

# Press Release

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**New: GCMS-QP2010 Plus  
Simply the Best...**

**GCMS-QP2010 Plus with the highest sensitivity on the market today /**

**Groundbreaking technology with intelligent software /**

**Unique: automatic calculation of linear retention index (LRI)**

Shimadzu, one of the world leaders in analytical instrumentation, has presented its new GCMS-QP2010 Plus, exhibiting the highest sensitivity ever attained in a quadrupole GCMS instrument to date. The system is therefore suitable for analysis of trace compounds in complex organic matrices in many application areas – forensics, environmental analysis, food analysis or fragrance and flavour analysis. Intelligent software solutions such as linear retention index (LRI) and automatic adjustment of retention times (AART) simplify analysis and provide highly accurate and reliable measuring results.

## **Quantum leap – two-fold increase in sensitivity**

Based on the successful GCMS-QP2010 predecessor model, the ion source of the new GCMS-QP2010 Plus is optimized to attain the highest possible sensitivity. A high-performance differential turbo pumping system increases sensitivity and allows operation under

high column pressures. In comparison with the previous model, the sensitivity is more than twice as high. This puts the GCMS-QP2010 Plus far ahead of the competition.

### **Maximal flexibility**

High flexibility during method development is ensured via the broad mass range of 1.5 up to 1090 m/z as well as the independently heated ion source in the temperature range of 100 up to 300 °C. In this way it is possible to analyze high-boiling point compounds and difficult to analyze samples such as brominated flame-retardants.

### **Unique to Shimadzu: automatic calculation of the LRI**

Automatic calculation of the linear retention index (LRI) offers optimal accuracy for the identification of unknown compounds in complex samples. By using the LRI, integrated in the library search, unequivocal results can be attained. For this purpose Shimadzu offers, in addition to the NIST 05, the specialized FFNSC (Flavour and Fragrances Natural and Synthetic Compounds) library version 1.2 with linear retention indices for fragrance and flavour components.

### **AART – simple and fast**

After column exchange, AART enables simple, fast and trouble-free identification and quantification of all compounds via automatic adjustment of retention times in tables and SIM-windows. In this way, no changes are made to the test method (also in ‘Constant Linear Velocity Mode’), ensuring an optimum chromatographic separation.

### **Fast GCMS: FASST (Fast Automated SIM/Scan Type)**

With FASST, Shimadzu opens a new chapter in fast GCMS. The

GCMS-QP2010 Plus with its fast quadrupole offers the possibility to acquire and quantify Scan as well as SIM data for individual peaks. For quantitative determination the number of data points is critical for quality of the results. With a data acquisition frequency of up to 50 data points per second in the Scan mode and up to 100 data points in the SIM mode, data of excellent quality are obtained. This is not only important for quantitative determination but also for library search, the accuracy of which is largely determined by the quality of the acquired spectra. Shimadzu's many years of experience with fast GCMS is a guarantee of the highest possible data quality.



Caption: The best quadrupole mass spectrometer available on the world-market today: the new GCMS-QP2010 Plus

<sup>1</sup> Automatic Adjustment of Retention Times

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