

Agilent 7000E and 7010C Triple Quadrupole GC/MS Systems

Key Application Areas:

- Pesticide analysis in food and cannabis
- Environmental semi-volatile, dioxin, PCB, and PAH testing in water, soil and air
- Impurities analysis in pharmaceuticals

Key Features:

- Mass Spec Intelligence with Advanced Diagnostic Tools
- New HydroInert Ion Source on 7000E for hydrogen carrier gas applications
- New Acquisition Modes— Triggered MRM and Simultaneous Dynamic MRM/Scan
- Accountability, Consistency, and Transparency (ACT) label on the GC/TQ
- Consistent data acquisition and analysis using MassHunter software

Overview

The Agilent 7000E and 7010C triple quadrupole GC/MS systems are the latest iterations of the most successful GC/MS/MS family in history to be used across many market segments including food safety, environmental, and pharmaceutical applications.

The 7000E GC/TQ is the routine workhorse for labs across various industry applications meant to provide optimum operational efficiency. Additionally, the 7010C GC/TQ was designed for the most challenging analyses that demand the lowest limits of detection down to the attogram-level.



7000E



7010C

Agilent 7000E & 7010C GC/TQ Key Features Explained

Mass Spec Intelligence with Advanced Diagnostic Tools

The 7000E & 7010C GC/TQ are powered by a smarter more powerful processing core to enable SWARM autotune for tune completion twice as fast and new advanced diagnostic tools to reduce instrument downtime further than ever before. These tools are paired with the built-in intelligence of the 8890 and Intuvo 9000 GCs including smart diagnostics, monitoring, and simplified access to powerful operations through the integrated touchscreen and browser interface.

HydroInert Ion Source on 7000E

The new Agilent HydroInert source on the 7000E has been designed to overcome the challenges associated with using hydrogen as a carrier gas including improving chromatographic efficiencies for H₂ gas applications. Made with a novel proprietary material, HydroInert helps minimize losses in sensitivity and reduce spectral anomalies associated with H₂ gas all while helping laboratories prevent disruptions from helium shortages.

New Acquisition Modes

Two new GC/TQ acquisition modes, Triggered MRM (tMRM) and simultaneous Dynamic MRM/Scan (dMRM/Scan) function to provide maximum confidence in compound detection. tMRM is a data dependent mode which allows users to distinguish between very similar analytes with maximum duty cycle efficiency. It surveys for a primary

transition, and only triggers to collect confirmatory transitions if the primary is present. dMRM/Scan enables users to tackle large, multi-analyte analyses and accurately quantify exceedingly narrow peaks all while simultaneously performing a scan to provide the user qualitative and quantitative data with excellent precision.

Accountability, Consistency, and Transparency (ACT) label

To enable our GC/MS users to make a better-informed, sustainable choice, Agilent has partnered with My Green Lab to have both the 7000E GC/TQ & 7010C GC/TQ independently audited for their Accountability, Consistency, and Transparency (ACT) label.

Data acquisition and analysis using MassHunter software

MassHunter delivers complete control from tune to data analysis and report generation, while streamlining the GC/TQ workflow. MassHunter Quantitative Analysis simplifies and speeds up data analysis with features like MassHunter Review-by-Exception and Compounds-at-a-Glance. For labs that are required to operate in various compliant environments, MassHunter Acquisition has built-in technical controls combined with procedural controls that ensure data security, control access, and facilitate compliance as defined by US FDA 21 CFR Part 11, EU Annex 11, and similar national electronic record regulations.

Key Benefits of the Agilent 7000E & 7010C GC/TQ to Laboratory Operators and Managers

Reduce downtime and improve profitability

Given the daily, routine usage of both 7000E GC/TQ & 7010C GC/TQ and the importance of keep these instruments up and running, diagnostic and preventative maintenance tools have never been more important. Built-in features like Early Maintenance Feedback help users track consumable resource and part usage, and to configure alerts for when they need to be replaced or serviced. The GC/TQ intelligence paired with additional Agilent solutions like JetClean or GC backflush, instrument uptime and sample throughput are greatly increased.

Improve run times and lower operating costs

As the supply of helium declines, the supply chain becomes increasingly unstable resulting in supply

disruptions and higher prices. The Agilent HydroInert source for the 7000E GC/TQ allows users to change from the traditional helium carrier gas to hydrogen without sacrificing sensitivity. The HydroInert source is designed to improve chromatographic efficiencies with hydrogen carrier gas including faster, shorter separations, avoiding spectral anomalies, and offering superior high-boiler peak shape, especially for PAHs.

In addition to hydrogen usage, customers can take advantage of the new acquisition modes like tMRM and dMRM/Scan to shorten runtimes. The simultaneous dMRM and scan functions provide excellent qualitative and quantitative data such that the user can reliably identify suspect compounds while also being able to search for additional unknown analytes.

For more information visit Agilent's newsroom or contact Naomi Goumillout, Director, Business Public Relations (naomi.goumillout@agilent.com)