



Mayura Analytical LLP
Specialists in Analytical Instrumentation

Head Space Auto Sampler

*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.*

Model HSA-II is a Microcontroller based Head Space Auto Gas Sampler. It is a standalone unit and attachable to any Gas Chromatograph with minor modifications. This equipment is extremely useful in testing samples that cannot be directly injected into the GC for testing. For example, solvents in resin like samples, trapped solvents in tablets, different notes in perfumes and fragrances cannot be directly injected into the GC as it would block the syringe or injection ports. In such cases, the sample is taken in separate vials, heated in order to release the solvents into gaseous form which is then, injected into the GC automatically.





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The Head Space Auto Sampler Model HSA II is a unique design developed in-house that allows auto injection of samples that cannot be directly injected into the GC given the nature of the sample being tested. The equipment is programmed with the required method and temperature. The HSA II then takes over the complete analytical operations. It will inject the sample automatically into the GC, start the Data Station to acquire data and can start the column temperature programming. A total of 10 vials can be placed at any point of time in the circular tray. The analyses of all 10 samples can be conducted in the absence of an operator or with the exchange of analysed vials with new vials a single routine can perform up to 99 samples. Speed is an important consideration. When testing multiple samples, the HSA II provides a quick and efficient way to analyse samples in a pre-determined method.

Features

- Compatible with any make of Gas Chromatographs
- Microcontroller with built in memory to store different methods
- Auto sampler starts the Data Station and Column Temperature programming automatically
- Programmable for a single cycle operation of 10 samples or interchangeable 99 samples
- Motorised gas sampling valve, which can be fixed with interchangeable sample loops from 100µl to 5000µl to match the required Pharmacopeal method.
- Temperature can be set from ambient to 100°C
- Circular sample holder for 20mL crimped vials
- Temperature of transfer line can be changed.



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Specifications

- No. of Vials on the Circular Tray : 10
- No. of Vials for Programme : 99
- Dimension : 23 x 75mm
- Vial Volume : 20mL Capacity
- Temperature Range : Up to 150°C
- Sample Loop volume : 1000µl (Standard)
- Operating Gas : Nitrogen or Helium
- Operating voltage : 220V AC 50 Hz.

Programming Specifications

- No. of Vial : 1-99
- Time : Equilibration Delay
Purging time
Analysis time
Pressure Decay delay time
- Printout : Method
- Sample loading : Tray rotation
- Method generation : Saving and Loading
- Sample Injection : Automatic with Needle and sample loop



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Heating Zones

- Vial : Ambient to 150°C
- Accuracy : $\pm 1^\circ\text{C}$
- Setting : 0.1°C increments
- Transfer Line : Ambient to 150°C

Gas Control:

- Pressurising Gas : Helium or Nitrogen
0 – 2 Kg/cm² pressure regulator with gauge
- Flow Rate : Max 30mL/min
Nominal 10mL/min
- Gas Volume injection to Vial 1-3 mL (prefixed normally at 1 mL)
- Motorised syringe for gas injection to vial
- Motorised Needle for Vial gas sample withdrawal
- De-pressurisation by Solenoid
- Injection Needle cleaning continuous throughout the analysis time with the gas pressure
- Gas line connection 1/16" F