SPECIFICATION FOR LIQUID-PHASE OXYGEN ELECTRODE SYSTEM

The following features must be standard part of the system and documentary evidence of the same should be provided along with technical bid.

- PC operated oxygen electrode control unit with USB connectivity
- Clear cast acrylic DW1/AD oxygen electrode chamber with integral Clark type polarographic oxygen electrode
- Suitable for liquid-phase samples with 0 – 100% oxygen concentration
- 24-bit high resolution measurement of oxygen signals
- Integral systems for measurement of Ph & other ion-selective electrode signals using separate respective electrodes
- System expansion to 8 channels via purchase of additional systems
- Should be capable of making comprehensive analysis of oxygen activity simultaneously with signals from sensor for pH, TPP+, hvCalcium, potassium and hydrogen ions.
- OxyTrace+ Windows® software for data acquisition, hardware control & data analysis
- Post acquisition analysis tools allow automatic Calculation of oxygen rates from user-defined rate intervals with saved Comma Separated

  Values (CSV) data files opening effortlessly in external data processing packages such as MS Excel®.
- Real time 0 – 4.5v analogue output of oxygen electrode signal

ELECTRODE CONTROL UNIT

Measuring range: Oxygen: 0 - 100% | pH: 0 - 14pH | Aux: 0 - 4.096V
Signal inputs: Oxygen electrode (SMB) | pH/ISE (BNC) | Auxiliary (8 pin Mini Din)
Resolution: Oxygen: 0.0003% (24-bit) | pH: 0.0006pH (16-bit) | Aux: 62.5µV/bit (16-bit)
Polarising voltage: 700mV
Input sensitivity: 0 - 9000nA
Magnetic stirrer: Software controlled 150 - 900rpm in % steps
Sampling rate: 0.1 - 10 readings/s
Electronics: Microcontroller: 16-bit high performance CPU running at 32 MHz
ADC: Dual, Low power, 16/24 Bit Sigma Delta
Communications: USB2.0
Analogue output: 0 - 4.5V O2 signal
Dimensions (HWD): 200 x 110 x 60mm
Weight: 0.45 Kg
Power: 12V dc @ 100mA, 90Vac – 264Vac @ 1A

SPECIFICATIONS OF ELECTRODE CHAMBER

Suitability: Liquid-phase respiration/photosynthesis
Construction: Clear cast acrylic
Sample chamber: Precision bore, borosilicate glass tube
Sample volume: 0.2 - 2.5ml
Temperature control: Water jacket connected to thermoregulated circulating water bath
Dimensions (DH): 65 x 105mm
Weight: 100g
Plunger: Variable height plunger assembly with central bore for sample additions

OXYGEN ELECTRODE DISC

Electrode type: Clark type polarographic oxygen sensor
Electrode output: Typically, 1.6µA at 21% O2
Residual current: Typically 0.04µA in 0% O2
Response time: 10 - 90% typically < 5 seconds
Oxygen consumption: Typically<0.015µmol/hr-1

System should be supplied with basic spares.

Optional Item

PC with the following specifications:

Processor	Intel® Core™ i5-7400 Processor
Motherboard	Gigabyte B250
Memory	Corsair Vengeance LPX Series 8GB DDR4
Hard Drive	1TB 7200 RPM SATA Hard Drive and 256GB Solid State Drive
Video Card	2GB Graphic Card
Optical Drive	Reads and Writes to DVD/CD
Peripherals	USB Keyboard and mouse
Antivirus Program	Antivirus Internet Security for minimum of 3 years

Eligibility Criteria

- Bidder should be Manufacturer/ Authorized Partner/ Reseller of the manufacturer and a Letter of Authorization from manufacturer for the same and specific to the tender should also be enclosed. The bidder should also be the Authorized Service Provider.
- Bidder should be financially sound to execute the order. Certificate to this effect should be issued by any nationalized/ scheduled bank showing its annual turnover of at least 25Lakhs each in the last three financial years.
- The Bidder shall provide the Registration number of the firm along with the LST/ CST/ WCT No. and the PAN Number issued by the concerned authorities.
- Separate technical and price bid should be uploaded.
- Technical Bid must contain a Technical Compliance sheet. Technical compliance sheet must have the page number of a published catalogue/operating manual/manufacture website as proof for compliance with the instrument and accessories for each technical points. Relevant copies of catalogue/operating manual/manufacture website pages that have been listed as proof should be attached.
- Price Bids should contain the prices, terms of delivery, sales, payment terms etc.
- The bidder must not be blacklisted by Delhi University. A Certificate or undertaking to this effect must be submitted.

No Commitment to Accept Lowest or Any Tender

- Demonstration of the equipment will be required if needed.
- University of Delhi shall be under no obligation to accept the lowest or any other offer received in response to this tender notice and shall be entitled to reject any or all offers. University of Delhi will not be obliged to meet and have discussions with any vendor, and or to listen to any representations.

Warranty /Comprehensive Maintenance

- Machine should be warranted for minimum 12 months from the date of installation.
- Installation and commissioning to be completed up to the satisfaction level of the technical purchase committee followed by training and handling by the bidders

Price quotation

- F.O.R. UDSC price (INR/FC) to be quoted which includes, custom duty & clearance as well as transportation charges to site of installation. CDEC will be provided.
- Payment will be made against successful installation.
- Validity of the quotation should be for 6 months.

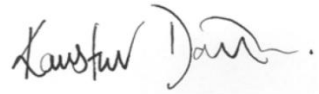
Published Date : 08-12-2018 (14:00 Hrs)

Bid Document Download Start Date : 10-12-2018 (10:00 Hrs)

Bid Submission Start Date : 11-12-2018, (10:00 Hrs)

Bid Submission End Date : 02-01-2019, (17:00 Hrs)

Bid Opening Date 04-01-2019, (11:00 Hrs)



Kaustuv Datta

KAUSTUV DATTA, Ph.D
Assistant Professor
Department of Genetics
University of Delhi South Campus
New Delhi-110021

All the relevant documents related to tender can be found on CPPP portal