SHIMADZU
Excellence in Science

C146-E191

Gas Chromatograph Mass Spectrometer

GCMS-TQ8030

—Speed Beyond Comparison

The solution is the GCMS-TQ8030 Triple Quadrupole Gas Chromatograph Mass Spectrometer, which provides the speed, accuracy, and easy operation scientists want.

High Sensitivity and Enhanced Selectivity

- Shimadzu's proprietary, high-efficiency ion source offers unmatched sensitivity
- Overdrive lenses reduce neutral noise
- Variety of measurement modes provide enhanced selectivity and method flexibility

High-Speed Performance

- UFsweeper® allows 600 MRM transitions per second.
- ASSP™ permits high-speed scanning at 20,000 u per second
- Fast Scan/MRM measurements provide a wealth of qualitative and quantitative information

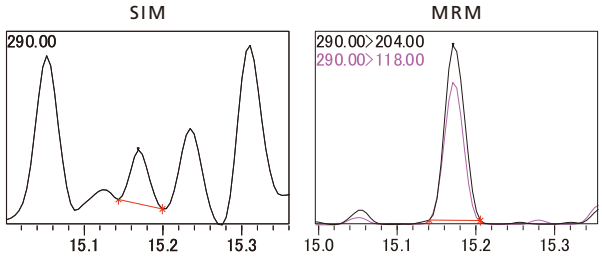
Ultimate Ease of Use

- AART function automatically adjusts compound and MRM retention times
- Easy sTop injection port reduces maintenance downtime
- Front-opening ion source chamber makes maintenance fast and easy

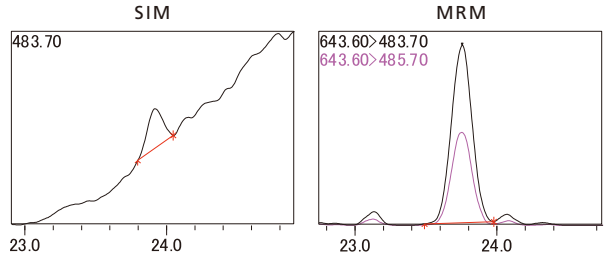
UFMS
ULTRA FAST MASS SPECTROMETRY

High Sensitivity and Enhanced Selectivity

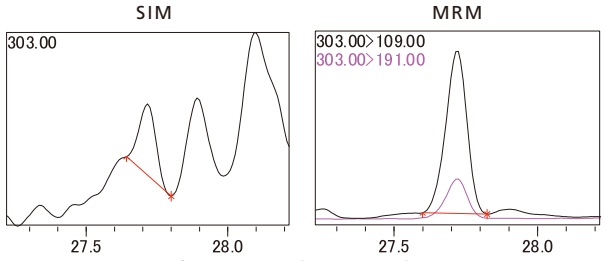
Because GC/MS systems are able to identify individual components using retention time and mass spectra, they are especially useful for detecting trace-level contaminants in a variety of sample types. However, unambiguous identification can be difficult in the presence of a complex or problematic matrix. Multiple Reaction Monitoring (MRM) in GC/MS/MS systems separate masses in two stages, making the instrument significantly more selective than a single quadrupole system. As a result, even components that cannot be analyzed by conventional scan or SIM modes can be easily identified and quantified in the presence of complex matrices using MRM. For example, MRM can be a particularly effective measurement tool for analyzing residual pesticides in food.



Analysis of residual pesticides (isoprothiolane 1 µg/L) in ginger



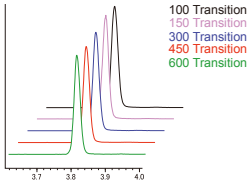
Analysis of PBDEs (hexa-BDE (BDE-153)) in sediment



Analysis of metabolites (suberic acid) in rat urine

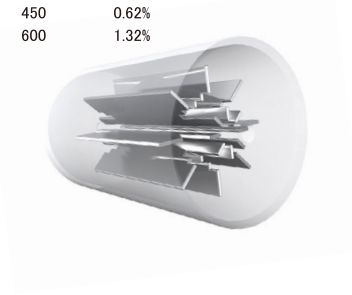
High-Speed Performance

UFsweeper® is a unique technology created by Shimadzu that minimizes collision cell length, while providing high CID efficiency and high ion transport speed. This prevents any drop in signal intensity or cross-talk, even at fast measurement speeds.



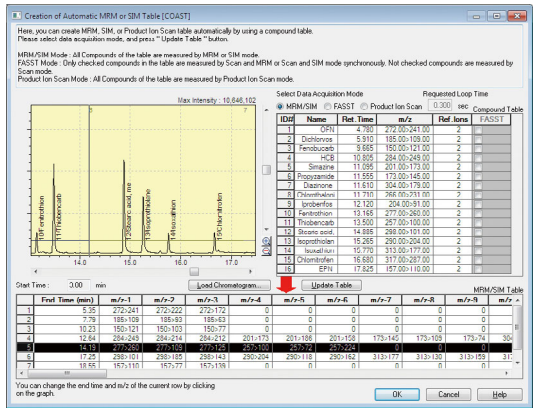
MRM/sec	%RSD
100	1.06%
150	1.13%
300	0.60%
450	0.62%
600	1.32%

MRM Transition and Reproducibility
Quetiapine-TMS *m/z* 321 > 211



Ultimate Ease of Use

The COAST (Creation of Automatic Scan/SIM Table) function enables switching between measurement modes or specifying time programs while checking data. This makes it easy to set optimal analytical conditions that are compatible with a variety of measurement modes.



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