



Mayura Analytical LLP
Specialists in Analytical Instrumentation

Gas Chromatograph – Model 1100

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.

The *Mayura Analytical GC Model 1100* has a proven record in High Temperature and High Resolution chromatography. Our equipment have been successful in resolving trace impurities in ENA (Extra Neutral Alcohol-Whiskey base), perfumery compounds from natural extracts, chemical process monitoring, traces in pharmaceutical formulations (organic volatile impurities or OVI), petrochemical products and much more. Our installations at the IITs and IISc stand testament to our analytical expertise in these forms of analyses. Capillary GCs with double capillary for simultaneous analyses with independent result compilation is the most cost effective for essential oil analysis.



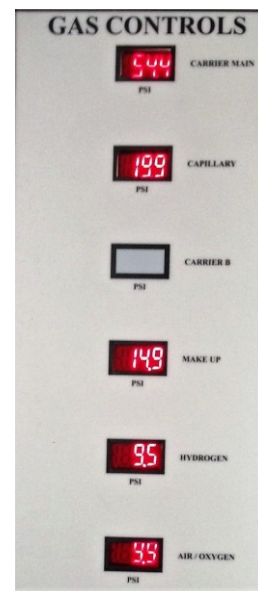


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Features of the digitally controlled and computer interfaced GC

- GC with precision process parameter settings controlled through a computer
- Gas pressure settings with digital display is a unique feature
- Digital pressure display and accuracy of ± 0.1 PSI
- Column oven, injector and detector temperature settings controlled through a computer
- Temperature settings in steps of $\pm 0.1^\circ\text{C}$
- The software is 21 CFR part 11 compliant as per Pharma requirement with Hardware and Software validation



Physical characteristics - Oven

- Dimensions in cms : 27 x 25 x 31 (W x D x H) cms.
- Volume : 21 litres approximately

Temperature Ranges

- Isothermal (initial) : 5°C above ambient to 400°C in steps of 1°C *
(*special requirement of below ambient is also available)
- Ramp rate : 0° to 50°C per min in 1°C per min increments set through a computer with a maximum of eight ramps and a programmable display monitor
- Final Temperature : Up to 400°C
- Temperature display : 0.1°C
- Temperature accuracy : $\pm 0.1^\circ\text{C}$
- Overheat protection : Maximum temperature protection adjustable from 50°C to 400°C with built-in alarm and auto shut off for overheat protection



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- Digital column carrier gas flow display for packed columns with DFC control
- Auto cool on program completion

Injector

Multiple Injection ports as per the user's choice

- Options
 - One Capillary Column Port
 - One Packed Column Port
 - Two Capillary Columns Ports
 - One Capillary and One Packed Column Ports
 - Two Packed and One Capillary Column Ports
 - Two Packed Column Ports

Detectors

- Flame Ionisation Detector (FID)
- Thermal Conductivity Detector (TCD)
- Special Detectors on Enquiry

Flame Ionisation Detector

- Signal Range : High and Low
- Sensitivity : Better than 1PPM Hexane
- Operating Temperature : 5°C above ambient to 400°C, $\pm 0.2^\circ\text{C}$ through computer programming

Thermal Conductivity Detector

- Filament : Dual path 4 Tungsten-Rhenium filaments
 - Range : High and Low
 - Operating Temperature : 5°C above ambient to 400°C, $\pm 0.2^\circ\text{C}$ through computer programming
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- Sensitivity : Less than 1 PPM Oxygen

Pneumatics

Carrier gas

- Precise column carrier gas regulation that can be set within ± 0.1 PSI
- Digital display of the pressure set to the column
- Excellent retention time reproducibility
- Digital pressure display configured to the GC procurement
- Digital flow display in case of packed column with the control from imported differential flow controllers (1 / 2)
- Digital column back pressure display to improve high precision in capillary column application
- Make-up gas precision regulation and digital pressure display and control
- Hydrogen for Flame Ionisation Detector (FID) with precise pressure control with digital display
- Air for Flame Ionisation Detector (FID) with precise pressure control with digital display
- Pressure range : 0 – 60 PSI
- Pressure accuracy : ± 0.1 PSI
- Pressure readability : ± 0.1 PSI

Digital pressure display for precise gas control

- Capillary column : Pressure
- Packed column : Digital flow setting with imported DFC
- Makeup Gas for FID : Digital pressure setting
- Hydrogen for FID : Digital pressure setting
- Oxygen / Air for FID : Digital pressure setting
- Flame Ionisation Detector : Electronic setting of ranges