none"> <li>• Automatic Microtome should have stepper motor driven specimen feed and vertical and horizontal cross roller bearing mechanism to ensure accurate reproducibility of section thickness</li> <li>• Automatic Microtome should have Section thickness selection from 0.5µm to100 µm with following setting range 0.5µm-5 µm in 0.5 µm increment and 5 µm -20 µm in 1 µm increment</li> <li>• 20 µm -60 µm in 5 µm increment and 60 µm – 100 µm in 10 µm increment</li> <li>• Automatic Microtome should have trimming setting from 1µm to 600µm or more with step trim function and retraction setting at 5 µm - 100 µm in 5 µm increments &amp; user can turn off.</li> <li>• Automatic Microtome should have motorized slow forward and backward coarse feed speed at 300 µm/s, fast forward speed at 800 µm/s &amp; fast backward speed at 1800 µm/s and sectioning speed of 0.0 to 420 mm/sec</li> <li>• Automatic Microtome should have user selectable memory function &amp; fast homing in less than 15Sec to increase efficiency &amp; throughput by rapid specimen exchange while trimming or microtoming.</li> <li>• Automatic Microtome should have specimen horizontal feed of Approx. 23 mm to 25mm via stepper motor and vertical stroke length of 70 mm with Vibration Free Mechanism for trimming &amp; sectioning.</li> <li>• Automatic Microtome should have sectioning modes: Single, Continuous, Step &amp; rocking mode with retraction function, Modes Speed, to be controlled by nob, on external control panel in cutting window for better efficiency</li> <li>• Automatic Microtome should be able to work with external foot switch optionally for automatic operation.</li> <li>• Automatic Microtome Hand wheel with gravitational force compensation system should make rotating the hand wheel extremely smooth, light &amp; avoids vibrations while sectioning or microtoming, further facilitate convenient &amp; safe specimen clamp exchange without requiring modification of hand wheel.</li> <li>• Automatic Microtome should have electronic braking for safe blade &amp; specimen handling, so that will automatically hold object head after motorized sectioning in upper position, activated on separate control unit.</li> </ul>	1 No.

- Automatic Microtome should have standard silent specimen retraction for working in a silent environment to improve ability & concentration.
- Automatic Microtome should have removable top tray with rim avoids falling tools, contributing to a safer working environment on flat top of
- Microtome to allow user for placement of larger object & increase efficiency and further cleaning & maintaining of instrument.
- Automatic Microtome should have personalized coarse feed hand wheel in ergonomic position with user selectable direction selection to improve comfort & rapid specimen exchange.
- Automatic Microtome with force balance hand wheel should facilitate convenient & safe specimen clamp exchange without requiring modification of hand wheel & minimize risk of injury from unbalanced object head, to user & specimen further, reduce instrument wear & tear.
- Automatic Microtome should have removable antistatic waste tray to reduce contamination and provides unmatched efficiency through shortened cleaning times.
- Automatic Microtome Hand wheel should have facility to center handle while operating with force compensation for other modes. Emergency stop knob on microtome for convenience & safety.
- Automatic Microtome should be with Precision orientation Quick clamping system for rapid specimen clamp exchange, with Zero Position Indicator for ease in re-cuts, fast return to 0 position for new specimen. Compatible & Supplied with Standard Specimen Clamp & Universal Cassettes Clamp for paraffin blocks
- Auto Microtome should be supplied with disposable blade holder with lateral displacement, Compatible for both types of high & low profile blades and Specimen orientation of  $\pm 8^\circ$  degree both horizontally and vertically
- Microtome should have safety mechanism with integrated knife guard with blade ejection lever with coloured safety guard to cover blades & magnetic brush for safe removal of blades & protect user from injury & infection.
- Automatic Microtome should have rocking mode to minimize risk of developing repetitive motion disorders.
- Automatic motorized rotary microtome should be with a separate control panel with adjustable inclination & speed control by nob & other settings & all controls on the instruments along with external control unit.
- Automatic Microtome should be supplied with low/ high profile blades packet with premium coating, advanced design & top-grade materials, high precision, to consistently achieve finely cut sections
- Automatic Microtome should have manufactured with Safety features in compliance with c-CSA-US and CE/ US-FDA standards/ registrations mandatory.
- Automatic Microtome should have installations at Govt. state/ central Institutes of National Importance, list of 100 Installations, performance certificate of quoted or similar model with allocated factory trained service engineer from the Manufacturing Company, Training certificate should be attached for technical evaluation.

- Automatic Microtome with force balance should allow & handle various block sizes & optionally upgradable in future with Electrically Cooled clamp & block temperature is kept cold for longer duration of Universal Cassette Clamp Adapter & achieves temp 20 K less than ambient temperature, useful for serial sections.

**Item Name: Micro Centrifuge**

Should be Ideal for everyday laboratory use up to 21,100 x g, microcentrifuges should provide outstanding processing power, unique safety features and a broad array of microcentrifuge rotors and accessories for microcentrifuge tube processing. Refrigeration should offer cooling from room temperature to set temperature in just 9 minutes.

Support micro-volume separation needs with:

- Exceptional acceleration of up to 21,000 x g in as little as 12 seconds
- Refrigerated versions to offer cooling from room temperature to set temperature in as little as 9 minutes
- Should have the following optional microcentrifuge rotors to find the ideal fit for each application:
  - Outstanding corrosion resistance with lightweight engineered polymer rotors.
  - Standard rotor runs 24 microcentrifuge tubes in a single row, from 1.5 to 2.0 mL tubes to mini-preps and spin columns
  - Ergonomic one-click rotor opening and closing, as well as transparent design for added safety and convenience with biocontainment lids
  - Eliminate the need for adapters with unique dual row rotor
- Simplify operation with intuitive controls, easy-to-read displays and fast one-click centrifuge lid closure.
- Sleek, lightweight, space-saving design.
- Durable and easy to clean and maintain.
- Quiet performance promotes a safe, stress-free environment.
- Conforms to the latest clinical and safety standards, including 98/79/EC In Vitro Diagnostic Directive.

Certifications/Compliance CSA, CE, IVD

Dimensions (HWD) 12.9 x 11.6 x 17.5 in. (33.0 x 29.5 x 44.5 cm)

Electrical Requirements 230 V 50/60 Hz

Frequency 50/60 Hz

Model Sorvall Legend Micro 21R

Net Weight 62.0 lb. (28.0 kg)

Noise Level 50 dB(A)

Rotor 24 x 1.5/2 mL Rotor with Clickseal Biocontainment Lid

Run Time 1 to 99 min. (1 min. increments); HOLD

Standards IEC 61010-1, IEC 61010-2-020 (refer to manual for more details)

Temperature Range -9°C to +40°C

Type Benchtop Centrifuge

Voltage 230 V

Warranty 2 Years

Capacity 24 x 1.5/2 mL

Max. RCF 21,100 x g

Max. Speed 14,800 rpm

Product Line Sorvall

Refrigerated Yes

20. Micro centrifuge

1 No.

21.	Vortex mixer	<p><b>Item Name: Vortex Mixer</b></p> <p>Load Bearing Capacity (Metric) 0.5 kg</p> <ul style="list-style-type: none"> <li>• Speed Range 200 to 3000 rpm</li> <li>• Electrical Requirements 100/240 V</li> </ul> <p>Voltage 230 V</p> <p>Product Type Digital Vortex Mixer</p> <p>Certifications/Compliance cCSAus, CE, Certificate of Analysis (COA), Certificate of Analysis(COA)</p> <p>Plug Type EU, UK, CN Plug</p> <p>Frequency 50/60 Hz</p> <p>Material Rubber, Plastic Platform</p> <p>Dimensions (L x W x H) 8.1 x 5.9 x 5.2 in. (20.5 x 15.1 x 13.1 cm)</p> <p>Height (English) 5.2 in.</p> <p>Height (Metric) 13.1 cm</p> <p>Length (English) 8.1 in.</p> <p>Length (Metric) 20.5 cm</p> <p>Width (English) 5.9 in.</p> <p>Width (Metric)15.1 cm</p> <p>Shipping Weight (English) 14.6 lb.</p> <p>Shipping Weight (Metric) 6.6 kg</p> <p>Model Digital Vortex Mixer</p> <p>For Use With (Equipment) Rocker, Rotator, mixer</p> <p>Operating Modes Touch, Continuous Timer Range 1 to 99 min., Continuous</p>	1 No.
22.	Magnetic stirrer and stirring bars	<p><b>Item Name: Magnetic Stirrer and stirring bars</b></p> <p>To Get precise stirring control for routine protocols using digital stirrers. The Stirring Hotplate Series should be available in three sizes, providing flexibility from microscale chemistries to production operations.</p> <p>Advanced technology</p> <ul style="list-style-type: none"> <li>• Stir-Trac features innovative engineering for slow-speed stirring, consistent speed control, and strong magnetic coupling</li> <li>• Temperature adjustable in 1 degree increments</li> <li>• Hot Top warning system protects from accidental burns with prominent display when heating surface is above 50°C (122°F)</li> </ul> <p>Flexible, robust design</p> <ul style="list-style-type: none"> <li>• Top plate choices in ceramic or aluminum</li> <li>• Easy-to-read LED display for heating and stirring, besides 4"x 4" Hotplate Stirrer, which has digital temperature and analog stirring control.</li> <li>• Raised display design protects electronics from spills</li> <li>• Optional temperature probe and splash guard protection shield</li> <li>• Variable sizes for different sample volumes</li> </ul> <p>Specifications:</p> <p>Dimensions (L x W x H)7.25 in. x 7.25 in.</p> <p>Electrical Requirements230 V 50/60 Hz</p>	1 No.

		<p>Frequency 50/60 Hz  Height (English) 3.8 in.  Height (Metric) 9.7 cm  Includes Power Cord  Length (English) 13 in.  Length (Metric) 33 cm  Shape Square  Shipping Weight (English) 11.2 lb.  Shipping Weight (Metric) 5.1 kg  Type Stirring Hotplate  Weight (English) 11.2 lb.  Weight (Metric) 5.1 kg  Width (English) 8.2 in.  Width (Metric) 20.8 cm  Certifications/Compliance Certificate of Analysis (COA), Certificate of Conformance (COC)  Display LED  Plug Type UK  Size 7.25 x 7.25 in.  Stirring Range 50 to 1500 rpm  Temperature (Metric) Ambient to 540°C  Top Plate Material Ceramic  Voltage 230 V</p>	
23.	Biological hoods and chambers	<p><b>Item Name: Biological hoods and Chambers</b>  Specifications:  Amperage 8 A to 10 A  Description 25.4 cm Window  Dimensions (L x W x H) Exterior 31.5 x 39.4 x 61.8 in. (80 x 100 x 156.8 cm)  Electrical Requirements 120 V, 50/60 Hz  Filter Efficiency 99.995% MPPS  Filter Type H14 HEPA EN 1822, 99.995% MPPS  Frequency 50/60 Hz  Height (English) Exterior 61.8 in.  Height (English) Max. Opening 21 in.  Height (Metric) Exterior 156.8 cm  Height (Metric) Max. Opening 53.5 cm  Length (English) Exterior 31.5 in.  Length (Metric) Exterior 80 cm  Load Bearing Capacity (English) 110 lb.  Load Bearing Capacity (Metric) 50 Kg  Plug Type NEMA 5-15  Ports 1 x Each Side Panel  Sash Opening (English) 10 in.  Service Fixtures 6 (3 on Each Side)  Width (English) Exterior 39.4 in.  Width (English) Interior 35.4 in.  Width (Metric) Exterior 100 cm  Width (Metric) Interior 900 mm  Certifications/Compliance NSF/ANSI 49, UL, CE</p>	1 No.

		Chamber MaterialStainless Steel (304) Model1300 Series Noise Level63 dBA Sash Opening (Metric)25.4 cm Voltage120 V Volume (Metric) Exhaust15 L	
24.	Digital Microscope	<p><b>Item Name: Digital Microscope</b>  <u>Forensic Digital Microscope Systems :</u>          These are lab-grade microscopes used in forensic labs (not consumer hobby models):</p> <p style="padding-left: 40px;">Forensic Comparison &amp; Digital Microscope- 2x-240x Motorized Digital Forensic Comparison Microscope Wide magnificent range for comparing specimens and detailed visualization.</p> <p><u>Specifications of Forensic Digital Microscopes:</u>  <u>Optical &amp; Imaging System :</u></p> <ul style="list-style-type: none"> <li>• Magnification range: ~2x-240x (wide range for both large and fine details).</li> <li>• Digital capture: Built-in high-resolution CCD/CMOS camera (commonly ~3 MP up to higher resolution sensors).</li> <li>• Live display options: USB output to PC, HDMI, or integrated LCD screen (e.g., ~9.7" LCD).</li> <li>• Eyepiece optics: Wide field eyepieces WF10x, WF20x with interpupillary adjustment (48-75 mm).</li> <li>• Objective types: Infinity plan achromatic</li> <li>• objectives (0.5x to 6x) with auxiliary lenses (0.4x and 2.0x).</li> </ul> <p><u>Mechanical &amp; Imaging Performance:</u></p> <ul style="list-style-type: none"> <li>• Working distance: ~95 mm 101 mm (to allow room for sample manipulation).</li> <li>• Field of view: ~2.3 mm to ~62 mm depending on optics configuration.</li> <li>• Stage motion: X/Y/Z movement ranges typically ~54 mm in each axis; some models have motorized stages.</li> <li>• Split/overlap view: For comparison microscopes, simultaneous left/right or superimposed image display enhances evidence comparison.</li> </ul> <p><u>Illumination &amp; Filters :</u></p> <ul style="list-style-type: none"> <li>• Light sources: Adjustable combinations of halogen, LED, coaxial light, and optional UV / polarizing filters.</li> <li>• brightness adjustment: Independent control of light intensity and angle for better contrast and fine detail.</li> </ul> <p><u>Software &amp; Output:</u></p> <ul style="list-style-type: none"> <li>• Image capture and analysis software: Professional forensic imaging tools support measurement, annotation, and reporting.</li> <li>• Video &amp; digital output: USB or HDMI interfaces to transfer live images/video to PCs or screens.</li> <li>• Compatibility: Can integrate with lab information systems for documentation and case linkage</li> </ul>	1 No.

25.	Refrigerators	<p><b>Item Name: Refrigerator</b></p> <ul style="list-style-type: none"> <li>• Frost Free double door Refrigerator greater than 300 L: Auto defrost function to prevent ice-build up</li> <li>• Capacity 322 L: Suitable for families with 5 or more members   freezer capacity: 81 L, fresh food capacity: 241 L</li> <li>• Energy Rating: 3 Star Energy Efficiency   Annual Energy Consumption: 242 Kilowatt Hours per Year</li> <li>• Manufacturer warranty: 1 year on product; 10 years on compressor (T&amp;C Apply)</li> <li>• Storage or Interior description: Total no of shelves - 02 (Trimless Tempered Glass); Vegetable box Capacity - 28 Ltr. (GPPS Transparent), Pull out tray – Slide out for easy reach, Egg Tray, Anti-bacterial gasket – Protects food from bacteria &amp; dust, Anti rat bite (Steel Sleeve) in double door refrigerator</li> <li>• Exclusive Features: Convertible – Freezer to fridge conversion offers you more space to suit your needs in double door refrigerator, Multi Air Flow - Distribute and circulate cool air to every corner for proper and even cooling; Temperature Control- I Micom, Express Freeze, Smart Diagnosis – Detects problem automatically</li> <li>• Additional Features: Deodorizer - eliminates bad smells and preserves food's original flavor and aroma for longer, Work without stabilizer, Twist Ice Maker, Handle type – Pocket, Smart Connect – Automatic home inverter connection</li> <li>• Item Dimensions &amp; Weight: 60 CM (Width) x 71 CM (Depth) x 164 CM (Height)   59 Kg (Weight)</li> </ul>	1 No.
26.	Anthropological Measurement tools and kits	<p><b>Item Name: Anthropological Measurement tools and kits</b></p> <p>The materials and equipment in this kit should allow to implement a series of anthropology labs. Should be able to use the pelvises, humeri, and femurs for the Sex and Race Determination Labs or do an analysis of the large bones to establish a probable height. The kit should come with male and female skulls and pelvises from various races (European, Asian, and African descent) as well as a series of measuring tools: calipers, rulers, and protractors.</p> <p>The kit should include:</p> <ul style="list-style-type: none"> <li>• European Female Skull with jaw</li> <li>• European Male Skull with jaw</li> <li>• Asian Male Skull with jaw</li> <li>• African Male Skull with jaw</li> <li>• Female pelvis skeleton</li> <li>• Male pelvis skeleton</li> <li>• Right humerus bone</li> <li>• Left femur bone</li> <li>• 6 small calipers</li> <li>• 8 flexible plastic rulers</li> <li>• 4 protractors</li> <li>• 1 large caliper</li> </ul>	1 No.

27.	Stereo microscope	<p><b>Item Name: Stereomicroscope</b></p> <p>Detailed specifications for stereo (dissecting) microscopes used in forensic laboratories - especially for pre-DNA extraction evidence examination, documentation, and sample prep. In forensic work, stereo microscopes are used to visually inspect biological and physical evidence (e.g., hair, fibers, bone fragments, tool marks) before DNA extraction or to aid in locating cells/biological material - they are supporting tools rather than DNA sequencers.</p> <p><u>Specifications for Forensic Stereo Microscopes:</u></p> <p><u>Optical &amp; Magnification:</u></p> <ul style="list-style-type: none"> <li>• Standard zoom range: ~2x - 80x (extend to ~100x or more with auxiliary lenses).</li> <li>• Zoom stereos: Continuous magnification (6.7:1 zoom ratios or 16x zoom ranges).</li> <li>• True 3D imaging: Two optical paths allow depth perception to examine surfaces and structures.</li> </ul> <p><u>Imaging &amp; Documentation:</u></p> <p>Modern forensic stereo microscopes should support:</p> <ul style="list-style-type: none"> <li>• Optional trinocular heads for cameras.</li> <li>• Built-in digital imaging - integrated sensors (e.g., 3 MP-5 MP) that connect via USB to a PC for still images/video.</li> <li>• Live display output and software support for annotation, measurement, and archiving court-ready images.</li> </ul> <p><u>Illumination:</u></p> <ul style="list-style-type: none"> <li>• Good illumination is critical for contrast and detail:</li> <li>• Reflected (top) light: LED or halogen adjustable light sources - most forensic stereo microscopes include dual lighting for flexible angles.</li> <li>• Transmitted (bottom) light: Available for semi-transparent materials like fibres or thin films.</li> <li>• Polarizing lighting / filter options: useful for examining birefringent materials like some fibres or crystals.</li> </ul> <p><u>Working Distance:</u></p> <ul style="list-style-type: none"> <li>• Large working distance: Typically ~90-110 mm or more, allowing room to manipulate samples under the lens crucial for forensic handling.</li> </ul> <p><u>Image capture and analysis software:</u></p> <ul style="list-style-type: none"> <li>• Professional forensic imaging tools support measurement, annotation, and reporting.</li> <li>• Video &amp; digital output: USB or HDMI interfaces to transfer live images/video to PCs or screens. <a href="http://optomicroscope.com">optomicroscope.com</a></li> <li>• Compatibility: Can integrate with lab information systems for documentation and case linkage.</li> </ul>	1 No.
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28.	Gel Documentation system	<p><b>Item Name: Gel Documentation System</b></p> <p>Should Capture western blot and gel images and analyze data efficiently and easily with the Invitrogen Imaging System. This system supports basic imaging applications associated with chemiluminescent western blots, as well as fluorescent stained nucleic acid gels, fluorescent stained protein gels, and colorimetric stained protein gels.</p> <p>The Imaging System should support the main imaging applications associated with chemiluminescent and colorimetric western blots, as well as fluorescent stained nucleic acid gels, fluorescent stained protein gels, colorimetric stained protein gels, and colorimetric membrane stains. The Imaging System should feature the same imaging capabilities and also offer fluorescent western blot imaging capability.</p> <p>Features of the Imaging System:</p> <ul style="list-style-type: none"> <li>• 9.1 MP cooled CCD camera—high sensitivity and dynamic range to help enable the detection of subtle differences in samples</li> <li>• Smart Exposure technology—provides rapid determination of optimal exposure time to help minimize the need to repeat exposures to acquire the desired signal</li> <li>• High Dynamic Range imaging*—Smart Range HDR combines optimized short and long exposures into a single HDR image to capture an extended linear dynamic range and providing high-quality non-saturated data for improved quantitation</li> <li>• Simple interface—clear layout of functions and features combined with a 12.1-inch capacitive touchscreen for a smooth imaging experience</li> <li>• 22.5 x 18.0-cm field of view—large field of view for high-throughput imaging (image up to four mini or two midi blots at a time)</li> <li>• Green LED-based transilluminator—effectively excite popular DNA dyes such as ethidium bromide and SYBR Green dyes with an alternative to UV-based transilluminators</li> <li>• Expanded imaging applications*—capture and analyze visible, chemiluminescent or fluorescent stained colonies on single- or multi-well cell culture plates using the optimized imaging channels and onboard analysis workflows</li> <li>• Flexible connectivity—export captured images via ethernet connection, Wi-Fi (with optional accessory), USB, or directly to our Connect cloud-based platform</li> <li>• Multiple image analysis options—perform densitometry, quantitation, and normalization directly using the on-instrument software, or for more in-depth analysis use Analysis Software (available in both desktop and cloud-based versions)</li> </ul>	1 No.
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29.	pH Meter	<p><b>Item Name: pH meter</b></p> <p>Specification:</p> <p>pH Range: -2.000 to 18.000 Resolution:0.1,0.01,0.001 Relative Accuracy: ±0.005</p> <p>Calibration Calibration Points: Up to 5 Calibration Editing: Yes</p> <p>Calibration pH buffer USA: 1.68, 4.01, 7.00, 10.01, 12.46 sets DIN: 1.68, 4.01, 6.86, 9.18, 12.46</p> <p>Read type Continuous, Auto-Read, Timed</p> <p>Status of pH electrode pH electrode condition icon should be displayed in home screen.</p> <p>mV/RmV Range: ±2000.0 mV</p> <p>ORP Mode Yes</p> <p>Temperature Range: -5 to105oC</p> <p>Data logging Memory :500 with time and date stamp.</p> <p>Display 5" backlit LCD</p> <p>Ingress Protection IP-54 rating</p> <p>Rating</p> <p>Certification CE, TUV</p> <p>Power 220VItUniversal power adapter.</p> <p>pH electrode Epoxy body pH/ATC electrode, Precision:0.02, Temp:0-100°C.</p> <p>Warranty Meter:3 Years Electrode:12 months .</p>	1 No.
30.	-20 °CDeep Freezer	<p><b>Item Name: Freezer – 20°C</b></p> <p>Technical specification :</p> <p>Capacity: 200-400 litre</p> <p>Inner shelf: 5-6 Refrigerant: CFC free</p> <p>Temperature control: Micro-processor controlled, Digital display with temperature resolution of0.1°C Alarms: Low/high temperature, power failure</p> <p>Door closing and locking adjustment: self closing door with key door lock, adjustable levelingfeetstandard (optional casters )</p> <p>Power supply: 210-240V/50-60 Hz Positive forced-air circulation incorporate water blown foam Mercury-free LED interior lighting externally mounted internal light switch capacity of 23 cubic feet</p> <p>1 minutes door opening recovery of less than or equal to 19 minutes Freezer set-point security</p> <p>Freezer set of four casters standard and installed in factory Freezer keyed on/off power switch</p> <p>Freezer door ajar alarm and icon Freezer service alarm and icon</p> <p>System has a RS485 output, dry contacts and 4-20mA output (Optional) for remotemonitoring purposes.</p> <p>DLH/connectivity enabled low battery alarm</p> <p>graphic thermometer</p> <p>(4) internal wire shelves</p>	1 No.

		<p>standard 1   rear access port standard standard remote alarm terminals  standard Freezer have cULus listed  Freezer meet requirements for dual language (French and English) Freezer  haveEnergy Star rated and certified to the laboratory refrigeration standard  Freezer have incorporate V-Drive, variable speed control system Freezer have  use environmentally friendly HC refrigerants Freezer have operate at less than  or equal to 52 dba  Freezer have Energy Star rated for laboratory use  Freezer have meet the requirements for safe vaccine storage per the CDC  Freezer have support a standard settable range of -25C to -15C  Freezer have support GMP Clean Room Class A / ISO 6 (ISO EN 14644-1)  Freezer have include soft touch grip for door handles  Warm Up Time (-20C to 0C) (min) during power failure will be :169 Minutes  Freezer with standard Pressure Equalization Port (PEP) for easy and quick door  re-opening  Having Remote alarm contacts, RS485 output and 4-20 mA output (optional)  for connectivity andcentralized monitoring.  Electronic lock compatible  System will be compatible with optional door access control electronic lock  with  password and user.  Inbuilt Battery Backup for control Panel during power failure for 48 Hours  Keyed on/off switch with set point security as per Regulated Guidelines to  avoid any changes on setParameters.  Temp Test™ Alarm Test facility will be provided. Creates simulated over  temperature and under temperature condition for audible and visual alarms  testing without changing actual cabinet temperature.  Freezer have 1000 Ohms PT1000 High Accuracy control sensor for excellent  accuracy</p>	
31.	Digital Autoclave	<p><b>Item Name: Digital autoclave</b></p> <p><u>Features:</u>  With Present Automatic Digital control cum timer  SS-304 double walled construction  Saves over 20% in electricity cost and does not heat up the room  Convenient handy-raise for lid lifting  With SS wire mesh carrier (S) and spare gasket <u>Technical Specification:</u>  Capacity: 35 Ltrs  Usable Inner Dimensions: 300x500mm (12x20  ) Heater Power: 1.8kw  Duty Cycle: Four cycles in eight hour shift with a 30 minute cooling period  External Dimensions(WxDxH): 590x450x930mm</p>	1 No.
32.	Liquid Handling System	<p><b>Item Name: Liquid handling system</b></p> <p>Perform sample transfers between virtually any tube, rack, microplate or  horizontal gel box quickly and efficiently with the Equalizer Pipette. Adjustable  tip spacing allows to set the distance between tips by simply sliding the scale  to expand or contract to the desired labwareformat.TheMyPipette™Creator  app should enable programming of E1-ClipTip from the comfort of PC  Innovative ClipTip interlocking tip interface technology*</p>	1 No.

- Tip is locked and sealed in place until ejected — no dropped tips that waste valuable samples
- Complete seal to secure the sample volume in each tip for enhanced accuracy and precision.
- Tips are attached and ejected with a light touch — eliminates the frustration of banging tips on the pipette

My Pipette Creator to revolutionize the way pipette with a new era of technology

- New web-based pipetting app
- Enables efficient, centralized programming and sharing of protocols between E1-ClipTip pipettes and colleagues
- Offers pre-programmed protocols, to download and share, for many of your favorite reagent kits and pipetting protocols
- Connect E1-ClipTip pipette to the app via a Bluetooth\*\* or USB connection.
- Accelerate collaboration and reproducibility, all from the comfort of your computer.

E1-ClipTip pipette to help you enjoy pipetting

- E1-ClipTip is designed for optimum comfort and ease of use: the electronic tip ejection and index finger pipetting action let your thumb relax during pipetting.
- Two operating options: Step-based Matrix or Presets with settings for your most common applications.
- The Programs function allows you to store 30 your most common Matrix or Presets protocols with a specific name.
- Connect your E1-ClipTip pipette to My Pipette Creator app conveniently via Bluetooth\*\*
- Five different user profiles offer customized settings for multiple users and protocols
- MyPipette™ function to customize your main menu view by organizing the icons in your preferred order or creating shortcuts for your favorite programs and pipetting functions. You can also protect important settings from unintentional editing with a password.
- Service and calibration trackers remind you when the pipette needs to be sent for service
- Li-ion battery for long lasting performance and fast recharging.
- Recharging with a charging stand or a plug, you decide.
- 2-year warranty with convenient web registration

E1-ClipTip™ Equalizer: transferring multiple samples between different labware formats

- Adjustable tip spacing allows you to set the distance between pipette tips for different types of labware simply by sliding a scale to expand or contract the tip spacing to the desired format:
  - Microcentrifuge tubes to/from 24,-48,-96-and 384- well microplates
  - Test tubes to/from deep well blocks

		<ul style="list-style-type: none"> <li>○ Microplates and tubes to agarose gels</li> <li>• Save up to 90% in time and repetitions compared to use of single channel manual pipettes***</li> </ul> <p>E1-ClipTip pipette and ClipTip tips for every application</p> <ul style="list-style-type: none"> <li>• Choose your E1-ClipTip, volume range from 0.5 µL to 1250µL: <ul style="list-style-type: none"> <li>○ Single channels</li> <li>○ Multichannels with 8, 12 or 16 channels in 96 and 384 formats</li> <li>○ Adjustable tip spacing multichannels with 6, 8, 12 channels in 96 and 384 formats</li> </ul> </li> <li>• Wide selection of ClipTip tips: <ul style="list-style-type: none"> <li>○ ClipTip 96-format tips are available in 20, 50, 200, 300, 1000 and 1250 µl</li> <li>○ ClipTip 384-format tips are available in 12.5, 30 and 125 µl</li> <li>○ Several packaging options: filtered, sterile, non-sterile, racked and reload</li> </ul> </li> </ul>											
33.	Refrigerated centrifuge	<p><b>Item Name: REFRIGERATED CENTRIFUGE HIGH SPEED</b></p> <p>Product Description : Should be designed for high safety, solid reliability and consistent results. Simple solutions Flexible processing: Secure, push-button Auto-Lock rotor exchange in as little as 3 seconds delivers:</p> <ul style="list-style-type: none"> <li>• Trouble-free rotor installation and removal —No tools are required —No complicated rotor changing procedures</li> <li>• Clear chamber access for cleaning convenience</li> <li>• Quick switch between applications – from conical tubes to blood tubes, and from microtubes to microplates – and the flexibility to evolve with the changing needs of your laboratory</li> </ul> <p>Optimize bench space with maximized capacity:</p> <ul style="list-style-type: none"> <li>• 48 microtubes, 8 x 50 mL conical tubes or 4 microplates for research needs</li> <li>• Rotor: 24x1.5/2ml blood tubes per run</li> </ul> <p>Reliable quality Safe operation: Biocontainment sealing options, including certified1 ClickSeal lids for glove-friendly, one-handed operation</p>	1 No.										
34.	Vacuum Pump	<p><b>Item Name: Vacuum Pump</b></p> <table border="0" style="width: 100%;"> <tr> <td style="width: 60%;">Flow Rate(Litre/Minute)</td> <td>50 LPM</td> </tr> <tr> <td>Flow Rate</td> <td>20 m3</td> </tr> <tr> <td>Type</td> <td>Belt Drive Rotary Vane Pumps</td> </tr> <tr> <td>Number Of Stages</td> <td>Double Stage</td> </tr> <tr> <td>Power</td> <td>1 HP</td> </tr> </table>	Flow Rate(Litre/Minute)	50 LPM	Flow Rate	20 m3	Type	Belt Drive Rotary Vane Pumps	Number Of Stages	Double Stage	Power	1 HP	1 No.
Flow Rate(Litre/Minute)	50 LPM												
Flow Rate	20 m3												
Type	Belt Drive Rotary Vane Pumps												
Number Of Stages	Double Stage												
Power	1 HP												

35.	Thermo mixer	<p><b>Item Name: Thermo Mixer</b></p> <p>Gain variable speed and temperature control with the Thermal Mixer, should come with a choice of blocks for microtubes and microplates.</p> <ul style="list-style-type: none"> <li>• Heating and cooling capability to cover a wide range of applications</li> <li>• Compact size with quiet operation</li> <li>• Convenient packages that include a Thermal Mixer with a Block</li> </ul> <p>Mixer Features</p> <ul style="list-style-type: none"> <li>• Fast heat-up and cooling times and quick to reach specified mixing speed</li> <li>• Temperature control range : 15°C below ambient to 100°C</li> <li>• Temperature setting range : +4°C to 100°C</li> <li>• Shaking speed : 250 to 1400 rpm</li> <li>• Temperature stability : ±0.1°C</li> <li>• Even mixing across the thermoshaker block</li> <li>• Excellent uniformity across the block</li> <li>• Digital timer with sound alarm : 1 min to 96 hours</li> <li>• Temperature calibration function – compensate for differences in the thermal behavior of different tubes and samples</li> <li>• Choice of 5 interchangeable blocks</li> <li>• LCD Display indicates the set and actual time of operation, mixing speed, and temperature</li> <li>• Heating/Cooling and mixing functions can be run independently of each other</li> <li>• Specifications</li> <li>• Holds 20 x 2mL, 12 x 1.5mL Microtubes</li> <li>• No. of Positions 20 x 2 mL (Block), 12 x 1.5 mL (Microtubes)</li> <li>• Product Type Block</li> <li>• Certifications/Compliance Certificate of Analysis (COA), Certificate of Conformance (COC)</li> </ul>	1 No.
36.	Bone pulveriser	<p><b>Item Name: Bone pulveriser (SPEX Freezer/Mill® 6875 (High-Capacity Cryogenic Grinder))</b></p> <p>Intended Use: Highest capacity cryogenic milling for large or many samples - useful in heavy-throughput forensic labs.</p> <p><u>Key Specifications:</u>  Sample Size Range: ~0.1-100 g  Grinding Chamber Configurations:</p> <ul style="list-style-type: none"> <li>• One large vial</li> <li>• One mid-size vial</li> <li>• Four standard vials or four microbial sets</li> </ul> <p>Controls: Touch screen programmable; stores ~20 programs; USB run history &amp; training features  Safety: LN2 level sensor, safety lid interlock  Power: 115 V/60 Hz or 230 V/50 Hz  Optional : Auto-LN2, fill system available  Weight &amp; size : ~44 lb (~24 kg); similar footprint as 6870 series</p>	1 No.

		<u>Accessories:</u> Should include the following accessories :- <ul style="list-style-type: none"> <li>• Cryogenic grinding vials &amp; adaptors</li> <li>• Extractors / vial openers</li> <li>• Vial racks &amp; microbial sets</li> <li>• Liquid nitrogen auto-fill modules</li> </ul>	
37.	Incubator	<b>Item Name: Incubator</b> Outside made of mild steel with powder coated paint. Inside made of aluminum/stainless steel with 2/3 shelves. Inside acrylic glass door. Temperature is controlled with microprocessor PID digital temp. Controller to get temperature from 5° to 60° ± 1° to work on 220/230V AC. Fitted with two air circulating fans.	<b>1 No.</b>

## 2. CYBER FORENSIC DIVISION

1.	Firewall Log Analyzer	1) <b>Product Type:</b> PHYSICAL FIREWALL + LOG ANALYZER APPLICATION 2) <b>Product Overview:</b> A Next-Generation Firewall (NGFW) designed for SMBs and branch offices. It should provide advanced threat protection, SD-WAN, Zero Trust Network Access (ZTNA), and centralized cloud management via Sophos Central. 3) <b>Security Architecture:</b> <ul style="list-style-type: none"> <li>• Xstream Architecture with programmable acceleration</li> <li>• Network Flow FastPath</li> <li>• Streaming Deep Packet Inspection (DPI)</li> <li>• Accelerated TLS 1.3 inspection</li> <li>• Offloading of VPN, cryptographic, and trusted traffic</li> </ul> 4) <b>Network Protection:</b> <ul style="list-style-type: none"> <li>• Next-Generation IPS</li> <li>• Advanced Threat Protection (ATP)</li> <li>• Sophos Security Heartbeat</li> <li>• Active Threat Response with Sophos X-Ops</li> <li>• SD-RED VPN support</li> </ul> 5) <b>Web Protection:</b> <ul style="list-style-type: none"> <li>• User and group-based web control</li> <li>• URL, category, keyword, and application filtering</li> <li>• High-performance SSL/TLS inspection</li> <li>• SophosLabs-powered web threat protection</li> </ul> 6) <b>Zero-Day Protection:</b> <ul style="list-style-type: none"> <li>• AI and ML-based threat detection</li> <li>• Static and dynamic file analysis</li> <li>• Cloud sandboxing</li> <li>• Ransomware and unknown threat protection</li> </ul> 7) <b>SD-WAN &amp; VPN:</b> <ul style="list-style-type: none"> <li>• Application-aware routing</li> <li>• Performance-based WAN link selection</li> <li>• Load balancing and failover</li> <li>• IPsec and SSL VPN</li> <li>• Clientless HTML5 VPN</li> </ul>	<b>1 No.</b>
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|  |  | <p>8) <b>Central Management:</b></p> <ul style="list-style-type: none"> <li>• Sophos Central cloud management</li> <li>• Group firewall management</li> <li>• Centralized reporting and logging</li> <li>• Zero-touch deployment</li> </ul> <p>9) <b>Hardware Interfaces:</b></p> <ul style="list-style-type: none"> <li>• 4 × 1 GE Copper ports</li> <li>• 2 × 2.5 GE Copper ports</li> <li>• 2 × SFP+ fiber ports</li> <li>• 2 × 2.5 GE PoE ports (30W per port)</li> <li>• USB, COM, Micro-USB management ports</li> <li>• Optional 5G module</li> </ul> <p>10) <b>Performance Specifications:</b></p> <ul style="list-style-type: none"> <li>• Firewall Throughput: 19.1 Gbps</li> <li>• IPS Throughput: 5.85 Gbps</li> <li>• Threat Protection: 4.75 Gbps</li> <li>• Concurrent Connections: 6.55 Million</li> <li>• IPsec VPN Throughput: 6.6 Gbps</li> </ul> <p>11) <b>Physical &amp; Environmental Specifications</b></p> <ul style="list-style-type: none"> <li>• Dimensions: 320 × 44 × 212 mm</li> <li>• Weight: 2.4 kg (unpacked)</li> <li>• Power: 100–240V AC</li> <li>• Operating Temperature: 0°C to 40°C</li> <li>• Humidity: 10%–90% non-condensing</li> </ul> <p>12) <b>Certifications:</b> CB, CE, UKCA, UL, FCC, ISED, VCCI, KC, BSMI, RCM, NOM, Anatel, TEC</p> <p>13) The team should come up with solutions - The Hash Generator Application is a Windows-based tool designed for efficient file integrity verification and hash management. Users can select files to generate hash values using popular algorithms such as MD5, SHA1, SHA256, and SHA512 for comprehensive security checks. The app supports exporting generated hash results into PDF format for documentation and easy sharing. It features robust file validation to verify whether a file matches a provided hash value, ensuring integrity confirmation. Additionally, the app can compare two files using any selected hash algorithm to detect changes or discrepancies. With its user-friendly interface, the application is ideal for professionals and individuals seeking reliable data verification on Windows systems—ensuring a secure and streamlined process for managing file integrity.</p> <p>14) <b>Warranty and Support:</b> Three (03) Years On-site Warranty and support.</p> <p>15) The product must have <b>Manufacturer's Authorization Letter.</b></p> <p>16) <b>Training:</b> On-Site product training with certificate.</p> <p>17) The product must be installed by a certified engineer/technician.</p> |  |
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2.	20 KVA Modular UPS	<p>1) <b>Product Type:</b> 20 KVA MODULAR UNINTERRUPTED POWER SUPPLY (UPS)</p> <p>2) <b>Capacity:</b> '20 KVA/20 KW (3Øinput/ 3Ø output) Modular Technology with 4 Nos of 5 KVA Power Module. Module should be Hot Swappable.</p> <p>3) <b>Topology:</b> High frequency Online. Output should be fully isolated by Double Conversion. Standalone UPS with single battery bank.</p> <p>4) <b>Technology:</b> Microprocessor based, PWM with IGBT based, APFC, Advanced dual-core DSP control technology</p> <p>5) <b>INPUT:</b></p> <p>A. <b>Input Facility:</b> 3Ø, 4-wire &amp; Ground, (3Phase &amp; Neutral + Ground)</p> <p>B. <b>Rated Voltage:</b> 380/400/415</p> <p>C. <b>Input Voltage Range:</b> 304 ~ 485 VAC (On 100% Load)</p> <p>D. <b>Rated Frequency:</b> 50 / 60 Hz (auto-sensing)</p> <p>E. <b>Input Frequency Range:</b> 40 ~70Hz</p> <p>F. <b>Input Power Factor:</b> ≥0.99</p> <p>G. <b>Bypass voltage range:</b> -60% ~ +20% (settable)</p> <p>H. <b>THDi:</b> ≤3%</p> <p>6) <b>OUTPUT:</b></p> <p>A. <b>Output Facility:</b> 3Ø, 4-wire &amp; Ground, (Phase &amp; Neutral + Ground)</p> <p>B. <b>Power Factor:</b> 1</p> <p>C. <b>Rated Output Voltage:</b> 380/400/415 VAC</p> <p>D. <b>Voltage regulation:</b> ± 1%</p> <p>E. <b>Nominal Frequency:</b> Synchronized with utility in mains mode, 50 / 60 Hz ±0.1% in battery mode</p> <p>F. <b>Waveform:</b> Sinusoidal</p> <p>G. <b>Crest factor:</b> 3:1</p> <p>H. <b>Total harmonic distortion (THDv):</b> ≤ 1% (linear load); ≤4% (non-linear load)</p> <p>I. <b>Output Short Circuit Protection:</b> Electronic, trip</p> <p>J. <b>Transfer time:</b> Mains mode to battery mode: 0 ms; Inverter mode to bypass mode: &lt; 4ms</p> <p>K. <b>Maintenance/Manual Bypass:</b> Automatic &amp; Manual</p> <p>L. <b>DC Ripple factor:</b> ≤1%</p> <p>M. <b>Efficiency:</b> Max. 96% in online mode, 99% in ECO mode</p> <p>N. <b>Inverter overload capability:</b></p> <ul style="list-style-type: none"> <li>• upto 100% infinite</li> <li>• 105% ~ 110% for 60 min</li> <li>• 110% ~ 125% for 10 min</li> <li>• 125% ~ 150% for 1 min</li> <li>• &gt;150% for 0.2 s</li> </ul> <p>7) <b>Surge Protection Device (SPD):</b></p> <p>A. Type 2 , three Phase four pole , AC - SPD</p> <p>B. Suitable for TNS System (3Ph+N)</p> <p>C. Un - 415 VAC</p> <p>D. Uc - 520V</p> <p>E. I<sub>max</sub> - 40kA</p> <p>F. In - 20kA</p> <p>G. Up - ≤ 1.5kV</p> <p>H. Should have Reversible installation facility : reversible chassis to allow cable entry from above or below</p> <p>I. Should have clear display of protection end of life of cartridge.</p> <p>J. Two types of terminal: for rigid or flexible cable and for fork type comb</p>	1 No.
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bus bar.

K. Should have thermal disconnection system.

L. Should have Cartridge security System: vibration proof insertion 'click' effect.

M. Should have individual Mechanical cartridge coding for safety system to avoid possible cartridge replacement error.

8) **BATTERY & BATTERY BANK CHARGER:**

A. **DC BUS voltage:** 144 VDC

B. **Batteries Type:** Sealed Maintenance Free, 12 V

C. **Battery VAH for 15 Mins Backup:** 21000VAH for 30 Min Backup with Each 20KVA Modular UPS. 2\*Battery Bank (21000VAh) for 2\*20KVA UPS in Parallel

D. **Battery Make:** Exide/Quanta/HBL

E. **Battery management:** Intelligent battery management

F. **Number of Battery Banks:** One or Two

G. **Minimum Charger Rating:** The Charger should be able to deliver charging current (minimum) equivalent to 10% of Battery AH rating offered.

H. **Battery re-charge time (After complete discharge) to 90% capacity:** 8-10 Hrs

I. **Battery Housing:** Should be compact and space saving MS Steel Open Racks complete with interconnectors

9) **Interfaces:** Should support DOS/UNIX/WINDOWS OS, RS 232 Connector should be available

10) **Cold Start:** should be provided

11) **Fault tolerance:** 50% load on one fan damage and 30% load on two fan damage

12) **Fan Speed:** Vary intelligently with temperature, noise reduction

13) **Self-Diagnosis:** UPS should be capable to carry out self-test of Rectifier/Charger & Inverter Module during start up

14) **Display:** 5 inches LCD colorful touch screen

15) **Communication port:** RS232, USB, RS485, RJ45, dry contact

16) **Wireless communication:** SNMP CARD along with Cyber Security Certificate (IEC 62443-4-1:2018 and IEC 62443-4-2:2019)

17) **Self-aging:** UPS must have Self aging facility; it should test internally without connecting any load.

18) **INGRESS PROTECTION:** IP 20 As per IEC60529 , Certificate must be submit at the time of bidding

19) **Factory Licence:** OEM must have their own factory licence. Licence must be submitted at the time of bidding.

20) **Environmental:**

A. **Operating Temperature:** 0-40 degree C

B. **Operating Altitude:** 1000 m.a.s.l

C. **Type of Cooling:** Forced Air

D. **Noise Level:** ≤65 dBA at 1 meter distance

21) **ISO Certification:**

ISO 9001:2015(Quality Management System),

ISO14001:2015(Environmental Management System),

ISO45001:2018 (Occupational Health & Safety Management System),

ISO 20000-1:2018(Information Technology Service Management System),

ISO 27001:2022(Information Security Management System ),

ISO50001:2018 (Energy Management System),  
IEC 62443-4-1:2018( Cyber Security of SNMP ),  
IEC 62443-4-2:2019( Cyber Security of SNMP ),  
ISO 14025 (Environmental Declarations ),  
TL9000( Telecom Quality Management System),  
FCC (limits for ionizing radiation)  
IEC 61000-3-11  
IEC 61000-3-12

**22) CE Certification (Safety):**

IEC /EN 62040-1-1 Safety, IEC/EN-50091-1-1,IEC/EN 60950,IEC/EN-50091-2,IEC/EN 62040-2,IEC 62040-3,IEC 60146,IEC/EN 61000-4-1 level4,IEC/EN 61000-4-2 level4,IEC/EN 61000-4-3 level4,IEC/EN 61000-4-4 level4,IEC/EN 61000-4-5 level4,IEC/EN 61000-4-6 level4

**23) SUPPORT**

- A. **Web/Window base Support:** It is mandatory to provide online centralized call tracking system Like OVSD (Open view Service Desk) for monitoring of logged calls viewing through web / windows based access for at least 2 officials.
- B. Must include The Hash Generator Application, a Windows-based tool designed for efficient file integrity verification and hash management. Users can select files to generate hash values using popular algorithms such as MD5, SHA1, SHA256, and SHA512 for comprehensive security checks. The app supports exporting generated hash results into PDF format for documentation and easy sharing. It features robust file validation to verify whether a file matches a provided hash value, ensuring integrity confirmation. Additionally, the app can compare two files using any selected hash algorithm to detect changes or discrepancies. With its user-friendly interface, the application is ideal for professionals and individuals seeking reliable data verification on Windows systems—ensuring a secure and streamlined process for managing file integrity.

**24) Warranty and Support:** Two (02) Years On-site Warranty and support.

**25) The product must have Manufacturer's Authorization Letter.**

**26) Training:** On-Site product training with certificate.

**27) The product must be installed by a certified engineer/technician.**

3.	65 inch UHD Smart LED TV	<p>1) <b>Product Type:</b> INTERACTIVE FLAT PANEL DISPLAY</p> <p>2) <b>Product Overview:</b></p> <ul style="list-style-type: none"> <li>• UHD 4K display with resolution of 3840 × 2160.</li> <li>• Anti-glare and anti-blocking design to ensure smooth interaction.</li> <li>• Dual systems of Android and Windows (optional with 195×30×180mm OPS) saving cost and easy to use, video conferencing software is recommended to run on the Windows system.</li> <li>• Quick response, at most 40-point touch controls and smooth writing experience.</li> <li>• Multi-button front design for convenient classroom use.</li> </ul> <p>3) <b>Display:</b></p> <ul style="list-style-type: none"> <li>A. <b>Screen Size:</b> 65 inch</li> <li>B. <b>Backlight:</b> DLED</li> <li>C. <b>Pixel Pitch:</b> 0.124 (H) × 0.372 (V) mm</li> <li>D. <b>Resolution:</b> 3840 × 2160 @60 Hz</li> <li>E. <b>Brightness:</b> 400 cd/m<sup>2</sup> (Typ.)</li> <li>F. <b>Color Depth:</b> 10 bit (8 bit + FRC)</li> <li>G. <b>Display Color:</b> 1.07G</li> <li>H. <b>Response Time:</b> 5ms</li> <li>I. <b>Panel Type:</b> VA</li> <li>J. <b>Contrast Ratio:</b> 5000:1 (Static) 30,000:1 (Dynamic)</li> <li>K. <b>Color Gamut:</b> 72% NTSC (CIE1931) (Typ.)</li> <li>L. <b>Refresh Rate:</b> 60 Hz</li> <li>M. <b>Viewing Angle:</b> 178°(H)/178°(V)</li> <li>N. <b>Aspect Ratio:</b> 16:9</li> <li>O. <b>Surface Haze:</b> 25% Haze</li> <li>P. <b>Display Area:</b> 1428.48 mm × 803.52 mm</li> <li>Q. <b>Working Duration:</b> 7 × 16H</li> <li>R. <b>Surface Hardness:</b> 9H (Pencil) 7 (Mohs)</li> <li>S. <b>Surface Glass:</b> 3.2 mm Anti-Glare Glass</li> <li>T. <b>Transmittance:</b> 88% ± 3</li> <li>U. <b>Lifespan:</b> 50,000 hours</li> </ul> <p>4) <b>Touch:</b></p> <ul style="list-style-type: none"> <li>A. <b>Type:</b> Infrared Touch Screen</li> <li>B. <b>Touch Point:</b> 40-point multi-touch</li> <li>C. <b>Touch Response Time:</b> &lt; 5 ms</li> <li>D. <b>Minimum Touch Object:</b> ≥ 2 mm (≥ 90% touching area)</li> <li>E. <b>Touch Precision:</b> ± 1 mm (≥ 90% touching area)</li> <li>F. <b>Touch Resolution:</b> 32767 × 32767</li> </ul> <p>5) <b>Built-in System:</b></p> <ul style="list-style-type: none"> <li>A. <b>Operation System:</b> Android 13.0</li> <li>B. <b>Memory:</b> 8 GB</li> <li>C. <b>Built-in Storage:</b> 64 GB</li> <li>D. <b>CPU:</b> Cortex-A55 × 4 (1.92 GHz)</li> <li>E. <b>HDCP Version:</b> Support 1.4/2.2/2.3</li> <li>F. <b>GPU:</b> Mali-G52 MP2 (2EE)</li> </ul> <p>6) <b>Internal Function:</b></p> <ul style="list-style-type: none"> <li>A. <b>Loudspeaker:</b> Built-in 2 × 20 W</li> <li>B. <b>Speaker Frequency:</b> 200-20Khz</li> <li>C. <b>Bluetooth:</b> Built-in BLE (Bluetooth Low Energy) module supports Bluetooth 5.2</li> <li>D. <b>NFC:</b> Support card reader</li> </ul>	1 No.
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		<p>E. <b>Light Sensor:</b> Yes</p> <p>7) <b>Interface:</b></p> <p>A. <b>Video &amp; Audio Input:</b> HDMI In (HDMI 2.0) × 2, Audio In × 1</p> <p>B. <b>Video &amp; Audio Output:</b> Audio Out × 1</p> <p>C. <b>Control Interface:</b> TOUCH-USB 2.0 × 1, RS232 × 1</p> <p>D. <b>Network Interface:</b> LAN (100 Mbps) × 2 WIFI AP&amp;Station, 2.4G/5G  WIFI AP : IEEE 802.11 a/b/g/n/ac 2 × 2 MIMO (2.4 GHz and 5 GHz)  authentication protocols WEP, WPA, WPA2, PSK and 802.1X EAP  WIFI Station : IEEE 802.11 a/b/g/n/ac/ax 1 × 1 MIMO (2.4 GHz and 5 GHz)  authentication protocols WEP, WPA, WPA2, PSK and 802.1X EAP</p> <p>E. <b>Data Transmission Interface:</b> USB 3.0 × 3, USB 2.0 × 2, Type-C × 1  (Type-C supports USB 2.0)</p> <p>8) <b>Power:</b></p> <p>A. <b>Power Supply:</b> 100 to 240 VAC, 50/60 Hz</p> <p>B. <b>Standby Consumption:</b> ≤ 0.5 W</p> <p>C. <b>Max. Consumption:</b> 184 W</p> <p>D. <b>Average Consumption:</b> 153 W</p> <p>9) <b>Working Environment:</b></p> <p>A. <b>Working Temperature:</b> 0 °C to 40 °C (32 °F to 104°F)</p> <p>B. <b>Working Humidity:</b> 10%~90% RH</p> <p>10) <b>General:</b></p> <p>A. <b>Product Dimensions:</b> 1491.88 mm × 901.59 mm × 82.3 mm</p> <p>B. <b>Package Dimensions (W × H × D):</b> 1662 mm × 1062 mm × 223 mm</p> <p>C. <b>VESA:</b> 600 mm × 400 mm (4 × M8-25 mm)</p> <p>D. <b>Net Weight:</b> 31.2 kg</p> <p>E. <b>Gross Weight:</b> 45.6 kg</p> <p>11) <b>Accessory:</b> Wall mount bracket, hook, user manual, stylus × 2, packing list, 1.5 m power cable (European standard), remote controller</p> <p>12) <b>Warranty and Support:</b> One (01) Year On-site Warranty/SMS. Any Software/ Firmware updates to be provided during the Warranty Period.</p> <p>13) The product must have <b>Manufacturer's Authorization Letter.</b></p> <p>14) <b>Training:</b> On-Site product training with certificate.</p> <p>15) The product must be installed by a certified engineer/technician.</p>	
4.	UFED Touch2	<p>1) <b>Software Type:</b> IMAGING AND TRIAGE SOLUTION</p> <p>2) <b>Operating System supported:</b> Windows 11 Pro 64-bit</p> <p>3) <b>Generic Features:</b></p> <ul style="list-style-type: none"> <li>• Proposed solution should have capability for on-scene triage, live data acquisition, preview, targeted data collection, and forensic imaging of both Mac and Windows systems from a single USB device</li> <li>• Solution should have the ability to install and run forensic analysis software on both Windows and Mac workstations.</li> <li>• Solution must run on live Windows computers with 64-bit hardware running Windows 10, version 1909 and newer. It should forensically boot Windows computers running Windows 10 and also start some older Windows operating systems.</li> <li>• Solution must be able to conduct acquisition on large range of macOS devices which include laptops and desktop models with HFS+, APFS, Core Storage, FileVault, T2 and Fusion drives.</li> </ul>	1 No.

- It should be able to create images of M1 computers running macOS Big Sur 11 and macOS Monterey 12, either running live or starting (booting) from the product
- It must have ability to start (boot) Mac M1, M2, and T2 computers running macOS Sonoma 14.3 as well as run live on these systems.
- Must have ability to browse file system, review file content and collect data in both live mode and booted mode.
- It must be able to acquire full disk forensics images or collect just specific user files.
- It must be able to capture important live data such as Internet, chat, and multimedia files in real time. It should have the capability to selectively acquire email, chat, address book, Calendar, and other data on a per-user, per-volume basis.
- It should be able to conduct selectively acquire data on a per-user, per volume basis.
- Ability to create decrypted physical images of Apple T2, M1, and M2 chip systems, including unallocated and APFS Fusion drives. Able to create physical image of Mojave APFS Fusion drives.
- Should support AFF4 image format for imaging Mac computers with APFS Fusion and with T2 chips.
- Should be able to create images of selected files to a folder or a logical evidence format (L01).
- It must be able to authenticate collected data using all MD5, SHA-1 or SHA-256 hash functions.
- Product must be able to have a decryption method support for T2 password or recovery key
- Product must be able to have a decryption method support for file vault and core storage keychain, password or recovery key
- Product must be able to write to evidence storage on the following file system: APFS, HFS+, exFat or NTFS.
- It must be able to format evidence storage on site using built in tools.
- Product must have a browser view to preview file content prior to acquisition.
- Product must be able to do a search view to locate using filters or keyword before acquisition and filter by metadata.
- Product must be able to add files and folder to data collection when data is being triaged via browser and search.
- Product must be able to produce extensively log data acquisition information throughout the collection.
- It must be able to boot the supported Mac and Windows systems via a single USB device from the same OEM.

4) **Warranty and Support:** 01 (One) Year On-site Warranty/SMS/Software Subscription. Any Software/ Firmware updates to be provided during the Warranty Period.

5) The product must have **Manufacturer's Authorization Letter.**

6) **Training:** On-Site product training with certificate.

		<p>7) Product should include toolkit box containing cables, adaptors, accessories, etc.</p> <p>8) The product must be installed by a certified engineer/technician.</p>	
5.	X1 Social Discovery	<p>1) <b>Software Type:</b> SOCIAL MEDIA AND WEB-BASED EVIDENCE COLLECTION SOLUTION</p> <p>2) <b>Operating System supported:</b> Windows 11 Pro 64-bit</p> <p>3) <b>Enhanced Data Collection and Analysis:</b></p> <p>A. <b>Broad-Spectrum Data Collection:</b> The tool should excel in collecting data from a wide array of internet sources and social networks, includingbutnotlimitedtoFacebook, Twitter, Instagram, LinkedIn, Tumbler,YouTubeandemailplatforms, ensuringthepreservationofCriticalmetadata.</p> <p>B. <b>Advanced Search and Analysis:</b> Should employ robust search capabilities across all collected items, supporting immediate search functionality for content and metadata,with language support for multiple languages.</p> <p>4) <b>User Interface and Workflow:</b></p> <p>A. <b>Case-Centric Workflow:</b> Should provide a streamlined, case-centric workflow from search and collection to production, with data presented in searchable native formats within a unified interface.</p> <p>B. <b>Interactive Data Preview:</b> Should allow for the searching, collection, highlighting, and preview of social posts and web content within a user-friendly interface, facilitating immediate review and analysis.</p> <p>5) <b>Automated Collection and Export Features:</b></p> <p>A. <b>Automated Data Collection:</b> Features automatedcollectionatthe item level from various platforms with flexibility for cloud oron-premisedeployment.</p> <p>B. <b>Versatile Export Options:</b> Should enable the export of data, along with critical metadata, in multiple formats (Concordance,CSV,PDF,PST, HTML) and generates load files for review platforms, maintainingdigitalhashvaluesofitemsforintegrity.</p> <p>6) <b>Comprehensive Platform Support and Deployment:</b></p> <p>A. <b>Extensive Platform Support:</b> The tool should integrate the leading functionalities found in solutions like Sprout Social for engagement, Agora pulse for management, RivalIQ for competitive analysis, Keyhole for hashtag tracking, Mention for real-time monitoring and Cyfe for data dashboarding.</p> <p>B. <b>Deployment Flexibility:</b> Should offer deployment flexibility to meet the specific security and operational needs of the user organization, whether cloud-based or on-premise.</p> <p>7) <b>Advanced Filtering and Unified Searches:</b></p> <p>A. <b>Dynamic Filtering and Sorting:</b> Should support advanced filtering and immediate search functionalities, enabling users to quickly isolate relevant data points and insights from vast amounts of collected data.</p> <p>B. <b>Unified Search Capabilities:</b> Allows users to perform broad, unified searches across multiple accounts, platforms, and websites from a single interface, enhancing the efficiency of data analysis and evidence collection.</p>	1 No.

		<p>8) <b>Training, Support and Licensing:</b></p> <p>A. <b>Hands-On Training:</b> Commits to comprehensive, hands-on training for the user organization's team to ensure full proficiency in utilizing all features and capabilities of the tool.</p> <p>B. <b>Dedicated Customer Support:</b> Provides robust email and phone-based customer support throughout a 1-year license period, with a promise to address and resolve all user grievances satisfactorily within 10 days of notification.</p> <p>C. <b>Extended License and Updates:</b> Offers a 1-year license that includes training, free updates, upgrades, and continuous customer support, ensuring the tool remains current with the latest social media trends and technologies.</p> <p>9) <b>Warranty and Support:</b> 01 (One) Year On-site Warranty/SMS/Software Subscription. Any Software/ Firmware updates to be provided during the Warranty Period.</p> <p>10) The product must have <b>Manufacturer's Authorization Letter.</b></p> <p>11) <b>Training:</b> On-Site product training with certificate.</p> <p>12) The product must be installed by a certified engineer/technician.</p>	
6.	Forensic Explorer	<p>1) <b>Software Type:</b> DIGITAL FORENSICS PLATFORM SOFTWARE</p> <p>2) <b>Operating System supported:</b> Windows 11 Pro 64-bit</p> <p>3) The platform shall support analysis of forensic image formats including Advanced Forensic Format v4 (*.AFF4), Apple Disk Image (*.DMG), Access Data Logical (*.AD1), EnCase (*.E01, *.EX01), EnCase Logical (*.L01, *.LX01), ISO (*.ISO), Macquisition (*.00001), Memory (*.mem), Microsoft (*.VHD, *.VHDX), NUIX (*.MFS01), Oracle (*.VDI), ProDiscover (*.EVE), ProjectVIC (*.JSON), RAW/DD (*.DD, *.BIN, *.RAW, *.CTR, *.IMG), SafeBack2 (*.001), SMART (*.S01), TAR (*.TAR), VMWare (*.VMD, *.VMDK), XWAYS (*.CTR), ZIP (including segmented).</p> <p>4) This Software should support Cell Phone Analysis like Cellebrite (*.UFD, *.UFDR, *.BIN, *.TAR, ZIP, *.XML), (includes iOS Biome and ProtoBuf).</p> <p>5) This Software should support create Evidence files likes Forensic Explorer <ul style="list-style-type: none"> <li>• Export from within FEX (EnCase *.L01, *.JSON)</li> <li>FEX Imager - create, convert, remote, compression, verify <ul style="list-style-type: none"> <li>• EnCase (*.L01, *.E01)</li> <li>• RAW/DD (*.001)</li> </ul> </li> <li>FEX Memory Imager <ul style="list-style-type: none"> <li>• Memory (*.mem)</li> </ul> </li> <li>FEX Triage <ul style="list-style-type: none"> <li>• EnCase (*.L01)</li> </ul> </li> </ul> </p> <p>6) <b>File system support</b>  FAT 12/16/32/exFAT  NTFS  HFS, HFS+, APFS  EXT 2/3/4  RAID (Hardware, Software, JBOD, 0, 5)  DVR – Hikvision, LVF (Logitech Video)  QNX – Vehicle Forensics</p> <p>7) This software should Encryption like Bitlocker&amp;Filevault.</p> <p>8) Email: Message, Contacts, Calendar, Attachment Gallery and Video  EDB, EML, EMLX, ESE, MBox, MSG, OST, PST VCF (vCard), ICS (I &amp; v Calendar)</p>	1 No.

- 9) It should support Network forensic Deployable Network Servlet. Servlet supports covert deployment
- 10) **GUI:**  
 Detachable data views  
 Multiscreen layouts  
 Save and load custom layouts  
 Start-up with selected modules  
 Create custom modules  
 Create custom data columns
- 11) **Data views**  
 Gallery thumbnails (with cache)  
 Disk view (with custom colors)  
 Hex  
 Text  
 Info (file properties)  
 Bookmark  
 Byte Plot  
 Display  
 File System Record  
 File Metadata  
 File Extent  
 Permissions
- 12) **Display view**  
 Inbuilt (no codecs required)  
 Zoom, rotate, full screen  
 Video thumbnail multi-view with jog  
 Windows Open and Open With  
 SQLite viewer
- 13) **Filters**  
 Column text typing filter  
 Graphical date range filter  
 Folders filter (scriptable)  
 Categories view
- 14) **Keyword Search**  
 Text, Hex, RegEx, Code page language support  
 Folder and File Name Search
- 15) **Index Searching**  
 Inbuilt dtSearch indexing  
 Index FileSystem, Registry, Email, Keywords
- 16) This software should support signature analysis Determine file signatures for 350+ file types
- 17) **Data Carving**  
 Inbuilt carving engine for 350+ file types  
 Cluster/Block/Sector (Cell phone binary files, JTAG/Chip Off/ISP)  
 Custom Byte Carve (using Regex)
- 18) **Hashing**  
 Hash Files Values Supported  
 Crypto Hash Methods:  
 • CRC, MD5, SHA1, SHA256, SHA512, xxHash64  
 Similarity Hash Methods:  
 • Fuzzy, Differential Hash Sets  
 • PhotoDNA Hash Sets (LE Only)

Hash Sets Created  
FEX Hash Sets (\*.db3)  
NCMEC Flat Hash Sets (\*.txt)  
ProjectVIC (\*.JSON, models 1.2, 1.3, 2.0)  
Hash Sets Supported  
FEX Hash Sets (\*.db3)  
NCMEC Flat Hash Sets (\*.txt)  
ProjectVIC (\*.JSON, models 1.2, 1.3, 2.0)  
EnCase (\*.hash) compatible  
NIST (NRSL) compatible

19) **Scripting Language**

Delphi scripting  
Create/compile/execute/debug

20) **Metadata Analysis**

NTFS, EXIF, PDF, OLE, MS Office, ZIP, Jump List, LNK, Prefetch  
Extract metadata to columns  
GeoTag identification  
Google Earth KML integration  
Google My Maps integration  
Entropy analysis  
LNK by Target Volume  
Visualize LNK Metadata  
Extract XMP Metadata  
Extract NTFS/MAC Permissions/Owner to Columns

21) This software should support Registry Analysis

Analyze individual keys  
Automated script extraction of registry data

22) This software should support Video Analysis

Video thumbnail multi play  
Expand Video by Key Frames, Time Sliced, Divided  
Detect MKV Multiplexing

23) **Shadow Copy (VSS)**

Mount and browse shadow copy files

24) **Inbuilt Automation Scripts**

Charts creation – File Types, Partitions, Sub-Folder Sizes, Timeline  
Bookmark Digital Cameras by Make and Model  
Bookmark GPS Photos  
Bookmark LNK Files by Target Volume  
Bookmark MS by Author, Company, Date Printed or Last Saved By  
Bookmark PDF by Author  
Crypto Wallet Detection  
Distance from GPS Co-ordinates  
Encrypted Files  
Entropy Analysis (Header/Shannon)  
Expand Compound Files  
Export File Types  
File and Folder Name Search (using Regex)  
Google Earth KML Create  
Google My Maps Create  
iTunes Backup Identification and Analysis  
NTML Hashing  
Skin Tone Analysis

Timeline to CSV

Windows Triage

25) This Software should support different artifacts module

Biome like iOS Biome App Intent, iOS Biome App Launch, iOS Biome Keybag Lock States, iOS Biome Plugged-in States, iOS Biome Safari History, iOS Biome User Activity, iOS Biome User Notification Events.

**Browsers**

@ Bing, @ Cloud, @ Dating, @ DeepFake, @ FaceBook, @ Google, @ Shipping, @ Youtube, Brave, Chrome, Chromium, DuckDuckGo, Edge, Firefox, Google, Internet Explorer 10-11, Internet Explorer 4-9, Opera, Safari, URL Cache, iOS Safar.

**Chat**

Accounts Android, Android Badoo, Android Burner, Android ByLock, Android Coco, Android Discord, Android Facebook Messenger, Android Gettr, Android Google, Android Google Duo, Android Grindr, Android GroupMe, Android Growlr, Android IMO, Android Instagram, Android Kakao, Android Kik, Android Line, Android Messenger, Android MeWe  
Android Microsoft Teams, Android Oovoo, Android Scruff, Android Skout, Android Skype, Android SnapChat, Android Tango, Android Telegram, Android TextNow, Android Tiktok, Android Tinder, Android Venmo, Android Viber, Android WhatsApp, Android Wire, Android Zalo, Android Zello, Call Logs Android, Facebook Messenger, Google, iOSAntiChat, iOS Burner, iOS Coco, iOS Couple Relationship, iOS Discord, iOS Facebook Messenger, iOS Fast Hookup Dating, iOS Google Duo, iOSGrindr, iOSGroupMe, iOSGrowlr, iOSHelloTalk, iOS IMO, iOSInstagram, iOSKakao, iOSKik, iOS Line, iOSMeetMe, iOSMessageMe, iOS Messenger, iOS Microsoft Teams, iOSOovoo, iOSRandomChat, iOS Scruff, iOSSkout, iOSSnapChat, iOS Telegram, iOSTextNow, iOSThreema, iOSTiktok, iOS Tinder, iOS Touch, iOSTumblr, iOSViber, iOSWhatsApp, iOS Whisper, iOS Wire, iOSZello, iOS Zoom, JSON GroupMe, Messages Android, OSX iMessage, PC v11 Viber, PC Viber, Skype, Slack, SnapChat, Windows Yahoo Messenger

**Cloud**

Box Sync, Google Drive, OneDrive

**Email**

Android Aqua Mail, Android Gmail, Android Proton, iOSGmail, iOS Mail

**Finance**

iOS Apple Pay, iOS Apple Wallet

**Health**

Apple Health Distance, Apple Health Flights Climbed, Apple Health Heart Rate, Apple Health Steps, Apple Health User Height, Apple Health User Weight, Apple Health Workout Latitude, Apple Health Workout Longitude, Fitbit Activity Log, Fitbit Event, Fitbit Profile, Fitbit User, Garmin Connect Activities, Garmin Connect Activity Details.

**Locations**

Android AirTag Personal Safety, Android AirTag Personal Safety Last Scan, Android GoogleMaps Searches, iOS Apple Maps Searches, iOS Cached Locations, iOS Map Tiles, iOS Maps History, iOS Parked Car Locations, iOS Significant Locations, iOS Significant Locations Visits, iOSWifi Locations.

**Mobile**

Android Accounts CE, Android Accounts DE, Android Accounts Notifications, Android Application Usage, Android Aqua Mail Email, Android Battery Event (turbo), Android Bluetooth Adapter, Android Calendar Items, Android Calendars, Android Call Logs, Android Contacts Details, Android Contacts Manager, Android Device Info, Android Email Message, Android Files External, Android Files Internal, Android Files Master, Android Gboard Clipboard, Android GMail Message, Android Google Drive, Android Google Maps Saved Places, Android Google Play Search, Android Google Recent Quick Search, Android Installed Applications, Android Installed Applications Google Play, Android Picasa Photos, Android Roles XML, Android Settings Secure, Android Shutdown Checkpoints, Android SMS MMS, Android SMS MMS Agent, Android ToDo Items, Android Version Information, Android Wifi Configurations SQLite, Android Wifi Configurations XML, Android Wifi Flattened Data, iOS Accounts Type, iOS Application Permissions, iOS Application State, iOS Application Usage, iOS Bluetooth Devices, iOS Bluetooth Paired Low Energy Devices, iOS Bluetooth Seen Devices, iOS Calendar Items v3, iOS Calendar Items v4, iOS Call History, iOS Contacts (Contacts Table), iOS Contacts (Recents Table), iOS Contacts Details, iOS Data Usage, iOSDropbox Metadata Cache, iOSDropbox Spotlight Items, iOS Dynamic Dictionary, iOS Google Maps, iOS Google Mobile Search History, iOS Installed Applications, iOSItunes Backup Details, iOSItunes Backup Manifest, iOS Mobile Backup Restore Info, iOS Note Items, iOSPhotos.SQLite, iOSPhotos.SQLite Person, iOS Private Photo Vault Albums, iOS Private Photo Vault Media, iOS Screen Time Application Usage, iOS SMS v3, iOS SMS v4, iOSUber Accounts, iOSUber Database, iOSUber Eyeball, iOS User Shortcut Dictionary, iOS Voice Mail, iOS Voice Memos, iOSWifi Configurations, iOSWifi Locations, iOSWifi Networks.

**Operating System – Windows**

Office Backstage, Prefetch Windows, Program Compatibility Assistant DB, Program Compatibility Assistant Dic, Wifi Windows, Windows 10 Timeline (Activity), Windows 10 Timeline (ActivityOperation)

**Operating System – MAC**

AddressBookMeMacOS, Attached iDevicesMacOS, Bluetooth MacOS, DHCP MacOS, Dock Items MacOS, iCloud Preferences MacOS, iMessage Accounts MacOS, Installation Date MacOS, Installed Printers MacOS, Last Sleep MacOS, Login Items MacOS, Login Window MacOS, Mail BackupTOCMacOS, Mail Folders MacOS, Networks Known MacOS, Networks Recent MacOS, OSX Update MacOS, Preferences MacOS, Printers CUPS Control MacOS, Printers CUPS MacOS, Recent Items (Applications) MacOS, Recent Items (Documents) MacOS, Recent Items (Hosts) MacOS, Recent iWork Numbers MacOS, Recent iWork Pages MacOS, Recent Photo Booth MacOS, Recent Preview MacOS, Recent QuickTime MacOS, Recent TextEditMacOS, Recent VideoLanMacOS, Safari Preferences MacOS, Safari Recent Searches MacOS, System Version MacOS, TimeZone Local MacOS, TimeZoneMacOS, User Accounts Deleted MacOS, WifiMacOS

**Social Media**

Android Twitter Direct Messages, Android Twitter Search Queries, Android Twitter Tweets, Facebook App Favicons, Facebook App Friend Requests, Facebook App Friends, Facebook App Messages, Facebook App Stories,

		<p>Facebook Contacts Android, iOSTumblr Followed Blog, iOSTumblrReBlog, iOSTumblr User, Reddit Accounts</p> <p><b>Tracking</b> iOS Open GPX Tracker</p> <p>26) <b>Reporting</b> Inbuilt automated reporting from bookmarks Customized templates specific to case type Save and load report templates Quick Reports (automated reporting process with MS Office®)</p> <p>27) This solution should have mount image pro Mount AD1, AFF, DD, E01, EX01, L01, LX01 Mount Physical or Logical Images/Drives Mount Using Batch Files Mount as drive, PNP or File System</p> <p>28) This solution should have Live Boot Virtualization Boot E01, EX01, DD Boot Windows (All), Linux EXT, MAC (All) Boot to ISO - Password Recovery/By-Passing Supports VMWare and Virtual Box Create Stand-alone distributable Live Boot of suspect's computer</p> <p>29) Antivirus – Malware Inbuilt Cisco Clam Anti-Virus Yara Rules</p> <p>30) This solution should have Graphics Analysis / Face Recognition Graphic Analysis Categories Aircraft, Alcohol, Chat, Credit Card, CSAM (LE Only), Currency, Document, Drugs, Extremism, Face + Face Recognition, Gambling, Gore, ID, Map, Medical, Meme, Offensive Gesture, Porn, QRcode, Schematic, Swim/Underwear, Tattoo, Vehicle Weapon.</p> <p>31) <b>Warranty and Support:</b> 01 (One) Year On-site Warranty/SMS/Software Subscription. Software/ Firmware updates to be provided during the Warranty Period.</p> <p>32) The product must have <b>Manufacturer's Authorization Letter.</b></p> <p>33) <b>Training:</b> On-Site product training with certificate.</p> <p>34) The product must be installed by a certified engineer/technician.</p>	
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### 3. NARCOTICS DIVISION

1.	High Performance Liquid Chromatography(HP LC) With Narcotic library & computer system	<ol style="list-style-type: none"> <li>1. Smartline HPLC Pump with 10 ml Pump Head with S.S inlays- 2 Nos</li> <li>2. Dynamic Mixing Chamber, stainless steel, Analytical - 1 No</li> <li>3. 4 Bottles each 1000 ml for Smartline Tower -1 No</li> <li>4. Eluent Tray - 1 No</li> <li>5. Smartline capillary Kit stainless steel for HPG Tower - 1 No</li> <li>6. 6 port/3 Channels Injection valve, SS, 1/6" with 20 ul Loop - 1 No</li> <li>7. Smartline universal mounting ba Racket for manual injection valves. - 1 No</li> <li>8. Fast scanning smart line detector without flow cell, inclusive accessories.- 1No</li> <li>9. Analytical flow cell. - 1 No</li> <li>10. Smartline manager 5000 including degasser module analytical.-1 No</li> <li>11. Start up Kit, Analytical. - 1 set</li> </ol>	1 No.
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		<p>12. Eurosphere 100 CI 8, 250 x 4.6 mm, 5u with guard column. - 1 No</p> <p>13. Eurosphere 100 C 8, 250 x 4.6 mm, 5u with guard column. - 1 No</p> <p>14. Eurochrom 2000 Basic Edition, HPLC Software for Windows. - 1 No</p> <p>15. Computer with HP ColourInjet Printer. -1 No</p> <p>16. UPS, 2 KVA, Back-up time 30 minutes.- 1 No</p> <p>17. 25 ul syringes. - 2 Nos</p> <p>18. Cartridges along with the offered column C-18. - 10 Nos</p> <p>19. Samples as well as solvent filtration unit with necessary filters &amp;vacumpump . -1 set</p> <p>20. HPLC grade water. - 2 ltrs</p> <p>21. Methanol - 2 ltrs</p> <p>22. Acetonitrile - 2 ltrs.</p>	
2.	UV-Visible Spectrophotometer (UV-VIS) With Narcotics library and computer system with printer.	<p>1) Optical design Double-beam with sample and reference cuvette positions with czerny-Turner Monochromator</p> <p>2) Spectral Bandwidth-1nm</p> <p>3) Light Source-Xenon Flash Lamp with three years warranty (7 years typical lifetime)</p> <p>4) Detector: Dual Silicon Photodiodes</p> <p>5) Wavelength range 190-1100 nm</p> <p>6) Wavelength Accuracy: 0.2 nm (546.11 nm mercury lines)</p> <p>7) Wavelength Repeatability <math>\leq 0.01</math> nm (548.1 nm mercury line, SD of 10 measurements)</p> <p>8) Scanning Speed <math>&lt; 1</math> to 6000 nm/min or better</p> <p>9) Photometric Range <math>&gt; 3.5</math> A or better</p> <p>10) Photometric Display Range -0.3 to 4.0 A or better</p> <p>11) Photometric Noise <math>0A \leq 50.00015</math> A  1A: <math>\leq 0.00050</math> A  2A : <math>\leq 50.00050</math> A</p> <p>12) Stray Light KCl 198 nm: <math>\leq 0.40\%</math> T  NaI, 220 nm: <math>\leq 0.027\%</math> T  NaNO<sub>2</sub>, 340 nm. <math>&lt; 0.025\%</math> T</p> <p>13) Baseline Flatness <math>\pm 0.0006</math> A or better</p> <p>14) Data intervals 10, 5, 2, 10.05.02.01 nm</p> <p>15) A pair of standard quartz cuvette to be quoted.</p> <p>16) CE certificate &amp; ISO certificate should be provided</p> <p>17) Warranty - The complete system should be covered with two years of warranty</p>	1 No.
3.	Gas Chromatography Mass Spectroscopy(GC-MS) with auto sampler	<p><b>1) General.</b></p> <p>Gas Chromatograph system to be coupled with solid metallic quadruple based mass chromatographic system with Electron Impact (EI) ionization module System should be Dual Detector Microfluidics in order to keep the split ratio between two detectom (FID &amp; MS) 11 The carrier control should be useable without limitations. Constant pressure, programmed pressure. Constant flow, and programmed flow should also be possible.</p> <p>Flame Ionization Detector (FID) should be provided which can be coupled with the Gas chromatographic system.</p> <p>System should be capable of supporting two inlets and two detector ports simultaneously, should have electronic pneumatic/pressure controls for all the gases and should have Chromatography Data system which is based on</p>	1 No.

Microsoft Windows operating system for instrument control, data acquisition, data analysis, quantization, automation & customization with online and offline sessions provided.

## **2) Column Oven.**

All gases flow should be adjustable/controlled by software with no manual control.

Provision to install at least two columns.

Operating temperature range from near ambient to 450 °C or more.

Temperature set point resolution: 0.1°C or better Maximum temp ramp rate: 120 °C/min or better.

Heating rate from 50°C to 450 °C within 5 minutes or better.

Cooling rate: from 450°C to 50°C within 4 minutes or better (room temp. maintained at 22°C)

Should have oven power safety (power off when door is open).

Temperature programming should have minimum 21 ramps & 22 plateaus or better.

## **3) Injection Port-2 nos**

Split/Spitless injection port with IEC/EPC/PPC with fast GC capability -02 nos.

The injector should be capable to operate with capillary, wide bore and packed columns. Possible to use capillary columns of 50 µm to 530 µm columns.

The injector needs to be optimized, modular thermal profile for split and splitless injection with a cold head.

Pressure range 150 psi or better with 0.001 psi resolution.

Maximum temperature: 400 °C or more.

Split ratio up to 12500:1 or more.

Should have independently heated zones'.

Digital display of gas flow, temperature etc.

Manufacturer's software controlled (IEC/EFC/EPC controlled) two ways Dual Detector Microfluidics Splitter for MS & FID (11 The carrier control should be useable without limitations) from same manufacturer should be provided.

## **4) Auto Injector Device.**

An automatic injector device having a capacity to hold 155 nos, or more vials capacity should be provided.

Injection Parameters: Max. volume 5 µL, Mini, volume: 0.01 µL, Increments 0.01 µL steps.

Syringe: 10 µL or more

Syringe Rinsing Pre and/or Post injection.

Vials & Caps for 5000 sample analysis.

## **5) GC FID Detector.**

FID detector having an MDL <1.2 pg C/s or better.

Sensitivity >0.03 Coulombs/gC.

Linear Dynamic Range >10 (±10%)

Maximum Temperature: 450°C or better.

Carrier gas head pressure setting should be more than 1000 kpa

Mass range (m/z) up to 1100 amu or better

Mass Analyzer should be made of solid, non-coated, inert material with Dual-stage mass filter with off-axis ion guide pre-filter for noise reduction

Mass axis stability should be 10 10 amu over 48 hrs.  
Acquisition rate: Ability to acquire more than 240 scans/s in SIM or better.  
Ability to acquire more than 97 scans/s in FS when scanning over a range of 125 u or better.  
Pumping Systems: Turbo molecular pump 300 L/sec or better (Single Pump).  
Electron energy: Adjustable up to 150 eV dependent on ion source type.  
Resolution: Unit Mass Resolution.

**6) Workstation instrument control software.**

GC and MS and HS system should be integrated with the same workstation for simultaneous settings and programming.  
Should have Auto tune (to optimize MS parameters automatically) feature.  
A user friendly automatic data collection and analysis system compatible with Microsoft Windows OS and Microsoft Office suite applications.  
Library search through Retention Index function should be provided as standard in the software

**7) Spectral Library.**

Latest version of library database NIST 2023 Library.

**8) Accessories.**

Branded PC Intel Core i7 8700 with 32GB (4X8GB) DDR4 2666MHz RAM M.2 512GB Solid State Drive. UltraSharp 24" Infinity Exige Monitor Win10 Enterprise Long-Term Servicing Channel (LTSC).

MS Office latest version and a good quality Laser Jet printer are needed from the manufacturer.

Branded UPS: 10 KVA UPS with at least 60 min back up is needed.

Suitable Working place for installation and operation of the GC-MS systems.

High quality He, H<sub>2</sub>, N<sub>2</sub>& Zero Air gas cylinders along with compatible Regulators (two numbers each) gas purification panel for the above mentioned four gases, and required tubing's should be provided.

Syringes for manual and auto sampler injection (minimum pack of 5 each), Filaments (minimum 2 no.), vials, tool-kit should be provided.

Capillary column for drugs and Narcotic (one for each segment) Column

TG-5 MS or any equivalent stationary phase column 30m X 0.25mm X 0.25 micrometer- 2 Nos.

TG-1 MS or any equivalent stationary phase column 30m X 0.25mm X 0.25micrometer-1 Nos.

TG-624 GC Column 30m x 0.25mm x 0.25um or Equivalent Column- 1No.

Trace GOLD TG-ALC1 30Mx0.32Mx1.8 µm or Equivalent -1No.

Mechanical accessories and consumable spares for the operation and maintenance of them instrument should be provided to meet our needs for at least Three years.

UHP Grade Nitrogen Gas Hydrogen Gas, Zero Air Gas with Double stage SS Diaphragm Rgulator-1. Qty Each.

Gas Purification Panel for all required gases should be provided according to the need.

**9) Other terms and conditions.**

The system must be factory tested and a certificate should be provided.

A minimum of Three years warranty over on complete GC-MS system.

		<p>The entire system should be installed by the company professionals at our site. A thorough technical training (minimum 5 days) in analyzing and troubleshooting should be given by the technical professionals.</p> <p><b>A list of references in East India, where similar systems have been installed minimum 10 nos. in last three years. Please also give the list of the users with contact details in East India &amp; reputed institutes (Minimum ten installations-particularly in FSL, CFSL, IIT, IISE, &amp; reputed Govt. Institution) in Eastern India and this will be taken very seriously while making the decision. Your post sales service feedback will certainly be a deciding factor.</b></p>	
4.	Automated Accelerated Solvent extraction System	<ol style="list-style-type: none"> <li>1) The extraction system should be able to extract minimum 10 samples per cycle per hour.</li> <li>2) The extractor shall use a combination of solvent(s) under set temperature and pressure conditions to perform rapid and efficient extractions.</li> <li>3) System should have minimum of 10 position auto extractor &amp; should comply USEPA3545 &amp; other EPA methods.</li> <li>4) Extractor shall have an integrated solvent controller permitting the use of up to six solvents. These solvents can be mixed and introduced to the extraction cell in selectable volume ratios.</li> <li>5) Extractor shall automatically sense extraction cell volumes and automatically adjust method control parameters, including temperature and solvent volume, to ensure constant results regardless of extraction cell volume.</li> <li>6) Extractor shall be capable of oven temperature control of up Ambient to 150°C and cell pressure control upto 150 psi. Extractor must have controls to prevent operation at excessive temperatures and pressures.</li> <li>7) Temperature controls: System should have infrared temperature control option</li> <li>8) The extractor must be able to be run unattended and be able to automatically shut down once the extraction sequence is completed.</li> <li>9) Extractor must have minimum of 10 -position sample carousel with minimum of two rinse positions for unattended operation.</li> <li>10) Extractor shall have the ability to use upto 60 ml extraction cells interspersed on the sample carousel.</li> <li>12) Extractor shall have automatic shut-off in the event of pressure or temperature sensor failure.</li> <li>13) Extractor shall have the ability to perform multiple sequential extractions per individual cells.</li> <li>14) If the solvent composition changes when changing methods, the extractor should automatically rinse with the new solvent or solvent mixture to ensure that the correct solvent or mixture is delivered to the extraction cell.</li> <li>15) Extractor shall allow extracts to be automatically filtered prior to collection in the vial or bottle.</li> <li>16) Extractor shall be able to operate without fume-hood and solvent vapor is not expelled into the atmosphere. Extractor shall have a built in vapor sensor and the extractor will shut down if vapor levels are detected.</li> <li>17) Extractor shall be able to monitor each sample for pressure and</li> </ol>	1 No.

		<p>temperature. Every sample is monitored to ensure samples are extracted according to the users' method parameters.</p> <p>18) The extractor shall be able to accommodate minimum 50mL collection vials.</p> <p>19) The extractor shall be capable of extracting acidified or basic samples with the use of a pH hardened pathway and pH resistant extraction cells.</p> <p>20) Extractor shall have acid or basic resistant tubing in the solvent flow path. Optional corrosion resistant extraction cells and extraction cell components must be available.</p> <p>21) The system must be able to cool vessel from 150 Deg C to room temperature within 3 minutes. By any means like forced air, nitrogen or so.</p> <p>22) System should be able to load upto 12 different sample at time &amp; the extraction cycle should be carried out automatically as per pre designed programs.</p> <p>23) Extractor shall have front panel control with both method and sequence editor, and method and sequence storage.</p> <p>24) System must have a built in operating system with fluorescent Display and alphanumeric keypad for entry of operating parameters System must operate stand alone as well as through PC, suitable software for such control should be offered as option.</p> <p>25) System should be supplied with 500 no's of Filters if required along with system.</p> <p>26) System should be provided with 5KVA UPS with batteries</p> <p>27) System and UPS must carry a minimum one-year warranty on parts and labor.</p> <p>28) To ensure the timely availability of service engineer in case of any repair, contact details of service engineer must be provided. Those firms which fail to provide the contact details, such quotations will not be considered.</p>																	
5.	Microscope with computer system and camera	<p><b>1) Usage</b></p> <table border="1" data-bbox="414 1216 1412 1294"> <tr> <td><b>Applications</b></td> <td>Scientific research</td> </tr> </table> <p><b>2) Microscope specification</b></p> <table border="1" data-bbox="414 1327 1412 1891"> <tr> <td><b>Eyepieces</b></td> <td>10x</td> </tr> <tr> <td><b>Voltage</b></td> <td>240 Volt</td> </tr> <tr> <td><b>Frequency</b></td> <td>60 Hertz</td> </tr> <tr> <td><b>Illumination</b></td> <td>LED</td> </tr> <tr> <td><b>Optical System</b></td> <td>High Contrast Infinity corrected Optical System</td> </tr> <tr> <td><b>Observation Head Rotation</b></td> <td>360 degree</td> </tr> <tr> <td><b>Dimension</b></td> <td>508 millimeter</td> </tr> </table>	<b>Applications</b>	Scientific research	<b>Eyepieces</b>	10x	<b>Voltage</b>	240 Volt	<b>Frequency</b>	60 Hertz	<b>Illumination</b>	LED	<b>Optical System</b>	High Contrast Infinity corrected Optical System	<b>Observation Head Rotation</b>	360 degree	<b>Dimension</b>	508 millimeter	1 No.
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<b>Optical System</b>	High Contrast Infinity corrected Optical System																		
<b>Observation Head Rotation</b>	360 degree																		
<b>Dimension</b>	508 millimeter																		

<b>Holder clip</b>	Single specimen
<b>Weight</b>	8.5 kilogram
<b>Mechanical Stage</b>	Double plate stage size 190x140mm
<b>Accessories</b>	Pointers & Micrometer Reticules,Rackless Mechanical Stage,Infinity Corrected Optics,Phase-contrast,Polarizing,Fluorescence and Dark Field Kits, Quintuple nose - piece,Application Specific Objectives and Eyepieces,Wooden Box
<b>Nose-piece (with proper click stops)</b>	Ball bearing type
<b>Magnification of microscope lens (x)</b>	1000
<b>X/Y travel range (x)</b>	90
<b>Observation Head (inclined at 30)</b>	Trinocular
<b>3) Camera Specifications</b>	
<b>Capture/Control API</b>	Native C/C++, C#/VB.NET,DirectShow,Twain and Labview
<b>Toolbar</b>	Zoom
<b>Camera Control Panel</b>	Color Adjustment
<b>Cooling System</b>	Natural
<b>Recording System</b>	Picture
<b>White Balance</b>	ROI White Balance
<b>Video Record</b>	ASF Format
<b>Spectral Range</b>	650 nanometer
<b>Image Capture</b>	JPEG Format
<b>Magnification of camera</b>	4x
<b>Resolutions (Mgapixel)</b>	10

**4) Camera Adapter**

No.of Adapters	2
Compatibility	SLR/DSLR cameras
Adapters converting size	23.2 millimeter
T-mount Connection (Standard)	23.2 millimeter
Mounting Size on Microscope Side	23.2 millimeter

**5) Operating System**

Operating System	Microsoft Windows XP
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**6) PC Requirements**

Interface	HDMI output
Memory	6 gigabyte
USB Port	2
Display	23 inch
CPU	Intel Core2 2.8GHz

**7) Certifications and Standards**

Certifications and Standards	ISO 9001
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**8) Warranty**

Warranty	2 year
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**9) Test Reports**

Test Report to be furnished to the buyer on demand	Yes
Test Report No and Date	20
Name and Address of the Lab	20
Availability of Test Report from Central Govt/NABL/ILAC accredited lab to prove conformity to specification	Yes

6.	Ultra- Sonicator	<b>1) Standards</b>		1 No.
		Product standard certifications	CE	
		Certification No and Date	C-GI-1001-1509 10-10-2025	
		Conformity to standard for electrical safety latest amendment	IEC- 60601- or BIS Equivalent	
		Manufacturers Quality Standards	ISO 9001,ISO13485	
		<b>2) Performance Parameters Technical Specification</b>		
		Ultrasonic Power requirement (in watts)	180	
		Heating power requirement(in watts)	200	
		Tank drainage valve provided	Yes	
		Range of adjustable Time setting(in mins)	1-30	
		Range of adjustable heating temperature(in degree centigrade)	0-80	
		Frequency range required (in KHz)	20-40	
		Capacity of sonicator in L	5.1	
		Material of the Lid	Stainless Steel 304 grade	
		Material of the Inner Tank	Stainless Steel 304 grade	
		Material of the Outer Tank	Stainless Steel 304 grade	
		Tank size (w× H × D)(in mm x mm x mm)	240X135X200 MM	
		Overall size(W×H×D)(in mm x mm x mm)	260X160X300 MM	
		Weight (in Kg)	5	
		Power supply	220-240 V AC 50 Hz Single phase	
<b>3) Miscellaneous Parameters</b>				

		<p><b>Warranty (Option of comprehensive warranty is available through bidding only, which if opted will supersede normal warranty in the catalogue)</b> 2</p> <hr/> <p><b>User/Technical/Maintenance e manuals to be supplied in English in hard and soft copy</b> YES</p> <hr/> <p><b>Demonstration of equipment and training to be provided after completing supplies &amp; Installation"</b> YES</p> <hr/> <p><b>The Principal Manufacturer must have direct Presence/approved service center In India</b> Yes</p> <hr/> <p><b>Certification regarding spare parts</b> Certificate from the principal shall be provided to the buyer/consignee along with the equipment that spare parts will be available for next 10 years</p> <hr/> <p><b>Copies of reports and certifications to be furnished to buyer on demand</b> Yes</p>	
7.	Vortex Shaker	<p><b>1) WARRANTY</b></p> <hr/> <p><b>Warranty on machine</b> 3 year</p> <hr/> <p><b>2) DISCREPTION</b></p> <hr/> <p><b>Type of Drive Motor</b> Brushless DC Motor</p> <hr/> <p><b>Display Option/Output Read out Option</b> No integral Display</p> <hr/> <p><b>Material of Mixing Head/vortex cup</b> Rubber</p> <hr/> <p><b>Type of Vortex Mixer</b> Standard Vortex Mixer</p> <hr/> <p><b>Type of Controller</b> Microprocessor Controlled</p> <hr/> <p><b>Timer Setting (Increment step)</b> 1 minute</p> <hr/> <p><b>Base material</b> Die cast aluminium</p>	<b>1 No.</b>

<b>Number of Sample tubes testable simultaneously</b>	Single Tube
<b>Weight (kg)</b>	3.5 kilogram
<b>User Interface</b>	Analog Front Panel
<b>Largest Volume of the tube testable</b>	200 milliliter
<b>Finish of Body material</b>	Powder coated
<b>Body Material</b>	Die cast Aluminium
<b>Noise Level (maximum) (db)</b>	60 decibel
<b>Maximum Load capacity</b>	0.5 kilogram
<b>3) FEATURES</b>	
<b>Speed increment step,if variable speed (RPM)</b>	45
<b>IP rating or Ingress protection rating</b>	21
<b>Activation mode</b>	Press Activated and Continuous run
<b>Speed mode</b>	Variable Speed
<b>Type of Data Logging option</b>	USB,RS232,PRINTER PORT,HDMI,BLUETOOTH
<b>Number of Programmable/Programmed modes</b>	4
<b>Maximum Speed (RPM)</b>	1
<b>Minimum Speed (RPM)</b>	1
<b>Timer Provided</b>	No
<b>Input Current (Amp)</b>	50
<b>Pulse mode</b>	Yes
<b>In built Counter balance</b>	No

	<b>Programmable Pulse mode</b>	No
	<b>Speed control Accuracy (+/-) (RPM)</b>	40
	<b>Suction Cup in the base</b>	Yes
	<b>Maximum Diameter of the tube testable (mm)</b>	50
	<b>Accessories and spares included in standard pack</b>	NONE
	<b>Auto Cutoff</b>	Yes
	<b>4) DIMENSIONS</b>	
	<b>Orbital Diameter</b>	4 millimeter
	<b>External Dimension: Height</b>	160 centimeter
	<b>External Dimension: Width</b>	127 centimeter
	<b>External Dimension: Depth</b>	130 centimeter
	<b>5) POWER</b>	
	<b>Power Consumption (W)</b>	60 Watt
	<b>Input Voltage (V) with number of Phases</b>	230 single phase
	<b>6) CERTIFICATIONS</b>	
	<b>availability of test report (to be furnished to Buyer by Seller on demand of the former) from NABL/ILAC/Govt laboratory</b>	No
	<b>Test Report Number and date</b>	NA
	<b>Name and address of the Lab issuing test report</b>	NA
	<b>Product CE certified</b>	Yes
	<b>Firm certified to ISO9001:2008 or latest</b>	YES
	<b>If CE certified, EN/IEC ditrectives</b>	NA
	<b>7) OPERATING PARAMETERS</b>	

4-

		<b>Ambient operating Temperature (0 to 50 Degree Celsius)</b>	YES	
8.	UV Cabinet (254nm, 265nm, Visible)	<b>1) Ultra violet(UV) Properties</b>		<b>1 No.</b>
		<b>UV Light Source</b>	UV Light Tube	
		<b>Number of UV Lamp</b>	2	
		<b>Average life span of UV lamp, hour</b>	> = 8000	
		<b>UV Radiation Type</b>	Shortwave UV-C germicidal type	
		<b>Power Consumption(UV Lamp)</b>	8 Watt	
		<b>UV Rays destroy bacteria and micro-organisms</b>	15 second	
		<b>Peak Wavelength</b>	254 nm	
		<b>2) Generic</b>		
		<b>Number of Trays</b>	2	
		<b>Cabinet Capacity</b>	45 liter	
		<b>UV Cabinet Type</b>	Single Door(1)	
		<b>3) Physical Properties</b>		
		<b>Inner Cabinet Material</b>	Stainless Steel	
		<b>UV Cabinet Size (Height)</b>	260 millimeter	
		<b>Tray Size (L x B x H)</b>	600X320X260	
		<b>UV Cabinet Size (Length)</b>	600 millimeter	
		<b>Tray Material</b>	MS sheet	
		<b>UV Cabinet Size (Breadth)</b>	320 millimeter	
		<b>4) Others</b>		
		<b>Colour</b>	WHITE	
		<b>Weight</b>	20 kilogram	
<b>5) Power</b>				

		<b>Power Supply</b> AC 220V, 50 Hz <b>6) Features</b> <b>Features</b> with Intensity Meter <b>7) Accessories</b> <b>Accessories inclusive in the scope of supply</b> User Manual <b>8) Warranty/Services</b> <b>Contact details of manufacturer, supplier and local service agent are provided</b> Yes <b>Time Duration for Repairing /Replace the defect during Warranty Hint: Select "NA" if not applicable</b> Within Two week <b>Response Time to attend the complaint during Warranty Hint: Select "NA" if not applicable</b> 24 Hour <b>Warranty Hint: Select "0" if not applicable</b> 12 month <b>9) Test Report/Certification</b> <b>Certification</b> CE <b>Name and address of the Lab where Test conducted</b> NA <b>Copies of reports and certifications to be furnished to buyer on demand at time of supplies</b> NA <b>Availability Of Test Report From Central Govt/Nabl/Ilac Accredited Lab To Prove Conformity To Specification</b> No <b>Test Report Number and Date</b> NA	
9.	Fuming Hood	<b>1) Application:</b> It is safety equipment used in all chemical laboratories to limit human exposure to hazardous or toxic fumes, vapours or dusts. Fume Hoods with floor mounted systems are designed to meet the challenges when working with chemicals, chemical fumes and other flammable materials etc. with a high	1 No.



degree of efficiency.

**2)Coupling:** Direct

**3)Balancing:** Dynamically

**4)Overall Dimension:**

The system should have following Overall Dimensions:

Overall Length of Fume Hood: 1500-1550mm

Overall Width of Fume Hood: 750-1500mm

Overall Height of Fume Hood: 1500-2500 mm

Length of Base Cabinet: 1000-1500mm

Height of Base Cabinet: 700-800mm

**5)Body Features:**

Double Wall Construction

Body thickness: 10 mm(Min.)

Completely made from GI sheet with Highly corrosion resistant epoxy powder coating.

Inner Chamber Chemical & Heat Resistance, Fire retardant, smooth finish, easily cleanable, made out of durable PRL sheets of thickness 5 mm (Min)/ SS 304 of 18-20 gauge thickness.

Should be provided with Fume Hood installation Kit and Accessories

Should be provided with Safety Device Trip

**6)Working Table Top:**

Granite /MS Powder Coated Sheet Covered with P.PSheet/ SS 304

Thickness of granite 18 mm (Min)

**7)Utility connections:**

Should be provided with Utility Pipe lines for Nitrogen, Compressed Air, Water

**8)Outer Covering (MoC)**

CRC, 18G, Epoxy Powder Coated

**9)Exhaust Duct**

Chemically Resistant, PVC/PP duct pipe

Provided with bends, dampers, transitions and clamps up to blower

All joints should be curved in order to avoid any backtracking of fumes and a smooth flow to exhaust fumes

Two exhaust ports connected to the fume hood exhaust System internally

**10) Sink & Tap**

Size: 100-200mm

Shall made of chemically resistant material

No leakage shall observe from Outlet Nipple

Shall be provided with Single way/Three-way swan neck tap

**11) Baffle Arrangement:**

Removable, Chemically Resistant PVC Back Baffle to capture and remove/ slide fumes instantly at faster speed Three-point suction system (for light, normal & heavy fumes) with baffle to ensure smooth and immediate removal exhaust of fumes.

**12) Exhaust Blower & Motor:**

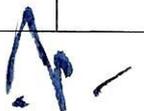
Motor Centrifugal Type, Motor

Blower :1.0 HP motor (3 phase, 50Hz, AC Supply) with phase MCB. Direct Driven, totally enclosed fan-cooled (TEFC), Squirrel Cage Induction Motor Chemical &heat resistance heavy-duty epoxy coated Min. 4Watt

**13) Scaffold/Grid:**

Should be provided to hold the chemicals and apparatus

		<p><b>14) Door/Sash /Shutter</b>  Thickness-4 mm(min.)  Material Toughened Glass  Door vertical Folding Type with adjustable height</p> <p><b>15) Air Flow</b>  Low Constant Volume Exhaust Type  Approx. 100 cubic meter/hour</p> <p><b>16) Noise Level</b>  Not more than 65 dB</p> <p><b>17) Face Velocity</b>  0.5 m/s or 100 feet per minute</p> <p><b>18) Shelves in Base Storage Units/ Cabinets</b>  Number-2  Type-Movable (With or Without Wheels)</p> <p><b>19) Illumination</b>  Florescent Lights-2 nos. (Min), 40 Watt</p> <p><b>20) Electrical Arrangements</b>  Min. 2 Nos. 15/5 amps 3 pin electric socket  Switch for blower, Switch for Lightings</p> <p><b>21) Compliance</b>  Must be compliant to ASHRAE Standard 110.2016-Method of Testing Performance of Laboratory Fume Hoods</p> <p><b>22) Power Requirement</b>  220/230 Volts</p> <p><b>23) Accessories</b>  Gas/vacuum tap  Additional set of sockets  Cabinet base of the fume hood is equipped by fixed supports and internal shelf for the reagents storing.</p> <p><b>24) Operating manuals, service manuals, other manuals</b>  Should provide  User, technical and maintenance manuals in English language List of procedures required for local calibration and routine maintenance service and operation manuals to be provided Advanced maintenance tasks documentation, if any.</p> <p><b>25) Supplier/Manufacturer</b>  Should be FDA/CE/BIS approved product.  Electrical safety conforms to the standards for electrical safety IEC 60601-General requirements (or equivalent IS/ International Standard)  All suppliers must submit a copy of catalogue showing technical specifications.</p> <p><b>26) Warranty</b>  Minimum three years comprehensive onsite warranty with one Preventive Maintenance from the date of installation and commissioning every year.  Warranty to be provided by OEM/Manufacturer.</p> <p><b>27) IQ/PQ/OQ</b>  On site IQ, OQ of instrument along with document to be provided &amp; supplier to assist till satisfactory PQ of instrument</p>	
10.	Water bath with evaporator	<p><b>1) Water Bath Chamber Dimensions, Capacity and Construction</b></p> <hr/> <p><b>Chamber Length of offered product:</b> 300 millimeter</p>	1 No.



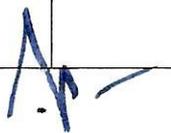
	<p><b>Chamber Width of offered product:</b> 250 millimeter</p> <p><b>Chamber Depth of offered product:</b> 150 millimeter</p> <p><b>Water bath Chamber Capacity</b> &gt;over 8 to 10 litre</p> <p><b>Chamber Construction:</b> Double walled rectangular chamber</p> <p><b>Material of inner Chamber and lid Construction:</b> Stainless Steel (SS 304)</p> <p><b>Material of Outer Chamber Construction:</b> Epoxy coated/Powder coated mild steel</p> <p><b>Weight (kg)</b> 15</p> <p><b>Number of racks provided with Water bath unit</b> 0</p> <p><b>Number of 75 mm diameter Holes provided:</b> 6</p> <p><b>2) Heating Arrangement Parameters</b></p> <hr/> <p><b>Heat source:</b> Heating shall be done by a immersion heater.</p> <hr/> <p><b>Heating Capacity (&gt;=):</b> 1000 Watt</p> <hr/> <p><b>3) Control Panel and Display Unit</b></p> <hr/> <p><b>Control Panel has:</b> ON/Off Switch, Heating &amp; Temperature (Set &amp; Actual) Indicators, Power mains Indicator</p> <hr/> <p><b>Adjustable shaking frequency in rpm</b> NA</p> <hr/> <p><b>Type of Temperature controller</b> Thermostat based control</p> <hr/> <p><b>Water bath Display type:</b> Analog Display</p> <hr/> <p><b>Integrated circulation pump for temperature homogeneity</b> No</p> <hr/> <p><b>Removable bottom plate and shaking inserts</b> No</p> <hr/> <p><b>4) Water bath Temperature</b></p>	
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	<b>Temperature range of bath chamber:</b>	5°C above ambient to 99.9°C
	<b>Temperature control sensitivity:</b>	±0.5°C or better
	<b>Least temperature increment Step available</b>	5 degree C
	<b>Temperature Accuracy:</b>	±5°C or better
	<b>Safety Features:</b>	Over temperature Alarm & cutoff, Redundant safety thermostat
	<b>5) Power Requirement, Certifications and Warranty</b>	
	<b>Power requirement:</b>	220 V 50 Hz Single Phase AC
	<b>Availability of Test Report from Central Govt/NABL/ILAC accredited lab to prove conformity to specification</b>	No
	<b>Manufactured by ISO 9001:2008 or latest certified firm:</b>	YES
	<b>Equipment has CE certification</b>	No
	<b>Warranty Period:</b>	3 year
	<b>6) Cover</b>	
	<b>Lid/cover Provided</b>	Yes
	<b>Shape of Cover</b>	NA
	<b>7) Timer Unit</b>	
	<b>Timer Provided</b>	No
	<b>Timer Setting ( minimum increment step)</b>	0 second
	<b>8) Miscellaneous Features</b>	
	<b>Drain plug in Chamber provided</b>	No
	<b>Data Logging facility through (RS 232/USB/HDMI/Bluetooth etc) to computer available:</b>	No
	<b>Steel holder for tubes and Flasks provided:</b>	No

		<p><b>Drain screw for emptying of water bath</b> No</p> <hr/> <p><b>Seamless and waterproof keypad</b> No</p>	
11.	Water Distillation plant	<p><b>1. Description of function</b> Required for production of distilled water which is to be used in EPS Lab and preparation of buffers.</p> <p><b>2. Operational requirements</b> Distillation plant with stand (not wall mounted) and approx. 100-150 Litres/hour output. Panel box and stand to accommodate regulator and electrical supply, clamps etc. Instant distilled water flow,</p> <p><b>3. Technical specifications</b> <b>Water Quality:</b></p> <ul style="list-style-type: none"> <li>a) Purity: TDS (Total Dissolved Solids) &lt; 10ppm, typically close to 0 ppm.</li> <li>(b) Conductivity: &lt; 1 <math>\mu</math>S/cm (micro Siemens per centimeter) indicating extremely low levels of dissolved salt.</li> <li>(c) Pyrogens/Endotoxins: Non detectable</li> <li>(d) PH-6.9-7.</li> <li>(e) Hardness-Zero</li> <li>(f) Bacterial content. &lt;1CFU/ml</li> <li>(g) Heating method: Electrical</li> <li>(h) Cooling Method: Air Water cooled condenser</li> <li>(i) Material of construction: Stainless steel of Grade 304.</li> <li>(j) Control Features: Equipped with DTC, pressure control, Alarm and Automatic power &amp; water supply cut off.</li> <li>(k) Water recovery rate: 80-90%</li> <li>(l) Equipment should be thermal shock proof.</li> <li>(m) Tubing should be made up of good quality rubber (Heat Resistant)</li> <li>(n) It should have deconcentrated a bleeder device on the evaporation that constantly removes part of the boiling water from it so that the cumulative concentration of no volatile impurities in the water is prevented.</li> <li>(o) Guarantee/Warranty: Minimum 2 years from the date of commissioning.</li> </ul> <p><b>4. Additional accessories, Spares and Consumables</b> Any Accessories/consumables required for installation standardization of system to be given by the firm.</p> <p><b>5. Environmental Factors</b> The unit shall be capable of operating continuously in ambient temperature of 0-50° C and relative humidity of 15-90%.</p> <p><b>6. Standards, Safety and Training</b> Should be BIS approved product Easy to operate, durable and safe for routine work. Installation and on-site training to operate the distilled water plant.</p> <p><b>7. Documentation</b></p>	1 No.

		<p>User/Technical/Maintenance manuals to be supplied in English and Hindi. Certificate of calibration and inspection List of important spare parts and accessories with their part number and costing.</p> <p><b>8. Power Supply</b> Power input to be 220-240V AC, 50Hz fitted with Indian plug Energy Consumption: 6-12kw. Wiring of the equipment should be enclosed in Case.</p>																																					
12.	PH meter	<p><b>1) Technical specification of PH Meter</b></p> <table border="1"> <tr> <td><b>Product Name</b></td> <td>Digital pH Meter</td> </tr> <tr> <td><b>Type of pH Meter</b></td> <td>Microcontroller Based</td> </tr> <tr> <td><b>Display</b></td> <td>Backlit LCD / Digital Display showing pH and temperature</td> </tr> <tr> <td><b>pH Measurement Range</b></td> <td>0.00 to 14.00</td> </tr> <tr> <td><b>pH Resolution</b></td> <td>0.01</td> </tr> <tr> <td><b>pH Accuracy</b></td> <td>±0.05</td> </tr> <tr> <td><b>Calibration Type</b></td> <td>Manual</td> </tr> <tr> <td><b>Number of Calibration Points</b></td> <td>3 point</td> </tr> <tr> <td><b>Temperature Compensation Type</b></td> <td>Manual</td> </tr> <tr> <td><b>Temperature Range</b></td> <td>0 °C to 100 °C</td> </tr> <tr> <td><b>Temperature Accuracy</b></td> <td>±0.05 °C</td> </tr> <tr> <td><b>mV Resolution / Accuracy</b></td> <td>0.1 mV / 1 mV; ±0.1–0.2 mV</td> </tr> <tr> <td><b>Power Requirement</b></td> <td>230 V ± 10, 50 Hz AC</td> </tr> <tr> <td><b>Parallel Temperature Indication</b></td> <td>Yes</td> </tr> <tr> <td><b>Corrosion Resistant</b></td> <td>Yes</td> </tr> <tr> <td><b>Impact Resistant</b></td> <td>No</td> </tr> <tr> <td><b>Ingress Protection</b></td> <td>Minimum IP65 (Water-tight, splash-proof)</td> </tr> </table> <p><b>2) ACCESSORIES</b></p> <table border="1"> <tr> <td><b>Measuring Electrode</b></td> <td>Yes</td> </tr> </table>	<b>Product Name</b>	Digital pH Meter	<b>Type of pH Meter</b>	Microcontroller Based	<b>Display</b>	Backlit LCD / Digital Display showing pH and temperature	<b>pH Measurement Range</b>	0.00 to 14.00	<b>pH Resolution</b>	0.01	<b>pH Accuracy</b>	±0.05	<b>Calibration Type</b>	Manual	<b>Number of Calibration Points</b>	3 point	<b>Temperature Compensation Type</b>	Manual	<b>Temperature Range</b>	0 °C to 100 °C	<b>Temperature Accuracy</b>	±0.05 °C	<b>mV Resolution / Accuracy</b>	0.1 mV / 1 mV; ±0.1–0.2 mV	<b>Power Requirement</b>	230 V ± 10, 50 Hz AC	<b>Parallel Temperature Indication</b>	Yes	<b>Corrosion Resistant</b>	Yes	<b>Impact Resistant</b>	No	<b>Ingress Protection</b>	Minimum IP65 (Water-tight, splash-proof)	<b>Measuring Electrode</b>	Yes	1 No.
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<b>Measuring Electrode</b>	Yes																																						

		<p><b>(Combined) provided</b></p> <p><b>Glass Calomel Electrode provided</b> Yes</p> <p><b>Temperature Probe provided</b> Yes</p> <p><b>Electrode Stand provided</b> Yes</p> <p><b>Calibration Buffers provided</b> Yes</p> <p><b>Maintenance Kit provided</b> Yes</p> <p><b>Operation Manual provided</b> Yes</p> <p><b>Power Cable &amp; Plug provided</b> Yes</p> <p><b>3) WARRANTY</b></p> <p><b>Warranty (Year)</b> 1</p> <p><b>4) CERTIFICATIONS</b></p> <p><b>Availability of Test Reports of the product from Central Govt/NABL/ILAC accredited Lab showing compliance to the specification</b> Yes</p> <p><b>Agree to furnish all test report and certificates to buyer on demand</b> Yes</p>	
13.	Vortex Shaker	<p><b>1) WARRANTY</b></p> <p><b>Warranty on machine</b> 3 year</p> <p><b>2) DISCREPTION</b></p> <p><b>Type of Drive Motor</b> Brushless DC Motor</p> <p><b>Display Option/Output Read out Option</b> No integral Display</p> <p><b>Material of Mixing Head/vortex cup</b> Rubber</p> <p><b>Type of Vortex Mixer</b> Standard Vortex Mixer</p> <p><b>Type of Controller</b> Microprocessor Controlled</p> <p><b>Timer Setting (Increment step)</b> 1 minute</p>	<b>1 No.</b>



<b>Base material</b>	Die cast aluminium
<b>Number of Sample tubes testable simultaneously</b>	Single Tube
<b>Weight (kg)</b>	3.5 kilogram
<b>User Interface</b>	Analog Front Panel
<b>Largest Volume of the tube testable</b>	200 milliliter
<b>Finish of Body material</b>	Powder coated
<b>Body Material</b>	Die cast Aluminium
<b>Noise Level (maximum) (db)</b>	60 decibel
<b>Maximum Load capacity</b>	0.5 kilogram
<b>3) FEATURES</b>	
<b>Speed increment step,if variable speed (RPM)</b>	45
<b>IP rating or Ingress protection rating</b>	21
<b>Activation mode</b>	Press Activated and Continuous run
<b>Speed mode</b>	Variable Speed
<b>Type of Data Logging option</b>	USB,RS232,PRINTER PORT,HDMI,BLUETOOTH
<b>Number of Programmable/Programmed modes</b>	4
<b>Maximum Speed (RPM)</b>	1
<b>Minimum Speed (RPM)</b>	1
<b>Timer Provided</b>	No
<b>Input Current (Amp)</b>	50
<b>Pulse mode</b>	Yes
<b>In built Counter balance</b>	No

<b>Programmable Pulse mode</b>	No
<b>Speed control Accuracy (+/-) (RPM)</b>	40
<b>Suction Cup in the base</b>	Yes
<b>Maximum Diameter of the tube testable (mm)</b>	50
<b>Accessories and spares included in standard pack</b>	NONE
<b>Auto Cutoff</b>	Yes
<b>4) DIMENSIONS</b>	
<b>Orbital Diameter</b>	4 millimeter
<b>External Dimension: Height</b>	160 centimeter
<b>External Dimension: Width</b>	127 centimeter
<b>External Dimension: Depth</b>	130 centimeter
<b>5) POWER</b>	
<b>Power Consumption (W)</b>	60 Watt
<b>Input Voltage (V) with number of Phases</b>	230 single phase
<b>6) CERTIFICATIONS</b>	
<b>availability of test report (to be furnished to Buyer by Seller on demand of the former) from NABL/ILAC/Govt laboratory</b>	No
<b>Test Report Number and date</b>	NA
<b>Name and address of the Lab issuing test report</b>	NA
<b>Product CE certified</b>	Yes
<b>Firm certified to ISO9001:2008 or latest</b>	YES
<b>If CE certified, EN/IEC ditrectives</b>	NA
<b>7) OPERATING PARAMETERS</b>	

		<b>Ambient operating Temperature (0 to 50 Degree Celsius)</b>	YES	
14.	Fractional distillation apparatus	<b>1)</b> <b>Material</b> <b>Features</b> <b>2) Dimension</b> <b>Extractor capacity</b> <b>Flask capacity</b> <b>3) Specifications</b> <b>Warranty</b> <b>Heating element</b> <b>Operating temperature</b> <b>Extractor socket</b> <b>Heating mantles</b> <b>Operating voltage</b> <b>Frequency</b> <b>Shape</b> <b>Extractor cone</b> <b>4) Generic</b> <b>Packaging</b> <b>5) Test Report/Certification</b> <b>Manufacturer should have ISO certification for quality standards</b> <b>ISO certification date and number (if no then put NA)</b>	YES  Borosilicate glass 3.3 with heating cabinet  500 milliliter 500 milliliter  12 Nichrome 200 degree Celsius 12 inch 1 230 Volt 30 Hertz Round 4 inch Box  No NA	1 No.
15.	Mortar and pestle	<b>1) Description:</b> A mortar is a tool used to crush, to reduce to powder and to mix solid substances. It is essentially a container, with a rounded bottom, in hard		1 No.

		porcelain in which the substances are placed, which is then crushed by the action of a pestle. 2) Manufactured in polished porcelain.																											
16.	Spot test plate	1) A flat plate with multiple cavity-like depressions (wells) for holding small amounts of reactants. 2) <b>Materials:</b> Usually porcelain (durable, reusable, resistant to concentrated chemicals, autoclavable) 3) <b>Capacity:</b> Each plate has 12–24 wells, allowing multiple reactions at once. 4) <b>Colors:</b> Commonly white (for easy observation of color changes) or clear (for transmitted light observation).	1 No.																										
17.	Ph indicator paper	1) Strips of paper impregnated with pH-sensitive dyes that change color when dipped in a solution. 2) <b>Range:</b> universal range (1–14).	1 No.																										
18.	Desktop unit with color printer   7 core, 32 GB with windows 10 OS	<p><b>1) PROCESSOR</b></p> <table border="1"> <tr> <td>Description of Stores</td> <td>Desktop Computer with Table Mount Monitor System with Compatible Chipset as per Processor make with Minimum 6 USB Port</td> </tr> <tr> <td>Base Processor Number</td> <td>NA for Higher Processor</td> </tr> <tr> <td>Higher Processor Number</td> <td>Intel Core i9- 14900</td> </tr> <tr> <td>Out of Band Management</td> <td>Intel vPro</td> </tr> </table> <p><b>2) MOTHERBOARD</b></p> <table border="1"> <tr> <td>Expansion Slots (PCIe x 1)</td> <td>1</td> </tr> <tr> <td>Expansion Slots (PCIe x 4)</td> <td>1</td> </tr> <tr> <td>Expansion Slots (PCIe x 16)</td> <td>1</td> </tr> <tr> <td>Expansion Slots (M Dot 2) for SSD</td> <td>2</td> </tr> <tr> <td>Expansion Slots (M Dot 2) for WiFi</td> <td>1</td> </tr> <tr> <td>Trusted Platform Module</td> <td>Discrete TPM 2.0</td> </tr> </table> <p><b>3) GRAPHICS</b></p> <table border="1"> <tr> <td>Graphics Type</td> <td>Integrated</td> </tr> <tr> <td>Graphic Card Make and Model - Must declare</td> <td>UHD Graphics 770</td> </tr> <tr> <td>Size of Memory in Case of Dedicated Graphic Card (GB)</td> <td>0</td> </tr> </table>	Description of Stores	Desktop Computer with Table Mount Monitor System with Compatible Chipset as per Processor make with Minimum 6 USB Port	Base Processor Number	NA for Higher Processor	Higher Processor Number	Intel Core i9- 14900	Out of Band Management	Intel vPro	Expansion Slots (PCIe x 1)	1	Expansion Slots (PCIe x 4)	1	Expansion Slots (PCIe x 16)	1	Expansion Slots (M Dot 2) for SSD	2	Expansion Slots (M Dot 2) for WiFi	1	Trusted Platform Module	Discrete TPM 2.0	Graphics Type	Integrated	Graphic Card Make and Model - Must declare	UHD Graphics 770	Size of Memory in Case of Dedicated Graphic Card (GB)	0	1 No.
Description of Stores	Desktop Computer with Table Mount Monitor System with Compatible Chipset as per Processor make with Minimum 6 USB Port																												
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Expansion Slots (M Dot 2) for SSD	2																												
Expansion Slots (M Dot 2) for WiFi	1																												
Trusted Platform Module	Discrete TPM 2.0																												
Graphics Type	Integrated																												
Graphic Card Make and Model - Must declare	UHD Graphics 770																												
Size of Memory in Case of Dedicated Graphic Card (GB)	0																												

<b>4) OPERATING SYSTEM</b>	
<b>Factory Pre-loaded Operating System</b>	Window 11 Professional
<b>Recovery Media for OS</b>	On Line / Cloud
<b>5) MEMORY (RAM)</b>	
<b>Type of RAM</b>	DDR5
<b>RAM Size (Memory Card/Module) (in GB) (Capacity to be Installed in the System)</b>	16
<b>Memory Expandable up to (in GB)</b>	128
<b>Total Numbers of DIMM Slots Available</b>	4
<b>Number of DIMM Slots populated with Memory Card</b>	1
<b>6) STORAGE</b>	
<b>Type of Storage Installed with the System</b>	NVME - SSD
<b>Primary Storage Capacity (in GB)</b>	1024
<b>Availability of Secondary Storage</b>	No Secondary Storage
<b>Secondary Storage Capacity (in GB)</b>	0
<b>7) BAYS AVAILABILITY</b>	
<b>Number of Internal Bays Available, Size 2 Point 5 Inch</b>	0
<b>Number of Internal Bay Populated, Size 2 Point 5 Inch</b>	0
<b>Number of Internal Bays Available, Size 3 Point 5 inch</b>	2
<b>Number of Internal Bay Populated, Size 3 Point 5 inch</b>	0
<b>8) CABINET</b>	

<b>Cabinet Form Factor</b>	Tower (More than 13 to 26 Liters)
<b>Bays for Optical Drive</b>	1
<b>Optical Drive</b>	No Optical Drive
<b>Audio Interface Type</b>	Audio-In, Audio-Out, Universal 3.5 mm Audio Jack (Support for Audio-in and Audio out)
<b>9) CONNECTIVITY</b>	
<b>Type of Ethernet Ports</b>	10/100/1000 on board Integrated Gigabit Port
<b>Number of Ethernet Ports</b>	1
<b>10) PORTS</b>	
<b>Number of USB Type A Ports (Version 2 Point 0)</b>	3
<b>Number of USB Type A Ports (Version 3 point 2 Gen 1)</b>	6
<b>Number of USB ports Type C</b>	1
<b>Number of Serial Ports</b>	0
<b>Number of Parallel Ports</b>	0
<b>Number of VGA Ports</b>	0
<b>Number of HDMI Ports</b>	1
<b>Number of DP Ports</b>	2
<b>11) Monitor</b>	
<b>Availability of Monitor</b>	Yes as per IS 13252 (Part 1)
<b>Panel Type</b>	Vertical Alignment (VA)
<b>Display Technology</b>	LED Backlit LCD (Liquid Crystal Display)
<b>Screen Size (in CMs)</b>	53.1 - 58 (20.91" - 22.83")
<b>Maximum Resolution (Pixels)</b>	1920 x 1080 (Full HD)
<b>Brightness (in Nits)</b>	200 to 250

		<b>Image Aspect Ratio</b>	16:9
		<b>Refresh Rate (in Hz)</b>	71 to 90
		<b>Monitor Port</b>	HDMI,VGA
		<b>Integrated Webcam with Mic</b>	Yes
		<b>Power Supply for Monitor</b>	External Power Adapter
		<b>Speaker</b>	Yes
		<b>12) INPUT DEVICES</b>	
		<b>Mouse Connectivity</b>	Wireless
		<b>Keyboard Connectivity</b>	Wireless
		<b>Type of Keyboard</b>	Standard
		<b>13) POWER</b>	
		<b>Power Supply Capacity- Maximum (in Watt)</b>	400
		<b>Minimum Power Efficiency Range (%)</b>	90 – 94
		<b>14) OPERATING CONDITION</b>	
		<b>Minimum Operating Temperature (in Degree Celsius)</b>	5
		<b>Maximum Operating Temperature (in Degree Celsius)</b>	35
		<b>Operating Humidity (RH) (in Percentage)</b>	10 to 90
		<b>15) WARRANTY</b>	
		<b>On Site OEM Warranty (In year)</b>	3
		<b>16) CERTIFICATION</b>	
		<b>Availability of RoHS Certificate</b>	Yes
		<b>Availability of Certification for Environmental Management System with Manufacturer</b>	Yes. As per IS/ISO:14001
		<b>Compliance of Information Security, Cybersecurity and</b>	Yes. Complies as per IS/ISO/IEC 27001: 2022

		<p><b>Privacy Protection-Information Security Management Systems Requirements</b></p> <hr/> <p><b>Availability of EPR Registration in Respect of the Manufacturer as per e-Waste Rules as Amended Up To Date</b>      Yes</p> <hr/> <p><b>Agreed to Provide a Copy of EPR Registration Certificate to Buyer on Demand</b>      Yes</p> <hr/>	
19.	I 7core, 32 Gb RAM with windows 10 OS, 14 inch (Laptop)	<p><b>1) Construction</b></p> <hr/> <p><b>Description of Stores</b>      Laptop with onsite 1 year OEM warranty, BIOS Password, 1- inbuilt RJ45 Gigabit Ethernet Port (1-RJ 45 adapter in case not inbuilt), minimum 2 number of USB Type A 3.0 Ports (1-Type C to Type A compatible adapter in case only 1 USB Type A 3.0 port is provided, minimum 1 Type C USB 3.0 Port, 1- HDMI Port, Wi-Fi 5 (802.11ac) or higher, Bluetooth 5.0 or higher, DC Adapter Jack, Built-in Stereo Speakers with high definition audio support, built-in microphone, Keyboard with touchpad, Minimum Li-ion battery Capacity -36 Watt Hour with minimum 8 hour battery backup and integrated webcam</p> <hr/> <p><b>Chassis Material</b>      Aluminium</p> <hr/> <p><b>2) Processor</b></p> <hr/> <p><b>Base Processor Number</b>      For Higher Processor</p> <hr/> <p><b>Base Processor Number Supplied</b>      For Higher Processor</p> <hr/> <p><b>Higher Processor Number</b>      Intel Core 7 150U</p> <hr/> <p><b>Chipset</b>      Compatible Chipset as per Processor Make</p> <hr/> <p><b>3) Motherboard</b></p> <hr/> <p><b>Security</b>      FTPM 2.0</p>	1 No.

<b>4) Operating System</b>	
<b>Operating System (Factory Pre-Loaded)</b>	Window 11 Professional
<b>Recovery Image Media</b>	Stored in Partition of the SSD
<b>Agreed to provide OEM Website URL Link for product verification to the buyer at the time of bidding or on demand</b>	Yes, agreed
<b>5) Memory</b>	
<b>Type of RAM</b>	DDR5
<b>RAM Size (GB)</b>	32
<b>Total Numbers of DIMM Slots Available</b>	1
<b>Number of DIMM Slots Populated</b>	1
<b>RAM Expandability up to</b>	0
<b>6) Display</b>	
<b>Display Size (in cm) - Diagonal</b>	38.08 to 40.62 (15 In to 15.99 In)
<b>Display Technology</b>	LED
<b>Minimum Display Resolution (Pixels)</b>	FHD- 1920x1080
<b>Minimum Resolution of Webcam</b>	HD-720p
<b>7) Storage</b>	
<b>Type of Storage Drive</b>	NVMe - SSD
<b>Capacity of Storage Drive (in GB)</b>	1024
<b>8) DIMENSION</b>	
<b>Weight (in gram)</b>	1300 to 1599
<b>9) ENVIRONMENTAL</b>	
<b>Minimum Operating Temperature (in degree Celsius)</b>	-10

		<b>Maximum Operating Temperature (in degree Celsius)</b>	55
		<b>Operating Humidity (in Percentage)</b>	10 to 90
		<b>10) Certification</b>	
		<b>BIS CRS Compliance</b>	Yes, as per IS 13252 (Part 1)
		<b>ROHS Compliance</b>	Yes
		<b>Certification for Environmental Management System with manufacturer</b>	Yes. As per IS/ISO:14001
		<b>Compliance of Information Security, Cybersecurity and Privacy Protection-Information Security Management Systems Requirements</b>	Yes. Complies as per IS/ISO/IEC 27001
		<b>EPR Registration in respect of the manufacturer as per E waste rules as amended up to date</b>	Yes
		<b>Agreed to Provide a copy of EPR Registration Certificate to Buyer on Demand</b>	Yes

  
 Asstt. Inspector General of Police (E)  
 Police Head Quarters, Itanagar  
 Arunachal Pradesh  
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