

Gas Chromatograph Mass Spectrometer

GCMS-QP2010 SE



Enhanced Standard Gas Chromatograph Mass Spectrometer

GCMS-QP2010 SE

Combining the easy operation of the GCMS-QP2010 Series
with versatile functionality



Simple operation

Easy maintenance reduces downtime



Enhanced performance

Superior technology that achieves high sensitivity and stability



Economy and Ecology

An ecology mode reduces energy consumption while waiting to start analyses





Enhanced performance, Economy and Ecology

Enhanced Standard Gas Chromatograph Mass Spectrometer

The GCMS-QP2010 SE is our enhanced standard GC-MS system, combining the benefits of economy with the simple operation and versatile functionality of the GCMS-QP2010 series.

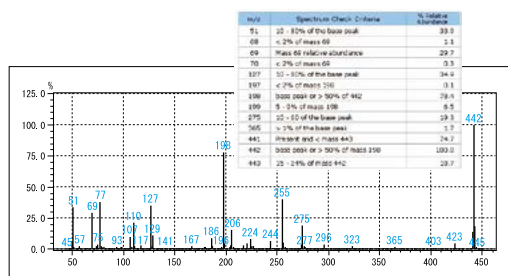
Superior Technology Achieves High Sensitivity and Stability

Stable Mass Spectra

The ion optics are optimized by employing a high-performance quadrupole mass filter and Shimadzu's proprietary Optdesign simulation program to provide high-quality mass spectra. Fully-automated MS tuning enables anyone to optimize parameters easily and consistently. This helps ensure that stable mass spectra can always be obtained.



Mass Spectrum of DFTPP (Decafluorotriphenylphosphine)



High-Performance Quadrupole Mass Filter

Shimadzu's patented technology for mass scanning produces ideal mass filter characteristics (Patent: US5227629).

This system features an easily removable pre-rod and lens system that allows the user to quickly perform cleaning and maintenance. Less downtime means greater productivity.

GC-MS System Based on New Environmentally Friendly Concepts



Ecology mode software window

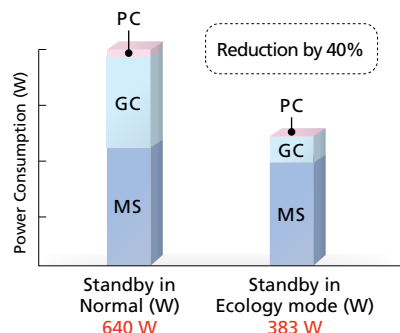
An "Ecology mode" Saves Power Consumption and Reduces Instrument Running Costs

By activating the new Ecology mode feature whenever the system is in between analyses or after finishing a batch of analyses, the GCMS-QP2010 SE will use about 60 % less carrier gas and 40 % less power than previous models. Given typical operating conditions,* this reduces helium gas consumption by about 2 cylinders (with a capacity of 7 m³) per year, reducing laboratory operating costs.

* Using our standard analytical conditions.

Reduction of Power Consumption in Standby Mode

When Ecology mode is entered, unnecessary power consumption by the GC, MS, and PC is automatically eliminated. The consumption of carrier gas is also automatically reduced. Furthermore, Ecology mode can be entered automatically after a batch run, allowing the lab to realize running cost savings on a nightly basis.





Simple operation

The GCMS-QP2010 SE offers both the easy operation of the GCMS-QP2010 Series models as well as versatile functionality. It enables anyone to easily acquire highly reliable data and features user-friendly operation and easy maintenance.

Easy Maintenance Reduces Downtime

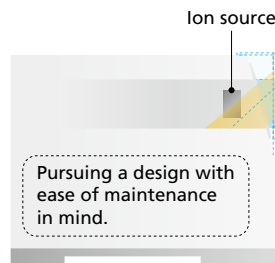
Design Offers the Ultimate in Ease of Use

The GCMS-QP2010 SE incorporates a front-opening chamber in a design that is both visually pleasing and practical, allowing maintenance to be performed with ease from the front of the instrument. "MSNAVIGATOR," which supports maintenance, has been improved to help the user perform instrument maintenance.



Common Consumables

The same septa, vials, and other consumables are universally used across the QP2010 and QP5000 series systems.

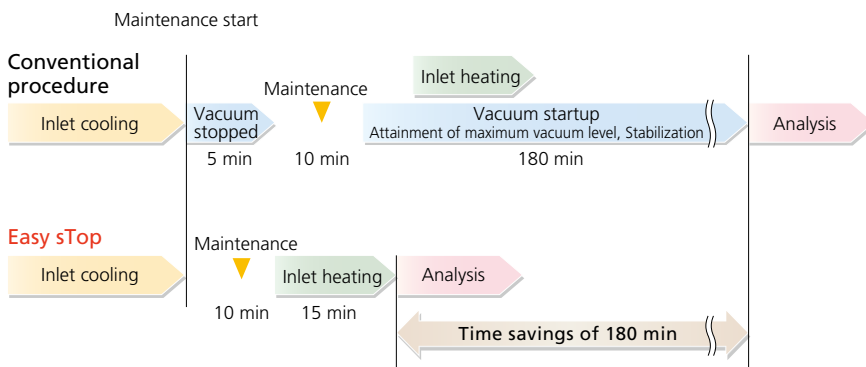


The line of sight of a flat architecture makes the filament difficult to see.



Easy sTop for Major Reduction of Maintenance Time

Many applications require that the injection port undergoes maintenance on a frequent basis. With the GCMS-QP2010 SE, maintenance is possible without venting the MS so downtime is minimized.



The Easy sTop navigator assists in taking the appropriate steps.

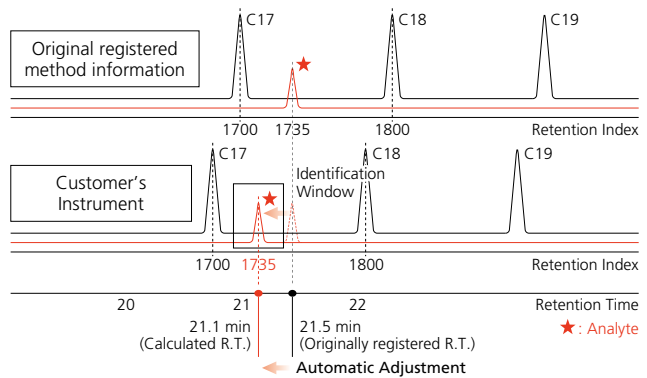
Dramatic Improvement in the Efficiency of Multicomponent Simultaneous Analysis

This new software packages an automatic method creation function and a multi-data processing program to dramatically improve the efficiency of daily analysis procedure.

Functions Using Retention Indices

The AART (Automatic Adjustment of Retention Time) function can estimate the retention times of target components from retention indices and the retention times of an alkane standard mix*.

* Requires alkane mix which is sold separately.



More Convenient Multicomponent Analysis

The Smart SIM automatic method creation function automatically configures the SIM program to suit the retention times. Even in cases where there are a number of compounds and they are apportioned to multiple methods, the methods can be integrated while maintaining the sensitivity as is. This significantly reduces the number of analysis cycles and the measurement time, improving productivity.

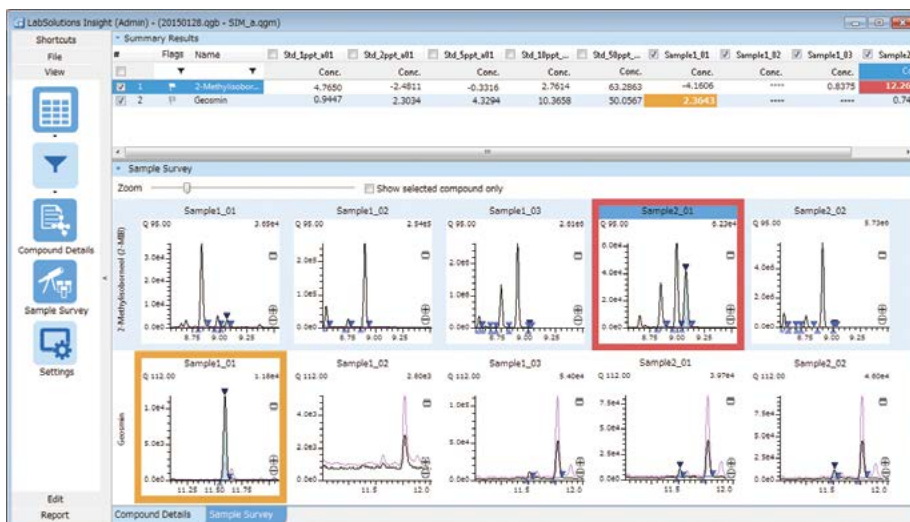
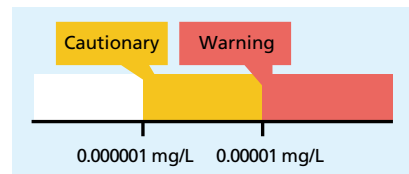


The optimal MS table is automatically created

- 41: Chlorobutane
- 42: Ethylacetate
- 43: Dichloromethane
- 44: Toluene
- 45: Fluorobenzene
- 46: Dichloroethane
- 47: Triethylamine
- 48: 2-Chloroethanol
- 49: Benzocaine
- 50: Dimethylacetamide
- 51: Sulfuric acid
- 52: Methylacetate
- 53: Butylacetate
- 54: Chloroform
- 55: Diethylamine
- 56: Propylacetate
- 57: alpha-HCH
- 58: Ethylacetate
- 59: Dimethylformamide
- 60: Thiocarbonyl diimide
- 61: Hexachlorocyclopentadiene
- 62: Diethylamine
- 63: Dimethylacetamide
- 64: Benzocaine
- 65: Fluorobenzene
- 66: Chlorobutane
- 67: Chlorobutane
- 68: Acetone

Multi-analyte Data Review

With LabSolutions Insight software, quantitative results for a complete series of data files can be displayed side-by-side for comparison and QC review. All of the chromatograms for a selected target compound can be displayed simultaneously, making it easy to review the detected peaks and confirm the quantitative results. Color-coded QA/QC flags quickly identify any outliers that require further examination.



Versatile System Configurations

The GCMS-QP2010 SE can be configured in multiple ways to meet an expanded range of applications.

Headspace Analysis (Environmental, Food and Chemical Analysis)

The headspace sampling technique is used in a variety of industries, including foods and flavors, environmental and pharmaceutical. Any volatile target analyte that can be driven out of solution with heat and agitation into the headspace above a liquid is suitable for analysis by this technique. The GCMS-QP2010 series is the perfect platform for headspace analyses.

Purge & Trap Analysis (Volatile Organic Compounds Analysis in Water)

The Purge and Trap sampling technique is used for concentrating volatile organic compounds from environmental matrices and then introducing the concentrated sample into the GC-MS for analysis. With its sensitivity and ruggedness, the GCMS-QP2010 series is an outstanding choice for environmental analyses.

Thermal Desorption System (Volatile Organic Compounds Analysis)



AOC-6000 Liquid and Headspace GC Injection System



The AOC-6000 is compatible with three sample injection methods: liquid sample injection, headspace injection, and solid phase micro extraction (SPME) injection. The sample injection method can be selected to suit the form of the sample and the components subject to analysis.

Pyrolysis System (Polymer Materials Analysis)



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