मुंबई विद्यापीठ

University Dept of Biotechnology 2nd floor Life Science Bldg, Vidyanagri,
Santacruz (E), Mumbai 40098
Telefax - 022-26526053

Email- varshakelkar@rediffmail.com,

Tender Document
No: Biotech/tender/01/2013/ND
Nano Drop (Multiscan Spectrophotometer)

Date: 1st October 2013

Part A- Terms and Conditions
Part B- Specifications
Part C- Specification Analysis

Price- Rs 500/- (non-refundable) DD to be drawn in the name of Finance and Accounts officer University of Mumbai

Important Dates:

Last date of Sale of Tender Document	Friday 11th October 2013, 11.00 am till 3.00 pm
Last Date of Receiving sealed Bids:	Monday 14th October 2013, 11.00 a.m. till 1.00 pm

University Dept of Biotechnology,
2nd floor Life Science Bldg,
University of Mumbai, Santacruz (E)
Vidyanagri, Mumbai 400098

Sealed Tender bids for **NanoDrop (MULTISCAN SPECTROPHOTOMETER)** for the Dept of Biotechnology are invited for and on behalf of University of Mumbai by the head of the department so as reach the office latest by Monday 14th October between 11.00 a.m. to 1.00 pm.

Tender Document containing terms and conditions and technical specifications are available in the Office of the University Dept of Biotechnology, 2nd floor Life Science Bldg, Vidyanagri, Santacruz (E), Mumbai 400098, on all working days between 11.00 a.m. & 4.00 p.m. from 1st October 2013 to 11th October 2013. Terms & conditions and technical specifications can also be downloaded from http://www.mu.ac.in. The tender bids duly complete in all respects, along with the necessary documents should be submitted to the above mentioned address, by Monday 14th October between 11.00 a.m. to 1.00 pm.

The Right to reject any or all tenders, without assigning any reason is reserved by the University of Mumbai.

I/c Head Dept of Biotechnology
University of Mumbai

Part A - Terms and Conditions

Quantity-1 (One)

Terms and Conditions of Supply:

1. Last date and time for acceptance of bids is 14th October 2013 between 11.00 a.m. to 1.00 pm

2. Suppliers shall submit the following documents along with their quotations.

(a) Income- Tax clearance certificate from the Income-Tax Officer concerned, certifying that the tenderer has cleared all the Income-Tax dues.

(b) Suppliers should be either manufacturer or authorized dealer of the said equipment and should submit the proof for the same. Also, the suppliers should state whether they are a Proprietary Firm, Partnership Firm or a Private/Public Limited Company and furnish the proof of the same.

(c) The names of the organizations and laboratories to which similar equipment have supplied.

(d) Earnest Money Deposit shall be in the form of a Demand Draft drawn in favour of **"Finance and Accounts officer, University of Mumbai, Fort Campus Mumbai 400032"** on any Scheduled/ Nationalized Bank, payable at Mumbai. The amount of Earnest Money Deposit shall be 3% of the cost of supply subject to maximum Rs 1 lakh.

(e) VAT Registration No.

(f) Technical specifications offered by the Supplier.

(g) Technical compliance table

(h) Propriety certificate, if any

3. The rates should be mentioned in the **Schedule** attached with the Tender Document. Each page of the tender shall be signed in full and stamped with the seal by the supplier. The supplier must clearly state in what capacity he or she is signing the tender.

4. The supplier shall submit the tender in two envelopes. The first envelope (Technical Bid) shall contain all the documents referred to in **para two above** and sealed. The second envelope (Commercial Bid) shall contain the **Schedule,** in which the supplier shall register the rates of supply. The second envelope shall also, likewise, be sealed. Both the envelope then should be put together, and shall be sealed in an envelope, and shall prescribed time and date. The Technical Bid shall be opened first to ensure that supplier have submitted all the requisite documents.

If the Technical Bids are not in order or are deficient in some respect, the commercial bids in respect of such tenders shall not be opened. The date and time of opening the financial bids shall be announced immediately after opening all the Technical bids.

5. Tender bids not accompanied by the requisite amount of Earnest Money Deposit are liable to be rejected

6. The Earnest Money Deposit paid by the supplier shall be forfeited, if the supplier fails to pay the necessary security deposit in the event of his tender being accepted.

7. The amount of Security Deposit/Performance Guarantee shall be 5 % of the cost. In case of successful tenderer the amount of Earnest Money Deposit shall be converted in Security Deposit/Performance Guarantee. Security Deposit/Performance Guarantee shall be refunded after the

warranty period is over. The Security Deposit/Performance Guarantee can be paid in the form of a Bank Guarantee from a scheduled bank.

8. Supplier should read carefully all the instructions and terms and conditions, etc before registering rates in prescribed schedule of the tender. Taxes and duties etc., should be shown separately.

9. The offers made by the suppliers shall be open for acceptance within 120 days after the last date of submission of tender.

10. **The Technical Documents shall be opened by the Head of the department of Biotechnology** 2nd Floor Life science bldg, Vidyanagri, Santacruz (E) for those bids for which minimum three Vendors have participated. The tenderers or their authorized representatives shall be allowed to be present at the time of opening of the tenders. Financial bids of only qualified tenderers shall be opened.

Tender opening (if minimum 3 bids are received), first extension of two weeks starts, if less than 3 bids are received in the 1st extension, last date of the first extension (opening of the technical bids on the same day, if 3 bids received), second extension of the second week starts if less than bids are received in the first extension, last date of second extension (opening of technical bids on same day even if less than 3 bids are received.)

The date and time of opening the bids (technical as well as financial) shall be announced on the Mumbai University website after the last date of the receipt of the tenders

11. In case of imported items/equipments, the rates should be quoted in the light of exemptions enjoyed by educational institutions. University is exempted from the payment of Octroi and the necessary certificate/form can be issued by the University. The customs duty applicable to the University of Mumbai is maximum 5% of the invoice.

12. Technical specifications of the instruments/equipments/articles are given in **Annexure** to these papers (Part B). Vendors are required to fill the Part C appropriately after studying the technical specifications as in Part B

13. The delivery, installation & operational training of the instruments/equipment should be completed within 3 months from placing of the order, in case of the imported equipment and within fifteen (15) days if the instrument/equipment is made in India. No extension shall be granted to the contractors/suppliers for the period of delivery, under any circumstances.

14. If the supplier fails to deliver the article as per the delivery schedule, the University of Mumbai shall be free to procure the balance/undelivered supply, at the risk and cost of the supplier, from other such suppliers

15. The goods, articles, materials supplied by the supplier shall be accepted after inspection by an officer authorized by the competent authority. No articles/materials which do not conform to the specifications laid down in the terms and conditions or damaged in transit be accepted.

16. The bills of the suppliers shall be paid by the University after all the materials /articles/equipments have been received, inspected as above.

17. Vendor must submit Compliance statement in tabular form comparing each specification of the quoted item with that given in the Tender Document part B. The Vendor also must supply a soft copy of the Table only Microsoft in word 2003 format.

18. If the equipment is imported and requires PC, printer other peripherals, they can be bought from India and should be of International brand such as HP. The monitor should LCD/TFT screen. The printer should be LaserJet printer. The processor should be Intel Core2 Duo. The amount quoted for

the items bought in India, installation; servicing etc. can be in Indian Rupees and the imported items can be quoted in foreign currency.

19. **The warranty period shall be for three years.**

20. As the suppliers shall be responsible for the supply and installation (wherever necessary) of equipment at Mumbai, the cost towards insurance until destination in the University, shall be borne by suppliers.

21. In the event of any breach of the terms and conditions of the supply, the University of Mumbai may terminate the contract placed with the supplier and forfeit the security deposit or the supplier.

22. **Proprietary certificate, if any, should be included in the technical bid.**

23**.** The basic operator training should be provided by the competent Engineer during the time of installation

24. Charges for AMC after one year of warranty for next four years (minimum 4 visits per year) should be clearly mentioned separately as optional item. A list of all the necessary accessories required to make the unit functional should be provided. Names and phone numbers of the persons responsible for Sales and Service for this territory should be mentioned.

SCHEDULE TO TENDER

Note:

1. Tenderers are advised to read carefully the Terms and Conditions of supply and "the Instructions to the Tenderers" before recording the rates in this schedule.

2. No erasures or overwriting shall be allowed, unless they are authenticated under the full signature and the seal of the tenderer.

3. The Rates shall be FOR, at destinations/godowns/places indicated in the delivery

Item no	Description of goods with details of specifications	Number/ quantity	Price/Rate per Unit	Taxes	Duties	etc

Signature of the Tenderer

Seal of the Firm

PART B

Multiscan spectrophotometer Specifications-

Technical specification

- A UV-visible spectrophotometer both for cuvette and microplate reading option.
- A monochromator based UV/Vis spectrophotometer with Xenon Flash lamp as light source and photo multiplier tube (PMT) as detector, for better performance.
- The system is able to read 96 & 384 well plates and standard cuvette as well as low volume cuvettes of any path-length.
- Instrument is able to provide the wavelength range from 200nm to 1000nm with 1 nm steps.
- Should have a spectral scanning option for standardizing new assays.
- The applications include nucleic acid quantification, protein assays , enzyme kinetic assays, immunoassays (ELISA) , cell toxicity assays, apoptosis and reporter gene assays.
- The instrument should have inbuilt **incubation** and **linear shaking** options for ELISA, enzyme kinetic assays etc.
- Incubation temperature: from ambient +4 ^{0}C to +45 ^{0}C.
- Measurement speed should be 6 sec. for 96 well and 10 sec. for 384 well plate
- It should be an open system and able to accommodate any consumables from any manufacturer.
- Instrument should have an option for pathlength corrections to correlate the microplate data to cuvette, in case of nucleic acid quantification performed on microplate.
- It should have Power Save function for reduced energy consumption when the instrument is 'on' but not in use.
- Instrument shoud be capable of running in stand-alone mode OR with computer & software controlled.
- The instrument should have a memory of 100 inbuilt protocols in stand-alone mode and a color display for better visualization.
- Analysis software to be supplied with the instrument and should have unlimited user system license.
- The instrument should have a USB port for the easy data transfer.
- Self diagnostics option to give a guaranteed high quality data.
- Quick and easy measurement of low sample volumes down to 2 µL.
- Should be ideal tool for photometric DNA or RNA quantitation and purity analysis.
- dsDNA detection to range from a few micrograms to a few milligrams per milliliter
- should have 16 sample positions for quick and easy measurement of sample volumes down to 2 µL
- Quick and easy to wipe off the samples in serial measurements
- Ready-made Software sessions for nucleic acid analysis
- Measurement slot for a rectangular cuvette
- The low-volume measurement area to consists of two quartz slides: the top clear quartz and the bottom Teflon-coated quartz slide.
- Sample positions to be arranged in a 2 x 8 matrix, providing a straightforward way of analyzing up to 16 samples simultaneously.
- The fixed light path of the Plate allows direct calculation of the nucleic acid concentrations of the samples.

Analysis software should have:

- *The calcuation, performed in compliance with the European Pharmacopoeia guidelines.*
- *Spectral scanning measurement and calculations*
- *Cuvette layout*
- *Pathlength correction*
- *Possibility to import results from internal software*
- *Compatible with Windows XP, Vista and Windows 7*
- *Language versions (at least 8language)*
- *Parallel Line Analysis (PLA)*
- *Improved Quality Control calculation*
- *Improved User-equation calculation*
- *Layout, protocol, calculations and reports can be edited freely*

PART C

Tick the appropriate specifications whether provided or not in the columns as below and highlight the specifications if provided in the equipment brochures that are to be attached.

Specifications (to be highlighted in the brochure)	**Specifications provided by the party**		
	Complied	Not-complied	Remarks
• A UV-visible spectrophotometer both for cuvette and microplate reading option. • A monochromator based UV/Vis spectrophotometer with Xenon Flash lamp as light source and photo multiplier tube (PMT) as detector, for better performance. • The system is able to read 96 & 384 well plates and standard cuvette as well as low volume cuvettes of any path-length. • Instrument is able to provide the wavelength range from 200nm to 1000nm with 1 nm steps. • Should have a spectral scanning option for standardizing new assays. • The applications include nucleic acid quantification, protein assays , enzyme kinetic assays, immunoassays (ELISA) , cell toxicity assays, apoptosis and reporter gene assays. • The instrument should have inbuilt **incubation** and **linear shaking** options for ELISA, enzyme kinetic assays etc. • Incubation temperature: from ambient +4 ^{0}C to +45 ^{0}C. • Measurement speed should be 6 sec. for 96 well and 10 sec. for 384 well plate • It should be an open system and able to accommodate any consumables from any manufacturer. • Instrument should have an option for pathlength corrections to correlate the microplate data to cuvette, in case of nucleic acid quantification performed on microplate. • It should have Power Save function for reduced energy consumption when the instrument is 'on' but not in use. • Instrument shoud be capable of running in stand-alone mode OR with computer & software controlled. • The instrument should have a memory of 100 inbuilt protocols in stand-alone mode and a color display for better visualization. • Analysis software to be supplied with the instrument and should have unlimited user system license. • The instrument should have a USB port for the easy data transfer. • Self diagnostics option to give a guaranteed high quality data.			

• Quick and easy measurement of low sample volumes down to 2 µL.
• Should be ideal tool for photometric DNA or RNA quantitation and purity analysis.
• dsDNA detection to range from a few micrograms to a few milligrams per milliliter
• should have 16 sample positions for quick and easy measurement of sample volumes down to 2 µL
• Quick and easy to wipe off the samples in serial measurements
• Ready-made Software sessions for nucleic acid analysis
• Measurement slot for a rectangular cuvette
• The low-volume measurement area to consists of two quartz slides: the top clear quartz and the bottom Teflon-coated quartz slide.
• Sample positions to be arranged in a 2 x 8 matrix, providing a straightforward way of analyzing up to 16 samples simultaneously.
• The fixed light path of the Plate allows direct calculation of the nucleic acid concentrations of the samples.
 	
Analysis software should have:
 	
• *The calcuation, performed in compliance with the European Pharmacopoeia guidelines.*
• *Spectral scanning measurement and calculations*
  • *Cuvette layout*
  • *Pathlength correction*
  • *Possibility to import results from internal software*
  • *Compatible with Windows XP, Vista and Windows 7*
  • *Language versions (at least 8language)*
  • *Parallel Line Analysis (PLA)*
  • *Improved Quality Control calculation*
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Email- varshakelkar@rediffmail.com,

Tender Document
No: Biotech/tender/02/2013/LAF

Date: 1st October 2013

Part A- Terms and Conditions
Part B- Specifications
Part C- Specification Analysis

Price- Rs 500/- (non-refundable) DD to be drawn in the name of Finance and Accounts officer University of Mumbai

Important Dates:

Last date of Sale of Tender Document	Friday 11th October 2013, 11.00 am till 3.00 pm
Last Date of Receiving sealed Bids:	Monday 14th October 2013, 11.00 a.m. till 1.00 pm

University Dept of Biotechnology,
2nd floor Life Science Bldg,
University of Mumbai, Santacruz (E)
Vidyanagri, Mumbai 400098

Sealed Tender bids for **Laminar Air flow (2 nos)** for the Dept of Biotechnology are invited for and on behalf of University of Mumbai by the head of the department so as reach the office latest by Monday 14th October between 11.00 a.m. to 1.00 pm.

Tender Document containing terms and conditions and technical specifications are available in the Office of the University Dept of Biotechnology, 2nd floor Life Science Bldg, Vidyanagri, Santacruz (E), Mumbai 400098, on all working days between 11.00 a.m. & 4.00 p.m. from 1st October 2013 to 11th October 2013. Terms & conditions and technical specifications can also be downloaded from http://www.mu.ac.in. The tender bids duly complete in all respects, along with the necessary documents should be submitted to the above mentioned address, by Monday 14th October between 11.00 a.m. to 1.00 pm.

The Right to reject any or all tenders, without assigning any reason is reserved by the University of Mumbai.

I/c Head Dept of Biotechnology
University of Mumbai

Part A –

Terms and Conditions

Quantity-2 (Two)

Terms and Conditions of Supply:

1. Last date and time for acceptance of bids is 14th October 2013 between 11.00 a.m. to 1.00 pm

2. Suppliers shall submit the following documents along with their quotations.

(a) Income- Tax clearance certificate from the Income-Tax Officer concerned, certifying that the tenderer has cleared all the Income-Tax dues.

(b) Suppliers should be either manufacturer or authorized dealer of the said equipment and should submit the proof for the same. Also, the suppliers should state whether they are a Proprietary Firm, Partnership Firm or a Private/Public Limited Company and furnish the proof of the same.

(c) The names of the organizations and laboratories to which similar equipment have supplied.

(d) Earnest Money Deposit shall be in the form of a Demand Draft drawn in favour of **"Finance and Accounts officer, University of Mumbai, Fort Campus Mumbai 400032"** on any Scheduled/ Nationalized Bank, payable at Mumbai. The amount of Earnest Money Deposit shall be 3% of the cost of supply subject to maximum Rs 1 lakh.

(e) VAT Registration No.

(f) Technical specifications offered by the Supplier.

(g) Technical compliance table

(h) Propriety certificate, if any

3. The rates should be mentioned in the **Schedule** attached with the Tender Document. Each page of the tender shall be signed in full and stamped with the seal by the supplier. The supplier must clearly state in what capacity he or she is signing the tender.

4. The supplier shall submit the tender in two envelopes. The first envelope (Technical Bid) shall contain all the documents referred to in **para two above** and sealed. The second envelope (Commercial Bid) shall contain the **Schedule,** in which the supplier shall register the rates of supply. The second envelope shall also, likewise, be sealed. Both the envelope then should be put together, and shall be sealed in an envelope, and shall prescribed time and date. The Technical Bid shall be opened first to ensure that supplier have submitted all the requisite documents.

If the Technical Bids are not in order or are deficient in some respect, the commercial bids in respect of such tenders shall not be opened. The date and time of opening the financial bids shall be announced immediately after opening all the Technical bids.

5. Tender bids not accompanied by the requisite amount of Earnest Money Deposit are liable to be rejected

6. The Earnest Money Deposit paid by the supplier shall be forfeited, if the supplier fails to pay the necessary security deposit in the event of his tender being accepted.

7. The amount of Security Deposit/Performance Guarantee shall be 5 % of the cost. In case of successful tenderer the amount of Earnest Money Deposit shall be converted in Security Deposit/Performance Guarantee. Security Deposit/Performance Guarantee shall be refunded after the warranty period is over. The Security Deposit/Performance Guarantee can be paid in the form of a Bank Guarantee from a scheduled bank.

8. Supplier should read carefully all the instructions and terms and conditions, etc before registering rates in prescribed schedule of the tender. Taxes and duties etc., should be shown separately.

9. The offers made by the suppliers shall be open for acceptance within 120 days after the last date of submission of tender.

10. **The Technical Documents shall be opened by the Head of the department of Biotechnology** 2nd Floor Life science bldg, Vidyanagari, Santacruz (E) for those bids for which minimum three Vendors have participated. The tenderers or their authorized representatives shall be allowed to be present at the time of opening of the tenders. Financial bids of only qualified tenderers shall be opened.

Tender opening (if minimum 3 bids are received), first extension of two weeks starts, if less than 3 bids are received in the 1st extension, last date of the first extension (opening of the technical bids on the same day, if 3 bids received), second extension of the second week starts if less than bids are received in the first extension, last date of second extension (opening of technical bids on same day even if less than 3 bids are received.)

The date and time of opening the bids (technical as well as financial) shall be announced on the Mumbai University website after the last date of the receipt of the tenders

11. In case of imported items/equipments, the rates should be quoted in the light of exemptions enjoyed by educational institutions. University is exempted from the payment of Octroi and the necessary certificate/form can be issued by the University. The customs duty applicable to the University of Mumbai is maximum 5% of the invoice.

12. Technical specifications of the instruments/equipments/articles are given in **Annexure** to these papers (Part B). Vendors are required to fill the Part C appropriately after studying the technical specifications as in Part B

13. The delivery, installation & operational training of the instruments/equipment should be completed within 3 months from placing of the order, in case of the imported equipment and within fifteen (15) days if the instrument/equipment is made in India. No extension shall be granted to the contractors/suppliers for the period of delivery, under any circumstances.

14. If the supplier fails to deliver the article as per the delivery schedule, the University of Mumbai shall be free to procure the balance/undelivered supply, at the risk and cost of the supplier, from other such suppliers

15. The goods, articles, materials supplied by the supplier shall be accepted after inspection by an officer authorized by the competent authority. No articles/materials which do not conform to the specifications laid down in the terms and conditions or damaged in transit be accepted.

16. The bills of the suppliers shall be paid by the University after all the materials /articles/equipments have been received, inspected as above.

17. Vendor must submit Compliance statement in tabular form comparing each specification of the quoted item with that given in the Tender Document part B. The Vendor also must supply a soft copy of the Table only Microsoft in word 2003 format.

18. If the equipment is imported and requires PC, printer other peripherals, they can be bought from India and should be of International brand such as HP. The monitor should LCD/TFT screen. The printer should be LaserJet printer. The processor should be Intel Core2 Duo. The amount quoted for the items bought in India, installation; servicing etc. can be in Indian Rupees and the imported items can be quoted in foreign currency.

19. **The warranty period shall be for three years.**

20. As the suppliers shall be responsible for the supply and installation (wherever necessary) of equipment at Mumbai, the cost towards insurance until destination in the University, shall be borne by suppliers.

21. In the event of any breach of the terms and conditions of the supply, the University of Mumbai may terminate the contract placed with the supplier and forfeit the security deposit or the supplier.

22. **Proprietary certificate, if any, should be included in the technical bid.**

23**.** The basic operator training should be provided by the competent Engineer during the time of installation

24. Charges for AMC after one year of warranty for next four years (minimum 4 visits per year) should be clearly mentioned separately as optional item. A list of all the necessary accessories required to make the unit functional should be provided. Names and phone numbers of the persons responsible for Sales and Service for this territory should be mentioned.

SCHEDULE TO TENDER

Note:

1. Tenderers are advised to read carefully the Terms and Conditions of supply and "the Instructions to the Tenderers" before recording the rates in this schedule.

2. No erasures or overwriting shall be allowed, unless they are authenticated under the full signature and the seal of the tenderer.

3. The Rates shall be FOR, at destinations/godowns/places indicated in the delivery

Item no	Description of goods with details of specifications	Number/ quantity	Price/Rate per Unit	Taxes	Duties	etc

Signature of the Tenderer

Seal of the Firm

PART B

Vertical Laminar Flow Cabinet specification:-

Technical Specification:

Nominal Size :	1.2 meters (4 ft)
External Dimensions (W x D x H)	1340 x 764 x 1280 mm 52.8" x 30" x 50.4"
Internal Work Zone (W x D x H) :	1270 x 700 x 720 mm 50" x 27.5" x 28.3"
Usable Work Zone :	0.79 m2 (8.5 sq.ft)
General requirements	: IEST-RP-CC002.2 and AS1386.5
Air cleanliness	: ISO 14664.1 Class 4, IEST-G-CC1001, IEST-G-CC1002 and other equivalent air cleanliness requirements
Laminar Air Flow Velocity :	Average of 0.45 m/s or 90 fpm measure 150 mm/6" from filter face for 40 air changes/minute (uniformity is +/-20%)
Main Filter type :	HEPA/ULPA filter with integral metal guards and filter frame gaskets; fully compliant with EN 1822 and IEST-RP-CC001.3 requirements.
Main Filter Efficiency Ratings:	Minimum: 99.99% / 99.999% at 0.3um
Pre Filter:	Disposable and non washable polyester fibres with 85% arrestance / EU3 rated
Noise Level	:<60 to <63 dBA at initial blower speed setting measured as per IEST –RP CC002.2 based on 3 feet model, subject to acoustic properties of test environment.
Light Intensity :	1150 to 1250 Lux
Side Window Construction :	Colourless and transparent UV absorbing 6 mm/0.24" tempered glass
Work Surface Construction :	1.5mmt / 0.06" / 16 gauge electro-galvanised steel with white oven-baked epoxy powder-coated finish.
Main Body Construction : **Net**	1.2mmt/0.05"/18 gauge stainless steel white oven epoxy powder coated finish
Weight :	appox 150-180 kg
Additional requirement	Gas / vacuum cock
	Gas burner / Bunsen burners

Vertical Laminar Air Flow:

Technical Specification

Nominal Size :	2 feets
External Dimensions (LxWxH)	750 X 750 X 2136mm 29.5" x 29.5" x 84"
Internal Work Zone (LxWxH):	670 X 750 X 705 26.3"x29.5"x27.75"
Air cleanliness	ISO Standard 14644-1-CLASS 5
Laminar Air Flow Velocity :	Average of -100 FPM at 6" from face of the filter
Main Filter type :	Mini pleat HEPA/ULPA filter Encased in aluminium frame
Main Filter Efficiency Ratings:	Minimum: 99.99% / 99.999% at 0.3um
Pre Filter:	10microns with 90% efficiency
Noise Level	:<60 to <63 dBA at initial blower speed setting measured as per IEST –RP CC002.2 based on 2 feet model, subject to acoustic properties of test environment.
Light Intensity :	800 to 1150 Lux
Side Window Construction :	Colourless and transparent UV absorbing 6 mm/0.24" tempered glass
Work Surface Construction :	1.5mmt / 0.06" / 16 gauge electro-galvanised steel with white oven-baked epoxy powder-coated finish.
Main Body Construction : **Net**	1.2mmt/0.05"/18 gauge stainless steel white oven epoxy powder coated finish
Additional requirement	Gas / vacuum cock
	Gas burner / Bunsen burners

PART C

Tick the appropriate specifications whether provided or not columns in the columns as below and highlight the specifications if provided in the equipment brochures that are to be attached.

Specifications (to be highlighted in the brochure)		Specifications provided by the party		
		Complied	Not-complied	Remarks
Nominal Size :	1.2 meters (4 ft)			
External Dimensions (W x D x H)	1340 x 764 x 1280 mm 52.8" x 30" x 50.4"			
Internal Work Zone (W x D x H) :	1270 x 700 x 720 mm 50" x 27.5" x 28.3"			
Usable Work Zone :	0.79 m2 (8.5 sq.ft)			
General requirements	: IEST-RP-CC002.2 and AS1386.5			
Air cleanliness	: ISO 14664.1 Class 4, IEST-G-CC1001, IEST-G-CC1002 and other equivalent air cleanliness requirements			
Laminar Air Flow Velocity :	Average of 0.45 m/s or 90 fpm measure 150 mm/6” from filter face for 40 air changes/minute (uniformity is +/-20%)			
Main Filter type :	HEPA/ULPA filter with integral metal guards and filter frame gaskets; fully compliant with EN 1822 and IEST-RP-CC001.3 requirements.			
Main Filter Efficiency Ratings:	Minimum: 99.99% / 99.999% at 0.3um			
Pre Filter:	Disposable and non washable polyester fibres with 85% arrestance / EU3 rated			
Noise Level	:<60 to <63 dBA at initial blower speed setting measured as per IEST –RP CC002.2 based on 3 feet model, subject to acoustic properties of test environment.			
Light Intensity :	1150 to 1250 Lux			
Side Window Construction :	Colourless and transparent UV absorbing 6 mm/0.24” tempered glass			
Work Surface Construction :	1.5mmt / 0.06" / 16 gauge electro-galvanised steel with white oven-baked epoxy powder-coated finish.			
Main Body Construction : **Net**	1.2mmt/0.05”/18 gauge stainless steel white oven epoxy powder coated finish			
Weight :	appox 150-180 kg			
Additional requirement	Gas / vacuum cock			
	Gas burner / Bunsen burners			

Specifications (to be highlighted in the brochure)		Specifications provided by the party		
		Complied	Not-complied	Remarks
Nominal Size :	2 feets			
External Dimensions (LxWxH)	750 X 750 X 2136mm 29.5" x 29.5" x 84"			
Internal Work Zone (LxWxH):	670 X 750 X 705 26.3"x29.5"x27.75"			
Air cleanliness	ISO Standard 14644-1-CLASS 5			
Laminar Air Flow Velocity :	Average of -100 FPM at 6" from face of the filter			
Main Filter type :	Mini pleat HEPA/ULPA filter Encased in aluminium frame			
Main Filter Efficiency Ratings:	Minimum: 99.99% / 99.999% at 0.3um			
Pre Filter:	10microns with 90% efficiency			
Noise Level	:<60 to <63 dBA at initial blower speed setting measured as per IEST –RP CC002.2 based on 2 feet model, subject to acoustic properties of test environment.			
Light Intensity :	800 to 1150 Lux			
Side Window Construction :	Colourless and transparent UV absorbing 6 mm/0.24" tempered glass			
Work Surface Construction :	1.5mmt / 0.06" / 16 gauge electro-galvanised steel with white oven-baked epoxy powder-coated finish.			
Main Body Construction : **Net**	1.2mmt/0.05"/18 gauge stainless steel white oven epoxy powder coated finish			
Additional requirement	Gas / vacuum cock			
	Gas burner / Bunsen burners			