

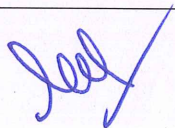
TECHNICAL SPECIFICATIONS OF ECG AND METABOLIC MEASUREMENTS
FOR SMALL ANIMALS

1	It should be supplied with a Data recorder having 16 channels or more.
2	Should be incorporated with a serial interface technology that expands the capability of the recording unit to over 32 channels or more.
3	Should have built-in spirometer: Range: ± 10 cm water
4	Should have built-in pressure sensor: 500 mmHg- 1700 mmHg
5	Should have a built-in temperature sensor (0-50 degree range)
6	ADC Resolution of 16 bits
7	Maximum sampling rates: 200 KHz or more
8	Should have both High voltage (100V compliance) and Low voltage Isolated stimulator along with stimulating electrodes \rightarrow Pulse duration: 50 – 200 μ s (software-selectable) & output current : 0 – 20 mA) \rightarrow Pulse rate: Software-selectable, to a maximum of 20 Hz and 200 μ s for safety
9	Should have an option to directly connect or be controlled by third-party software like MATLAB, and LABVIEW.
10	It should be used for both Human and Animal Experiments
11	The system should be able to measure all parameters related to O ₂ and CO ₂ monitoring and also to measure respiratory quotient, Respiratory Exchange Ratio, O ₂ consumed & CO ₂ expired.
12	The system should be able to measure noninvasive Blood Pressure from rodents.
13	The system Should have the following transducers and accessories for over 25 experiments and 75 exercises in cardiovascular and neuromuscular physiology: Event Marker, Hand Dynamometer, Dual range Force Transducer, Goniometer, Intracellular Probe Dual Nerve Bath Chamber, Patellar Reflex Hammer, Striated Muscle Transducer, Bi-Polar Stimulating Electrode, Set of stimulator cables, Five Platinum Needle Electrodes, Recording Leads - 7, Monopolar extracellular hook electrode, Disposable

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	Ag/AgCl Electrodes (100), Bluetooth based balance board
14	The system should perform Animal Nerve experiments like Compound Action Potentials Neuromuscular Studies Action Potentials in Earthworms Frog Sciatic Nerve Compound Action Potential
15	The system should have a provision to upgrade to additional Animal experiments like Tissue/Organ Bath studies, Non-Invasive Blood Pressure & also Tissue bath studies, and metabolic studies in small animals.
16	The system should be upgradable to Non-Invasive Zebra fish ECG with automated analysis with international research papers.
Software	
17	Should have user-friendly software that consists of lab setup, with stepwise instructions to perform various labs for demonstrating to the students.
18	Should have analysis modules for different parameters
19	The system has a scripting function for use if the built-in analysis tools fall short of what is required for your application. Scripting languages currently supported include DADiSP, Python, MatLab, LabView, and C++.
20	Includes open site license (for life) as well as free software upgrades (for life). Files can be shared for free with distinct users.
21	Software should have a playback option for playing saved data in real-time.
22	Should have preconfigured setting for all major parameters related to animal studies.
23	Software should be able to connect to similar or multiple hardware simultaneously.






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Conditions for tenderer:

1. All accessories should be from the same Original Equipment Manufacturer for the main unit.
2. Instruments must be ISO certified and a copy should be enclosed. (The ISO Certificate must be issued by any organization accredited by the Bureau of Indian Standard or accredited by the international accrediting forum "IAF" (Certificate to be attached).
3. Should be USA FDA and/ or European CE be approved by 4 digits notified body.
4. Other necessary certifications if any required will be provided by the bidder for the smooth functioning of the machine.
5. Installation process should be performed by O.E.M trained service engineers/ service representatives on OEM letterhead or Service Report within 15 days of supply, with the mandatory provision of providing preventive services visit of OEM trained Service Engineer/ Service Representative quarterly per year till the completion of warranty period (i.e., 20 visits for the first 05 years) & further quarterly visits (04 visits/year) year till the completion of CMC period.
6. The equipment should have a Brand name/ Model Number embossed/etched on the equipment.
7. All the technical specifications in the compliance statement must be supported by Original Literature from the firm/ O.E.M with highlighting Numbering & flagging of all technical certificates.
8. Offered Equipment should have a strong Government Installation base.
9. Offered Equipment should have a Regional Sales Service Centre of the Original Equipment Manufacturer in the region for a 95 % uptime guarantee.
10. For the offered main unit, the essential, optional required consumables'/accessories' shelf life should be declared on the Original Equipment Manufacturer's letterhead.
11. In case of technical snag/failure/breakdown the response time for the inspection should be within 24 hours and repair within 05 days otherwise provide a service machine/ alternate arrangement to be made till the period of recovery of the breakdown of the unit, failing which attracts penal action as per the decision of institute/ hospital.

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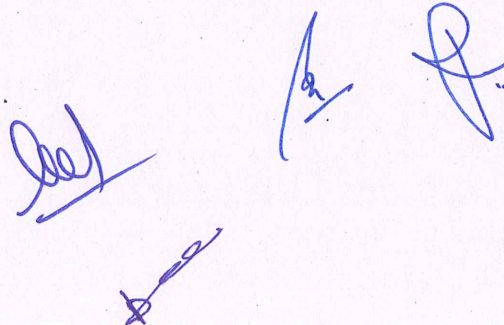
12. For offered equipment the Training of technical staff and users should be performed by Original Equipment Manufacturer trained Service Engineers at the proper designated place- at bidders' cost.
13. Company should quote their latest model and need to provide an affidavit for the same.
14. As a tendering process the Demonstration of the offered Equipment is Mandatory at hospital/institute premises or other designated places at the bidder's cost.
15. The bidder must comply with the General Financial Rules and their modifications if any issued by the Government of India- 2017.
16. Any bidder from a country that shares a land border with India will be eligible to bid in the tender only if the bidder is registered with the Competent Authority (i.e., Registration certificate issued by the Ministry of Commerce and Industry (Department for Promotion of Industry and Internal Trade- DPIIT after October 2020). If any such bidder is not registered with DPIIT they will be liable for technical disqualification.
17. Principal (OEM) must authorize only one agent to be quoted in the bid otherwise multiple quotes through different agents in the same bid will be canceled.
18. The Bidder and its OEM both have to submit a notarized affidavit on the Indian Non-Judicial Stamp Paper of Rs.100/- that the bidder has not quoted the price higher than the current financial year and last financial year supplied to any government Institute/Organization/ reputed Private Organization. OEM also has to submit that the price quoted by the bidder in the bid is on its behalf and the lowest in the current and last financial year in the country. Therefore, if at any stage it has been found that the supplier and its OEM have quoted lower rates than those quoted in this bid; the Institute (the purchaser) would be given the benefit of lower rates by the Supplier and any excess payment if any, will become immediately payable to the Institute (the purchaser). If such an affidavit is not submitted, the bid will be outrightly rejected. (Part of technical bid).
19. Guarantee / Warranty Period: Separate offers of Comprehensive Maintenance Contract (CMC on main equipment) and Annual Maintenance Contract (AMC on main equipment) for further 5 years after expiry of 5 years of warranty (i.e., 6th, 7th, 8th, 9th and 10th years) in rupees only (and on basis of percentage of price) should be included in a financial bid in the absence of which the offer is liable to be rejected. Payment for CMC/AMC shall be made only after the expiry of the warranty of 5 years, in case the Institute (the purchaser) decides for availing of CMC/AMC services.

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[Handwritten signatures and initials in blue ink]

Contract for CMC/AMC shall be decided on expiry of warranty but rates (not more than 5% inclusive of all taxes for 6th to 10th year) will be frozen at the price of an issued purchase order before the release of payment by the Institute (the purchaser). However, the Institute (the purchaser) may decide not to enter into any CMC/AMC contract without assigning any reason for the same, which shall be binding upon the bid.

20. Should provide 5-year CMC. CMC cannot be more than 5% of the contract value.
21. System configured application-specific educational video tutorials shall be provided as standard with the system.
22. Details of service outlet in India to render services during 5 years warranty period.
23. The principals must give a certificate if the supplier/vendor is changed during the course of the guarantee/warranty period, the principals would be responsible for the upkeep/maintenance of the quote/supplied equipment, besides honouring all the terms and conditions of CMC/AMC in letter and spirit.



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