



Mayura Analytical LLP
Specialists in Analytical Instrumentation

Portable GC Model PBGA I

Portable Gas Chromatograph for Biogas Analysis On The Move

*Mayura Analytical LLP is a leading organisation in analytical instrumentation that provides solutions to research institutions and industries to diagnose and resolve their analytical needs. Our pioneering products are made in India for the Indian market and beyond since our inception in 1984. We are widely acknowledged for our approach to chemical analysis and to customer troubleshooting. As recognised suppliers of analytical equipment to the **Indian Institute of Science (IISc), Bangalore and Indian Institute of Technology (All India)**, preeminent research and technology institutions of India as well as large industries such as **BIOCON**, we have cemented our standing in the market with our cutting edge expertise and solution focussed approach.*

The *Mayura Analytical Portable Gas Chromatograph* is a unique masterpiece developed for gases analysis and is completely portable, weighing about 6 kgs. This latest innovation comes in three models - **Model PHR I, Model PBGA I and Model PNITRO I.**

Portable Biogas Analyser Model PBGA I is a portable lightweight GC for On Line processing of high concentrations of biogas compositions with built-in auto sampler. This portable GC has also been used for the testing of Biogas and effluent discharge. The **Indian Institute of Science, Bangalore (I.I.Sc.) and Sri Ram Institute for**





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Industrial Research, Bangalore have greatly benefited from the *Model PBGA I* and have been successful as a result of our techniques and unique design.

When sampling the gas, it is important that the sample collection is done without any environmental contact or exposure so as to ensure that the real impurity profile is captured. Gas transportation with gas sampling bomb, gas sampling bag, such as Tedler bags, are prone to cross contamination. Regular Gas Chromatographs are quite bulky to be taken near the place of sample and it is impractical for the cylinders themselves to be carried into the laboratory. In such conditions, the benefit of using a Portable Gas Chromatograph comes into play.

Gases can be directly sent to the GC without any cross contamination without a syringe injection. The TCD built into the GC will determine up Biogas composition, thereby providing accurate and reliable results. An easy carry compact carrier gas cylinder of 3000 mL volume and a mini laptop will ensure the ease of use and portability. The GC can work on DC 12V car battery or AC 230 V adaptor.

Specifications

- Built in Auto Sampler for Auto Gas Injection and Column Switching in one equipment
- On line sampling : Minimum 10 PSI gas pressure required
- Carrier gas : Argon / Helium
- Pressure regulator : Mechanical
- Pressure gauge : Digital with 0.1 PSI resolution
- Columns : Hayasep A and Molecular sieve



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- Resolution : Single injection analysis
- Detector : TCD
- Gas sampling : Motorised microcontroller controlled 12 port gas sampling with column selection valve to reduce column conditioning frequency
- Range selection : High or Low
- Measuring range :
 - Hydrogen : 0.1% to 30%
 - CO : 0.5 to 30%
 - CO₂ : 0.5 to 30%
 - Oxygen : 0.1 to 20%
 - N₂ : 0.1 to 80%
- Signal amplifier with integrator output : $\pm 1V$ DC, voltage resolution of 0.001mV
- Operating voltage : 12 V DC or 220 AC adaptor
- Keyboard display : 4 x 4 array keyboard for programming
Two line large LCD display
- Total weight : 6 kgs
- Dimensions : 350 x 360 x 195 mm approximately
- Auto sampler with 1ml sample loop for accurate and reproducible volume injection (sample loop can be changed based on user requirement)
- Chromatography interface and software with all standard functions of data reduction, calibration and interpretation



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Other products from Mayura Analytical

- **Gas Chromatographs** for various applications including **Portable models**
- **Head Space Auto Sampler** for volatile organic compounds / residual solvents
- **Chromatography Integrator and Data Station for GC & HPLC** - Dual Channel
- **Auto Titrator** for Potentiometric, Amperometric, Redox, Argentometric, Complexometric and Karl Fisher Titrations with 21 CFR Part 11 compliance
- Microcontroller based **Karl Fisher Titrator** for Moisture Estimation
- **HPLC Column Ovens** for heating and cooling purposes
- **Temperature Programmed Desorption unit (TPD/ TPR)** for catalyst characterisation
- **High Purity Gas Generators** for Hydrogen, Nitrogen and Zero Air
- **Ultrasonic Baths** from 3.5 litres to 500 litres of any shape and size
- **Ozone Generator** for sanitising and cleaning purposes as well as industrial purposes.
- **Oxygen Monitor** for measuring ambient Oxygen levels (wall mountable and portable models with built in alarm system for health and safety concerns)
- **Digital pH Meters** with 2 Points and Microcontroller based up to 5 Points Calibration
- **Digital Conductivity and TDS Meter** for Pure Water testing
- **General Accessories and Spares for Chromatography**
- **Electrodes** for any application - pH, Conductivity etc.