

Government of India
Ministry of Agriculture
COASTAL AQUACULTURE AUTHORITY
2nd 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

| Sl.No | Details | Date and Time |
|--------------|---|--|
| 1 | Period of issue of Tender Document | 15-01-2010 to 5-02-2010 |
| 2 | Date and time for submission of Tender Document | From 9.00AM to 5.30 P.M in all working days from 15-01-2010 to 5-02-2010 |
| 3 | Date and time for opening of Technical Bids | At 11.Am on 8-02-2010 |

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No.1-1/2009-Accts
COASTAL AQUACULTURE AUTHORITY
Government of India
Ministry of Agriculture
2nd 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 of Water Quality Monitoring laboratory in the Coastal Aquaculture Authority, Chennai, The tender forms may be obtained from the premises of this office or downloaded from our website **www.caa.gov.in**
- 2 Selection will be on basis of fulfilment of the eligibility criteria and lowest rates.
- 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 5th February, 2010 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.
5. The Technical bids shall be opened on 8-02-2010 at 11A.M Coastal Aquaculture Authority, 2nd Floor, Shastri Bhavan Annexe, Chennai., in the presence of such tenderers or their authorized representatives who may wish to be present.
- 6 The tenderers whose Technical bids are accepted will be informed about the date of the opening financial bid.
7. Bids received after the closing date and time shall not be considered.

MEMBER SECRETARY

TERMS AND CONDITIONS

1. The successful bidder will have to supply, install, test and commission the equipments within 30 days from the date of placing the order at Coastal Aquaculture Authority, Technical Section, 2nd Floor, Radha Mandram, No-52,EVK Sampath Salai, Vepery Chennai,600007
2. The payment will be release only after successful supply & Installation of Equipment.
3. No Advance Payment.
4. After completion of the contractual obligations, including supply / installation / integration and commissioning of the items, the successful bidder shall raise the bills, in triplicate.
5. Details / specifications of items required are given in the tender document
6. Colour picture catalogues of the item should be attached with the Technical Bid.
7. The tenderers are required to submit two separate bids - Technical and Financial, as per proforma given in this tender document, in two separately sealed envelopes super scribed "Technical Bid and "Financial Bid" respectively. Both sealed envelopes should be put in a third sealed envelope super scribed "Tender for supply of laboratory equipments to CAA
8. The declaration in the prescribed proforma as given in this tender document should be submitted along with the Technical Bid.
9. The Technical bid should be accompanied by an Earnest Money Deposit (EMD) of Rs. 5,000/- (Rs. Five thousand only) 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 30th day after the award of contract.
10. The EMD of Rs. 5,000/- (Rs. Five thousand only) of the successful tenderer shall be Retained as Performance Security Deposit valid for 60 days beyond the completion of all contractual obligation of the supplier including warranty period.
11. 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.
12. Tender incomplete in any form are liable to be rejected outright
13. 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.
14. Conditional or incomplete bids will be rejected outright.
15. The closing date and time for receipt of tenders will be 5-02-2010 at 5.30 P.M.Bids received after the specified date and time for receipt of bids would not be entertained.
16. Any enquiry after submission of bids will not be entertained.
17. No bidder will be allowed to withdraw after submission of the bids; otherwise the EMD submitted by the bidding firm would stand forfeited.
18. The Technical bid shall be opened at 8-02-2010 at 11 A.M in the presence of the authorized representatives of the Firms, who wish to be present at that time. The bidders whose Technical Bids are accepted will be informed about the date of the opening financial bid
19. 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.
20. 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.
21. The items should be under warranty for a minimum period of one year from the date of supply of the items.
22. 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.
23. The bidder should indicate the time required for delivery / installation / integration of the items.

24. 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.
25. 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.
26. PAN Number and or other tax registration numbers should be printed on the bills raised by the successful bidder.
27. 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.
28. 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.

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).
- (b) The bidder should convey his acceptance to all the terms and conditions laid down by CAA.
- (c) The declaration in the prescribed proforma 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 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.
- (d) The Technical bid should be accompanied by an Earnest Money Deposit (EMD) of Rs. 5,000/- (Rupees Five thousand only) in the form of Demand draft in favour of "COASTAL AQUACULTURE AUTHORITY, Chennai .It should remain valid for a period of 6 months from the date of issue of the bid invitation.
- (e) Colour picture catalogues/brouchers etc of the item should be attached with the Technical Bid
- (f) The bids should be submitted in the two bid format, viz., separate bids – Technical and Financial, as per proforma given in this tender document and should put in a third sealed envelope super scribed "Tender for supply of laboratory equipments to CAA"

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.

TECHNICAL BID FORM (A)

| | | | | |
|-----------|---|----------------|----------------|-------------------------|
| 1. | Name of Bidding Firm | | | |
| 2. | Full Address | | | |
| (a) | Telephone & Fax No. | | | |
| 3. | Details of Earnest Money Deposit : Rs. 5,000/- (Rupees Five thousand only) | | | |
| (a) | D.D. / P.O. No. & Date | | | |
| (b) | Drawn on Bank | | | |
| (c) | Valid upto | | | |
| 4. | Give details of works awarded to the bidder by Government Departments / Ministries during the last three years, as on 31.12.2009, 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 | | | | |
| 6. | Time required for supply / installation / integration, etc. of the items | | | |
| 7. | 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 :

FINANCIAL BID FORM (B)

| Sl. No. | Particulars | Size / specification | Qty. | Unit rate (Rs.) | Total Rates (Rs.) |
|---------|--|---|------|-----------------|-------------------|
| 1. | AUTOCLAVE – VERTICAL | 750 X 1000 mm 6.00 Kw | | | |
| 2. | HOT PLATE | 18’’x 24’’ | | | |
| 3. | WATER BATH (DOUBLE WALLED) | 300 x 405 x 100mm | | | |
| 4. | HEATING MANTLE | 100/250/500/1000ml | | | |
| 5. | ELECTRICAL MUFFLE FURNANCE | 12’’x12’’x 12’’ | | | |
| 6. | HOT AIR OVEN (LABORATORY MODEL) | 605 x 605 x 910mm | | | |
| 7. | VACUUM PUMP | 200 pumping speed ltr | | | |
| 8. | DEEP FREEZER (HORIZONTAL) | 360 litres | | | |
| 9. | ELECTROMAGNETIC STIRRERS | 100 to 650 RPM | | | |
| 10. | PH METER BENCH | 3.5 Digital LED display, range 0-14ph, 0 to 1999 mv resolution etc; | | | |
| 11. | SALINO REFRACTOMETER | Range 0-100 PPT | | | |
| 12. | DO METER | 16 X 2 Line etc; | | | |
| 13. | NEPHLOMETER | 31/2 digital LED display etc; | | | |
| 14. | EC TDS meter | 1 to 10 ppt | | | |
| 15. | DISTILLATION UNIT | 5000 MI/hr | | | |
| 16. | B.O.D.INCUBATOR | 650x900x550 mm Max. Temp+ 5 deg c. Etc; | | | |
| 17. | FRIDGE | Frost free360 litres | | | |
| 18. | FILTRATION UNIT | 0.45 u pore | | | |
| 19. | TOP LOADING ROUGH WEIGHING ELECTRONIC BALANCE | 410g/610g | | | |
| 20. | <i>VAT / Service tax, etc. (please indicate details of applicable taxes)</i> | | | | |
| 21. | <i>Transportation&Delivery Charges if any</i> | | | | |
| 22. | Total: | | | | |

(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: _____

Technical specifications for Lab instruments

1. AUTOCLAVE – VERTICAL

An Autoclave double walled chamber with interior, perforated basket and the doomed lid made of polished stainless steel and argon arc welded. Exterior also made of stainless steel sheets / cold rolled mild steel sheet finished with powder coating. The Lid is tightened with wing nut. Heating elements are Immersion type Heaters. The Unit should be fitted with Neoprene Rubber Gasket to ensure tight sealing. Autoclave must be hydraulically tested up to 40 PSI as safety measure. The Unit need to be incorporated with Pedal Lifting Device for easy opening of the Lid. Standard accessories supplied with unit are Water level indicator, pressure gauge, steam release cock, spring-loaded safety valve, cord and plus

| Diameter x Height | Power rating |
|-------------------|--------------|
| 750 x 1000 mm | 6.0 Kw |

- Pressure Range: 20 psi.
- Inner Temp. : 120° C
- Operating volt: 230 Volts.
- Automatic low water cut-off switch.
- Digital Temperature Controller with sensor.
- Automatic timer 0 – 60 minutes.
- Automatic Pressure Control Switch.
- Radial Locking System

2. HOT PLATE

Rectangular shape hot plate (size = 18" x 24") with cast iron or stainless steel top. A heavy duty heating plate with a removable cast iron plate / stainless steel plate at the top is required. The housing made of mild steel sheet and finished in powder coat paint.

A heat control switch for low, medium and high heat and two nos. indicating lamps should be provided on the front panel. The hot plate with maximum power consumption of 3.0 Kw. and designed for operating on 230 V single phase 50 C/S. mains.

3. WATER BATH (DOUBLE WALLED)

Double walled water bath with stainless steel inside and outside of S.S/Mild steel sheet, finished in powder coating. The gap between the outer and inner walls need to be insulated with special grade glass wool. The top of the bath and concentric rings are stainless steel. The temperature controlled by a thermostat from ambient to 90 °C with a control accuracy of ± 2 ° C. Built in front panel providing two pilot lamps concentric rings on/off switch, wire and plug to work on 230 V AC.

Chamber Size: 300 x 405 x 100 mm (12 holes of 75 mm)

Automatic digital temperature controller with Fek sensor

4. HEATING MANTLE

The heating mantle should be housed in a housing made of mild steel sheets with powder coating finish. The Mantles of single piece and are flexible knitted glass fabric to which resistance wire is attached in a coil form. Mantle should be fitted with Built-in Energy Regulator & pilot lamps. Designed for operation on 230 V single-phase 50 cys. A/C. Suitable for heating applications using round bottom borosilicate glassware.

| | | | | |
|----------------|-----|-----|-----|------|
| Capacity (ml) | 100 | 250 | 500 | 1000 |
| Rating (watts) | 60 | 150 | 200 | 300 |

Digital Temperature Controller with Sensor.

5. ELECTRICAL MUFFLE FURNACE

The general design and construction comprises of an outer chamber fabricated out of thick cold rolled mild steel sheets. Rectangular in shape placed horizontally with opening in the front. Refractory Muffle of size 12" x 12" x 12" forms the inner chamber. The chamber is to be provided with a single door with 100mm thick ceramic fibre insulation mounted on heavy duty hinges and provided with latch. The furnace is heated by Kanthal A1 heating coils wound in spiral form on the muffle embedded in high grade refractory cement and backed by ceramic fibre blankets.

The temperature inside is maintained at any desired level within the operating range by a Digital Automatic Temperature Indicator-cum-controller working in conjunction with a Cr/Al thermocouple housed in the hot zone. Control Panel containing temperature controller, Air break magnetic contactor, indicating lamps, isolator. The furnace is finished in attractive powder coat finish

Operating Temp: Ambient + 5 – 900° C / 1000° C.

Max. Temperature: 900° C / 1000° C

Power supply: 230 volts AC, Single phase.

Power rating: 5.0 Kw

6. HOT AIR OVEN (LABORATORY MODEL)

Doubled walled chamber, inner made of stainless steel sheets and outer made of cold rolled mild steel sheets duly finished in powder coating. Inter space in between the walls is tightly packed with special grade glass wool.

Inner chamber accommodates perforated stainless steel trays at adjustable heights.

Insulated double walled door in the front is provided with locking arrangements.

Heating is by Nichrome wire heaters evenly distributed on the three sides.

Temperature is indicated and controlled by precision thermostat within the operating range.

Temperature Range : Ambient + 5 °C to 250 °C

Temperature Accuracy: ± 2 °C

Built in control panel accommodating all electrically electronic accessories

| Chamber size (mm) | Trays | Power rating kw |
|-------------------|-------|-----------------|
| 605 x 605 x 910 | 3 | 4.0 |

- Digital temp. Indicator cum Controller with FEK Thermocouple
- Air Circulating Fan Assembly
- Timer
- PID controller

7. VACUUM PUMP

The rotary oil-sealed vacuum pump should be quite operating and vibration less designed for continuous working and tested to assured satisfactory performance of the pump. Mechanism housed in a metal case with oil level sight guage and drain plus at base. Completely mounted on rectangular base plate and furnished with V belt & Motor. This double stage vacuum pump should be supplied with non-return Valve & Vacuum guage.

| | |
|--------------------|-----|
| Pumping speed ltr | 200 |
| Motor speed (RPM) | 550 |
| Motor power (H.P.) | 1/2 |

8. DEEP FREEZER (HORIZONTAL)

Double walled chamber with opening at the top. Top portion of the chamber and top lid are made of thick Stainless steel well polished and fusion welded. The outer chamber is made of cold rolled steel sheets and attractively finished in powder coat finish. High-class insulation with combination of special grade glass wool and thermocoll is provided all the sides between the two walls to minimize the sweating in humid condition.

The top lid is fixed with gasket seals and locking arrangements.

Evaporating coils are lead soldered and fixed in the backside of the inner chamber.

Temperature maintained and controlled by Digital Temperature controller working in conjunction with PT 100 Sensor. Refrigerant system consists of compressor, air cooled condenser and heavy-duty motor driven fan are provided at the bottom.

The control panel with built in Digital Temperature Controller cum Indicator, Indicators, switches etc. should be provided along with 4 Kw stabilizer.

Temperature Range: Ambient to - 20° C

| | |
|------------|-----------------------|
| Capacity | Inner chamber size mm |
| 360 litres | 1500 x 400 x 650 |

9. ELECTROMAGNETIC STIRRERS

Electromagnetic (motorless) stirrers suitable for titration & general lab, mixing of solution. Stirrer with superior stepless speed controller to control the speed from 100 to 650 RPM .

The features should include

- No moving parts or motor
- Reverse control provides automatic change of direction
- Accurate stepless speed control maintains excellent stability despite viscosity or volume changes
- Stirring capacity up to 1000 ml

10. PH METER BENCH

- Bench type PH meter containing ATC with combined epoxy imported gel filled electrode, 3.5 digital LED display, range 0-14ph, 0 to 1999 mv resolution 0.01 ph and 1 mv with stand

11. SALINO REFRACTOMETER

Range 0-100 PPT

12. DO METER

- Microprocessor based DO meter with 16 x 2 line alphanumeric LCD display with stirrer data storage up to 90 samples and external printer facility, range 0-20 ppm resolution 0.01 ppm bench model

13. NEPHLOMETER

- Turbidity meter / Nephelometer 3 1/2 digital LED display range up to 1000 NTU/JTU

14. EC TDS meter

- EC (Electrical Conductivity) & TDS (Total dissolved solids) measuring range from 1 to 10 ppt

15. DISTILLATION UNIT

- All glass double distillation unit
- Capacity: 5000 ml/hr

:12:

16. B.O.D. INCUBATOR

Double walled chamber with interior made of S.S. and exterior made of Cold Rolled mild steel sheets finished in power coating. Insulation is by special grade glass wool. Removable steel trays to be provided. Double door system with inner acrylic door and outer double walled M.S. door provided with lock and key arrangement. Temperature controlled by a digital on/of controller with RTD sensor. A circulating fan assembly incorporated for uniform temperature inside the chamber.

CFC free refrigeration system, compressor, air cooled condenser and accessories provided at the bottom of the chamber. Provision for illumination. The control panel containing digital temperature controller, indicating lamps, on/off switch etc. A

Movable Unit

Max. Temp. +5 deg. C to 60 deg. C + / - 2 deg. C

Voltage: 230V single Phase 50 cys.

| Inner chamber size | Capacity cu.ft. | No. of Trays | Power rating |
|--------------------|-----------------|--------------|--------------|
| 650 x 900 x 550 mm | 12 | 3 trays | 2 kw |

B.O.D. incubator should be supplied with

- Automatic voltage stabilizer
- PID (Proposal Integrative and derivative time) controller (+ / - 0.5 deg. C)

17. FRIDGE

Frost free, double door, 350 liters capacity, vertical fridge.

18. FILTRATION UNIT

Vacuum suction filtration unit made of polypropylene material for using 0.45 μ pore size filter paper of standard size (47 mm) suitable for water quality analysis.

19. TOP LOADING ROUGH WEIGHING ELECTRONIC BALANCE

General specification:

| | |
|----------------|--------------|
| Capacity: | 410 g / 610g |
| Readability: | 0.01 (10 mg) |
| Response time: | 2 seconds |
| Pan size: | 116 mm dia |

Features

Mass unit conversion (Toggling between two weighing units)

RS 232 interface

Stability indicator

Use selectable filter levels