

No.15-4/2010-Admn  
**COASTAL AQUACULTURE AUTHORITY**  
**Government of India**  
**Ministry of Agriculture**  
**2<sup>nd</sup> floor, Shastri Bhavan Annexe**  
**Chennai 600 006**

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**NOTICE INVITING TENDER**

- 1 Sealed tenders are invited from manufacturers/authorised dealers of laboratory equipments of International/National standard in the prescribed tender form under two-bid system for supply, erection, commissioning and training in the Water Quality Monitoring laboratory in the Coastal Aquaculture Authority, Chennai, Tender Details / Document may be purchased by Demand Draft in favour of Coastal Aquaculture Authority from Coastal Aquaculture Authority, 2<sup>nd</sup> Floor, Shastri Bhavan Annexe, Chennai – 600 006 for Rs 500/-(Five hundred only) or downloaded from the website [www.caa.gov.in](http://www.caa.gov.in). Those bidders downloading Tender document from website should deposit tender document fees of Rs 500/- in the form of Demand draft in favour of Coastal Aquaculture Authority payable at Chennai along with technical Bid.
- 2 Selection will be on basis of fulfilment of the eligibility criteria
- 3 The Sealed tenders with separate Technical and Financial bids duly filled in the prescribed Performa may be addressed to the **Member Secretary, Coastal Aquaculture Authority, 2nd Floor, Shastri Bhavan Annexe, Chennai-600006**, so as to reach him latest by 5.30 P.M on 10<sup>th</sup> January, 2011 The tender may be sent by post to the above mentioned address or dropped in the Tender Box placed at CAA office by the stipulated date and time.
- 4 Bids received after the closing date and time shall not be considered.

**MEMBER SECRETARY**

**Cost of Tender Documents Rs 500/-**

**Government of India  
Ministry of Agriculture  
COASTAL AQUACULTURE AUTHORITY  
2<sup>nd</sup> floor, Shastri Bhavan Annexe  
Chennai 600 006**

**TENDER DOCUMENT**

Supply and Installation of Equipment etc for establishment of water quality monitoring laboratory at Coastal Aquaculture Authority

| <b>Sl.No</b> | <b>Details</b>                                  | <b>Date and Time</b>  |
|--------------|---|---|
| 1            | Period of issue of Tender Document              | 15-12-2010 to 10-01-2011  |
| 2            | Date and time for submission of Tender Document | From 9.00AM to 5.30 P.M in all working days from 15-12-2010 to 10-01-2011 |
| 3            | Date and time for opening of Technical Bids     | At 11.Am on 11-01-2011  |

: 1 :

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### **Eligibility Criteria**

The bidder will be considered for selection, only if the following conditions are fulfilled:

- (a) The bidder should be registered with the appropriate registration **authority (proof to be enclosed with Technical Bid)**.
- (b) The bidder should convey his acceptance to all the terms and conditions laid down by CAA.
- (c) The declaration in the prescribed proforma and Manufacturer Authorisation Form in case of Foreign Supplier given in this tender document should be duly filled in, signed and submitted along with the technical bid. The above declaration, along with a copy of the terms and conditions, duly signed by the authorized signatory of the agency in token of acceptance of the terms and conditions and sealed in each page and Demand Draft of EMD and cost of Tender Form (Down loaded from Website or otherwise) should be enclosed with Technical bid.
- (d) Vendors in such similar line of business and having adequate experience in such similar product may only submit the bids.
- (e) In case, the Indian Agents who desire to quote directly on behalf of their foreign principals, should have themselves enlisted with the Central Purchase Organization of Ministry of Commerce and Industry/ Defence etc( **Proof to be enclosed with Technical Bid**)
- (f) The Vendor should be the original manufacturer of the equipments or authorized supplier/representative in India. An Authorization letter from the respective manufacturer of the equipments to this effect should be furnished *compulsorily* as enclosed in **Annexure II**, without which bid will be rejected. The offer should be submitted by manufacturer or their exclusive agent with certificate of exclusivity.

**TECHNICAL BID FORM (A)**

|           |   |                |                |                         |
|-----------|---|----------------|----------------|-------------------------|
| <b>1.</b> | Name of Bidding Firm  |                |                |                         |
| <b>2.</b> | Full Address  |                |                |                         |
| (a)       | Telephone<br>Fax No<br>E-Mail ID  |                |                |                         |
| <b>3.</b> | Details of Earnest Money Deposit :  |                |                |                         |
| (a)       | D.D. / P.O. No. & Date  |                |                |                         |
| (b)       | Drawn on Bank<br><br>Branch<br><br>Address  |                |                |                         |
| (c)       | Valid upto  |                |                |                         |
| <b>4.</b> | Give details of works awarded to the bidder by Government Departments / Ministries during the last three years, as on 31.03.2010, in the following format: Please attach copies of the works contracts. |                |                |                         |
|           | Details of Departments / Ministries along with name, designation, address, telephone and FAX numbers of the concerned Officer.  | Items supplied | Date of Supply | Value of Contract (Rs.) |
| A         |   |                |                |                         |
| B         |   |                |                |                         |
| C         |   |                |                |                         |
| <b>6.</b> | Time required for supply / installation / integration, etc. of the items  |                |                |                         |
| <b>7.</b> | Additional information, if any  |                |                |                         |

(If the space provided in the above sheet is insufficient, the Technical Bid can be prepared on any sheet, using the same format).

Date:  
Place:

Signature of Owner/Managing Partner/Director  
Name:  
Company's Seal :

## Technical bid

The technical bid should also include the product literature, manual and a short description of the product proposed to be supplied. Original Catalogue must be provided. All technical specifications should be printed on the catalogue. Separate sheet will not be acceptable. List of users is to be provided. Compliance statement is to be provided.

The bids received from vendors who do not have adequate experience in executing such similar product would be rejected and the Coastal Aquaculture Authority would offer no explanation. The Coastal Aquaculture Authority also reserves the right to request for proof of experience from vendors submitting the bids, in case it is required.

The bidders are required to adhere to tendering norms and no undue explanation, request for change in due date of bid submission, etc. will be offered by the Coastal Aquaculture Authority. Any request of any kind from the bidder before the bid submission due date must be forwarded to the undersigned in writing. The Coastal Aquaculture Authority (CAA) reserves the right to accept or reject the bidder's request without offering any explanation or reason for the acceptance or rejection. However, in case of any change/amendment in the tender content, all bidders participating in the tendering process would be informed in writing and sufficient time would be provided to adhere to such change/amendment.

Technical and commercial bids should be submitted duly signed and stamped by the vendor's authorized signatory **on or before 1730 hrs on 10<sup>th</sup> January 2011**. The bids should be submitted in separate sealed envelopes clearly superscribing on the envelope "**Technical Bid** for "Tender for supply of laboratory equipments to CAA as per Tender No "15-4/2010 dated 08<sup>th</sup> December 2010" and "**Commercial Bid** for "Tender for supply of laboratory equipments to CAA as per Tender No15-4/2010 dated 08<sup>th</sup> December 2010." and address it to **Member Secretary, Coastal Aquaculture Authority, 2nd Floor, Shastri Bhavan Annexe, Chennai-600006**, The tender may be sent by post to the above mentioned address or dropped in the Tender Box placed at Coastal Aquaculture Authority office by the stipulated date and time.

The Technical bid shall be opened at 11-01-2011 at 11 A.M in the presence of the authorized representatives of the Firms, who wish to be present at that time. The bidder who's Technical Bids is accepted will be informed about the date of the opening financial bid

## Technical specifications for Lab instruments

### **1. Combined System for Analytical and Ultrapure Water purification system**

#### **(i) Analytical Water purification system**

##### **Specifications:**

1. Combined RO technology and deionization to produce high quality pure water
2. Integrated 6L reservoir.
3. All in one pack with combined purification technologies.
4. Bright, color graphic display showing system parameters, operational functions and product water quality.
5. UV lamp 254nm with LRV of 5.

##### **Product Water Specifications:**

|                |                    |
|----------------|--------------------|
| Resistivity    | >10 Meg Ohm.cm@25C |
| TOC            | <50ppb             |
| Micro organism | >99.9% rejection   |
| Flow Rate      | 3L / hr            |

#### **(ii) Ultrapure Water Purification System**

##### **Specifications:**

1. Purification pack unit consist of specific feed water source containing mixed bed ion exchange resin/microfilter/activated carbon
2. Easy replacement of cartridges.
3. Coaxial resistivity meter with a cell constant of 0.01/cm and 0.1 degree C accuracy thermistor.
4. Pharmaceutical grade, final filter with 0.22micron membrane filter in stack disc configuration.
5. UF cartridge with LRV between 5.6 and 7.65 over challenge range of 220 and 22000 Eu/mL.
6. Automatic recirculation when system is not in use.
7. Preset of fixed volume dispenses.
8. Bright, color graphic display showing system parameters, operational functions and product water quality.

##### **Product Water Specifications:**

|                       |                                   |
|-----------------------|-----------------------------------|
| Resistivity           | : 18.2 Meg Ohm.cm (@ 25 degree C) |
| Conductivity          | : < 0.055uS/cm                    |
| TOC                   | : <10 ppb                         |
| Bacteria              | : <1cfu/mL                        |
| Pyrogen               | : <0.01 Eu/mL                     |
| RNase                 | : <0.003 ng/mL                    |
| Flow Rate             | : 1 L/min                         |
| Particulates (>0.22μ) | : >1P/mL                          |

## **2. Standard Weight Sets**

### **Specifications:**

Weight sets should be manufactured in accordance to International Recommendation OIML-R111.

Individual weights should not have any cavities, should not have removable/toque adjustable knob.

Weights set should contain knob weights for nominal mass values from 1 g and upward.

Weight set should contain wire weights from 1mg to 500mg.

MOC : Special Steel, Non-magnetizable

Density : 7.95 g/cm<sup>3</sup>

Calibration Certificate should be issued in the name of customer

The weight set should contain the following denomination of weights.

1mg, 5mg, 10mg, 50mg, 100mg, 500mg, 1g, 5g, 10g, 50g, 100g: Each 1 no.

2mg, 20mg, 200mg, 2g, 20g, 200g: Each 2 nos.

Total No. of Weights: 23 Nos.

## **3. Multiparameter Field Water Quality Monitoring system**

Following are the minimum features/specifications and suppliers may also quote for instrument with additional features.

1. The instrument shall be capable of working in fresh, polluted or seawater.
2. The instrument shall be capable of operating in water depths at least up to 61 meters.
3. The instrument shall be capable of operating in a self-powering mode from an internal power supply using a set of eight (8) "C" cell batteries for at least 45 days (or more) with a full sensor payload at a 15 minute sampling interval.
4. The instrument shall also have the capability of being powered by an external 12VDC-power supply through an interface cable.
5. Batteries shall be removable via an external hatch without opening the Sonde.
6. The battery compartment must be sealed and protected by a safety device that protects the operator from a gas pressure build-up in the battery compartment.
7. The instrument shall have a non-volatile flash disk memory capable of storing 150,000 individual readings as a standard. Loss of battery power shall not cause loss of memory, and a memory backup battery shall not be required.
8. The instrument shall have the capability of updating its internal software with newer versions via a disk in the field by the end user, or from the web.
9. The instrument shall be provided with portable field displays for calibrating, configuring, reporting and logging status **as an optional item**. It should be possible to download the data to this portable field display utilizing Kermit protocols and then transferred to a PC.
10. The instrument shall be capable of having connectorized field replaceable probes for the Dissolved Oxygen, Conductivity, Temperature, pH, ORP, and Turbidity sensors, as well as Chlorophyll, Rhodamine and Blue-Green Algae Sensors. These sensors shall



11. be capable of being removed without opening the Sonde or exposing the internal electronics to the environment.
12. As a minimum the instrument should monitor the following parameters  
 Temperature, DO, pH, ORP, Turbidity, chlorophyll, conductivity, Salinity and Chloride.  
  
 Other parameters like Physocyanin and Physoerythrin Blue Green Algae, Nitrate-Nitrogen, Ammonium-Nitrogen, Ammonia-nitrogen can be quoted under optionals.
13. All optical sensors must have their own dedicated wiping system for anti-fouling protection and improved data quality.
14. The instrument shall have the capability of being supplied with a dissolved oxygen sensor that employs the Luminescent "Life Time" Dissolved Oxygen measurement technique. This sensor shall be capable of measuring dissolved oxygen in the range of 0-20 mg/l with an accuracy of at least +/- 0.15 mg/l; and in the range of 0 - 200% saturation with an accuracy of +/- 1% air saturation with a response time of less than one minute under all or zero flow conditions without
15. the use of a stirring device. In addition the sensor must be able to measure dissolved oxygen in the range of 20 - 50 mg/l with an accuracy spec at this range of +/- 15% of the reading or better; and in the range of 200 - 500% saturation with an accuracy spec of +/- 15% of the reading or better.
16. The instrument shall be capable of having a non-vented characterized depth sensor capable of measuring in the range of 0 - 200 feet of water with an accuracy of +/- 0.4 ft. (4.8 in.) and a resolution of 0.001 feet. The output shall be capable of being displayed in Feet or Meters.
17. The instrument shall be capable of measuring temperature using a thermistor in the range of -5 to 45 degrees C with an accuracy of +/- 0.15 degrees C and a resolution of 0.01 degrees C. The instrument shall also provide, as an option, the capability of having a characterized temperature output with an accuracy of +/- 0.05 degrees C. The output shall be capable of being displayed in Celsius, Fahrenheit, or Kelvin.
18. The instrument shall be capable of measuring conductivity using a four nickel electrode cell in the range of 0 - 100 mS/cm with an accuracy of +/- 0.5% + 0.001 uS/cm and a resolution of 0.001 to 0.1 mS/cm. The output shall be capable of being displayed in mS/cm or uS/cm. The conductivity sensor shall be capable of measuring over the entire range (0-100 mS/cm) without changing the cell constant.
19. The instrument shall be capable of measuring pH in the range of 0-14 with an accuracy of +/- 0.2 and a resolution of 0.01 using a combination electrode with a gel filled reference electrode. This same sensor is also used for measuring most low-ionic strength waters.
20. The instrument shall have available as an output a salinity calculation based on the conductivity and temperature measurements in the range of 0-70 PPT with an accuracy of 1.0% or +/- 0.1 PPT (whichever is greater) and a resolution of 0.01 PPT. The algorithms used for the calculation should be those found in the Standard Methods for Examination of Water and Wastewater.
21. The instrument shall have the capability of being supplied with Nephelometric-type turbidity probe capable of measuring turbidity in the 0 - 1000 NTU range with an accuracy of +/- 2% of reading or 0.3 NTU's (whichever is greater) in Polymer standards. Resolution of 0.1 NTU's. Measurements should have reasonable agreement to the internationally acceptable bench top meter.

22. The instrument shall be supplied with a user-friendly software program providing communication and data processing. Data shall be presented in both report and graphical form, and data statistics will be automatically generated and displayed for Min, Max, Mean, and Standard Deviation. The software program shall be capable of exporting data in comma and quote delimited and ASCII formats.
23. All sensor ports shall have secondary backup seals, thus protecting the internal electronics from the environment.
24. The instrument shall include as standard RS-232 and SDI-12 communication interface.
25. Calibration solutions for all the supplied sensors should be quoted with the instrument. Sensors for the following parameters to be quoted as optional.

**Parameters and sensors Specification :**

**Temperature**

Sensor Type.....Thermistor  
 Range.....-5 to 50 C  
 Accuracy.....+/- 0.15 C  
 Resolution.....0.01 C

**ROX Optical Dissolved Oxygen, mg/L** (Calculated from % air saturation, temperature and salinity)

Sensor Type..... Optical, Luminescence Lifetime  
 Range.....0 to 50 mg/L  
 Accuracy.....0 to 20 mg/L, +/- 1 % of the reading or 0.1 mg/L, whichever is greater 20 to 50 mg/L, +/- 15 % of the reading; Relative to Calibration Gases.  
 Resolution.....0.01 mg/L

**pH**

Sensor Type.....Glass combination electrode  
 Range.....0 to 14 units  
 Accuracy.....+/- 0.2 units  
 Resolution.....0.01 units

**ORP**

Sensor type..... Platinum button  
 Range.....-999 to +999 mV  
 Accuracy.....+/-20 mV in redox standard solutions  
 Resolution.....0.1 mV

**Turbidity**

Sensor type..... Optical, 90 scatter, with mechanical cleaning  
 Range..... 0 to 1000 NTU  
 Accuracy.....+/- 2% of the reading or 0.3 NTU (whichever is greater).  
 Resolution.....0.1 NTU

### **Chlorophyll**

Sensor type..... Optical, fluorescence, with mechanical cleaning  
Range..... Approximately 0 to 400 µg/L Chl; 0-100 Relative Fluorescence Units (RFU)  
Accuracy..... No specification provided  
Linearity.....  $R^2 > 0.9999$  for serial dilution of Rhodamine WT solution from 0 to 500 µg/L  
Detection Limit..Approximately 0.1 µg/L Chl (determined using cultures of *Isochrysis* sp. and chlorophyll a concentration determined through extractions).  
Resolution.....0.1 µg/L Chl; 0.1 RFU

### **Conductivity\***

Sensor Type.....4 electrode cell with autoranging  
Range.....0 to 100 mS/cm  
Accuracy.....+/- 0.5% of reading + 0.001 mS/cm  
Resolution.....0.001 mS/cm to 0.1 mS/cm (range dependent)

### **Salinity**

Sensor Type.....Calculated from conductivity and temperature  
Range.....0 to 70 ppt  
Accuracy.....+/- 1.0% of reading or 0.1 ppt, whichever is greater  
Resolution.....0.01 ppt

### **Chloride**

Sensor Type.....Solid state ion-selective electrode  
Range.....0-1000 mg/L  
Accuracy.....+/- 15% of reading or 5 mg/L (whichever is greater)  
Resolution.....0.001 mg/L to 1 mg/L (range dependent)

### **Phycocyanin-Blue-green Algae (BGA-PC)**

Sensor type..... Optical, fluorescence, with mechanical cleaning  
Range..... Approximately 0 to 280,000 cells/mL of BGA (See **Principles of Operation** section for explanation of estimate); 0-100 Relative Fluorescence Units (RFU)  
Accuracy..... No specification provided.  
Linearity.....  $R^2 > 0.9999$  for serial dilution of Rhodamine WT solution from 0 to 400 µg/L  
Detection Limit..... Approximately 220 cells/mL. Estimated from cultures of *Microcystis aeruginosa*  
Resolution.....1 cell/mL; 0.1 RFU  
Temperature Range -5 to 50 C  
Depth..... 61 meters

**Phycoerythrin-Blue-green Algae (BGA-PE)**

Sensor type..... Optical, fluorescence, with mechanical cleaning  
Range..... Approximately 0 to 200,000 cells/mL of BGA (See **Principles of Operation** section for explanation of estimate); 0-100 Relative Fluorescence Units (RFU)  
Accuracy..... No specification provided.  
Linearity..... R2 > 0.9999 for serial dilution of Rhodamine WT solution from 0 to 8 ug/L  
Detection Limit..... Approximately 450 cells/mL. Estimated from cultures of a *Synechococcus* species.  
Resolution.....1 cell/mL; 0.1 RFU  
Temperature Range -5 to 50 C  
Depth..... 61 meters

**Nitrate-Nitrogen**

Sensor Type.....Ion-selective electrode  
Range.....0-200 mg/L-N  
  
Accuracy.....+/- 10% of reading or 2 mg/L (whichever is greater)  
Resolution.....0.001 mg/L-N to 1 mg/L-N (range dependent)  
Temperature Range -5 to 50 C  
Depth..... 15 meters

**Ammonium-Nitrogen**

Sensor Type.....Ion-selective electrode  
Range.....0-200 mg/L-N  
Accuracy.....+/- 10% of reading or 2 mg/L (whichever is greater)  
Resolution.....0.001 mg/L-N to 1 mg/L-N (range dependent)  
Temperature Range -5 to 50 C  
Depth..... 15 meters

**Ammonia-Nitrogen**

Sensor Type.....Calculated from ammonium, pH and temperature  
Range.....0-200 mg/L-N  
Accuracy.....+/- 10% of reading or 2 mg/L (whichever is greater)  
Resolution.....0.001 mg/L-N to 1 mg/L-N (range dependent)  
Temperature Range -5 to 50 C  
Depth..... 15 meters

#### **4. COD REACTOR**

##### **Specifications:**

COD reactor/digester to be used to for the sample digestion for the measurement of COD and all other thermal digestion processes, reactor should be dry temperature control device with safety cover and Cell shafts 12 cell shafts for reaction cells  $16 \pm 0.2$  mm.

**Reaction time setting** 20 min, 30 min, 60 min, 120 min (via fixed programs)

**Temperature setting** 100 °C, 120 °C, 148 °C and 150 °C via fixed programs

**Controlling accuracy**  $\pm 1$  °C  $\pm 1$  Digit

**Temperature stability**  $\pm 0.5$  K

**Over temperature protection**  $190$  °C  $\pm 5$  °C

**Heating time (with empty thermo block) from 25 °C to 100 °C** approx. 5 min

120 °C approx. 7 min

148 °C approx. 10 min

**Enclosure** PC ABS, recyclable, high temperature resistant






**Protection** IP 20 according to DIN 40050

**Test certificates** cETLus, CE

**Safety standards** EN61010; UL3101; CAN/CSA C22.2-1010; EN61010-2-010; IEC-CAN/CSA C22.2-1010.2.010

Replacement reagent should be supplied in bulk pack and the same can be supplied with in two weeks from the date of order.

**Digestion unit should come along with the following accessories and reagents:**

-  Reactor 230 VAC for COD and other thermal digestions for up to 12 reaction cuvettes
-  Pk/25 empty digestion vessels
-  250 tests reagents for up to 1500 ppm COD
-  COD cooling rack
-  Instructions manual

## **5. BOD Track Apparatus**

### **Specifications:**

BOD apparatus measuring principle should have Monometric with pressure measurement in a closed system.

System should be read directly as measured value in mg/L BOD

The system should have green and yellow heads for differentiation of inflow/outflow

The BOD instrument should have an **AutoTemp Function**

### **The system should have the following features:**

- i) Measuring Principle: Manometric with pressure sensor
- ii) Quantity measured: BOD<sub>n</sub>
- iii) Measuring range: 0 – 40 digits (display unit equals)  
0 – 40/ 80/200/400/800/2000/4000 mg/L BOD Using different volumes
- iv) Display accuracy:  $\pm 1$  digit ( $\Delta \pm 3.55$  hPa)
- v) Operating range: 500 – 1100 hPa
- vi) Memory: For BOD<sub>5</sub>: 1 per day. Should also permit the tracking of check values or measurements at all times during or after 5 day period.
- vii) Ambient Temperature: storage:- 13 – 149 deg F (-25 -- 65 deg C)  
Operations: 41 p 122 deg F (+ -- +50 deg C)

### **BOD Apparatus should come with following standard accessories:**

510ml Amber color bottles with rubber sleeve

Six measuring heads

IS 6 stirrer

CO<sub>2</sub> absorbent

Nitrification Inhibitor

Overflow measuring flask

Stirrer bars

Stirrer bar remover

Blocks of chart paper

## 6. CHNSO Analyser

### Specifications:

Fully Automated PC controlled Elemental Analyser for Solids. Liquid, liquid volatile and gas samples.

Operating modes for measurement of CHNS, CHN CNS, S, Trace S and O-TCD and Cl separately.

|                     |   |
|---------------------|---|
| Sample weight Range | 0.02 to 1000 mg The instrument should be capable to accept 40mg Absolute Carbon in any sample.                      |
| Measuring range     | 0.004% to 100% for all elements. Also mention the absolute measuring range for all elements with documentary proof. |
| Detection Range     | Less than 50 ppm.   |
| Standard deviation  | ≤0.1% of absolute.  |

### Sample Combustion System

- Must have dual furnace system for combustion/reduction with independent temperature control up to 1200 deg C for each furnace.
- Should have ash finger to hold ash and prevent ash from affecting catalyst and quartz combustion tube.
- Should have mass flow controller/electronic flow controller for constant flow of carrier gas.

### Separation System

Advanced Chromatographic separation of gases using segmented multi stage column with independent temperature control.

### Detector System

Temperature stabilized TCD detector for measurement of C-H-N-S-O.

IR detector for Trace measurement of Sulphur to 1ppm. Automatic Switchover from Trace S to Normal S mode.

### Other Features :-

- Attachment for determination of Chlorine using EC detector. Should use the same autosampler as for CHNS-O determination.
- Possibility of direct measurement of TIC in solid or liquid samples. The instrument should accept 3-4 gram of sample for direct TIC analysis.
- Possibility to analyse gas samples

**Autosampler System:** Electromechanical auto sampler system with 80 positions or more in single tray.

**Software** should be Windows based with all parameter display with possibility of segmented leak check through software.

**Carrier gas:** Possibility of using Argon gas and Helium gas both as carrier gas.

**Consumables:** To be supplied with consumables sufficient for 2000 sample analysis.

**Microbalance with 0.001 mg resolution** with interface to analyser for direct transmission of weighing data.

**Solid sample preparation device and liquid sample sealing press** (both) should be quoted

**FINANCIAL BID FORM (B)**

| Sl. No. | Particulars  | Size / specification | Qty. | Unit rate (Rs.) | Total Rates (Rs.) |
|---------|--|----------------------|------|-----------------|-------------------|
| 1.      | Combined System for Analytical and Ultrapure Water purification system       |                      | 1    |                 |                   |
| 2.      | Standard Weight Sets   |                      | 1    |                 |                   |
| 3.      | Multiparameter Filed Water Quality Monitoring system                         |                      | 1    |                 |                   |
| 4.      | <i>COD REACTOR</i>   |                      | 1    |                 |                   |
| 5.      | <i>BOD Track Apparatus</i>   |                      | 1    |                 |                   |
| 6.      | <i>CHNSO Analyser</i>  |                      | 1    |                 |                   |
| 7.      | <i>VAT / Service tax, etc. (please indicate details of applicable taxes)</i> |                      |      |                 |                   |
| 8.      | <i>Transportation &amp; Delivery Charges if any</i>                          |                      |      |                 |                   |
| 9.      | <i>Others if any</i>   |                      |      |                 |                   |
| 10.     | <b>Total:</b>  |                      |      |                 |                   |

(If the space provided in the above sheet is sufficient, the Financial Bid can be prepared on any sheet, using the same format.)

Signatures \_\_\_\_\_  
Name in bold capitals \_\_\_\_\_  
Name of the Bidding Firm \_\_\_\_\_  
Company's Seal: \_\_\_\_\_  
Date: \_\_\_\_\_

**Financial bid**

Taxes if any should be explicitly stated in the Commercial Bid along with the delivery schedule and three years (03) AMC charges after the warranty period.

The bidders are required to submit the commercial bid strictly in the format specified above. Commercial bids received in any other format or without proper inputs will not be evaluated.



**Terms and Conditions: -**

**Pricing & Negotiation:**

1. The prices as quoted in the commercial bids would be considered as the final prices for evaluation. However, the Coastal Aquaculture Authority can further negotiate with the selected bidder for downward revision in the prices. In any case, upward revision in the price from what is quoted in the commercial bid will not be allowed.

**Submission of Bids documents:**

2. The technical and commercial bids submitted by the bidder must be in strict accordance with the formats stated in the tender document. In case the bids do not match the Coastal Aquaculture Authority's standards, they may be rejected without any explanation for the same to the vendor.
3. The technical bid should strictly not carry any commercial information otherwise the bids from the vendor would be summarily rejected. Colour picture catalogues/ brochures/ pamphlets of the item should be attached with the Technical Bid.
4. After the submission of bids, no change in the content of the bid would be allowed. However the Coastal Aquaculture Authority at its discretion may request the bidder to provide additional inputs if required. In case of the bidder not being able to submit the additional input in writing on or before the date specified by the Coastal Aquaculture Authority, the bid received from the bidder would be rejected and no explanation would be offered to the bidder for the rejection.
5. The bids should strictly be submitted on or before the due date. No change in the due date & time of submission of the bid will be allowed. Any bidder requesting to do so will not be allowed to participate in the bidding process. Bids received after the specified date and time for receipt of bids would not be entertained. Any enquiry after submission of bids will not be entertained.
6. All entries in the tender forms should be legible and filled clearly. Any cutting in the Bid Application must be signed by the authorized signatory. Tender incomplete in any form are liable to be rejected outright. Conditional or incomplete bids will be rejected outright.
7. The declaration in the prescribed proforma given in the tender document should be submitted along with the technical bid and should be put in the same envelope containing the technical bid.

**Warranty & Guaranty:**

8. Bidder is required to provide onsite comprehensive warranty for a period of 3 years from the date of acceptance of the product by the Coastal Aquaculture Authority.
9. Warranty/Guarantee/after sales service should be properly given by the bidder.
10. Any defective/ unsatisfactory / inferior/ unsized stores should be replaced with a new one at free of cost by the bidder. Coastal Aquaculture Authority has the right to reject any received consignment in the case of defective/non qualitative/non as per specification/non-satisfaction without any compensation.
11. Selected bidder is fully responsible even in the case of changes in the ownership of firm/companies for the execution of contract until its tenure.
12. Selected bidder has to ensure availability of spare parts and service maintenance for at least ten years, on payment of cost, if applicable.

**Freight & Insurance**

13. The freight and insurance of the equipments would have to be borne by the supplier till the equipments have been satisfactorily installed, commissioned and integrated at the Coastal Aquaculture Authority and the issue of acceptance certificate by the Coastal Aquaculture Authority is issued to that effect. Transshipment is permitted. Part shipment is not permitted.

**Payment:**

14. By 100% irrevocable and confirmed letter of credit (L/C) will be opened in favour of selected bidder in case of abroad supplier. In case of Indian Supplier bill will be paid within twenty working days, only after successful supply & Installation of Equipment for which the supplier should give full particulars of Banker including their IFSC/RTG code number.
  - a. Octroi/Entry Taxes will be paid at actuals on submission of original Octroi/Entry Tax receipts and an invoice towards such claim.

**Taxes:**

15. All payments will be released based on submission of separate invoices. The bidder/vendor is required to quote VAT/ CST/ GST / Service Tax Registration Number on the invoice submitted for payment. Without such information, no payment will be released. PAN Number and or other tax registration numbers should be printed on the bills raised by the successful bidder. Sales tax and other taxes, if any, may be claimed as applicable and as per existing rule.

**Supply:**

16. The interim consignee will be M/s. Balmer Lawrie & Co Ltd., 628, Anna Salai, Teynampet, Chennai – 600 018 (Dist), Tamil Nadu (State), India.
17. The supply of equipments should be done within **thirty days** from the date of purchase order. The successful bidder will have to supply, install, test and commission the equipments within 30 days from the date of placing the order at the place of ultimate consignee, that is, Coastal Aquaculture Authority, Technical Section, 2<sup>nd</sup> Floor, Radha Mandram, No-52, EVK Sampath Salai, Veperiy Chennai, 600007. Contractor is fully responsible from manufacturing to delivery of the consignment at the place of ultimate consignee. Installation should be at free of cost by the selected bidder. Address of the consignee for all correspondence is Member Secretary, Coastal Aquaculture Authority, 2nd Floor, Shastri Bhavan Annexe, Chennai-600 006 (Dist), Tamil Nadu (State), India.
18. In case of any manufacturing defect or damage during transit/Installation, the item / component should be replaced with a new set, without any extra charges for the same.
19. Eligibility criteria for goods indicating any legal restrictions or conditions about the origin of goods etc..., which may required to be met by the successful bidder.
20. The bidder should indicate the time required for delivery / installation / integration of the items.
21. Materials or parts to be purchased should be tested by Regional Testing Laboratories in India/ by any testing governmental laboratories in case of foreign countries.
22. For propriety items, certificate to the effect that no other party is authorized to manufacture and sell them or they are the sole selling agents may be furnished.
23. Contractor is solely responsible for supplying the qualitative and inspected consignment as per the standards of BIS/ISBN/ISO etc., stores shall be entirely new, best quality, currently manufactured and brand new.
24. Consignment should be securely and properly packed to withstand transport. Supplier is fully responsible until the delivery of consignment to this office against from any loss/ damage/ leakage/ breakage/ shrinkage/ perishable/ evaporation/ deterioration. If necessary, supplier should insure the consignment.
25. The details of supply order, addresses of interim consignee and ultimate consignee should be shown on the cartoon.

**Penalty for Delay:**

26. For any delay in installation and commissioning of the equipments beyond the specified period, Coastal Aquaculture Authority will charge penalty @ 0.5% of the order per week or part thereof, subject to a maximum of 6%. In case, the amount equal to 6% of the order value is deductible as penalty and the supplier is still unable to complete successful Installation, the Coastal Aquaculture Authority reserves the right to cancel the order and no payment will be made to the supplier.

**Order Cancellation:**

27. Coastal Aquaculture Authority reserves its right to cancel the order in the event of one or more of the following situations:
- a. Delay in delivery beyond the specified period.
  - b. Delay in installation beyond **04** weeks from the date of Purchase Order.

**Repeated problems**

28. If during the warranty period, any system as a whole or any subsystem has any failure on two or more occasions in a period of 3 months, it shall be replaced by equivalent new equipment or any alternative steps are to be taken which would serve the purpose to the Coastal Aquaculture Authority.

**Invoicing:**

29. Any item additional to what is stated in the bill of material may be quoted as optional item in the commercial bid. After completion of the contractual obligations, including supply / installation / integration and commissioning of the items, the successful bidder shall raise the bills, in triplicate.
30. Bill of Lading, Challans, Packing notes, Bill of Exchange etc., must be submitted to the consignee sufficiently in advance of the actual arrival of stores at destination failing which the contractor will be held responsible for any demurrage be incurred owing to delay on the part of contractor and the amount of such charges will be deducted from bill.
31. In Case of Letter of Credit(L/C) the following negotiable documents one set each shall be forwarded to INDIAN OVERSEAS BANK, HADDOWS ROAD BRANCH, PRINCE TOWERS, NO.53, COLLEGE ROAD, NUNGAMBAKKAM, CHENNAI – 600 006 (DIST), TAMIL NADU (STATE), INDIA as well to the interim consignee as detailed above.
- i. Invoice with split up value of each item
  - ii. Air way bill addressed to the Banker at specified address above
  - iii. Certificate of origin
  - iv. Packing list
  - v. Pre-inspection certificate – by end user.

**Legal aspects:**

32. The decision of Coastal Aquaculture Authority is final.
33. The Member Secretary Reserves right to withdraw/relax any of the terms and condition mentioned above so as to overcome any problem that may arise at a later stage.
34. The competent authority Coastal Aquaculture Authority reserves right to withdraw/relax any of the terms and condition mentioned above so as to overcome any problem that may arise at a later stage.

35. The Member Secretary, reserves full authority to cancel, rejects, any / all offers, without giving any reason. The decision of Member Secretary shall be final in this regard.

36. For all disputes, Jurisdiction is Chennai (state), India only.

**Earnest Money Deposit & Security Deposit:**

37. The Technical bid should be accompanied by an Earnest Money Deposit (EMD) @ 3% of quoted rate in the form of Demand Draft/Pay order from a commercial bank drawn in favour of “COASTAL AQUACULTURE AUTHORITY, payable at Chennai. The EMD should be valid for a period of 6 months from the date of issue of the bid invitation. In the absence of EMD, the tender shall be rejected summarily. The earnest money shall be refunded to the unsuccessful bidders on or before the 30<sup>th</sup> day after the award of contract.

38. The EMD of the successful tenderer shall be retained as Performance Security Deposit. The successful tenderer will deposit Balance Performance Security 10% of value of the contract in the form of a bank guaranty from a commercial bank in favour of “COASTAL AQUACULTURE AUTHORITY”, payable at Chennai till the period of completion of all contractual obligation of the supplier including warranty period.

39. No bidder will be allowed to withdraw after submission of the bids; otherwise the EMD submitted by the bidding firm would stand forfeited.

40. In case the successful bidder declines the offer of contract, for whatsoever reason(s), the EMD submitted by the successful bidder would stand forfeited. In case the successful bidder fails to render the required services, this office will have full authority to cancel the order and forfeit the performance security. In case of breach of any terms and conditions attached to this contract, the Performance Security Deposit of the agency will be liable to be forfeited by CAA besides annulment of the contract.

41. In case the successful bidder fails to supply /Install the item(s), within the time as specified in the bid form, this office will have full authority to cancel the order and forfeit the performance surety amount.

42. In case of breach of any terms and conditions attached to this contract, the Performance Surety Amount of the agency will be liable to be forfeited by this office besides annulment of the contract.

43. EMD and Performance Security Deposit will not carry any interest amount for the period retained by Coastal Aquaculture Authority.

In case the vendor requires any further information/clarification, they may contact the undersigned in writing on or before the submission due date & time.

**Member Secretary**

## Annexure II

### MANUFACTURER'S AUTHORISATION FORM (MAF)

No. \_\_\_\_\_ dated \_\_\_\_\_

To

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

We \_\_\_\_\_ who are established and reputable manufactures of \_\_\_\_\_ having offices at \_\_\_\_\_ and \_\_\_\_\_ do hereby authorize M/S \_\_\_\_\_ (Name and address of Agent/Dealer) to offer their quotation, negotiate and conclude the contract with you against the above invitation for tender offer.

We hereby extend our full guarantee and warranty as per the terms and conditions of the tender and the contract for the equipment and services offered against this invitation for tender offer by the above firm.

Yours faithfully,

(Name) for and on behalf of M/s \_\_\_\_\_  
(Name of manufacturers)

**Note:** This letter of authority should be on the letterhead of the manufacturing concern and should be signed by a competent person of the manufacturer.

DECLARATION FORM

1. I, \_\_\_\_\_ Son / Daughter of  
Shri \_\_\_\_\_ Proprietor / Partner / Director /  
Authorized Signatory of M/s \_\_\_\_\_ competent to  
sign this declaration and execute this tender document;
2. I have carefully read and understood all the terms and conditions of the tender and  
are fully acceptable to me;
3. The information / documents furnished along with the above application are true and  
authentic to the best of my knowledge and belief. I / we, am / are well aware of the  
fact that furnishing of any false information / fabricated document would lead to  
rejection of my tender at any stage besides liabilities towards prosecution under  
appropriate law.

Date:  
Place:

Signature of authorized person  
Full Name:  
Company's Seal:

- N.B.:**
1. The above declaration, along with a copy of the terms and conditions, duly  
signed and sealed in each page, by the authorized signatory of the agency  
in token of acceptance of the terms and conditions should be enclosed  
with Technical bid.
  2. The Declaration can be made on Company letterhead using the same  
format.

