



INDIAN INSTITUTE OF TECHNOLOGY BOMBAY

MATERIALS MANAGEMENT DIVISION

Powai, Mumbai 400076.

Ref. No. (PR.1000041833)

Rx No. 6100001839

Specifications for Gas Analyser

Sr. No.	Technical Specification	Compliance (Yes/No)	Additional Information if Any
1.	<p>The Data Acquisition & Analysis software.</p> <ul style="list-style-type: none">• The system should have at least 32 channels input configuration for recording and C type USB based.• The Data recorder should have a high sampling rate of 100 KHz or more.• ADC resolution of 16 bits on all gain ranges and variable sampling speed on each channel with continuous record and display up to 32 data channels.• Should be capable of powering available external devices of up to 350W• The system should be able to be powered from mains, laptops, or portable battery packs for increased portability in different experimental setups.• A facility for ECG with real-time vector cardiography analysis is needed to evaluate the magnitude and direction of the cardiac axis during exercise.• It should be supplied with a strain gauge bridge circuit amplifier that automatically zeros to calculate the peak pressure during exercise.• It should be supplied with a compatible electronic stethoscope that allows the user to amplify or record heart and lung sounds. A sound selector switch is used to select the proper frequency for listening to either heart or breath sounds.• The respiratory belt should be DC-based and suitable for Stenography / breath-holding experiments.• The system should provide real-time data recording through online and offline analysis.• The graphs and report can be simple customization and printing option• Online data streaming to MS Excel and MATLAB and Editable macros for customization• Should have software-controlled filtering High Pass, Low Pass filters, AC Coupling, Digital filters, band pass filters, & Main filters.• Export formats should allow the export of Binary, IGOR, MATLAB, QuickTime, Wav, Text, Excel, etc.• The facility will perform an online and offline complete heart rate variability analysis (Time &		

