Specifications

Item	Specification
GC&MS Interface	Capillary direct interface, independent temperature control, 50-300 °C
Filament	Dual for EI, maximum emitting current 300uA
Ionization Energy	10-100eV adjustable
Ion Source Temperature	Independent temperature control, maximum 350°C, adjustable
Mass Analyzer	High precision metal Molybdenum Quadrupole with pre-quadrupole
Backing Pump	Mechanical pump, geometric pumping speed 165L/min
Turbo Pump	Turbo molecular pump, pumping speed 71L/s, 260L/s optional
Detector	Electron multiplier
Mass Range	1.5-1050 u
Mass Accuracy	±0.1u
Resolution(R)	Unit mass resolution
Signal to Noise Ratio (EI)	1pg OFN full scanning, ≥150:1 RMS at m/z 272
	100fg OFN selective ion scanning, ≥150:1 RMS at m/z 272
Mass stability	±0.1u/48h
Maximum Scanning Speed	11000u/s

PERSEE ANALYTICS, INC.
Affordable Lab Technology

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Web
www.perseena.com

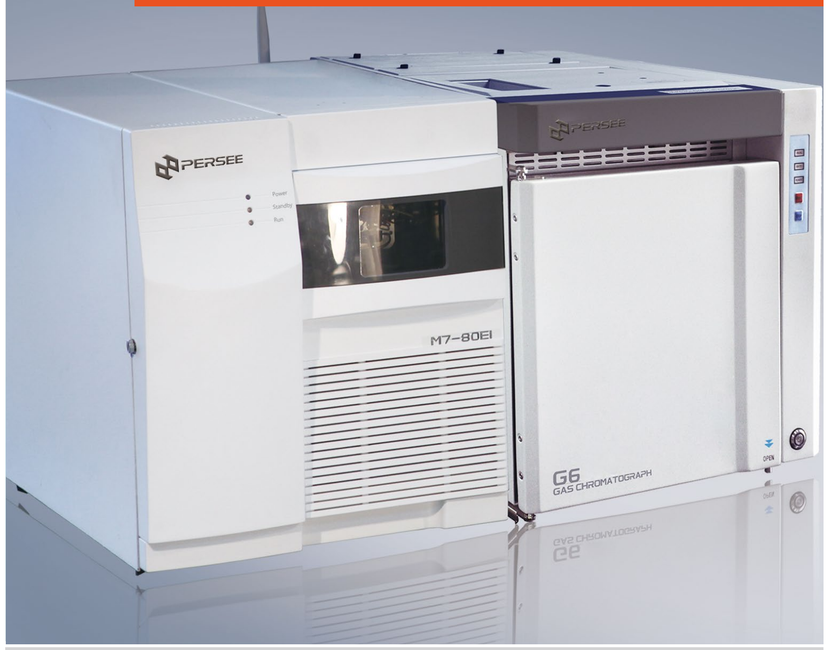
T.
(440)5919268

E-mail
jia.cao@pgeneral.com

· ISO9001 · ISO14001

PERSEE

M7 SINGLE QUADRUPOLE GCMS



PERSEE ANALYTICS, INC.

M7 SINGLE QUADRUPOLE GCMS

M7 Single Quadrupole GCMS is the new generation high performance Mass Spectrometer designed by Persee, who solely holds intellectual property rights. The M7 is an accurate, reliable and precise system which is suitable to mass routine analysis and precise research application as well.

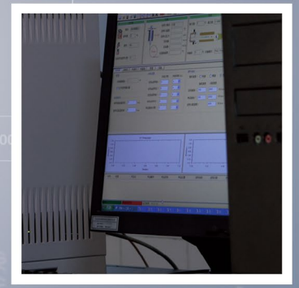
The M7 MS could be widely used in food safety, environmental protection, material chemical industry, life science, medicine research, criminal investigation and many other fields, benefiting from its high performance, long service life and good after-sales service.

- *Superior Material*
- *High performance*
- *Modularization design*
- *Remote control*
- *Full Automatization*
- *Quality Service*











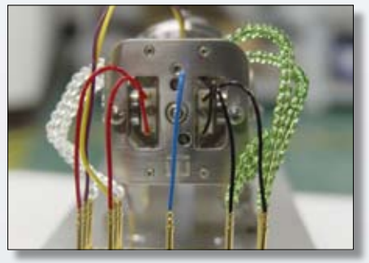
Features



The high performance GC and various optional accessories satisfy different analysis requirement.



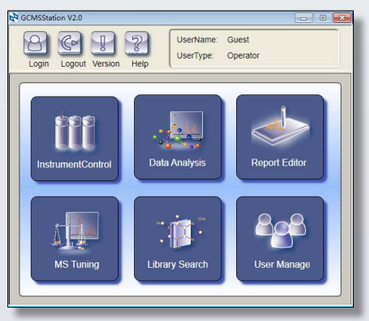
User-friendly design makes the maintenance much easier.



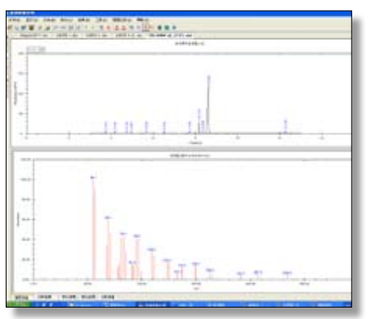
The new EI source with multi patents provides high ionization efficiency.



The new generation molecular pump made by PFEIFFEER satisfies the high vacuum requirement.



The powerful GCMS workstation is intuitive, simple and easy to operate. The unique remote control function enables powerful technical support.



Excellent specification provides reliable analysis result.

Excellent specification provides reliable analysis result.

The *M7 MS with GC650 brings more reliable, stable and efficient analysis result.*

The *EPC and digital electrocircuit set new benchmark for the precision of RTL, whichensures reliability of M7 to reach an unprecedented level. The highly flexible EPC design makes theanalysis of complicated hydrocarbon possible.*

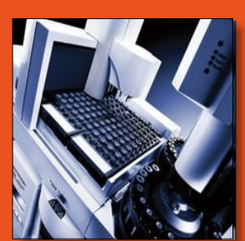
High *speed cooling down and heating of column oven, advanced automatic features will shorten analysistime and reduce your operation cost.*

Convenient *maintenance of injector, new turn top design reduces time required to replace the linerand no tools are needed.*

Various *optional components and accessories could meet all kinds of requirements.*







User-Friendly Design

User-friendly Observation Window and Indicative Lamp design, inside modular assembly design, side door design of the vacuum chamber and multiple interface modes.

·Front Panel

Filament is common consumable for a MS system. Do you want to visually observe status of it? Is it lit? Has it been damaged and replacement required? When you install a column, do you want to clearly see accessible location in the column after it passes through the transmission line? The transparent observation window on the front panel could help you achieve all of this, while the indicating lamp will show you real running state of the MASS system.



·Electrical Box

Do you feel puzzled about the chaotically distributed PCBs? Do you feel head-scratching for the scatted cables? M7 supplies an integral electrical box which is same as a PC does, leaving only cable connectors visible, keeping internal of your instrument tidy and clean. The distinct connection ID makes it simple to assemble.



·Quadrupole

New generation metal molybdenum quadrupole ensures excellent performance.



·Vacuum Chamber

Cleaning is an essential maintenance process for an Ion source, pre-quadrupole system. M7 supplies a side door design of the vacuum chamber, which makes cleaning much easier, routine maintenance much more simple.



·Rear Panel

Integrated wireless communication module, multiple interfaces, Ethernet port, serial port and USB port



Ion Source

***Elelectron impact source**, with dual heating robs independent heating which makes heating more uniform. Max temperature is 350℃.*

***Dual filament** design provides double filament life.*

***Electron energy** 10-100eV adjustable, enabling low-voltage operation to meet different application requirements.*

***Tube-shaped lens** enhance focusing effect and dramatically improve ionization efficiency.*

***Patented surface repulsion electrode** design dramatically improves ion focusing effect.*

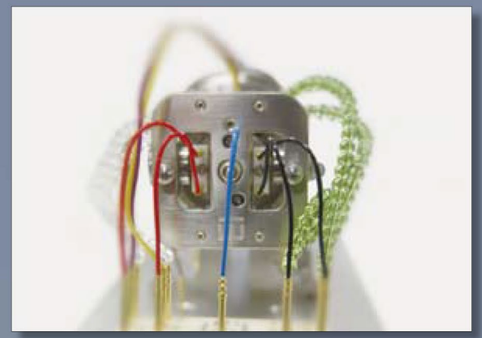
Vacuum System

***High performance** pre-vacuum pump and turbo molecular pump, to reduce ion collisions and background noise and memory effect.*

***Backing pump** using GLD-136 small direct oil rotary plate pump, geometrical pumping speed 165L/min*

***Turbo pump** using Germany PFEIFFEER innovative HiPace TM turbo-molecular pump, with a more reliable design, compact structure, higher pumping speed and more efficient cooling system. To suit your specific needs and budget, 2 specifications are available.*

- ***Hipace^{TM} 80**, maglev small turbo-molecular pump, with geo metrical pumping speed of 71L/S (standard configuration).*
- ***Hipace^{TM} 300**, maglev small turbo-molecular pump, with geometrical pumping speed of 260L/S (optional).*







Quadrupole Mass Analyzer

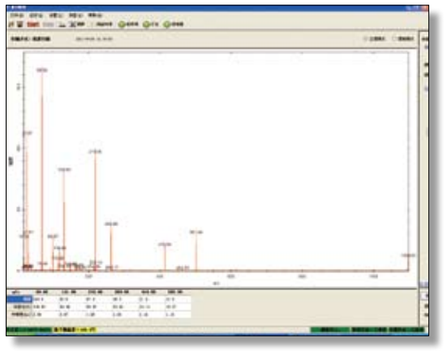


High precision *metal molybdenum quadrupole mass analyzer, to achieve standard unit mass resolution.*

Removable pre-quadrupole filter device*, to reduce pollution of main quadrupole and avoid cleaning maintenance.*

Backing pump *equipped with scanning voltage with mass changes, to ameliorate fringing field, improve efficiency of ion incidence and achieve better detection sensitivity.*

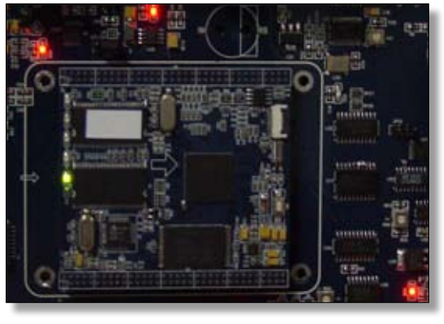
Detector



Electron multiplier *with high-voltage conversion dynode.*

Small-signal amplifier *with composite I/V conversion circuit technology, to effectively reduce circuit noise, improve signal to noise ratio and ensure outstanding linear dynamic range.*

Electronic System



High-quality *RF power supply, to calibrate mass axis of the full mass range just using two points, to maintain good linearity in the full scan mode.*

Excellent *electromagnetic compatibility design and high-precision, low-temperature drift electronic devices, to ensure outstanding mass precision and mass stability of the instrument.*

32-bit *embedded control system, using Ethernet communication interface, allowing remote control and network sharing.*

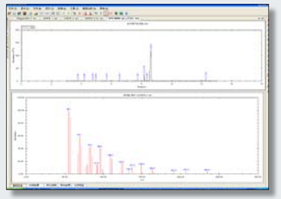
Highly *modular PSU and control circuit system, to enhance the overall reliability of the instrument and make maintenance and upgrade easier.*

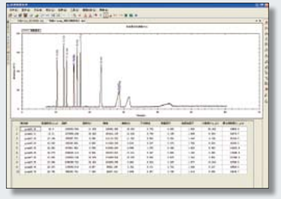
Software

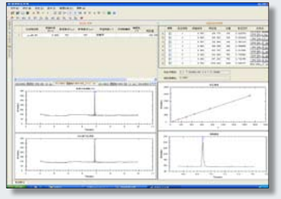
It *is a fully recrimination software, which is intuitive and intelligent and easy to operate. It is a good helper for you to easily make instrument control, data processing and spectra library search.*

Don't *feel worry when you are not familiar with the new instrument. As long as your instrument has an access to network, with the remote synchronization control function, we can help you operate the instrument and analyze data.*

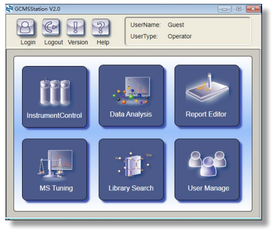














Wide Application Area

Manufacturing

Used for process control and finished product inspection, eg food additives, fragrance ingredient analysis in cosmetics

Quality Inspection

Used for quality inspection in quality monitoring, import and export inspection and quarantine, quality supervision sector

Petrochemical

Used for process control, quality control and finished product inspection in oil exploration, oil processing industry

Education and Research Institute

Used for experiments, research, teaching and presentations in colleges, vocational institutes of technology

Environmental Monitoring

Used for monitoring of soil, water quality, air, indoor environment, eg VOC, PAH, PCB, OCP etc.

Pharmacy

Used for quality control of drugs, drug raw material in pharmaceutical industry, and determination of solvent residues.

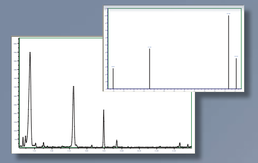
Agriculture and Animal Husbandry

Used for pesticide residue, veterinary drug residue testing, eg clenbuterol detection

Other Areas

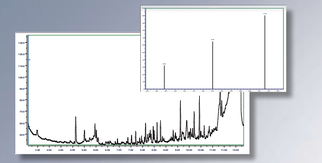
Used for water quality monitoring in water plant, drug testing in public security system





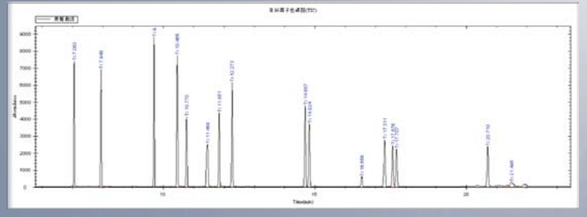
Melamine Testing

Column: DB-5MS
Ion Source: EI (70eV)
Analysis Condition
Injection Volume: 1μL
Carrier Gas Flow Speed: 1mL/min
Inlet Temperature: 240°C
Oven: 100°C to 250°C temperature-programmed
Transfer Line Temperature: 240°C
Ion Source Temperature: 240°C
Scanning Mode: selective ion scanning,
qualitative ion m/z99, m/z171, m/z327, m/z342
quantitative ion m/z 327



Dimethyl Fumarate in Fruits Testing

Column: DB-5MS
Ion Source: EI (70 eV)
Analysis Condition:
Injection Volume: 1μL
Carrier Gas Flow Speed: 1mL/min
Injector Temperature: 240°C
Oven: 100 °C to 200 °C temperature-programmed
Transfer Line Temperature: 230°C
Ion Source Temperature: 230°C
Scanning Mode: selective ion scanning,
qualitative ion 113
quantitative ion 59, 85



Simultaneous Detection of 16 kinds of Plasticizers

Column: DB-5MS
Ion Source: EI (70 eV)
Analysis Condition:
Injection Volume: 1μL
Carrier Gas Flow Speed: 1mL/min
Injector Temperature: 260°C
Oven: 60 °C to 280 °C temperature-programmed
Transfer Line Temperature: 250°C
Ion Source Temperature: 250°C
Scanning Mode: segmentation scanning