Minutes of ICB & LCB e-Tender Pre-Bid meeting dated 13th December 2019 from 11.00 am to 5.30 pm
Ref: e-Tender No. 1034 (ICB) - 7(6)/2019

1. Instrument Name :- GC-ECD Page No. 37

Sr. No.	Clause No.	Page No.	Tender Specification/ Description in e-Tender	Clarification Sought	Boards Response
Query Raised by : M/s Agilent					
1	II		Rapid column oven heating with rates from -250^{0}C to +250^{0}C	In point number II you have asked "Rapid column oven heating rate from -250 degree C to +250 degree C, which is not possible in GC. Generally, GC comes with temperature ramp rate of 120 degree C/min so please modify this point. 2	**Accepted Temperature ramp rate of 120 degree C/min .**
2	VII		Column Oven Operating temperature range: ambient +3°C to 450°C should be available	In point number VII you have asked column oven operating temperature range from ambient +3 degree, here we have very minor deviation as we start from ambient +4 degree so kindly change this point	**Accepted. Column Oven Operating temperature range: ambient +4°C to 450°C should be available**
3	VIII		GC should have provision for installing 3 injection ports and 3 detectors	You have asked two capillary inlets but in point number VIII you have asked provision of 3 Inlets, which is not required and in our GC we can give two inlets and we can accommodate both Inlets as asked so please change this point	**Accepted. GC should have provision for installing 2 injection ports and 2 detectors , upgradation for additional injector and detector should be possible in same system.**
4	IX		Oven must support 32 ramps / 33 plateaus and negative ramps must be allowed	In point number IX you have asked 32 ramps in oven which is not required for any GC application, maximum ramps in our GC are 20 and we can confirm here that all GC applications can be done by maximum 7-9 ramps so kindly change this point	**Accepted. Oven must support 20 ramps and negative ramps must be allowed**
5	XI		Built-in oven light that facilitates column installation should be available	In point number XI you have asked for Column oven light, which is very specific to one vendor and we expect proper light in lab so this is not required and we don't have this in our GC, so please remove this point	**Not Accepted**
6	XIII		Two Split / Splitless capillary injectors with temperature range of ambient +5^{0}C to 450^{0}C should be available.	In point number XIII you have asked 450 degree as temperature in split-spitless inlet which is very specific and doesn't require for any GC application, we gives temperature up to 400 degree in our GC, so please change this point	**Accepted Two Split / Splitless capillary injectors with temperature range of ambient +5^{0}C to 400^{0}C should be available.**
7	XVI		Programmable split ratio setting from 1 to 9000 or more should be available	In point number XVI you have asked split ratio of 9000 which is again specific to and doesn't carry any application requirement, we have split ratio of 7500:1 in our GC so please change this point	**Accepted. split ratio of 7500:1**

8	XVIII		Autosampler should able to Inject both Injection Port	In point number XVIII you have asked Auto Injector which can inject in both injection ports, which is very specific so please remove this point	**Accepted.** **Autosampler should able to Inject in one Injection Port at a time.**
9	XX.iii		At least have an acquisition time of 2ms (500Hz).	In FPD detector you have asked acquisition rate of 500 Hz which is too high and very specific, we offer date acquisition rate of 200 Hz, so please change this point.	**FPD Detector is not required. Only FID and ECD is required**
Query Raised by : M/s. Thermo Fisher					
11	II		Rapid column oven heating with rates from -250^{0}C to +250^{0}C	This should be changed to 125^{0}C	**Accepted** **temperature ramp rate of 120 degree C/min .**
12	IV		An integrated safety feature for the use of hydrogen gas should be available if required & must be quoted as an optional item such as the hydrogen sensor which cools down the instrument and cuts the gas flow in cases where a leak is detected, and an upper limit of hydrogen gas flow should be 500 mL/min.	Should be changed to 100 ml/min.	**Not Accepted**
13	VIII		GC should have provision for installing 3 injection ports and 3 detectors	Should be changed to 2 injectors and 2 detectors.	**Accepted** **GC should have provision for installing 2 injection ports and 2 detectors , upgradation for additional injector and detector should be possible in same system.**
14	XI		Built-in oven light that facilitates column installation should be available	Should be deleted	**Not Accepted**
15	XII		One-click installation of column by hand without the use of spanner or other tools should be available.	Specific to certain vendor and should be deleted	**Accepted**
16	XIII		Two Split / Splitless capillary injectors with temperature range of ambient +5^{0}C to 450^{0}C should be available.	Temp. should be upto 400^{0}C	**Accepted** **Two Split / Splitless capillary injectors with temperature range of ambient +50C to 400^{0}C should be available.**

17	XV		Carrier gas flow setting range preferably from 0 to more than 1,000 ml/min should be available.	Should be change to total gas flow in the injector	**Not Accepted**
18	XVIII		Sampling volume - Capable to inject from 0.1 µl to 50 µl	Change to 5 µl	**Not Accepted**
19	XVIII		Autosampler should able to Inject both Injection Port	Without removing the AS tower	**Not Accepted.** **Autosampler should able to Inject in one Injection Port at a time.**
20	XIX		Demonstration of Performance with (LoD and LoQ): The performance should be confirmed during installation using 30 m x 0.25 mm x 0.25 µm (Rtx-5MS / Rxi-5Sil MS OR equivalent column) Performance should be checked for test samples of VOC (BTEX),Pesticides (Lindane & Malathion). (Relevant certified standard should be supplied by vendor)	What test and what is the criteria. We have our own criteria.	**Test with conditions are clearly mentioned in tender document.**
21	XX.i		The detector should be capable of detection of trace amount of compounds with sensitivity should be less than 1.3 pg C/s.	Should be change to 1.4 pg C/s.	**Accepted**
22	XX.i		Able to control up to 3 channels of gas, i.e. H2, make-up and air (with electronic ON/OFF). The control range are to be for air: 0 – 1000mL/min, H2: 0 – 100mL/min, and make-up gas (N2 or He): 0 – 1000mL/min.	Changes to be done Air - 0 to 500 ml/min. Makeup gas (N2 or He) - 0 to 50 ml/min.	**Accepted** **Able to control up to 3 channels of gas, i.e. H2, make-up and air (with electronic ON/OFF). The control range are to be for air: 0 – 500mL/min, H2: 0 – 100mL/min, and make-up gas (N2 or He): 0 – 50mL/min.**
23	XX.i		GC should at least have an acquisition time of 2ms (500Hz).	Should be change to 300 Hz.	**Not Accepted**
24	XX.iii		The detector should be capable of detection of compounds with minimum detected quantity of 45.0fgP/s (tributyl phosphate) and 2.5fgS/s (dodecanethiol).	Change to 100 fgP/s and 5 fgS/s	**Accepted** **FPD detector is not required**

25	XX.iii		At least have an acquisition time of 2ms (500Hz).	Should be change to 300 Hz.	**Not Accepted**
26	XXII		Must provide software that monitors GC counters and provides graphic display. Also must provide a real-time notification via indicator/advisor when a counter limit has been reached for consumables such as injector port septum, glass insert (liner) and coolant.	Specific to one vendor and should be deleted	**Not Accepted**

2. Instrument Name :- GC-MS

Sr. No.	Clause No.	Page No.	Description in e-Tender	Clarification Sought	Boards Response
Query Raised by :- M/s. Agilent					
1	V	41	Autosampler should able to Inject both Injection Port	Please remove this point	**Not Accepted.** Autosampler should able to Inject both Injection Port one at time
2	VI	42	Quadrupole must be metallic robust enough to allow cleaning of any contaminates; thin films are not Accepted.	Very specific where as our Quadrupole is made up of quartz with gold coating so please keep "Metalic Quadrupole or eqivalent so that we can also quote.	**Accepted**
3	VI	42	Pumping system must come standard with at least 300 L/sec (nitrogen) air-cooled turbomolecular pump .	255 L/Sec capacity is enough so please change this point.	**Accepted** **250 L/Sec or more capacity**
4	VI	42	The GCMS should have capability to install two narrowbore capillary columns into the MS simultaneously in order to eliminate the need to swap columns.	This is very specific we can also install 2 columns in our GC but we can connect 1 column at a time with MS so please change this point.	**Not Accepted**
Query Raised by :-M/s. Thermo Fisher					
5	II	41	Must have precision to control pressure upto 0.001 psi and pressure settable upto 150 PSI or better.	Change to 145 PSI	**Accepted.** **Must have precision to control pressure upto 0.001 psi and pressure settable upto 145 PSI or better.**

6	V	41	Autosampler should able to Inject both Injection Port	Without removing AS towers	**Not Accepted.** **Autosampler should able to Inject in one Injection Port at a time.**
7	VI	42	EI Sensitivity must 1500:1 (RMS) or more for 1 pg octafluoronapthalene (OFN) MS using 60 m column must have at least unit mass resolution	Change to 30 mtrs or 15 mtrs.	**Accepted.** **EI Sensitivity must 1500:1 (RMS) or more for 1 pg octafluoronapthalene (OFN) MS using 30 m column must have at least unit mass resolution**
Query Raised by :- M/s. Perkin Elemer					
8	II	41	Must have precision to control pressure upto 0.001 psi and pressure settable upto 150 PSI or better.	Must have precision to control pressure upto 0.01 psi and pressure settable upto 100 PSI or better. 100 psi range covers all applications. Higher Pressure system Consume More Gas.	**Not Accepted**
9	III	41	Programmable split/splitless ,SPL ,Spiltless, OCI , PTV capillary injector	One Programmable split/splitless OR PTV, One Capillary Injector. Need Specific requirement.	**Accepted.** **One each of split/splitless and PTV Injector**
10	III	41	Operating Temperature range 50 °C to 400 °C in 1 °C increments	Operating Temperature range 50 °C to 450 °C in 1 °C increments. Higher Temp. Range Available with all vendors.	**Not Accepted**
11	IV	41	cool down time from 450 °C to 50 °C is less than 4.0 min	cool down time from 450 °C to 50 °C is less than 3.4 min. Faster Cooling Available with all vendors.	**Not Accepted**
12	IV	41	Maximum achievable temperature ramp rate should be 120 °C/min or more	Maximum achievable temperature ramp rate should be 140 °C/min or more. Faster Heating Available with all vendors.	**Not Accepted**
13	IV	41	Temperature ramps should be 15 or more.	Temperature ramps should be 8 or more. No Analytical Method Uses more than 3-4 Ramps. Higher No. Ramps increases run time and Additional Gas Consumssion.	**Not Accepted**
14	V	41	Autosampler should able to Inject both Injection Port	Autosampler should able to Inject both Injection Port Or Separate AutoInjector for Each Injector. Column Swaping Feature at MS detector will be of no use. If Autoinjector need to swap everytime for injector.	**Not Accepted.** **Autosampler should able to Inject in one Injection Port at a time.**
15	V	41	Manual injection should be possible .	Manual injection should be possible without removing Autosampler. All Vendors have similar design.	**Not Accepted**
16	VI	42	Mass number range: m/z 1.0 to 1000 amu	Mass number range: m/z 1.0 to 1100 amu or Better. All vendors have broad mass range.	**Not Accepted**

17	VI	42	Variable Scan rate upto 20000 amu/sec or better	Fully Variable Scan rate upto 12500 amu/sec or better. Scan Rate should be for Complete mass range. Not for specific Mass.	**Not Accepted**
18	VI	42	EI Sensitivity must 1500:1 (RMS) or more for 1 pg octafluoronapthalene (OFN) MS using 60 m column must have at least unit mass resolution.	EI Sensitivity must 1500:1 (RMS) or more for 1 pg octafluoronapthalene (OFN) MS. Column Conditions are vendor specific. Different Vendors have different conditions.	**Accepted** **EI Sensitivity must 1500:1 (RMS) or more for 1 pg octafluoronapthalene (OFN) using 30 mts column MS must have at least unit mass resolution**
19	VI	42	Demonstration of Performance with (LoD and LoQ): The performance should be confirmed during installation using 30 m x 0.25 mm x 0.25 µm (Rtx-5MS / Rxi-5Sil MS OR equivalent column) with automated Tuning (Auto tuning) facility.	Demonstration of Performance with (LoD and LoQ): The performance should be confirmed during installation with automated Tuning (Auto tuning) facility. Column Conditions are vendor specific. Different Vendors have different conditions.	**Not Accepted**
20	VI	42	Auto tuning can be performed in each ionization mode of EI.	Auto tuning should be available for EI. tuning is done for complete mass range. Not for specific mass. Modes for EI include Single Ion/ mass Monitoring Or Full scan (Complete Mass Range). Thus Tuning for each mode is not possible with all vendors.	**Accepted.** **Auto tuning can be performed in EI mode.**
21	VIII	43	Performance should be checked for test samples of VOC (BTEX), PAH (BaP), Pesticides (Lindane).	Specified Compounds are vendor Specific. List of Compounds / No. Compounds under PAH and Pesticides need to specified.	**Not Accepted**
22	VI	42	Filament should be of best quality. With dual filament .	Filament should be of best quality. Dual Filament is Vendor Specific Technology.	**Not Accepted**
23	VI	42	Automatic switching filament without manual intervention.	Vendor Specific Technology.	**Not Accepted**
24	VI	42	Pumping system must come standard with at least 300 L/sec (nitrogen) air-cooled turbomolecular pump .	Pumping system must come standard with at least 250 L/sec (nitrogen) air-cooled turbomolecular pump. 300 L/sec is vendor specific.	**Accepted** **250 L/Sec or more capacity**
25	VIII	43	60 m long x 0.32 mm ID x 1.4 µm film thickness each for pesticide and organic compound (PCB , PAH etc.) analysis.	60 m long x 0.32 mm ID (or equivalent) x 1.4 µm film thickness (or equivalent) each for pesticide and organic compound (PCB , PAH etc.) analysis. Column ID and Filmthickness Dimentions are Vendor Specific.	**Not Accepted**

Query Raised by :- M/s.Toshvin Analytical					
26	III	41	Inlet configuration and usability	Programmable split/splitless ,SPL ,Spiltless, OCI , PTV capillary injector . The basic GCMS m/c. generally comes with standard split / splitless injector . So Please confirm whether the m/c. should have upgradability if required in future for other independent inlets as mentioned in your specifications .	**Accepted.** **One each of split/splitless and PTV Injector**
27	VI	42	Detector	EI Sensitivity must 1500:1 (RMS) or more for 1 pg octafluoronapthalene (OFN) MS using 60 m column must have at least unit mass resolution. 30m column is widely used for the performance check of the instrument.	**Accepted.** **EI Sensitivity must 1500:1 (RMS) or more for 1 pg octafluoronapthalene (OFN) MS using 30 m column must have at least unit mass resolution.**
28	VIII	43	60 m long x 0.32 mm ID x 1.4 µm film thickness each for pesticide and organic compound (PCB , PAH etc.)	30 m long x 0.25 mm ID x 0,25 µm columns used for the pesticide and PAH analysis. In few cases 60m x 0.25mm ID x 0,25um used for PCB analysis.	**Not Accepted**

3. Instrument Name :- AAS (Flame)

Sr. No.	Clause No.	Page No.	Description in e-Tender	Clarification Sought	Boards Response
Query Raised by :- M/s. Agilent					
1	I.i	27	The system should have software controlled automatic vertical and horizontal alignment of the flame burner head for optimum light transmission	vertical / horizontal Agilent AAS atomizer position is vertically optimized so only horizontal alignment is required. Competition need to optimize both Horizontal & Vertical position	**Not Accepted.**
2	I.ii	27	Titanium Burner	Titanium/Incoloy. Incoloy material is more corrosion resistant than Titanium	**Accepted.** **Titanium or Incoloy**
3	I.v	27	The Auto sampler must be integrated to main instrument with a minimum of 50 or more sample positions and should have the auto dilution capability.	Should be removed. It is not recommended to operate Flame unattended using autosampler & even with dilutor as it will have direct impact & concern on safety of operator & Lab.	**Partially Accepted.** **The Auto sampler must be integrated to main instrument with a minimum of 50 or more sample positions**
4	II.iii	27	Built-in power supplies for both the Hollow Cathode Lamps and the special lamps	To be remove. Special power supply for As, Hg, Se is required for only one vendor. This is their limitation	**Not Accepted.**
5	IV.iii	28	A focal length of minimum above 250 mm and the Reciprocal Linear Dispersion of 1.6 nm/mm	focal length 330 mm, Reciprocal Linear Dispersion 1.6–0.8 nm/mm. This is very important to get interference free accurate measurement	**Not Accepted.**

6	IV.iv	28	Variable slit width between 0.2 to 2.0 nm with automatic slit selection	Variable slit width between 0.1, 0.2, 0.5 and 1.0 nm plus reduced height slit of 0.5 nm. Lesser slit width gives higher light throughput improving the sensitivity of the instrument & is important for removing interference coming from closely eluting peaks giving accurate interference free measurement.	**Partially Acceptted.** **Variable slit width between 0.1 to 1.0 nm or better with automatic slit selection.**
7	VIII	28	All safety interlocks built-in and additional feature like Burner Head Interlock, Nebulizer / End Cap Interlock and Drain Interlock to be built-in.	All Safety interlocks should be built-in. Agilent offers exhaustive 8 safety interlocks unlike others by default to ensure safety of operator & lab	**Not Accepted.**
8				Recommended - 1) System should be upgradable to Graphite Furnace. - To avoid people quoting their low end instruments. 2) Vapor Generation Accessory to be quoted. - Required for volatile elements like Hg, As, Se like hydride elements at very low level. - Looking at your element of interest, it is required	**Accepted.** **System should be upgradable to Graphite Furnace**
Query Raised by : M/s. Thermo Fisher					
9	I.i	27	i. The system should have software controlled automatic vertical and horizontal alignment of the flame burner head for optimum light transmission.	The system should have software controlled automatic **vertically** and fuel optimization of the flame burner head for optimum light transmission.	**Not Accepted.**
10	I.v	27	The Auto sampler must be integrated to main instrument with a minimum of 50 or more sample positions and should have the auto dilution capability.	This facility is needed for flame ? Integrated autosampler for FAAS is model specific.	**Partially Accepted.** **The Auto sampler must be integrated to main instrument with a minimum of 50 or more sample positions**
11	II.i	27	The system should have a minimum 8 lamp holder with a software provision of automatic lamp selection, slit width selection, wavelength selection.	Request to change: 6 or more lamps with independent power supply and ON/OFF capability. AAS being single element technique will require to change lamps whether it is 8 lamps or 6 lamps.	**Not Accepted.**
12	II.iii	27	Built-in power supplies for Hallow Cathode Lamps and the special lamps that are used for the analysis of volatile elements like As, Hg, Se. (e.g. Boosted HCL's Ultra Lamps, Super Lamps, Electrode Less Discharge Lamps, etc.).	Pls add : Special lamps (if required) as we do not need any special lamps for analysis of volatile elements like As, Hg, Se.	**Not Accepted.**

13	IV.iv	28	Variable slit width between 0.2 to 2.0 nm with automatic slit selection.	Request to change: Variable slit width between 0.2 to 1.0 nm or more with automatic slit selection. This range is sufficient to cover all the elements without causing any interference issue due to high slit width.	**Partially Acceptted.** **Variable slit width between 0.1 to 1.0 nm or better with automatic slit selection.**
14	XIV	29	**Essential Consumables** (to be mentioned with Part nos. along with quantity as well) for trouble free operation of the system during entire warranty period must be quoted along with system.	Pls specify the quantity /number of samples to be analyzed	**Not Accepted.**
Query Raised by : M/s. Perkin Elemer					
	I.v		Point 1 – (v) – The Auto sampler must be integrated to main instrument with a minimum of 50 or more sample positions and should have the auto dilution capability.	The Auto sampler must be integrated to main instrument with a minimum of 100 or more sample positions OR The Auto sampler must be integrated to main instrument with a minimum of **100 or more sample positions** and should have the auto dilution and **automatic calibration preparation capability.** The auto sampler with automatic calibration standard preparation facility helps in fast analysis and you need not have to prepare calibration standards manually and save time and no manual errors. If you don't want auto calibration then pls remove auto-dilution capability as well. because then we cannot qualify. Also the autosampler vial what other supplier gives is 12-15mL volume which is not sufficient for flame analysis. Atleat 50mL volume vial is required to run many elements in a sample. 12-15 solution will be consumed by only one element.	**Partially Accepted.** **The Auto sampler must be integrated to main instrument with a minimum of 50 or more sample positions**
Query Raised by : M/s. Lab India					
15	II.iii	27	Built-in power supplies for both the Hollow Cathode Lamps and the special lamps (high intensity lamps) that are used for the analysis of volatile elements like As, Hg, Se, etc. (e.g. Boosted HCL's Ultra Lamps, , Super Lamps, Electrode Less Discharge Lamps, etc.)	As per tender requirement to detect As,Hg etc. to detect such elements Hydride kit with heated quartz cell will be required to detect element at ppb level.	**Not Accepted.**

16	XI	29	Suitable single element lamps (As, Hg, Bo, Co, Cr, Cu, Fe, Mn, Ni, Ag, Cd, Pb, Zn, Al, Se etc.) as per environmental application should be quoted	As per tender requirement to detect As,Hg etc. to detect such elements Hydride kit with heated quartz cell will be required to detect element at ppb level, you have mentioned Bo but such elemene is not present in periodic table. So some typographical misteck is there.	**Please read Be instead of Bo**
Query Raised by :- M/s. SkyTech India					
17	I.v	27	The Auto sampler must be integrated to main instrument with a minimum of 50 or more sample positions and should have the auto dilution capability	The Auto sampler must be integrated/separate to main instrument with a minimum of 50 or more sample positions and should have the auto dilution capability. Better ROI (Return on Investment).If autosampler faces some issue we can change only autosampler.	**Partially Accepted.** **The Auto sampler must be integrated to main instrument with a minimum of 50 or more sample positions**
18	II.iii	27	Lamps-Built-in power supplies for both the Hollow Cathode Lamps and the special lamps (high intensity lamps) that are used for the analysis of volatile elements like As, Hg, Se, etc. (e.g. Boosted HCL's Ultra Lamps, , Super Lamps, Electrode Less Discharge Lamps, etc.)	For analysis of elements like As,Hg,Se Hydride generator is required. Kindly confirm.	**Not Accepted.**
19	IV.iv	28	Variable slit width between 0.2 to 2.0 nm with automatic slit selection	Variable slit width between 0.1 to 2.0 nm with automatic slit selection in 0.1 nm increment. Point will be clear.	**Partially Acceptted.** **Variable slit width between 0.1 to 1.0 nm or better with automatic slit selection.**
20	V.ii	28	Wavelength range: 185 – 900 nm or better	Wavelength range: 180 – 900 nm. Better sensitivity Lower elements can be analysed.	**Not Accepted.**

4. Instrument Name :- AAS (Graphite)

Sr. No.	Clause No.	Page No.	Description in e-Tender	Clarification Sought	Boards Response
Query Raised by .M/s. Agilent					
1	I.ii	30	System should be fully computer controlled furnace with integrated flame and furnace in single unit	flame and furnace System should be fully computer controlled simultaneously. This will allow to increase throughput of the system & both low & higher concentration samples can be analyzed simultaneously	**Not Accepted**

2	II.iii	30	Dispensed sample volume should be in the range of 1 - 80 ul in increment of 1 ul or better and flushing volume should be more than 1 ml	Dispensing volume variable from 1–70 µL with < 1% repeatability (5–70 µL). These specs. are not having relevance and are specific to one vendor	**Accepted.** **Dispensed sample volume should be in the range of 1 - 70 ul in increment of 1 ul or better and flushing volume should be more than 1 ml.**
3	III.ii	30	Built-in power supplies for both the Hollow Cathode Lamps and the special lamps	To be removed. Special power supply for As, Hg, Se is required for only one vendor. This is their limitation	**Not Accepted**
4	V.ii	31	A focal length of minimum above 250 mm and the Reciprocal Linear Dispersion of 1.6 nm/mm.	focal length 330 mm, Reciprocal Linear Dispersion 1.6–0.8 nm/mm. This is very important to get interference free accurate measurement.	**Not Accepted**
5	V.iii	31	Variable slit width between 0.2 to 2.0 nm with automatic slit selection	Variable slit width between 0.1, 0.2, 0.5 and 1.0 nm plus reduced height slit of 0.5 nm. Lesser slit width gives higher light throughput improving the sensitivity of the instrument & is important for removing interference coming from closely eluting peaks giving accurate interference free measurement	**Partially Acceptted.** **Variable slit width between 0.1 to 1.0 nm or better with automatic slit selection.**
Query Raised by M/s. Thermo Fisher					
6	I	30	System should be fully computer controlled furnace with integrated flame and furnace in single unit.	Pls add, Change over from Air/Acety to Nitro/Acyte should be computer controlled. Change over from Flame to Furnace should be computer controlled.	**Not Accepted**
7	II.iii	30	Dispensed sample volume should be in the range of 1 - 80 ul in increment of 1 ul or better and flushing volume should be more than 1 ml.	Dispensed sample volume should be in the range of 1 - 70 ul in increment of 1 ul or better and flushing volume should be more than 1 ml.	**Accepted.** **Dispensed sample volume should be in the range of 1 - 70 ul in increment of 1 ul or better and flushing volume should be more than 1 ml.**

8	II.v	30	The Graphite Furnace system should be equipped with pyrolytically coated graphite tube, L'vov platform, rapid furnace heating rate (up to 2000 ^{0}C Sec), should have max. furnace temperature of 2000^{0}C , internal gas stop, matrix modification, fast signal processing, peak area measurements and Zeeman / Self reversal background correction for effective interference removal.	Kindly amend to : heating rate (up to 2800^{0}C Sec or more), as many elements require a atomization temperature more than 2000 eg Mo 2750 Cr 2500 Ti 2850 Ru 2650 Ir 2800	**Partially Accepted** **The Graphite Furnace system should be equipped with pyrolytically coated graphite tube, L'vov platform, rapid furnace heating rate (up to 2000 0C Sec), should have max. furnace temperature of 28000C , internal gas stop, matrix modification, fast signal processing, peak area measurements and Zeeman / Self reversal background correction for effective interference removal.**
9	III.i	30	The system should have a minimum 8 lamp holder with a software provision of automatic lamp selection, slit width selection, wavelength selection	Request to change: 6 or more lamps with independent power supply and ON/OFF capability. AAS being single element technique will require to change lamps whether it is 8 lamps or 6 lamps.	**Not Accepted**
10	III.ii	30	Built-in power supplies for Hallow Cathode Lamps and the special lamps that are used for the analysis of volatile elements like As, Hg, Se. (e.g. Boosted HCL's Ultra Lamps, Super Lamps, Electrode Less Discharge Lamps, etc.).	Pls add : Special lamps (if required) as we do not need any special lamps for analysis of volatile elements like As, Hg, Se.	**Not Accepted**
11	V.iii	31	Variable slit width between 0.2 to 2.0 nm with automatic slit selection.	Request to change: Variable slit width between 0.2 to 1.0 nm or more with automatic slit selection. This range is sufficient to cover all the elements without causing any interference issue due to high slit width.	**Partially Acceptted.** **Variable slit width between 0.1 to 1.0 nm or better with automatic slit selection.**
12	VII	31	Zeeman / Self reversal Background Correction for the Graphite Furnace with the magnetic field parallel to the light beam	Pls add: Zeeman / Self reversal Background Correction for the Graphite Furnace and D2 for flame system as standard.to cover full analytical range.	**Not Accepted**

13	XVII	32	Essential Consumables (to be mentioned with Part nos. along with quantity as well) for trouble free operation of the system during entire warranty period must be quoted along with system.	Pls specify the quantity /sample numbers	**Not Accepted**
Query Raised by M/s. Perkin Elemer					
14	II.v	30	II (v) - The Graphite Furnace system should be equipped with pyrolytically coated graphite tube, L'vov platform, rapid furnace heating rate (up to 2000 oC Sec), should have max. furnace temperature of 2000 oC , internal gas stop, matrix modification, fast signal processing, peak area measurements and Zeeman / Self reversal background correction for effective interference removal	II (v) - The Graphite Furnace system should be equipped with pyrolytically coated graphite tube, L'vov platform, rapid furnace heating rate (up to 2000 oCSec), should have max. furnace temperature of **2500 oC** , internal gas stop, matrix modification, fast signal processing, peak area measurements and **Zeeman background correction** for effective interference removal.	**Partially Accepted. The Graphite Furnace system should be equipped with pyrolytically coated graphite tube, L'vov platform, rapid furnace heating rate (up to 2000 ^{0}C Sec), should have max. furnace temperature of 2800^{0}C , internal gas stop, matrix modification, fast signal processing, peak area measurements and Zeeman / Self reversal background correction for effective interference removal.**

15	VII	31	VII- Background Correction Methodology Zeeman / Self reversal Background Correction for the Graphite Furnace with the magnetic field parallel to the light beam.	**Zeeman Background Corre**ction for the Graphite Furnace with the magnetic field parallel to the light beam. We suggest to keep only Zeeman BG which is more superier than D2 and Self reversal SR as well as there is lot of difference in technology and price. Self reversal (SR) is only specific to Shimadzu and in this HCL lamp used to correct interference. SR method of background correction involves the alternation of low and high current operation of hollow-cathode lamp source radiation. There are some drawbacks related to Self reversal- 1. The high current is used which reduces their lifetime and requires suitable lamps. 2. The sensitivity being reduced by up to 70% and getting non-linear calibration curves. 3. Background showing molecular or atomic absorption structures close to the analyte wavelength cannot be corrected. Zeeman is available with perkinelmer, Agilent, Thermo, AnalytikJena and some other manufactuers.	Not Accepted
16	XII	32	XII. System should be quoted with hydride generation with peristaltic pump to achieve mercury detection limit upto 5 ppb	System should be quoted with automatic hydride generation with peristaltic pump to achieve mercury detection limit less than 1 ppb and the sample consumption will be less than 5 ml for three replicates. Indian Standard (IS) limit of mercury for water is 1ppb so to achieve this limit you need to have hydride system with quantification limit less than 1ppb.	Partially Accepted. System should be quoted with hydride generation with peristaltic pump to achieve mercury detection limit less than 5 ppb
Query Raised by M/s. Lab India					
17	XIII	32	Suitable single element lamps (As, Hg, Bo, Co, Cr, Cu, Fe, Mn, Ni, Ag, Cd, Pb, Zn, Al, Se etc.) as per environmental application should be quoted	You have mentioned Bo but such elemene is not present in periodic table. So some typographical misteck is there.	**Accepted.** **Please read B instead of Bo.**
18	**I**	30	System should be fully computer controlled furnace with integrated flame and furnace in single unit.	It should be integrated flame and graphite furnace in single unit	**Not Accepted**

19	II.iii	30	Dispensed sample volume should be in the range of 1 - 80 µl in increment of 1 µl or better and flushing volume should be more than 1 ml.	It should be 1 - 20 µl in increment of 1 µl	**Partially Accepted.** **Dispensed sample volume should be in the range of 1 - 70 ul in increment of 1 ul or better and flushing volume should be more than 1 ml.**
Query Raised by M/s. SkyTech India					
20	I	30	Atomizer system:-System should be fully computer controlled furnace with integrated flame and furnace.	Computer controlled Graphite Furnace is required. Since, all labs will have flame system So only graphite furnace is required.	**Not Accepted**
21	II.vi	30	An imported recirculating water chiller unit of appropriate capacity for cooling of Graphite Furnace must be quoted by the manufacturer	Suitable recirculating water chiller to be quoted. Compatible to AAS will be efficient during analysis.	**Accepted.** **Suitable recirculating water chiller unit of appropriate capacity for cooling of Graphite Furnace must be quoted .**
22	III & IV	30 & 31	Lamps, Sample Introduction system, Sensitivity	Remove all these points. This points are for flame system and already dedicated flame system is to be quoted.	**Not Accepted**
23	VI.ii	31	Detector- Wavelength range: 185 – 900 nm or better	Wavelength range: 180 – 900 nm. Better sensitivity Lower elements can be analysed.	**Not Accepted**
24	XI	32	**Demonstration of Performance,**	Remove elements like Hg,As	**Not Accepted**
25	XII	32	System should be quoted with hydride generation with peristaltic pump to achieve mercury detection limit upto 5 ppb.	Remove hydride generation. Graphite furnace is only required.	**Not Accepted**

5. Instrument Name :- ICP OES

Sr. No.	Clause No.	Page No.	Description in e-Tender	Clarification Sought	Boards Response
Query Raised by: M/s. Agilent					
1	**6**	**48**	The actual resolution (not the pixel resolution) of the system must be less than 0.009 nm at 200 nm.	0.007nm. Poor resolution system will not be able to remove interference from neighboring closely spaced wavelengths.	**Not Accepted**

2	**6**	**49**	The spectrophotometer must cover full spectral range from 165-840 nm or better.	167-785nm. ICPOES wavelength range will differ from Vendor to vendor based on optics & Detector technology used. Wider range will not have any advantage. All ICPOES will be capable to measure 73 elements in periodic table despite different wavelength range	**Not Accepted**
3	**8**	**49**	Free running solid state RF generator must run at frequency of 27.12 MHz or 40 MHz with suitable power wattage adjustable from 1000 to 1500 watts in 1 watt increment.	In 10 watt increment. There is no significant change in plasma even with 50 watt increment so 1 Watt increment is just cosmetic vendor specific.	**Not Accepted**
4	**10**	**50**	System should have the less than 14 L/min of the total Argon gas consumption. (Please mention complete Argon consumption in L/min including Plasma, Auxiliary, Nebulizer, purging gas flows	System should have lowest gas consumption per sample (Please mention complete Argon consumption in L/sample including Plasma, Auxiliary, Nebulizer, purging gas flows, Uptake time, analysis time, integration time, stabilization time, measurement time & rinse time). Misguiding & misinforming statement on gas consumption. Gas consumption will be less if analysis time is less without compromising plasma condition. It is not just gas flow deciding the gas consumption. Uptake time, integration time, stabilization time, measurement time & rinse time will decide the gas consumption per sample.	**Not Accepted**
5	**18**	**51**	Local accessories: Nitrogen gas generator	This is vendor specific requirement. Agilent do not require air compressor, air filter (consumable) accessory, Nitrogen generator	**Not Accepted**
Query Raised by M/s. Thermo Fisher					
6	5	48	• Variable Nebulizer gas Flow: 0-2 L/min in 0.01 L/min increment.	Variable Nebulizer gas Flow: 0-1.5 L/min or more in 0.01 L/min increment.	**Not Accepted**
7	8	49	27.12 MHz or 40 MHz with suitable power wattage adjustable from 1000 to 1500 watts in 1 watt increment.	from 750 to 1350 watts or better in 1 watt increment.	**Not Accepted**

8	10	50	System should have the less than 14 L/min of the total Argon gas consumption. (Please mention complete Argon consumption in L/min including Plasma, Auxiliary, Nebulizer, purging gas flows)	less than 16 L/min of the total	**Not Accepted**
9	10	50	performance should be confirmed during installation . Performance should be checked for test samples of Hg, As, Bo, Cu, Fe, Ni, Zn, Mn, Pb. (Relevant certified standard should be supplied by vendor).	Working Standard /CRM is needed : To be clarified	**Relevant certified standard should be supplied by vendor**
10	13	50	Consumables:- to be mentioned with Part nos. along with quantity as well) for trouble free operation of the system during entire warranty period must be quoted along with system	Pls specify the quantity of consumables .	**To be quoted for 3 years (warranty period)**
11	16	51	Minimum two week training to two MPCB Scientist at OEM facility OR at application Laboratory / manufacturing facility.	Thermo Application Lab within India has all the facilities for a world class training	**Not Accepted**
12	17	51	The personal computer with latest processor/configuration (Core i5 processor or better, minimum 4 GB RAM	16 GB RAM would be better	**Not Accepted**
Query Raised by M/s. Perkin Elemer					
13	**2**	**48**	Spectrometer The instrument must be true simultaneous (No sequential operation) , DUAL VIEW (Radial and Axial) ICP-OES system, The instrument must be equipped with polychromatic design optics for the best accuracy and precision	•The system should be simultaneous Dual view ICP OES system should capable for all elements in a single run •The instrument must be equipped with polychromatic design optics or Dual Monochromator for the best accuracy and precision	**Not Accepted**

14	**11**	**50**	Hydride Generator •Hydride generator kit with pump should be included for hydride forming elements like As, Hg, Se. in main item.	A continueous Hydride generator kit with pump should be included for hydride forming elements like As, Hg, Se in main item. The Quantification limit should be less than 1 ppb. If you don't mention limits then some of manufactuers will quote low end hydride kit which is not suitable for your applications and you cannot get limits.	**Not Accepted**
15	**13**	**50**	Essential Consumables - (to be mentioned with Part nos. along with quantity as well) for trouble free operation of the system during entire warranty period must be quoted along with system	Mention nos of tubing, torch, injector, nebulizer, spray chamber, RF coil for 3 years of operation.	**To be quoted for 3 years (warranty period)**
Query Raised by: M/s. Lab India					
16				As being pollution control board your water sample analysis for chlorine can come in future which are isotopes elements & its not come in your required range from 165 - 840 nm. So request you to increase range limit from 135 - 840 nm or put facility to upgrade ICP with halogen in future.	**Not Accepted**

6. Instrument Name :- ICP MS

Sr. No.	Clause No.	Page No.	Description in e-Tender	Clarification Sought	Boards Response
Query Raised by: M/s. Agilent					
	2	51	System should be offered with suitable technique to handle the sample with > 20% TDS	Sample matrix & TDS will be maximum in the range of 3 to 3.5%. Vendor will say yes to qualify technically but except Agilent no one will be able to give proof & confirmation from their factory. If you strictly go by mentioned specs. only Agilent will qualify this specs.	**Not Accepted**
	2	52	System should have high precision peristaltic pump with at least 4 channels and 12 rollers	10-roller, 3 channels. This is vendor specific.	**Not Accepted**

	8	53	Vendor should offer 3 sets of sampler and skimmer cones and 3 sets of lenses (X-lenses and Extraction lens assay for X-lenses)	Lens/quadrupole ion guide. Lenses are not consumable. This is specifically added to increase cost of competitor. Vendor not using lens has to add 3 sets of quadrupole ion guide	**Not Accepted**
	13	54	**Cell technology:**-System should come with inbuilt channel to handle H2 &O2 gases in 100% pure form for effective use of reaction mode while analyzing difficult matrix samples. System should operate in Collision / Reaction mode with suitable gases to remove polyatomic interference. System also should be able to use 100% pure reactive gases like CH4, C2H2, CH3F, C2H6 etc. as well as mixture of gases like H2/He. System and software should have facility to restrict the selection of isobaric interfering elemental masses. 'System must have provision of both Low and high mass cut off to prevent primary and secondary formed interferences in the cell.	The specs. mentioned are specific to one vendor. System should have Cell technology capable to do all above applications, removing all polyatomic interferences by using inert and or reaction gas. Due to their limitation of borrowed technology from Sciex & Seico, they require so many gases to remove polyatomic interferences. Due to inferior design of cell, they require low mass, high mass filters & multiple gases adding complications in analysis & measurement.	**Partially Accepted.** **System should come with suitable collison cell technology to remove polyatomic interference while analysing complex matrix samples.**
				Recommendation- Performance specifications: Sensitivity parameters for low mass, mid mass & high mass are missing in tender specifications. This will ensure MPCB gets best state of the art High Sensitivity ICPMS	**Accepted.** **Sensitivity parameters for low mass should be - ^{9}Be ≥ 7 MCPS / ppm** **mid mass should be - ^{115}In ≥ 140 MCPS / ppm** **& high mass should be - ^{209} Bi ≥ 115 MCPS / ppm**
Query Raised by: M/s. Thermo Fisher					
	2	52	System should be equipped with auto sampler with minimum 50 sample positions.	System should be equipped with auto sampler with minimum 100 sample positions.	**Not Accepted**
	8	53	Vendor should offer 3 sets of sampler and skimmer cones and 3 sets of lenses (X-lenses and Extraction lens assay for X-lenses)	Text is not generalized for Cones. Different vendors have different lenses. Vendor should offer 2 or more sets of sample and skimmer cones & 3 sets of extraction lens)	**Not Accepted**

	9	53	Quadrupole scan speed should be minimum 1000 amu/sec over the entire mass range during the data acquisition.	Scan speed should be > 3000 amu/sec.	**Not Accepted**
	13	54	• System should come with inbuilt channel to handle H2 & O2 gases in 100% pure form for effective use of reaction mode while analyzing difficult matrix samples. • 'System must have provision of both Low and high mass cut off to prevent primary and secondary formed interferences in the cell'.	Request you to change as: System should come with separate (dedicated) inbuilt channels to handle pure gas like He and Reactive gasses like H2 & O2 gases in 100% pure form for effective use of reaction mode while analyzing difficult matrix samples. This will allow user to work more flexibility with choice to use inert as well as reactive gas. Also the system should have full capability to use any gas as per requirement in future	**Partially Accepted.** **System should come with suitable collison cell technology to remove polyatomic interference while analysing complex matrix samples.**
	14	54	The performance should be confirmed during installation. Performance Should be checked for test samples of Hg, As, Bo, Cu, Fe, Ni, Zn, Mn, and Pb. (Relevant certified standard should be supplied by vendor.	pls clarify whether CRM/Working standard. For CRM, pls share the names.	**Relevant certified standard should be supplied by vendor.**
	15	54	• Oxide ratio (CeO/Ce): <3% • Doubly charged ratio: Ce2±/Ce (%): ≤3% • Short term stability: <3% (over 10 minutes) and longtime stability of <4% (over 4 hours) should be demonstrated. • Isotope ratio precision: Ag107/Ag109 <0.1% • It shall be possible to measure major and minor concentrations in a single analytical run. • Tune facility to optimize plasma conditions, lens and cell voltage, etc. for best ionization and sensitivity	Guaranteed sensitivity specifications are missing. The min values should be as below for a sensitive ICPMS system: Low mass : 55 KCPS/ppb Mid Mass : 200 CPS/ppb High Mass : 250 CPS/ppb	**Partially Accepted.** **Sensitivity parameters for low mass should be - ^{9}Be ≥ 7 MCPS / ppm** **mid mass should be - ^{115}In ≥ 140 MCPS / ppm** **& high mass should be - ^{209} Bi ≥ 115 MCPS / ppm**

	20	55	Minimum two week training to two MPCB Scientist at OEM facility OR at application Laboratory / manufacturing facility.	Application Lab with in India.	**Not Accepted**
	21	55	The personal computer with latest processor/configuration (Core i5 processor or better, minimum 4 GB RAM, 1 TB hard disk, DVD writer, with minimum 19" LED monitor, Optical Mouse, keyboard and LaserJet Printer) should be supplied along with the instrument. The latest OS (windows 10 or better software which is compatible with the ICP-OES MS software) should be supplied along with original license key of windows and Microsoft office.	Pls add Or PC supplied along with the instrument with mentioned or better specs.	**Accepted** **The personal computer with latest processor/configuration (Core i5 processor or better, minimum 4 GB RAM, 1 TB hard disk, DVD writer, with minimum 19" LED monitor, Optical Mouse, keyboard and LaserJet Printer) should be supplied along with the instrument. The latest OS (windows 10 or better software which is compatible with the ICP-OES MS software) should be supplied along with original license key of windows and Microsoft office C supplied along with the instrument with mentioned or better specs.**
	22	56	Such as suitable UPS, fume hood; Acetylene, Argon (if Hydride quoted), Nitrous oxide with dual stage regulators and purification panels should be quoted.	Kindly remove as this is for AAS	**Not Accepted**
	23	56	Vendor should submit list of Pre-Requisites (Inclusive / Exclusive in his scope) required for installation of ~~AAS~~ ICPMS instrument at Laboratory with cost.	Typo error it seems	**Accepted.** **Vendor should submit list of Pre-Requisites (Inclusive / Exclusive in his scope) required for installation of ICPMS instrument at Laboratory with cost.**

Query Raised by: M/s. Perkin Elemer					
	9	53	Quadrupole System •Quadrapole mass analyzer should be able to cover mass range from **5 to 200 amu** or better	Quadrapole mass analyzer should be able to cover mass range from **5 to 270 amu** or better. If you mentioned mass range only from 5 to 200amu, but Mercuy, Hg mass is 202 and Lead, Pb is 208 which are not in range you mentioned. Also actinides can not be done. So suggest you to keep range from 5 to 270 or more. All manufacturers have this range. If you don't mention then they will quote low end model.	**Partially accepted** **Quadrupole** **System** **•Quadrapole mass analyzer should be able to cover mass range from** **5 to 220 amu or better**
	9	53	Quadrupole scan speed should be minimum 1000 amu/sec over the entire mass range during the data acquisition at every mass.	Quadrupole scan speed should be minimum 3000 amu/sec over the entire mass range during the data acquisition at every mass. Fast scanning helps in fast analysis. Perkinelmer scanning spped is 5000amu/sec, but all other manufacturers asre passing 3000 amu/sec so suggest you to keep same.	**Not Accepted**
	13	54	Cell technology:	System should come with inbuilt channel (single or multiple channels as per manufacture design) to handle H2 &O2 gases in 100% pure form for effective use of reaction mode while analyzing difficult matrix samples. System should operate in Collision / Reaction mode with suitable gases to remove polyatomic interference. System also should be able to use 100% pure reactive gases like CH4, C2H2, CH3F, C2H6 etc. as well as mixture of gases like H2/He. System and software should have facility to restrict the selection of isobaric interfering elemental masses. System must have provision of both Low and high mass cut off to prevent primary and secondary formed interferences in the cell'. ICPMS with both collision and reaction capability is useful in environmental applications to remove all interferences. You can ask for single or multiple channels.	**Partially Accepted.** **System should come with suitable collison cell technology to remove polyatomic interference while analysing complex matrix samples.**
	13	54	Cell technology	Cell Technology- Kindly add point – The reaction cell should have mass shift mode for better interference correction. Add Mass shift mode capability which is helpful in removal interference for elements like ArCl 75 to As 75, Se 80 from Ar2. All amnufacturer have this facility in their high end models.	**Not Accepted**

	17	55	EssentialConsumables- (to be mentioned with Part nos. along with quantity as well) for trouble free operation of the system during entire warranty period must be quoted along with system	Mention nos of cones, tubing, torch, injector, nebulizer, spray chamber, RF coil, Lenses required for 3 years of operation.	**To be quoted for 3 years (warranty period)**

7. Instrument Name :- Microwave Digester

Sr. No.	Clause No.	Page No.	Description in e-Tender	Clarification Sought	Boards Response
Query Raised by: M/s. Anton paar					
	I	**58**	Microwave Digestion system with at least 20 or more Nos .high pressure vessel rotor for quick digestion & extraction of various sample like filter paper, environmental samples, Mines and rocks, geological samples etc. without loss of heavy metals from sample solution. Allowing pressurized reaction with user selection of continuous microwave reaction. The system should have metal body (not plastics/polymer) and should have solid steel door (without glass window) for safety.	Microwave Digestion system with at least 24 or more Nos .high pressure vessel rotor for quick digestion & extraction of various sample like filter paper, environmental samples, Mines and rocks, geological samples etc. without loss of heavy metals from sample solution. Allowing pressurized reaction with user selection of continuous microwave reaction. The system should have metal body (not plastics/polymer) and should have solid steel door (with glass window or the vendor must provide a camera if the system is without glass window) for safety. Instead of asking for additional 20 vessels separately, we recommend that you include the same as main supply with Rotor to take care of the high sample throughput requirements. All leading manufacturers of MDS offer rotors with capacity of 24 or more. - Among the 3 leading manufacturers worldwide for MDS only Milestone offers solid steel door without glass window. For highest safety and to monitor is the rotor is rotating to ensure that the reaction vessels do not get super heated and result in an accident, it is always important to be able to see the rotor movement. In case of the vendors not offering Glass Window for monitoring the rotor movement, a Camera option is provided. Hence, this should be incorporated in the specifications.	**Partially Accepted. Microwave Digestion system with at least 20 or more Nos .high pressure vessel rotor for quick digestion & extraction of various sample like filter paper, environmental samples, Mines and rocks, geological samples etc. without loss of heavy metals from sample solution. Allowing pressurized reaction with user selection of continuous microwave reaction. The system should have metal body (not plastics/polymer) and should have solid steel door (with glass window or the vendor must provide a camera if the system is without glass window) for safety.**

	II	**58**	MAGNETRON: The microwave system should have single / dual magnetron system with good diffuser for homogenous microwave power distribution in the cavity. Microwave frequency should be 2450MHz or equivalent and installed power should be 1800W minimum (two magnetrons minimum 900W each).	Kindly amend this to read as follows: MAGNETRON: The microwave system should have dual magnetron system with homogenous microwave power distribution in the cavity. Microwave frequency should be 2450MHz or equivalent and installed power should be 1800 W minimum (two magnetrons minimum 900 W or higher each). The term “good diffuser” is used by a specific manufacturer.	**Accepted .** **The microwave system should have dual magnetron system with homogenous microwave power distribution in the cavity. Microwave frequency should be 2450MHz or equivalent and installed power should be 1800 W minimum (two magnetrons minimum 900 W or higher each).**
	IV	**58**	HARDWARE AND SAFETY- should have following features: Stainless steel housing with multi-layer PTFE coating with a large flange. Protected against acids and solvents with polymer coating on both inner and outer surfaces. Self-resealing pressure responsive door mounted on sprigs, to ensure maximum safety even in case of overpressure release. Door Completely made of good quality stainless steel with toughen glass. An automatic door locking system ensures to keep the door closed until the set temperature is reached. User can modify the set temperature according to the lab needs. Independent door safety interlocks to prevent microwave emission in case of improper door closure or misalignment. Built-in exhaust system in the microwave cavity and separated from the electronics to prevent corrosion.	HARDWARE AND SAFETY- should have following features: Stainless steel housing with multi-layer PTFE coating with a large flange. Protected against acids and solvents with polymer coating on both inner and outer surfaces. Self-resealing pressure responsive door mounted on sprigs, to ensure maximum safety even in case of overpressure release. Door completely made of good quality stainless steel with toughen glass. An automatic door locking system ensures to keep the door closed until the set temperature is reached. User can modify the set temperature according to the lab needs. Independent door safety interlocks to prevent microwave emission in case of improper door closure or misalignment. Built-in exhaust system in the microwave cavity and separated from the electronics to prevent corrosion.	**No Change in specs**

	IV	**59**	Single/Dual magnetron system with rotating **diffuser** for homogenous microwave distribution in the cavity. Exclusive magnetron protection from reflected microwave power. Continuous and software controlled microwave emission at all power levels. Emission and Safety norms: EN61010-1:2001;EN61010-2-010:2003;UL61010-1:2004;CAN/CSA-C22.2 No 61010-1:2004;CAN/CSA-C22.2 No 61010-2-010:2004;EN61326-1:2006;CEI EN 61326-2-6:2006; GS/ETL/NRTL.	Dual magnetron system with homogenous microwave distribution in the cavity. Exclusive magnetron protection from reflected microwave power. Continuous and software controlled microwave emission at all power levels. Emission and Safety norms: EN61010-1:2001;EN61010-2-010:2003;UL61010-1:2004;CAN/CSA-C22.2 No 61010-1:2004;CAN/CSA-C22.2 No 61010-2-010:2004;EN61326-1:2006;CEI EN 61326-2-6:2006; GS/ETL/NRTL.	**Accepted. Dual magnetron system with homogenous microwave distribution in the cavity. Exclusive magnetron protection from reflected microwave power. Continuous and software controlled microwave emission at all power levels. Emission and Safety norms: EN61010-1:2001;EN61010-2-010:2003;UL61010-1:2004;CAN/CSA-C22.2 No 61010-1:2004;CAN/CSA-C22.2 No 61010-2-010:2004;EN61326-1:2006;CEI EN 61326-2-6:2006; GS/ETL/NRTL.**
	VI	**60**	Maximum Pressure capacity of vessel with rotor- Up to 35 bar (1500psi)	Maximum Pressure capacity of vessel with rotor- **Up to 100 bar (1450psi) or more . - Pressure capacity of rotor with vessels of upto 35 bar is a medium pressure rotor and not High Pressure rotor as required by the tender specification. Hence, we recommend changing the maximum operating temperature and pressure capacity of rotor to 250 degC and 100 bar with venting above 40 bar.**	**Accepted Maximum Pressure capacity of vessel with rotor- Up to 100 bar (1450psi) or more**
	VI	**60**	Volume of Vessel- 80 ml OR more	Volume of Vessel- **50 ml** OR more - Typical volume for digestion used is around 5-7 ml and a vessel volume of 50 mL is sufficient to digest all sample types mentioned in the tender.J18	**Accepted Volume of Vessel- 50 ml OR more**
Query Raised by: M/s. Lab India					
	I	**58**	Microwave Digestion System:- The system should have metal body (not plastics / polymer) and should have solid steel door without glass window for safety.	Microwave Digestion System: Glass window is meant for visualizing the happenings inside the cavity which is for safety , since it would enable monitoring of vessels inside the Microwave cavity in case of accidental leakage or spillage during the reaction, Should have solid steel door with Glass window or camera to see through.	**Accepted. The system should have metal body (not plastics/polymer) and should have solid steel door (with glass window or the vendor must provide a camera if the system is without glass window) for safety.**

	II	**58**	Magnetron: The microwave system should have single / dual magnetron system with good diffuser for homogenous microwave power distribution in the cavity. Microwave frequency should be 2450MHz or equivalent and installed power should be 1800W minimum (two magnetrons minimum 900W each).	Magnetron:- Word “Diffuser” is technology used by one particular manufacturer ie Milestone . We cannot provide the system with diffuser, we have waveguide for homogeneous distribution of the microwave power. Installed power of 1800 watt , What will be delivered power? Providing two magnetrons with 900 watt is not possible for every manufacturer , some may give 1200 + 600 , What we offer is dual magnetrons with 1000 watt & 800 watt Remove the word “Diffuser” Two magnetrons with 900 watt) Word “Installed should be replaced by “Delivered”	**Accepted.** **Dual magnetron system with homogenous microwave distribution in the cavity.** **Exclusive magnetron protection from reflected microwave power.** **Continuous and software controlled microwave emission at all power levels.** **Emission and Safety norms: EN61010-1:2001;EN61010-2-010:2003;UL61010-1:2004;CAN/CSA-C22.2 No 61010-1:2004;CAN/CSA-C22.2 No 61010-2-010:2004;EN61326-1:2006;CEI EN 61326-2-6:2006; GS/ETL/NRTL.**
	IV	**58**	Hardware & Safety:- Stainless steel housing with multi-layer PTFE coating with a large flange. Single/Dual magnetron system with rotating diffuser for homogeneous microwave distribution in the cavity.	Hardware & Safety:- Large Flange is by one company “Milestone”we don’t have large flange as is not required in our case. Remove words Large Flange Diffuser	**Accepted** **Hardware & Safety:-** **Stainless steel housing with multi-layer PTFE coating .** **Single/Dual magnetron system for homogeneous microwave distribution in the cavity.**
	VI	**60**	Rotors and vessels:- Maximum Pressure capacity of vessel with rotor- Up to 35 bar (1500psi) Additional complete set of TFM vessel should be offered in the main quote only . (20 Nos)	Rotors and vessels:- Maximum Pressure capacity of vessel with rotor- Up to 35 bar (508 psi) Up to 35 bar (508 psi)	**Accepetd.** **Maximum Pressure capacity of vessel with rotor- Up to 100 bar (1450psi) or more**
	VI	**60**	Every Vessels working must have vent and reseal spring to safely release the pressure in case of overpressure. Burst-disk, membrane or self-releasing / continuous venting device are not suitable due to very low performance	Vessels working must have vent and reseal `technology to safely release the pressure in case of overpressure.	**Accepted.** **Vessels working must have vent and reseal `technology to safely release the pressure in case of overpressure.**

	VI	**60**	Due to inhomogeneous nature of sample at MPCB, it must be possible to digest 1 gm OR more solid sample and 25 ml or more liquid sample per vessel.	Weight of solid sample and quanity of liquid sample for digestion is totaly depend upon matrix of sample. Instrument is capable to digest environmental solid and liquid sample.	**Not Accepted**
	VII	**60**	The software must control all parameter online and display : Temperature, pressure, time and power directly on terminal	The software must control all parameter online and display : Temperature, time and power directly on terminal	**Accepted** **The software must control all parameter online and display : Temperature, time and power directly on terminal**
Query Raised by: M/s. Perkin Elemer					
	I	**58**	I. Microwave Digestion system with at least 20 or more Nos .high pressure vessel rotor for quick digestion & extraction of various sample like filter paper, environmental samples ,Mines and rocks, geological samples etc. without loss of heavy metals from sample solution.	I. Microwave Digestion system with at least 16 or more Nos .high pressure vessel rotor for quick digestion & extraction of various sample like filter paper, environmental samples, Mines and rocks, geological samples etc. without loss of heavy metals from sample solution. if 20 vessel capacity vessel then we cannot qualify. We have 16 vessel microwave digestion system with pressure and temperature sensor. Also if you ask for 20 vessel then other vednor may quote low pressure digester. Other vendor have more vessel capacity digester for simple samples.	**Not Accepted**
	IV	**59**	Single/Dual magnetron system with rotating dufuser for homigeneous microwave distribution in cavity	Dual magnetron system with rotating dufuser for homigeneous microwave distribution in cavity. Dual magnetron is best for proper distribution of microwaves.	**Partially Accepted** **Dual magnetron system for homigeneous microwave distribution in cavity**
	VI	**59**	VI. Rotors and vessels- 20 or more position high-pressure rotor should be offered with 12 vessels. Vessels on the rotor should be segmented for easy use.	VI. Rotors and vessels- 16 or more position high-pressure rotor should be offered with 16 vessels. Vessels on the rotor should be segmented for easy use. We can not qualify for 20 vessels.	**Not Accepted**
	VI	**60**	Minimum rotor specifications should be as below, No of vessels can be used in run- 20 or more .	Minimum rotor specifications should be as below, No of vessels can be used in run- 16 or more .	**Not Accepted**

	VI	**60**	Maximum Temperature capacity of vessel - Up to 240 degree C	Maximum **operating** Temperature capacity of vessel - Up to 240 degree C. Actual operaing temperature of vessel is impoertant to mention. There two types of temperatures; 1. Maximum temp and 2. Operating temp. Max temperature means at this temp the vessels get damaged. And operating pressure means temperature requires to digest/dissolve sample.	**Not Accepted**
			Maximum Pressure capacity of vessel with rotor- Up to 35 bar (1500psi)	Operating Pressure capacity of vessel with rotor- Up to 35 bar (1500psi)	**Accepetd.** **Maximum Pressure capacity of vessel with rotor- Up to 100 bar (1450psi) or more**
	VI	**60**	Maximum Pressure capacity of vessel with rotor- Up to 35 bar (1500psi)	Operating Pressure capacity of vessel with rotor- Up to 35 bar (1500psi) Actual operaing pressure of vessel is important in MDS. There two types of pressures, 1. Maximum pressure and 2. Operating pressure. Max temperature means at this temp the vessels get dmanaged and operating pressure means pressure in vessel which need to digest/dissolve sample completely	**Accepetd.** **Maximum Pressure capacity of vessel with rotor- Up to 100 bar (1450psi) or more**
	VI	**60**	Volume of Vessel- 80 ml OR more	Volume of Vessel- 70 ml OR more. We have 75mL volume vessel	**Not Accepted**
	VI	**60**	Additional complete set of TFM vessel should be offered in the main quote only . (20 Nos)	Pl Mention warranty instead of nu of vessels. Suggest you to remove this because our TFM vessels are almost 1.5 cm dia and need not have to replace. Also we give 1 year warranty on vessel. Thickness is more compred to other vendor so price difference is more.	**Not Accepted**
	XII	**61**	XII. Essential Consumables (to be mentioned with Part nos. along with quantity as well) for trouble free operation of the system during entire warranty period must be quoted along with system.	Mention the consumables for no of samples appr. Or ask for no of quantity of consumables.	**To be quoted for 3 years (warranty period)**

8. Instrument Name :- CHNS

Sr. No.	Clause No.	Page No.	Description in e-Tender	Clarification Sought	Boards Response
Query Raised by: M/s.Skytech India					
	General	71	System should be having capability for switching to oxygen mode.	there is no clarity in the specs kindly provide clarity on this point. The system should be capable of changeover by just a click of software without any change of parts or human intervention.	**System should be having capability for switching to oxygen mode by software.**
	General	70	Detector: Either TCD or IR detector for all elements	kindly add 15 year warranty on furnace and TCD. kindly note that Thermo gives 15 year warranty on furnace and TCD. It is an advantage to the customer if any electrical malfunction happens during the warranty time.	**Not Accepted**
	—	—	Micro balance	kindly add micro balance in the specification. microbalance is compulsary for any CHNSO instrument. the specifications are mentioned below: Maximum capacity: 1.2 g / 3.1 g Readability: 0.001 mg / 0.01 mg Repeatability (nominal) (sd): 0.001 mg (1 g) / 0.006 mg (3 g) Typical Repeatability: (200 mg): 0.0008 mg Linearity deviation (test load): 0.02 mg (0.5 g) Minimum weight (200 mg, K=2, U=1): 0.2 mg Typical setting time: < 8 sec	**Not Accepted**
	General	71	Autosampler: 40 or more sample position with facility to analyze samples of all forms (Solid, Liquid, Semi Solids, Gels & Volatile solvents).	kindly change the same to min 32 position. kindly note Thermo has autosampler of min position 32 and can be upgraded to 125 position. Drum no 1: (1-32 position) drum no2 (33-63 position) drum no3 (64-94 position) drum no4 (95-125 position)	**Not Accepted**
	General	71	Analytical range of determination: C 40 mg or better H 2.0 mg or better N 10.0 mg or better S 3.0 mg or better O 5.0 mg or better	kindly remove this point. this much amount of sample weight is not required to perform CHNSO analysis. 2-3mg weight is enough to analyse the samples as it is micro analysis.	**Not Accepted**

9. Instrument Name :- Ion Chromatograph

Sr. No.	Clause No.	Page No.	Description in e-Tender	Clarification Sought	Boards Response
Query Raised by: M/s. Thermo Fisher					
	I	45	high pressure pump of ternary compositional gradient -	This needs to change as Two numbers of high pressure pump of ternary compositional gradient or low pressure Quaternary gradient Pump with Progression step, linear, convex, concave	**Not accepted**
	I	46	Should be possible to run high pressure binary gradient applications -	This needs to change as Should be possible to run gradient as well as isocratic mode.	**Not accepted**
	Conductivity Detector	46	Temperature coefficient range – 0 to 5% -	This needs to change as Temperature coefficient range – 0 to 5% or Cell Temperature Compensation programmable from 0–3% per °C	**Accepted** **Temperature coefficient range – 0 to 5% or Cell Temperature Compensation programmable from 0–3% per °C**
	Diod Array UV VIS Detector	46	Diod Array Uv- Vis Detector -	This need to change as Diod Array UV- Vis detector Or Multichannel UV-Vis detector .	**Accepted** **Diod Array UV- Vis detector Or Multichannel UV-Vis detector**
	IC Columns	47	The columns should have electronic chip to store data and history of column use -	This need to change as The columns should have electronic chip or RFID tag to store data and history of column use	**Accepted** **The columns should have electronic chip or RFID tag to store data and history of column use**
	Chemical Suppresoor	47	Chemical suppressor should be of packed bed type with high loading and high back-pressure tolerance with continuous regeneration –	Here need to do addition as Or Membrane base electrolytic suppressors without any need of external chemical suppression , peristaltic pump, tubing's filters should be with 2 year of warranty.	**Not accepted**
	Auto Sampler	47	Auto sampler should have 50 vial position of vial capacity of minimum 10mL sample volume.-	This need to change as Auto sampler should have 50 vial position of vial capacity of minimum 5mL or 10mL sample volume.	**Accepted** **Auto sampler should have 50 vial position of vial capacity of minimum 5mL or 10mL sample volume.**
	Automatic Eluent preparation. -	47	Automatic Eluent preparation. -	This need to remove as titrators burette need for eluent preparation . This is not the Ion chromatography accessories.	**Not accepted**
	Data Processor	48	Upgrade kit for ternary compositional gradient has to be quoted	This need to remove as the specs already asking for 2 Ternary or quaternary inbuilt pumps.	**Not accepted**

10. Instrument Name :- Water Purification Syatem (WPS)

Sr. No.	Clause No.	Page No.	Description in e-Tender	Clarification Sought	Boards Response
Query Raised by: M/s. Saksham					
				What is feed water quality? Is it same for all 10 instruments or location specific.	**it will not be same for all location .**
Query Raised by: M/s. First Source					
	VIII	67	Endotoxin (Pyrogens) < 0.001EU/ml .	No specifics mentioned of which water. Please specify requirement is for Type1	**Endotoxin (Pyrogens) < 0.001EU/ml for Type-I water**
	XII.d	68	Water Storage Capacity: Min 20 Liter	: Min 30L, conical bottom, with UV and vent filter . All the labwater vendors supply with 30L conical PE tank with air vent filter and automatic sanitation model in built which would avoid the contamination of the stored water. Hence we would recommend you to re-consider the tank specifications	**Not Accepted.**
	XIII.b	68	XIII. Production flow rates b. Type 2 Water	: Minimum 10L/h- will suffice for a daily water availability for usage of 150L-200L after operating for 8hr-10hr. This is supplied by most vendors	**Not Accepted.**
	XIV.a.	68	Point of Delivery - Two remote points of delivery. (Specify Type II from tank and Type I from external dispenser).	Kindly specify if the customer will provide the type 2 water through tank or through dispenser. Either ways it is not going to change. Th is only an additional cost and discourages other vendors to participate. Type -1 dispenser is in-built. Remote- Type1 dispenser is not available with most vendors.	**Not Accepted.**
Query Raised by: M/s.Tritontechnologies					
	XIII.b	68	XIII. Production flow rates b. Type 2 Water	There is a suggestion to change the type II water flow rate to 10 L/ hr instead of 15 L/ hr. because since most of the manufacturer are providing 10 L/ hr. as standard flow rate only & 15 L/hr flow rate is provided by hardly one or two manufacturers so to participation in the tender become bit difficult to us. Also since we believe your water consumption is not more than 50 L per day so in that case 10L/ hr system is sufficient for your requirement.	**Not Accepted.**

				Another suggestion is that if your consumption is more as mentioned above & you do not want to change the flow rate of Type II water then please incorporate EDI technology for type II water system as it is a best technology for higher consumption required & it will minimise the maintenance cost / running cost over the period of time or for longer running of the instruments. Also output water from EDI will be better in specifications than any other technology. Also local manufacturer can not provide EDI technology so you will get best imported system which is internationally accepted for usage.	**Not Accepted.**
	IX	68	Bacteria - < 0.01CFU / ml.	Regarding Bacteria Count you have mentioned value is 0.01 cfu/ml for type I water. But this value is may be related to specific brand/ Model happened mistakenly from your side & not most of the other manufacture will provide this specifications for Bacteria count. Normally it should be 1CFU/ml.	**Not Accepted. For Type-I water - Bacteria - < 0.01CFU / ml.**
Query Raised by: M/s. Trident Equipments Pvt Ltd					
	XIII	68	Production flow rates b. Type 2 Water	In spec you have asked production flow rate for Type 2 water as 15L/hr with tank capacity as 20L. I request if your consumption is not on the higher side then the tank capacity of 20L can be possible with production flow rate for type - 2 water as 5L/hr or 10L/hr.	**Not accepted**
Query Raised by: M/s. ThermoFischer					
	XVI	68	Dispenser should be stand-alone, independent of main equipment	In the interest of the maintaining the final quality of water, dispenser can have the stagnancy of water which will be degraded water quality and will have the bad effect on water quality & also The above point has no contribution to improve quality of the water so request to make it optional not as qualifying criteria. We shall stick to the quality of parameter which is more critical to application.	**Not accepted**
	IV.c	67	Reverse osmosis step should be water conservative. Conductivity before and after Reverse Osmosis should be measured by system	This is a design belongs to one company WHICH very other vendor cannot copy s an compliant manufacturing. In order to make it generalize to make it an healthy competition, we can remove this point or can mention “Reverse Osmosis output water quality should be monitored and has to give alarm if not performing”	**Accepted. Reverse osmosis output water quality should be monitored and has to give alarm if not performing**

	XIII.a	68	Type 1 Water: Manual dispensing Minimum 1.5 Lit/min Automatic volume dispensing .	we want you to allow the minimum flow as **1ml/min** as with UF technology which required for bacterial removal hence Biological application as required/mentioned in tender specs. This will not make any difference to end user application.	**Not Accepted**
Query Raised by: M/s.Labindia					
				Is continuous electrodeionisation (EDI) technology expected after RO?	**Any Technology accepted, ensuring Type-II quality water as per specification**
				Can we get feed water quality report (hardness) of installation sites?	**No**
				Only one company has a facility of cartridge replacement indicator (RFID tag) based on days consumed and not volume consumed. Instead we can submit approx life of each consumable.	**No**
				Inline ultra filter for Rnase / Dnase free water	**Not accepted**
Query Raised by: M/s.Lablink					
	XVI	68	Dispenser - standalone independent of main system.	Any specific requirement for independent stand alone or inbuilt dispenser will be Accepted to you.	**Not accepted**

11. Instrument Name :- Gas Generator

Sr. No.	Clause No.	Page No.	Description in e-Tender	Clarification Sought	Boards Response
Query Raised by: M/s. Perkin Elmer					
			Hydrogen gas specifications:		
	I	85	Hydrogen flow rate : 400 ml/min	min 400 ml/min	**Accepted** **Minimum 400 ml/min**
	II	85	Hydrogen generation by electrolysis of water through Proton Exchange membrane cell (PEM)Technology	vendor specific technologies so please no need to specificy	**Not Accepted**
	IV	85	Pressure setting – Up to 8 Bar adjustable	min 8 bar Pressure (up to 11 bar (160 psi)	**Not Accepted** **Upto 8 Bar adjustable**
	V	85	Hydrogen Purity – Greater than 99.9995 %	Purity 99.99996 %	**Hydrogen Purity – Greater than 99.9995 %**

	VI	85	Safety – It should have extreme safety with all safety alarms.(i.e. internal hydrogen leak ; External Hydrogen leak ; low water level alarm ; High hydrogen pressure etc.)	All Saftery Alarms like Change water / Low Water / High Temp / Over Pressure / Water flow error / Shock error / Low internal pressure / Low ext pressure / High Cell voltage / Dryer Failure	**Safety – It should have extreme safety with all safety alarms.(i.e. internal hydrogen leak ; External Hydrogen leak ; low water level alarm ; High hydrogen pressure etc.)**
	VIII	86	It should have easily removable Water tank for filling water without needing to stop generator	We can easily refill tank externally w/o stopping generator by using plug and play.	It should have easily removable Water tank for filling water without needing to stop generator
	IX	86	Generators should be stackable in order to save space	it's a design specific specification (Even we have flat style generator where we can put our system. Also Air and Hydrogen Generator is in single unit. So customer will have two units Air + Hydrogen and N2)	Generators should be stackable in order to save space
			Nitrogen gas specifications:		
	I	86	Capacity – 500 ml/min	min 500 ml (750 ml/min so wording should be 500 ml/min or suitable)	**Capacity – Minimum 500 ml/min**
	VIII	86	Service due indicator Inbuilt in system	Design specific model (system having all alert so no need to mention it)	Service due indicator Inbuilt in system
	IX	86	Generators should be stackable in order to save space	Design specific model(Even we have flat style generator where we can put our system. Also Air and Hydrogen Generator is in single unit. So customer will have two units Air + Hydrogen and N2)	Generators should be stackable in order to save space
			Specification for Zero Air generator with inbuilt compressor:		
	VI	86	Outlet Pressure – up to 10 bar	Outlet Pressure up to 11 bar	Outlet Pressure – up to 10 bar
	VII	86	Service due indicator Inbuilt in system	Design specific model (system having all alert so no need to mention it)	Service due indicator Inbuilt in system
	VIII	86	Generators should be stackable in order to save space.	Design specific model (Even we have flat style generator where we can put our system. Also Air and Hydrogen Generator is in single unit. So customer will have two units Air + Hydrogen and N2)	Generators should be stackable in order to save space.
			Air Compressor		
	IV	87	All Compressor operation should be controlled by separate controller which allows monitoring of operational status; all report alarms & functioning parameters remotely.	it's a design specific model	All Compressor operation should be controlled by separate controller which allows monitoring of operational status; all report alarms & functioning parameters remotely.

	VI	87	Compressor should be stackable in order to save space	external compresor no need to stack	Compressor should be stackable in order to save space
Query Raised by: M/s.Lablink					
			Hydrogen Gas specifications		
		—	—	Generator should have conductivity indication of inside water & generator should stop in case of high conductivity & avoids to enter high conductivity of water into Hydrogen cell	**Accepted.** **(Can quote Optional)**
		—	—	Hydrogen cell life should be more than 8 years	**Not Accepted**
		—	—	Service due indicator inbuilt in system to avoid breakdown of Generator (Already mentioned in Nitrogen generator specifications)	**Accepted**
			Nitrogen Gas Generator		
		86	Nitrogen gas generator with Inbuilt Compressor	On heading you mentioned Nitrogen gas generator with Inbuilt Compressor but asked separate Stackable compressor also . Stackable silent compressor models are also available in market so that space can be saved & no need to keep compressor outside lab & generator will not come with inbuilt compressor	**Accepted.** **Please read as generator with OR without in-built silent compressor.**
			Zero air generator		
		86	Zero Air gas generator with Inbuilt Compressor	On heading you mentioned Zero air generator with Inbuilt Compressor but asked separate Stackable compressor also . Stackable silent compressor models are also available in market so that space can be saved & no need to keep compressor outside lab & generator will not come with inbuilt compressor	**Accepted.** **Please read as generator with OR without in-built silent compressor.**
			Air Compressor		
	VII	87	It should have very low noise level so that it can be kept inside the lab	In point no VII its mentioned that very low noise level & does not specify any maximum limit . This limit can vary person to person so request to mention noise level limit .as per standard norms it can be less than 55 or 60 db .	**Accepted.** **Noise level should be less than 60 db as compressor will be inside Laboratory.**

			—	We request you to please clarify you are looking for **either combined Air & Nitrogen Gas generator with inbuilt silent compressor** Or **Individual stackable model having Nitrogen ; Zero air & silent air compressor.**	**Gas Generator with OR without inbuilt silent compressor will be accepted.**
Query Raised by: M/s.Peakscientific					
			Hydrogen Gas Generator		
	I	**85**	Flow rate : 400ml/min	100ml/min – 250 ml/min. As H2 would be used only as fuel gas and not as carrier gas requirement per FID will be 40ml/min hence 250ml/min would be highly enough if you want to put up to 5FID`s	Not Accepted
	IV	**85**	Pressure setting: Upto 8bar	100psi. As all GC Manufacturer`s recommend 100 psi. (Because 8 bar pressure is too high and to operate it requires 4-5 bar of pressure and 100 psi also is 6.9bar it is very much sufficient to run FID`s)	**Accepted. For Hydrogen minimum pressure required 6.5 Bar**
			Nitrogen Gas Generator		
	I	**86**	Capacity – 500 ml/min	600ml/min. As per specifications N2 would be used as carrier gas and if want to use 3-4 GC recommended value as carrier gas will be 600ml so that all instrument run properly	Not Accepted
	III	**86**	It should have built in catalytic platinum/palladium reactor for HC removing <0.01 ppm	HC<0.05 ppm. As <0.05 ppm is approved and recommended by all GC Manufacturers	Not Accepted
	IV	**86**	All Generator operations should be controlled by separate controller which allows monitoring of operational status; all report alarms & functioning parameters remotely	All generators operation is controlled by separate controller only but display is not required to see alarm & functioning parameters. As in case of H2 its combustible gas hence to keep record in case of H2 display is required. Whereas in case of N2 Majority of atmospheric air is of N2, hence display is just additional feature and it will not have impact on functionality & feature of instruments	Not Accepted
	VII	**86**	Oulet pressure upto 10bar	80psi .As per GC Manufacturers gas pressure required will be 3-4 bar only.	Accepted. Actually in tender specs it is 0-6 Bar but still for Nitrogen pressure required is 0 - 5 Bar is accepted
			Zero Air Gas Generator		
	I	**86**	Capacity : 5000ml/min	1500ml/min. As per N2 generator specifications it seems to be clear you are going to add only 2 GC/GCMS to generator; then to operate the same	Not Accepted

				1500ml/min is sufficient qty. 1500ml/min can suffice upto 4GC if required. Also by procuring such huge amount of zero air it is just adding cost to maintenance and nothing else	
	V	**86**	Air purity (Hydrocarbon residual <0.1 ppm)	0.05ppm. As in Nitrogen you have asked for HC of 0.01ppm as you are going to use it as carrier gas but Zero air is oxidizer gas for detector if HC is compromised it will have impact on analysis. Hence <0.05ppm of HC is recommended in both cases.	Not Accepted
	VI	**86**	Outlet pressure upto 10bar	Not relevant – Recommended 80psi. as Instrument will not require of pressure more than 5bar or 80psi as all GC Manufacturers recommend the same.	Not Accepted
	III		All Generator operations should be controlled by separate controller which allows monitoring of operational status; all report alarms & functioning parameters remotely	All generators operation are controlled by separate controller only but display is not required see alarm & functioning parameters. As in case of H2 its combustible gas hence to keep record in case of H2 display is required. Whereas in case of N2 Majority of atmospheric air is of N2, hence display is just additional feature and it will not have impact on functionality & feature of instruments	Not Accepted
	—	—	—	Highlighted – Specifications are not relevant and required for generator operation or too high involving high amount of maintenance in near future.	**Not Accepted**
Query Raised by: M/s.Tritechindia					
	IV	**85 & 86**		for the required flow specifications of Hydrogen and Nitrogen Gas Generators ,desirable maximum output pressure for H2 Generator is **6.89 Bar** and for N2 Generator **5.00 Bar**. Accordingly we request you to please arrange to incorporate these changes in the specifications Maximum Output Pressure for these two generators.	**Accepted ; For Hydrogen pressure required 0 - 6.5 Bar and For Nitrogen pressure required 0 - 5 Bar.**

	IV & VII	**85 &86**		As informed below from for the required gas flow rate s(Hydrogen & Nitrogen) and form safety point of view the desirable maximum pressure that should be generated within generator is maximum of 7 bar for Hydrgen and 5 bar for Nitrogen. Accordingly Parker Gas Generators are designed for maximum pressure of 6.89 bar for Hydrogen and 5 Bar for Nitrogen. Hence we request you to please arrange to change the Maximum Pressure setting in the range of 6 to 7 Bar for Hydrogen and 5 to 6 Bar for Nitrogen.	**Accepted ; For Hydrogen pressure required 0 - 6.5 Bar and For Nitrogen pressure required 0 - 5 Bar.**

12. Instrument Name :- Automated Pressuried Fluid Extraction (Microwave Extraction System)

Sr. No.	Clause No.	Page No.	Description in e-Tender	Clarification Sought	Boards Response
Query Raised by: M/s. Labindia					
	I	**80**	Main Platform The system must be equipped with 2 magnetron of 950W (each) for a total power of 1900W.	Main Platform Our system comes with 1800 watt system with dual magnetron of 1000 watt & 800 watt magnetrons. Replace 1900 watt with 1800 watt & remove 950 watt each word	**Not Accepted**
	II	**80**	The microwave cavity must be bigger size for safety and easy handling .Cavity volume should be more than 70 Liters.	Our system has 45 lts capacity & is sufficient to accommodate not 24 but 40 vessels of 80 ml capacity , infact microwave distribution is more homogenous in smaller cavity . Mention , 40 ltrs instead of 70 liters.	**Not Accepted**
	III	80	The system must be configured with a 24 positions rotor (Weflon vessels and 100ml disposable glass vials).	We don't get by word "Weflon"Do you mean Teflon Glass vials are prone to breakage thus resulting more maintenance cost to run the system. Also Glass vials are prone to leaching when it comes in contact to chemicals like Acetone or Other hexane The above specification is of one particular manufacturer : "Mileston" We don't have 100 ml glass vessles. Remove Weflon & use Teflon. Remove Disposable glass vials.	**Not Accepted**

	III	80	The software must be available in 11 languages and must be icon-driven. The software must display simultaneously time, power, temperature and pressure.	Our software is available in English & as English is commonly used language & also 11 languages is not going to affect results. Software should be in English as mandatory & any other languages if available.	**Accepetd** **Software should be in English as mandatory & any other languages if available.**
	IV	80	Hardware 18/8 stainless steel housing with multi-layer PTFE coating with a large flange with 36 mm ID. Additional multiple ports on the side walls of the microwave cavity.	Hardware Word Large flange & 36 mm id is manufactured by one manufacturer “Milestone. Remove “Large Flange , 35 mm id”	**Accepted.** **Hardware** **18/8 stainless steel housing with multi-layer PTFE coating .** **Additional multiple ports on the side walls of the microwave cavity.**
	VII	81	Door completely made of 18/8 stainless steel.	Our system comes with SS 316 grade steel provided with PTFE coating.	**Not Accepted**
	XII	81	Dual magnetron system with rotating diffuser for homogeneous microwave distribution in the cavity.	Word “Diffuser” This technology is patented by Milestone , we cannot offer , what we have is wave guide for homogeneous distribution . Remove word “Diffuser”	**Accepted.** **Dual magnetron system for homogeneous microwave distribution in the cavity.**
	XVI	81	Touch-screen 4,3” TFT display 480x272 VGA resolution with 16M colors. Icon-driven software allowing the user the edit, saving, and run a virtually unlimited number of methods.	Our system comes with Touchscreen 7" (800 x 480) TFT-LED glass capacitive touchscreen display. Instrument should have touch screen TFT display.	**Partially accepted.** **The software must control all parameter online and display: temperature, time and power directly on the terminal.**
	XVIII	**81**	The software must control all parameter online and display: temperature, pressure, time and power directly on the terminal.	The software must control all parameter online and display: temperature, time and power directly on the terminal..	
	XX	**81**	Rotors & Vessels Disposable glass vials volume Reactor Materials Safety shield material Up to 24 100 mL Weflon Polypropylene .	100 ml glass vials are manufactured by one particular company , we have TFM vessels of 100 ml capacity, Mention TFM / Glass / PTFE vessels .	**Not Accepted**
	XX	**81**	Additional 100 glass vessels should be offered with the system.		
	XX	**82**	Every vessel should have a 100ml disposable glass vials		
	XIX	**81**	Reaction Sensor Single IR sensor have to control both rings inner & outer	Ideally to control temperature of inner ring and outer ring required two IR sensor. IR Sensors in system should control temperature of inner ring and outer ring vessels	**Partially accepted.** **IR Sensors in system should control temperature of inner ring and outer ring vessels**

13. Instrument Name :- Solid Phase Extractor

Sr. No.	Clause No.	Page No.	Description in e-Tender	Clarification Sought	Boards Response
Query Raised by: M/s. Labindia					
	II	**82**	Catridge Capacity 20 Nos	CEM EDGE instruments work on revolutionary and patented Q-Cup technology. Cartridge technology is manufactured by Thermo. Is the patented technology of them. We can not offered the same. We can offered Q-Cup instead of cartridge. Maximum No. of Q-Cup we can offered is 12 nos. in one tray at a time. Cartridge/ Qcup- Capacity 12 nos. or more	**Not Accepted**
	III	**82**	Catridge type System should be compatible with commercially available standard 1 ml, 3ml and 6.0 ml SPE catridges	As mention we don't have cartridge. We have Q-Cup of maximum 30 ml capacity. Where in user can load maximum 10g of sample. System should be compatible with commercially available Cartridge type/Q-cup type	**Not Accepted**
	VI	**82**	Sample loading, catridge conditioning and elution volume 1 ml -3 ml or better (on both ranges)	Extracted solvent volume is upto 40 ml in CEM EDGE system Add word 'Cartridge/Q-Cup'	**Not Accepted**
	VIII.b	**82**	Features The system should be upgradeable to add modules for injection of the eluted samples to HPLC/GC or other analytical system	CEM EDGE extracted solvents can directly inject into GC,HPLC or any other technique without any sample preparation.Upgradation is not required in our system. Add '"be upgradeable to add modules for injection of the eluted samples to HPLC/GC or other analytical system Or further filtration is not required in sample preparation'.	**Not Accepted**
	VIII.d	**82**	Flow rate adjustment for sample loading, elution, rinsing and washing	User can adjust quantity of solvents. Add following 'Flow rate adjustment/ volume adjustment	**Not Accepted**
	X	**82**	Accessories a) SPE and accessory kits should be quoted for 3.0 ml catridges	SPE and accessory kits should be quoted for 3.0 ml or more volume catridges/ Qcup	**Not Accepted**

14. Instrument Name :- Flash Point

Sr. No.	Clause No.	Page No.	Description in e-Tender	Clarification Sought	Boards Response
Query Raised by: M/s. Anton Paar					
	1	**53**	Temp. Range: 40 to 400°C.	Flash Point testing as method BIS 1448 part 21 or ASTM D 93	**Not Accepted**
	2	**53**	Ignition Source: Electrical igniter with LPG gas connection.		**Not Accepted**
	3	**53**	Temperature Sensor: PT-100 in stainless steel sheath.		**Not Accepted**
	4	**53**	Flash Detector: CRC Thermocouple.		**Not Accepted**
	5	**53**	Controller: Touch Screen, Color Display with PLC with audio visual alarm to check the machine. 3-wire RTD temperature sensor, free potential flame detector sensor as i/p. with automatic barometric reading correction.	Touchscreen/ Large color LCD with PLC or Microprocessor controller with RTD/ PT 100 sensor	**Accepted**
	6	**53**	Inbuilt storage memory for Flash Detection.		**Not Accepted**
	7	**53**	Flame-Sampling Arrangement: 10 rpm, D.C. 12 v or 24V DC, gear motor, vertical movement reciprocating to & fro motion.	Motor Gear movement or Single twist turn movement system	**Not Accepted**
	8	**53**	Heater: 800 W, 230v.		**Not Accepted**
	9	**53**	Automatically Shut The Machine and Horn The Buzzer In The Case: 1) EFP+30oC or at 400oC is reached 2) Temperature sensor is found defective 3) Flash detector is found defective	EPF+20C For safety instrument should have Fire sensor and automatic fire extingushing system	**Not Accepted**

	10	**53**	Accessories: • Cup & Lid • Thermal Printer • Thermal Printer Roll Pc Interface Cable • Software For Above • Thermal Fuse • Signal Cable • Electrical Requirement: 220-240v, 50/60 Hz	Thermal Fuse or Signal cable if applicable in your system. Thermal/ Suitable Printer	**Not Accepted**
	11	**54**	Instrument/ Equipment supplied needs to be provided with IQ/OQ/PQ documents along with traceability calibration certificate from NABL/ ISO17025 accredited laboratory.	NABL/ISO 17025? Any International Boday	**Not Accepted**

15. Instrument Name :- Total Organic Carbon (TOC)

Sr. No.	Clause No.	Page No.	Description in e-Tender	Clarification Sought	Boards Response
Query Raised by: M/s. Elementar					
	IV	**66**	Sample Injection: Auto sampler with minimum 50 place automatic Injection System.	From the above point we understand you need Autosampler of 50 place. Kindly confirm and clarify with necessary changes in the specification whether you need autosampler for both solid and liquid samples?	**Accepted.** **Sample Injection: Auto sampler with minimum 50 place automatic Injection System for liquid samples.**
Query Raised by: M/s. Skytech India					
	II	**66**	Measurement Method: Catalytically Combustion Oxidation and NDIR detection method	kindly change the same to Wet oxidation heated sodium persulphate method Wet method is far more effective for low ppb applications.also conusmable cost such as catalyst and furnace tube is not applicable in wet method. Consumable cost is less as compared to combustion technique. Better ROI	**Not Accepted**
	V	**66**	Applicable Samples: The system should be able to analyze aqueous (viz. pure water, drinking water, ground and surface waters) and solid samples directly	kindly remove the specs of solid samples been done directly. we have a stand alone instrument to analyse solid samples. Kindly ammend the same to stand alone for solid analysis	**Not Accepted**

	IX.	**66**	Analysis Range: Solid: 0 to 30 mg. Detection limit: 10 µg	kindly change the range to 0.05–mg C to 50-mg C. the end user will have a wide range to operate the wide range of applications	**Not Accepted**
Query Raised by: M/s. Saksham Group					
	VII	**66**	Analysis modes	Confirmation on POC measurement mode. Generally for any Environmental application POC measurement is not required.	**Not Accepted**
Query Raised by: M/s. Trident Equipments					
	IX.	**66**	Analysis Range: 1. Liquid: 0 to 30,000 mg/L, Detection limit: 6 µg/L. 2. Solid: 0 to 30 mg. Detection limit: 10 µg	In this you have mentioned the analysis range for liquid 0-30000 mg/Ltr and for solid 0-30mg but ideally the range should not begin with zero,it has some value. So please clarify the starting range. For solid sample analysis you did not mention about the solid sample module. Our experience shows very few people use TOC for solid sample analysis. You have asked for auto sample for 50 samples - solid cannot be run their, but you haven't asked for solid sample module which is always an additional accessory. In case the application is limited to water analysis, remove the solid part or else we can do analysis by dissolving solid sample into aqueous solution and get the result. As there are many new innovative technologies that can bid and you will have much better options to select from.	**Minimum ragne is clarified by Detection limit which is mentioned in Specification.** **Sample Injection: Auto sampler with minimum 50 place automatic Injection System for liquid samples.**
Query Raised by: M/s.Skalar Analytical					
	IX.	**66**	Analysis Range: 1. Liquid: 0 to 30,000 mg/L, Detection limit: 6 µg/L. 2. Solid: 0 to 30 mg. Detection limit: 10 µg	The range for both solids and liquids are in line with general requirement. However, the detection limit of 6 ug cannot be verified with any standards available in he market. Moreover, most of the sample matrix indicated in your tender are not having such low concentrations of detections. Having carbon everywhere, its also difficult to prepare any standard to chck such low detection limit. Even cleanest sample, pharmaceutical wastewater will have more than 100 ug/L. Hence, we request you to modifythe detection at least 50 ug/L, especially for liquid samples.	**Not Accepted**

16. Instrument Name :- Automatic Burrette Digital)

Sr. No.	Clause No.	Page No.	Description in e-Tender	Clarification Sought	Boards Response
Query Raised by: M/s. Borosil					
	Xii	**23**	Capacity of Bottle top burette	Accuracy should be as per ISO standards.	**Accepted**

17. Instrument Name :- Heating Mantle

Sr. No.	Clause No.	Page No.	Description in e-Tender	Clarification Sought	Boards Response
Query Raised by: M/s. Borosil					
	All	**35**	All	Hating mantle dimension are very specific.	**Not Accepted**

18. Instrument Name :- UV-VIS Spectrometer

Sr. No.	Clause No.	Page No.	Description in e-Tender	Clarification Sought	Boards Response
Query Raised by: M/s. Labindia					
	VI.c	**61**	Hardware specifications required: c. Spectral Bandwidth: 1nm over entire range	Tenders requirement as Spectral Bandwidth means resolution has to be 1 nm but you will have different sample with low impurities also in such case you will be required low resolution, So request to mention spectral Bandwidth starting from 0.5 nm.	**Not Accepted**
	—	—	—	Also tender doesn't mention absorbance range as without that any local party with 2 absorbance also can participate. So requested to keep universal absorbance range - 4 to + 4.	**Not Accepted**
Query Raised by: M/s. Cabhay					
	VI.d	61	Wavelength accuracy: +/-0.3nm over entire range	Wavelength accuracy: +/-0.5nm over entire range. More vendors will be able to participate as wavelength accuracy difference of 0.2nm will not have any impact on the analysis result.	**Not Accepted**

	VI.f	61	Light source: Separate Deuterium and tungsten lamp for UV and VIS range	Light source: Separate Deuterium and tungsten lamp OR Xenon flash Lamp for UV and VIS range OR Better. Xenon lamp is a cool source covers the entire UV visible range & has typical life of 5-7 years. This means there is no recurring replacement cost for the lamp where as Tungsten & Deuterium lamps have to be replaced at every 18/24 months. As such Xenon lamp is more modern technique & doesn't require any warm up time like T & D2 Lamps.	**Accepted.** **Light source: Separate Deuterium, tungsten OR Xenon flash Lamp for UV and VIS range.**
	VI.h	62	Noise level: less than 0.00005Abs.	Noise level: less than or equal to 0.00003 Abs.. More vendors will be able to participate as wavelength accuracy difference of 0.2nm will not have any impact on the analysis result.	**Not Accepted**
	VI.j	62	Sample Compartment: Sample & Reference cells should be mounted in one single sample compartment so as to maintain same conditions.	Sample Compartment: Sample & Reference cells should be mounted in one single sample compartment OR separate compartments but should maintain same conditions. The tender specs is too specific on design aspect of the instrument. More over a true double beam spectrophotometers should always have separate Sample & reference compartment to have lower stray light & hence better absorbance.	**Not Accepted**
Query Raised by: M/s.Mettler Toledo India Pvt. Ltd.					
	V	**61**	Instrument should have Lamp Hour usage monitoring with display of Lamp hours consumed.	Continuous lamps are liable for 'Lamp hour' life, however xenon flash lamp is latest and beneficial technology.Xenon lamp performance complies regulatory compliance. Advanced xenon lamp is Accepted or not?	**Not Accepted**
	VI.b	**61**	Monochromator: Blazed holographic grating with **Crenzy Turner Mountings**.	Performance of instrument is not measured on mounting of grating? Is type of mounting 'Czerny turner' is mandatory? If yes why?	**Not Accepted**
	VI.c	**61**	Spectral Bandwidth: 1nm over entire range	Spectral bandwidth is limitation of scanning instrument. Bandwidth applicable only for double beam instruments. Resolution is actual implicating performance parameter? Whether equivalent toluene in hexane resolution (<1.5) is Accepted or not?	**Not Accepted**
	VI.d	**61**	Wavelength accuracy: **+/-0.3nm over entire range**	Even stringent (eg. Pharma) regulation asks for wavelength accuracy +/- 1 nm in UV range and +/- 2 nm in Visible range. Whether wavelength accuracy of +/- 1 nm is Accepted or not?	**Not Accepted**

	VI.f	**61**	Light source: Separate Deuterium and tungsten lamp for UV and VIS range	Continuous Deuterium and tungsten lamp is old poor technology. Xenon flash lamp offers more advantages and compliant to performance as per stringent criteria and saves over INR 70,000 annually*. Same as mentioned for point 'V' above.	**Accepted.** **Light source: Separate Deuterium, tungsten OR Xenon flash Lamp for UV and VIS range.**
	VI.g	**62**	Lamp Changeover: **Automatic and user selectable lamp changeover** between UV to visible Range.	This is applicable for older deuterium and tungsten combo lamp. Not applicable for xenon lamp. Same as mentioned for point 'V' above.	**Not Accepted**
	VI.i	**62**	Detector: Silicon Photodiode.	Silicon photodiode is old technology and rather than detector type performance is measure of instrument. CCD array detector is latest technology and most of ICP-OES have same type CCD array detector. Whether CCD array detector Accepted or not?	**Not Accepted**
	VI.j	62	Sample Compartment: Sample & Reference cells should be mounted in onesingle sample compartment so as to maintain same conditions.	Sample and reference in single compartment is limited to scanning instrument and required to correction in sample detector response. Whether latest array based technology is Accepted or not?	**Not Accepted**
	VII.B	62	**PC based software**	If standalone system software fulfills all software requirements mentioned why PC based required? Is it Accepted to not include PC in supply?	**Not Accepted**
	XIV	63	**PC & Printer**	Same as VII Compatible printer will be supplied. Same as VII Compatible printer will be supplied	**Not Accepted**
	—	—	—	We had demonstrated the Mettler Toledo Make UV vis spectrophotometer at MPCB – Central Lab Mahape Navi Mumbai for 02 days and it was successful and appreciated by the scientist. The reports were successful (Attached herewith for your refrence) Results of demo were better than current systems. Demonstration results report Feedback of the scientist. White paper on the array based technology.	**Not Accepted**

19. Instrument Name :- Liquid Handling System (Dispenser)

Sr. No.	Clause No.	Page No.	Description in e-Tender	Clarification Sought	Boards Response
Query Raised by: M/s. Borosil					
	Heading	**39**	Bottle Top Digital Dispensette	It should be bottle top dispenser as digital dispensette is a registered brand name.	**Accepted.** **bottle top dispenser**
	3 (4)	**39**	**Valeve seat - Ceramic**	Valeve seat - Ceramic is unique to particular brand	**Not Accepted**

20. Instrument Name :- COD Digester

Sr. No.	Clause No.	Page No.	Description in e-Tender	Clarification Sought	Boards Response
Query Raised by: M/s. Spectra Lab					
	5	**28**	Heating Rate - 20 °C to 150 °C in 10 minutes	Heating Rate mentioned in your specification is 20 to 150 °C in 10 minutes ,– It has to be ambient to 150 °C in 20 minutes as this is standard time taken by aluminium block to heat upto 150 °C.	**Partially Accepted.** **Heating Rate - ambient to 150 °C in 10 minutes.**

21. Instrument Name :- Conductivity meter

Sr. No.	Clause No.	Page No.	Description in e-Tender	Clarification Sought	Boards Response
Query Raised by: M/s. Spectra Lab					
	1	**29**	Conductivity Measuring Range - 0.01µs/cm to 199.9 mS/cm. (Depending on the cell used 0.1 / 0.5 / 1.0 K	Our range is 0.02 to 200 µs. we have conductivity cell of 1 constant which is suitable for the entire range.	**Not Accepted**
Query Raised by: M/s. Lab India					
	1 & 12	**29**	Conductivity Measuring Range - 0.01µs/cm to 199.9 mS/cm. (Depending on the cell used 0.1 / 0.5 / 1.0 K	Tender point as depending on the cell used - 0.1/0.5/1.0K but to cover range upto 199.9 mS/cm our requested is 0.1/1.0/10k	**Accepted.** **Conductivity Measuring Range - 0.01µs/cm to 199.9 mS/cm. (Depending on the cell used 0.1 / 1.0 / 10.0 K** **Accessories : Conductivity Cell K = 0.1/1.0/10 K**

22. Instrument Name :- Filtration Assembly

Sr. No.	Clause No.	Page No.	Description in e-Tender	Clarification Sought	Boards Response
Query Raised by: M/s. Lab India					
		34	Filtration Assembly Consisting of Complete Glass of Components like holder funnel, 25 mm base with 25 mm sintered disc, spring clamp, 1 L Vacuum Flask Consisting of Complete glass of Components like holder funnel 47 mm base with 47 mm sintered disc, spring clamp (Steel) 2 litre vacuum flask.	These are way old techniques and mostly discontinued by all good suppliers. We supply automated assembly which does not require above things are we still require to quote the above mentioned items along with our automated filtration assembly?	**Partially Accepted may quote automated assembly**
		34	Vacuum / Pressure Pump for Filtrationassembly One Vacuum / Pressure pump, material of construction pump head and housing made of cast aluminium, chemically resistant head anddiaphragm, oil free, molded PTFE diaphragm, PTFE/Ryton head, with vacuum / pressure gauge, separate regulators for vacuum and pressure and simple switching, vacuum capacity 24‘‘ Hg (610 mm), 30l/min trace air displacement and pressure capacity 35 psig, free air capacity o.5 cfm, 230 Volts/ 50 Hz AC operated.	These are way old techniques and mostly discontinued by all good suppliers. We supply automated assembly which does not require above things are we still require to quote the above mentioned items along with our automated filtration assembly?	**Partially Accepted may quote automated assembly**

23. Instrument Name :- High Pressure Liquid Chromatograph (HPLC)

Sr. No.	Clause No.	Page No.	Description in e-Tender	Clarification Sought	Boards Response
Query Raised by: M/s. Thermo Fisher					
	I	**44**	One Analytical binary high pressure mixing pumping system with flow range 0.01-5 ml/min with pressure upto 400 bar and composition precision +/- 0.5% And One Preparative binary high pressure mixing system with flow range 0.01 - 100 ml/min with pressure upto 400 bar and composition precision +/- 0.5%.	100 ML Binary Pump Requirement - Should be Clarified	**Accepted** **One Analytical binary high pressure mixing pumping system with flow range 0.01-5 ml/min with pressure upto 400 bar and composition precision +/- 0.5%**

24. Instrument Name :- Selective Ion Meter

Sr. No.	Clause No.	Page No.	Description in e-Tender	Clarification Sought	Boards Response
Query Raised by: M/s. Spectra Lab					
	4	**45**	Star stirrer probe controlled directly from the meter	Stirrer can be controlled by stirrer controlled unit.	**Not Accepted**
	3	**45**	Calibarion graph with slope data for viewing or printing	Calibration option – linear only which covers entire range without deviation in result.	**Not Accepted**

25. Instrument Name :- Automatic Titrator

Sr. No.	Clause No.	Page No.	Description in e-Tender	Clarification Sought	Boards Response
Query Raised by: M/s. Mettler Toledo India Private Limited					
	1	**72**	Method of Detection :- Conductometric / Coulometric / Volumetric	What exactly the instrument is required, i.e. a single instrument cannot fulfill all the three methods in a single instrument. What are the samples which require all the three methods to be followed. Please clarify whether 3 different instrument required? Or one of the 3 is Accepted?	**Accepted.** **Method of Detection :-** **Coulometric**

	2	**72**	Range of Moisture Determination :- Less than 1.0 PPM to 100%	Less than 1PPM water can be determined with Coulometer only whereas volumetric for more than 5% water determination Please clarify type of samples for PPM water content. Also, specify at least 2 instruments available in market so that we would understand equivalent model.	**Oil and Solid**
	11	**72**	Data storage being asked for 100 analyses,	KF methods is a single method which can be used for n no of samples why such high no of method storage asked. Why specific 100 analysis data storage asked?	**Not Accepted**
	12	**72**	Display Backlit LCD,	LCD technology is 30 years OLD and outdated technology ,hence it should be Color Touch screen TFT (Thin Film Transistor) which is the latest technology. Why specifically backlit display asked? What other displays Accepted?	**Accepted.** **Display:- Color Touch screen TFT (Thin Film Transistor)**
	17	**72**	Last point specifies: "Instrument/ Equipment supplied needs to be provided with IQ/OQ/PQ documents along with traceability calibration certificate from NABL/ ISO17025 accredited laboratory."	The instrument needs to be sent to NABL accredited lab for the certification and once the instrument is moved out of the same lab , the conditions change and values change hence its not a valid point. This is ICB whereas NABL is local accreditation body. Please clarify.	**Not Accepted**
Query Raised by: M/s.Skytech India					
	1	**72**	Method of Detection :- Conductometric / Coulometric / Volumetric	Please specify requirement is coulometric or Volumetric	**Accepted.** **Method of Detection :- Coulometric**
	2	**72**	Range of Moisture Determination :- Less than 1.0 PPM to 100%	Specification of volumetric Titrator	**Not Accepted**
	11	**72**	Data Storage:- More than 100 analysis data with corresponding calibration data	Pendrive	**Accepted**
Query Raised by: M/s. Spectralab					
	1	**72**	Method of Detection :- Conductometric / Coulometric / Volumetric	Method of detection has to be volumetric	**Accepted.** **Method of Detection :- Coulometric**
	2	**72**	Range of Moisture Determination :- Less than 1.0 PPM to 100%	Range you have mentioned 1 ppm to 100% , standard range for KF Titrator is 10 ppm to 100%	**Not Accepted**

26. Instrument Name :- Analytical Micro Balance

Sr. No.	Clause No.	Page No.	Description in e-Tender	Clarification Sought	Boards Response
Query Raised by: M/s. Mettler Toledo India Private Limited					
	vii.	**21**	Monobloc technology	Please consider to revise to Balance with EMF technology as it is similar technology to Monobloc and has various advantages in the maintenance of the balance in operation	**Not Accepted.**
	i	**21**	Weighing Capacity	Micro balance will be used for filter weighing. Maximum weight of the filter paper is 150 mg. Why higher weighing capacity is required?	**Not Accepted.**
	vi	**21**	Pan Size should not be less than 50 mm Diameter.	In Micro balance pan size should be as small as possible as it affects eccentricity error. Bigger pan size causes more eccentricity offset. However to address requirement such as filter weighing. Filter weighing kits are supplied. Filter weighing kits are designed to reduce impact due to eccentricity. Why bigger pan size is required?	**Not Accepted.**
	vii.	**21**	Balance should have Mono Block Weighing Technology	Mono-Block technology is not considered as sensitive technology. For micro balance, conventional weighing cell is used to achieve required sensitivity Any specific reason for employing Mono-Block weighing technology?	**Not Accepted.**
	xiii	**21**	Safe and clear documentation by sample and batch identifiers for keeping perfect track of weighing data	These are terms related to Pharmaceutical industry. There is no relevance of these requirement here. However to keep track of filter paper number, site of sampling details would be required to record for which software is required. Licensed Software should be asked for this to enter filter paper number, site details from balance display. Software should be assessed by third party reputed consultant for data integrity Why Pharma regulatory requirements are required?	**Not Accepted.**
	xv	**21**	Password protection of set-up settings to avoid unauthorized person to operate the balance. Three configurable levels of security.	These are terms related to Pharmaceutical industry. There is no relevance of these requirement here. Same as mentioned for point 'XIII' above.	**Not Accepted.**

	xvi	**21**	Facility of Storage of all data of calibration procedures	There is no mention of period of storage. For global terms as per 21 CFR part 11, such data needs to be stored for 20 years. Any standalone instrument can't store the data for such a long period. Software can store such data in PC so software should be asked. Same as mentioned for point 'XIII' above.	**Not Accepted.**
	xvii	**21**	Filters for adapting the balance to ambient conditions (Balance adjusts & performs automatically according to environmental conditions).	This is repetition of point viii so should be removed	**Not Accepted.**
			—	Filter weighing is affected by static charge. Nothing is mentioned about detecting the static charge and removal of the same.	**Not Accepted.**
			—	Motorized draft shield is not asked. Manual draft shield can cause error due to proper closure of draft shield. Motorized draft shield should be included.	**Not Accepted.**

27. Instrument Name :- Automatic Titrator

Sr. No.	Clause No.	Page No.	Description in e-Tender	Clarification Sought	Boards Response
Query Raised by: M/s. Mettler Toledo India Private Limited					
	III	**83**	"galvanically isolated measuring interfaces with measuring cycle of 100 ms for all measuring modes" clarification needed.	What are the specific application on the Titrator which required such type of spefications. Clarify what this specification means and what is the impact on the analysis	**Not Accepted**
	III	**83**	Two titrations simultaneously with same system.	Simultaneous titration exactly is when you do the titration with two titrators also if one Titrator is in breakdown then all the work gets stopped i.e. none of the analysis can be continued. Also you have asked for the automation , how you achieve the simultaneous in automation. What kind of titration to be performed 'simultaneously'? How two operators will operate software 'simultaneously' on single PC/system? Would you accept 2 different Titrator systems altogether?	**Not Accepted**

	IV	**84**	pH : 0 to + 14.0 with Resolution of 0.001 mV : ±1200 with Resolution of 0.1 mV or better	If you ask for high accuracy of pH upto 0.001 pH ,then why only 1100 mV , which should be at least +/- 2000.mV Please clarify need of 3 decimal resolution in pH and lower in mV	**Not Accepted**
	VII	**84**	Burette resolution specifically 1/10,000.	Higher accuracy is achieved by higher resolution of the burettes 1/10000 is old technology Clarify burette resolution 1/10000 only?	**Not Accepted**
	IX	**84**	Burette volume options specifically 2,5,10, 20, 50 ml	Why such low volume 2 mL burette is asked and high volume like 50 ml. Kindly clarify.	**Not Accepted**
Query Raised by: M/s.Skytech India					
	VIII	**84**	Preparation of burette with new titrant and emptying the burette, with a single command should be possible.	Not clear. For new solvent new exchnage unit is required.	**Not Accepted**
	IX	**84**	Burettes volume of 2, 5, 10, 20 and 50 ml should be available if required. The burettes of 20 ml and 50 mL should be given with the system.	2 ml not required . No titraion is possible with 2ml	**Not Accepted**

28. Instrument Name :- Analytical balance

Sr. No.	Clause No.	Page No.	Description in e-Tender	Clarification Sought	Boards Response
Query Raised by: M/s. Mettler Toledo India Private Limited					
	vi	**21**	Pan Size should not be less than 90 mm.	Smaller the Pan Size better is the performance as the Eccentricity is improved. Pan size 70 mm is provided for analytical balances. Balance performance is affected due to pan size. Bigger the pan size causes more eccentricity error.	**Not Accepted**

29. Instrument Name :- XRF

Sr. No.	Clause No.	Page No.	Description in e-Tender	Clarification Sought	Boards Response
Query Raised by: M/s. Amil Ltd.					
	I	**73**	X-ray tube of suitable anode material of 50W with 60kV or higher	Since we manufacture our own X-ray Tubes, they are highly efficient in consumption of energy and give superior performance these are optimized using thin Beryllium windows with power wattage of 15 W with excitation energies of 50kV and current rating of 3000 micro – amperes. Higher current rating is essential for a good performance with full range of elements at even lower concentration. Same configuration is been used successfully at IIT Kanpur & IISER Bhopal for critical air pollution monitoring using air filters as per IO 3.3 guideline. Request to change the power rating to 15W and above, Voltage to 50kV and above and include current rating as an important parameter in the specification	**Not Accepted**
	II	**73**	Combination of direct excitation, filter changer & polarizer to conduct air particulate and environmental samples analysis	Our instrument employs a direct excitation arrangement, this results in a smaller path travelled by the X-rays from the tube to detector as compared to Polarized arrangement wherin, A longer path travelled by the X-rays results in loss of intensities. Also having a secondary target in the instrument means a longer downtime. Request to also include direct excitation in the specification	**Not Accepted**
	III	**73**	a) Integrated sample tray for 12 position samples or better with a capacity to hold 32 and 40mm sample cup. b) Integrated sample spinner for 8 position samples or better with a capacity to hold 40 mm sample cup	Our instrument employs a 10 – position sample tray with a sample spinner. A combination of an efficient X-ray tube and a sensitive SDD detector helps to achieve quality analysis in less time. The sample tray is standard and can accommodate samples of various sizes by using samples inserts to hold the samples in place. Request to give relaxation in the no. of positions in the sample tray	**Not Accepted**
	IV	**73**	In addition to standardless program like fundamental parameters, calibration with empirical process should be provided	Blank subtraction would be a critical facility in a software when working with Air – filters, it shall enable the user to collect samples on numerous types of filters, yet retaining the quality of the data produced which otherwise may have been affected by the diversity of substrate filters used. Request to also add Blank subtraction ability in the specifications	**Not Accepted**

	VII	**73**	SDD detector with peltier cooling having a preferred resolution of < 130 eV (Mn Kα) or better at an input count rate of up to 800,000 cps or higher.	Window thickness of the detector will impact the ability to detect low intensities, a window thickness of up to 10 microns will make the detector sensitive to these energies. Average energy difference is approximately 1 KeV between two elements. Hence a resolution ability of up to 150 eV would be more than enough to yield quality results. Input count rate ability of the detector will determine at what point the detector saturates. Lesser input count rate may result in poor accuracies. An input count rate of about 1250,000 cps would suffice the need for broad utility of the instrument. Request to 1) Include window thickness of the detector. 2) Relax the resolution to up to 150 eV (Mn Ka) 3) Change the input count rate to a higher value of atleast 1250,000 cps.	**Not Accepted**
			—	**We would like to suggest inclusion of the following points,** **1.AERB type approval – Atomic Energy Regulatory Board type approval of the system/model which is to be quoted.** **2.Existing users – We are honored to have our instruments serve at your various sister organizations across INDIA for pollution control mission.** **Our customers include IISER Bhopal, IIT Kanpur, West-Bengal Pollution Control Board, Andhra Pollution Control Board, Telengana Pollution Control Board etc. A solid user base shall help to instill MPCB's confidence in the vendor and its systems.**	**Noted**

30. Instrument Name :- Wet Chemistry analyzer

Sr. No.	Clause No.	Page No.	Description in e-Tender	Clarification Sought	Boards Response
Query Raised by: M/s. Skalar Analytical					
	1	**76**	FOUR CHANNEL CONTINUOUS FLOW ANALYSER FOR THE SIMULTANEOUS ANALYSIS OF THE FOLLOWING CHEMISTRIES IN WATER SAMPLES : □ Total Cyanide □ Ammonia / Total Nitrogen □ Hydrogen Sulfide □ Phenol □ Phosphate □ Sulfate □ MBAS – Anionic Surfactants □ System must be capable of handling simultaneous analysis & flexibility to upgrade from 4 chemistries to 16 chemistries in future to run simultaneously. □ System need to be upgradable in future, for the operation of unattended / extended hours of operation with reagent switching valves and details to be offered presently.	We would like to know exactly how many chemistris you want to analyze from the list. Because in the heading it says four channel, however the list indicates seven on the same page and at the end it indicates nine chemistries including Boron and Fluoride other than seven mentioned in the previous column. Also please clarify whether you want to analyze all the chemistries simultaneously from the samples.	Accepted. FOUR CHANNEL CONTINUOUS FLOW ANALYSER FOR THE SIMULTANEOUS ANALYSIS OF THE FOLLOWING CHEMISTRIES IN WATER SAMPLES : □ Total Cyanide □ Boron □ Fluorid □ Phenol □ System must be capable of handling simultaneous analysis & flexibility to upgrade from 4 chemistries to 16 chemistries in future to run simultaneously. □ System need to be upgradable in future, for the operation of unattended / extended hours of operation with reagent switching valves and details to be offered presently.
Query Raised by: M/s.Agaram Industries					
			—	We refer you to your above mentioned tender in which there is also an item for Auto Analyser. We also refer you to the pre-bid meeting today to which our colleague Brajesh Kumar had attended. We are happy to inform you that we represent Systea, Italy, who are the manufacturers of high-quality water auto anlaysers. We have found that the tender specs are very much in bias towards one single manufacturer – Skalar Analytical, Holland.We request you to kindly ensure that the tender specs are more general than this so that it can allow us to compete also.	**Not Accepted**

31. Instrument Name :-TKN Analyser

Sr. No.	Clause No.	Page No.	Description in e-Tender	Clarification Sought	Boards Response
Query Raised by: M/s. LCGC					
	C.i	64	Should have a compact design to save bench space. □ Capacity for 12 x 250 /400ml digestion tubes	Capacity should be 8 x250/300ml Digestion tube instead of 12 X250/400ML	**Partially Accepted** **Should have a compact design to save bench space.** **Capacity for 12 x 250 ml digestion tubes**
	C.v	64	Should have a compact design to save bench space. □ Automatic temperature calibration	Automatic Temperature calibration point can be removed.	**Not Accepted**
			—	Separation of the suction head from the tube rack should be possible.	
Query Raised by: M/s. Borosil					
	C.i	64	Digester should have : a. Built-in lift, automatically controlled. b. Automatic separation of the suction head from the tube rack d. Damaged probe detection e. Auto auction cap to prevent emission of fumes in to lab	Too Specific to a particular manufacurer, request to kindly look into the above points.	**Not Accepted**
		65	Scrubber Epoxy painted inox structure	Too Specific to a particular manufacurer, request to kindly look into the above points.	**Not Accepted**
		65	Distillation System : Distillation time : 4 minutes to collect 100 ml of distillate Display : 3.5” Color touch screen Interfaces : 2 x USB	Too Specific to a particular manufacurer, request to kindly look into the above points.	**Not Accepted**
Query Raised by: M/s.Pelican					
	C.i	64	capacity of Tubes:12 X 250 / 400 ml Digestion Tubes.	Under capacity of Tubes: It is mentioned as 12 X 250 / 400 ml Digestion Tubes. In the specification solid aluminium block digester is asked. In a Aluminium block only one type of tube can be used. Say for 250ml there are blocks of capacities 4,8,12 and 20 samples at a time. But in the same unit 400 ml cannot be used. It is a mistake. Only infrared digester 250 ml or 400 ml can be used. Therefore, it may be amended as 12 X 250 ml. Instead of 12 X 250 ml / 400 ml.	**Partially Accepted** **Should have a compact design to save bench space.** **□ Capacity for 12 x 250 ml digestion tubes**

	C.xiv	64	Readout in a choice of °C,°F and K	Read out of choice °C or °F and K is asked. In Indian application all electronic temperature measuring devices are in "°C" only. Fahrenheit and Kelvin is used only in foreign countries. Therefore, this line may be deleted.	**Partially Accepted** **Readout in °C**
		64	essential accessories for digester –	Under essential accessories for digester – "Recirculating water pump for fumes aspiration" is asked. Different manufacturer have different design. Most of the companies give recirculation pimp integrated with the scrubber and not as 2 separate units. The pump will be part and parallel of the scrubber system. The specifications of pump mentioned separately reflects only in one company in the website. Therefore, it is suggested that, it may be amended as "Integrated / Inbuilt recirculation water pump for fumes aspiration with Scrubber	**Not Accepted**
			—	Under the heading, you have mentioned technical specifications for (Instruments/ Equipment mentioned as Annexure – IV under Buyback). You have not mentioned details about buyback	**list of Laboratory wise instrument availabe for buyback will be uploaded as Annexure -V**

32. Instrument Name :- AOX/ TOX analyzer

Sr. No.	Clause No.	Page No.	Description in e-Tender	Clarification Sought	Boards Response
Query Raised by: M/s.Skytech India					
	VII	26	Free Maintenance Services will be provided by the supplier during the period of warranty. After warranty period, Comprehensive Maintenance and Repairs of the equipment supplied including supply of spares etc (excluding consumable items) for next 36 months will be done by the Supplier.	kindly clarify the warranty period and comprehensive contract period	**Please refer Annexure-I at page No.88**
		25	Sample fan for EOX analysis	kindly add cooling fan at the boat module. for EOX anlaysis cooling fan is required or there would be evaporation of the next sample when injected at the boat module	**Not Accepted**

Query Raised by: M/s. Lab India					
		25	5 Packets of polycarbonate membrane filters (100 membrane in each packet) with 0.4 µm pore size) for 25 mm with no or least chloride content.	Our instrument does not requires this item are we still required to quote these?	**Not Accepted**
		25	Syringe 1 to 5 µl—5 Numbers Syringe 1 to 10 µl—5 Numbers Syringe 1 to 25 µl—5 Numbers	Syringe 1 to 5 µl—5 Numbers Syringe 1 to 10 µl—5 Numbers Syringe 1 to 25 µl—5 Numbers Above syringes are not used in our system, we use 100uL syringes. Please clarify if we can quote 100uL syringes instead of above mentioned capacity	**Not Accepted**
		23		The Specifications of the Computer and printer mentioned in technical specifications of AOX analyzer and that mentioned in Annexure III are different	**Quote Suitable for Instrument**
			—	Please specify which one is to be considered. Location for the delivery of AOX analyzer is not specified, please specify.	**MPCB Central Laboratory, Navi Mumbai**

Quer's related to General Terms and Conditions

Sr. No.	Clause No.	Page No.	Description in e-Tender	Clarification Sought	Boards Response
Query Raised by: M/s.LabIndia					
1	**15(6).A**	**12**	For each item quoted in Annexure-IV at Sr. No.1, 5, 12, 13, 14, 15, 16, 17, 18, 20, 22, 23, 25, 26, 27 & 28 post commissioning of instrument onsite training shall be provided by trained engineers free of cost for minimum two days to at least two MPCB scientist of each location. Tenderer can opt for providing training at its application Laboratory at sole cost of tenderer. Training shall cover operation, maintenance, troubleshooting and applications.	Can we provide similar training here in India? As the cost of training will be very high in abroad and will not be affordable	**No Change training at respective location of MPCB laboratory OR application Laboratory of Vendor in India.**

	10	**13**	The quoted model OR equivalent, should have been supplied to minimum five vendors in last three years (Enclose list of Purchasers and certificate of satisfactory commissioning and performance).	Can we submit the PO's and installation reports for the customer who bought instrument from Principle Company in abroad? Whether these documents will be Accepted?	**Accepted.** **Provided the instrument is supplied and installed in India .**
	12	**13**	Specification of (Instrument / Equipment Name) is enclosed at Schedule-IV. Bidders are requested to state the buy-back discount on the price quoted in price bid against all the items collectively existing at MPCB laboratories.	Please specify the name of the equipment as it is not clear which instrument is to be considered for buyback	**Accepted** Separate **Annexure-V** stating Laboratory-wise List of instrument available for Buy-back enclosed/uploaded.
	Schedule -I 2	**16**	Schedule· I PRE-QUALIFICATION CRITERIA 2. List of Suppliers having (Instrument / Equipment Name) of same model. Enclose Photocopies of Purchase Orders for last three years. The Bidder should be profitable for each of the past three financial years ending 31st March 2019. Total Annual supply should not be less than Rs. 5.0 Crores.	How many purchase order copies should be attached? Can we submit the Pos and installation reports for the customer who bought instrument from Principle Company in abroad? Whether these documents will be Accepted?	**Accepted.** **Provided the instrument is supplied and installed in India .**

Query Raised by: M/s.Elmentar					
2	**Schedule -I 2**	**16**	List of Suppliers having (Instrument / Equipment Name) of same model. Enclose Photocopies of Purchase Orders for last three years. The Bidder should be profitable for each of the past three financial years ending 31st March 2019. Total Annual supply should not be less than Rs. 5.0 Crores.	In the pre-qualification you have asked "The Bidder should be profitable for each of the past three financial years ending 31st March 2019." Elementar Analysensysteme GmbH (our Parent company in Germany) is more than 100 years old company working in India for more than 30 years. Elementar has supplied 7 nos of elemental analyzer/total organic carbon analyser to MPCB through dealer in India and close to 400 instruments in India. Elementar in India was represented by dealers earlier but since 2016, Elementar Germany has started their operations directly in India through Elementar India Pvt. Ltd.- A 100% subsidiary of Elementar Analysensysteme GmbH. •Considering Elementar India has started their operations from mid-2016 only, we are unable to furnish profitable statements for three financial year. We will however attach the statements for two financial years. •Also Kindly note we have 6 instruments (CHNS Analyzer) installed since more than 10years in MPCB regional labs and central lab and ensured its satisfactory support till date. Considering the above points we request you to kindly accept our bid.	**Accepted.** **Enclosed copy of Company registration as proof.**
	6.B	**13**	For each item quoted in Annexure-IV at Sr. No.2, 3, 4, 6, 7, 8, 9, 10, 11, 19, 21 & 24 , post commissioning of instrument training shall be provided by trained engineers for minimum Five working days to minimum two scientist of MPCB at OEM facility or at application Laboratory at OEM facility of Manufacturer. Allinclusive cost of such training shall be borne by Principal supplier	From the above point we understand that the training is required at Factory / Manufacturing site. Kindly confirm the same	**Yes.** **As proposed in tender clause.**

				Please refer to the above tender. We are a manufacturer of Item no 16 and 19 of the above mentioned tender and want to participate in the tender process. We have attended the Pre bid meeting on 13 December 2019. As the any response related to the outcome of the pre bid meeting is not yet published, we request you to please extend the due date of the tender by two weeks considering the upcoming Christmas and new year holidays. As it will be very difficult for us to submit the tender in such a short time considering the holidays.	**Agreed.** **Revised Time Schedule is enclosed.**
M/s.LCGC					
3	**Tender Notice Details :** **4**	**3**	Cost of blank tender document & Mode of Payment - Rs.5000/- (Rs. Five Thousand only) (Non Refundable) **to be paid through Online Payment Modes i.e. Net Banking, Debit / Credit Card during Tender Document Download Stage.**	According to the tender document in Tender Notice Details [page No. 3] and Earnest Money Deposit [Page No. 7] we need to make the payment throw Net Banking/Debit Card/Credit Card/NEFT/RTGS only if any other process will not be accepted, but on the same way in **Schedule-1** mode of EMD payment is Demand Draft of a nationalized bank has drawn in the favor of "Maharashtra Pollution Control Board" with the validity of 6 months after the date of issue of the tender.	Cost of blank tender document & Mode of Payment - Rs.5000/- (Rs. Five Thousand only) (Non Refundable) to be paid ONLY through Online Payment Modes i.e. Net Banking, Debit / Credit Card during Tender Document Download Stage. DD/ Pay order will not be Accepted
	6.1	**7**	6.1 Earnest Money Deposit (EMD) Bidders are required to pay Earnest Money Deposit through Online Payment modes i.e. Net Banking, Debit Card, Credit Card and NEFT/RTGS during Bid Preparation Stage. This payment will not be accepted by the department through any offline modes such as Cash, Cheque or Demand Draft	We kindly request, please confirm us the mode of EMD payment for above tender,	**AS ABOVE**

	3	**16**	The intending bidder will have to submit earnest money deposit (EMD) as per Annexure-IV in the form of pay order / Demand Draft of a nationalized bank drawn in favour of “Maharashtra Pollution Control Board” with a validity of six months after the date of issue of this tender. A tender which is not accompanied by earnest money will not be considered. Bidders has to submit EMD for quoted instruments only as mentioned at Annexure-IV		**AS ABOVE**
Query Raised by: M/s.Borosil					
4	**31**	**15**	The successful bidder shall deposit security deposit @10% of Purchase cost in the form of D.D. drawn in favour of Maharashtra Pollution Control Board which will be refunded within 30 days without interest, after the successful completion of the warranty period.	Consider Security Deposit in the form of Bank Gurantee or in the form of FD	**The successful bidder shall deposit security deposit @10% of Purchase cost in the form of D.D. OR Bank Gurantee drawn in favour of Maharashtra Pollution Control Board with the condition for renewal untill release order is issued to the bank by MPCB.**
M/s.Anton Parr					
5	**10**	**13**	The quoted model OR equivalent, should have been supplied to **minimum five** vendors in last three years (Enclose list of Purchasers and certificate of satisfactory commissioning and performance).	The quoted model OR equivalent, should be supplied to **three vendors** in last three years (Enclose list of Purchasers and certificate of satisfactory commissioning and performance).	**Not Accepted** **The quoted model OR equivalent, should have been supplied to minimum five customers in last three years (Enclose list of Purchasers and certificate of satisfactory commissioning and performance).**
				All instrument should be calibrated as per traceability calibration certificate from NABL/ ISO17025/ Any International body accredited laboratory	**Accepted.** All instrument should be calibrated as per traceability calibration certificate from NABL/ ISO17025/ Any International body accredited laboratory **at the cost of supplier.**

				MPCB to give list of buyback instruments. Also to give GST inclusive tax invoice for the buy back of instruments.	**Annexure V stating list of instruments availabel for buy-back in each lab is enclosed. Vendor to offer cost of basic unit after considering buyback discount.**
M/s.Triton Technologies					
6	**31**	**15**	The successful bidder shall deposit security deposit @10% of Purchase cost in the form of D.D. drawn in favour of Maharashtra Pollution Control Board which will be refunded within 30 days without interest, after the successful completion of the warranty period	Security deposit - 10% in the form of DD to be returned after warranty period (As a standard practice security deposit is reurned back after delivery of the consignment.	**Not Accepted**
M/s.Pelican					
7			Specification of (Instrument / Equipment Name) is enclosed at Schedule-IV. Bidders are requested to state the buy-back discount on the price quoted in price bid against all the items collectively existing at MPCB laboratories.	Under the heading, you have mentioned technical specifications for (Instruments/ Equipment mentioned as Annexure – IV under Buyback). You have not mentioned details about buyback.	**Annexure V stating list of instruments availabel for buy-back in each lab is enclosed. Vendor to offer cost of basic unit after considering buyback discount.**
Query Raised by: M/s.Tritechindia					
8	**6.1**	**7**	6.1 Earnest Money Deposit (EMD) Bidders are required to pay Earnest Money Deposit through Online Payment modes i.e. Net Banking, Debit Card, Credit Card and NEFT/RTGS during Bid Preparation Stage. This payment will not be accepted by the department through any offline modes such as Cash, Cheque or Demand Draft	In reference to trailing emails , we request you to please provide us your bank details ,with IFSC code for RTGS/NEFT transfer of EMD payment.	**Please refer General Instructions to Bidders section 3.1 at page No.5.**

Query Raised by: M/s.SIFY					
9	**35**	**15 (ICB) 14 (LCB)**	**General T & C**	**It must be noted by all the bidders that in Commercial Bid Opening stage MPCB will get access to commercial offers of all items submitted by a bidder however only those offers will be considered in which he has been shortlisted during Technical Shortlisting stage.**	**New clause at Sl. No. 35 at page at Page 15(ICB) and 14 of LCB 35.** It must be noted by all the bidders that in Commercial Bid Opening stage MPCB will get access to commercial offers of all items submitted by a bidder. **However, offers of only those bidders who have qualified in Technical Bid will be considered. Financial Bid of others will remain undisclosed.**
MPCB					
10		**15 (ICB) 14 (LCB)**	**General T & C**	__	**New clause at Sl. No. 36-39 to be inserted at page at Page 15(ICB) and 14 of LCB**
	36				**Team of MPCB officials may visit manufacturing site for inspection of quoted model prior to dispatch before issuing the purchase order**
	37				**Successful bidder shall remove the instruments / Equipment's offered for buyback from respective laboratory immediately, after supply and commissioning of new instruments / Equipment's at respective location as per purchase order, failing which final payment will not be released.**
	38				**Bidder shall submit list of pre-requisites (inclusive / exclusive in their scope) required for installation of instruments / Equipment's at MPCB respective laboratory with cost.**

	39				**Bidder shall submit hard copies of all the uploaded technical documents in spiral bind form to MPCB at the time of technical bid opening in person or by speed post to I/c.C.Lab., Nirmal Bhavan, Mahape, Navi Mumbai – 400 022, within two days from opening of technical bid.**