

Liquid Chromatograph Mass Spectrometer

LCMS-8045

 **SHIMADZU**

LCMS-8045
LIQUID CHROMATOGRAPH MASS SPECTROMETER

Best in class sensitivity

■ Accomplishes Both High Sensitivity and Ultra-High-Speed Detection

Equipped with a heated ESI probe, the LCMS-8045 has the highest* sensitivity in its class. The instrument is capable of providing accurate and stable data over long periods of time. The inclusion of Shimadzu's ultra-high-speed* high-voltage power supply enables the world's fastest scan speed (30,000 u/s) and polarity switching time (5 ms). High-speed acquisition benefits the laboratory by reducing run times for increased throughput, and also shortens method development time.

* As of August 2016, according to a Shimadzu survey

■ Superior Robustness Assures That High Sensitivity is Maintained Over the Long Term

The LCMS-8045 was designed to be robust. The heated ESI probe, high-temperature heating block, heated desolvation line, drying gas, and focusing optics all act to maximize sensitivity and minimize contamination. This means long periods of continuous operation in the laboratory with reliable data collection, even with complex biological fluids or food samples.

■ LabSolutions LCMS Software and Wide-Ranging Method Packages

LabSolutions LCMS features an intuitive user interface, and offers the latest features designed to enhance laboratory productivity and streamline workflows. Numerous pre-configured MRM method packages are available. Predetermined LC separation conditions and MRM parameters allow analysis to be started without long hours of method development, enhancing the efficiency of your laboratory.

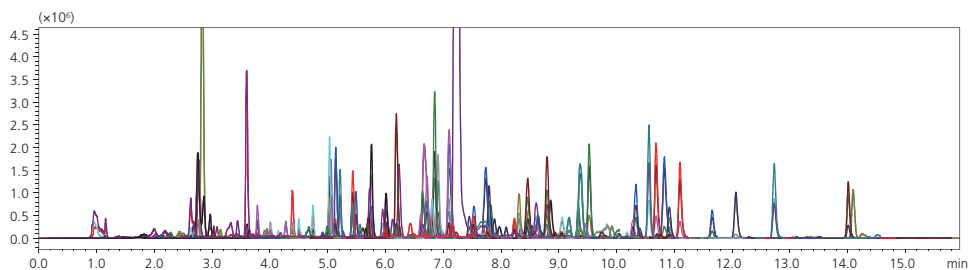


■ Accomplishes Both High Sensitivity and Ultra-High-Speed Detection

Simultaneous analysis of residual pesticides in herbal supplements

Regulatory agencies worldwide provide oversight for an extensive and ever-increasing list of pesticides in order to promote food safety and protect public health. The MRM chromatogram below shows the simultaneous analysis of 153 pesticides spiked into *Codonopsis pilosula* at 0.01 mg/kg. Plant matrices can be very challenging due to background

interferences, but the LCMS-8045 provides enough sensitivity to analyze most pesticides at the trace level of 10 parts per billion. Many pesticides methods also benefit from polarity switching, which the LCMS-8045 can accomplish in just 5 msec.

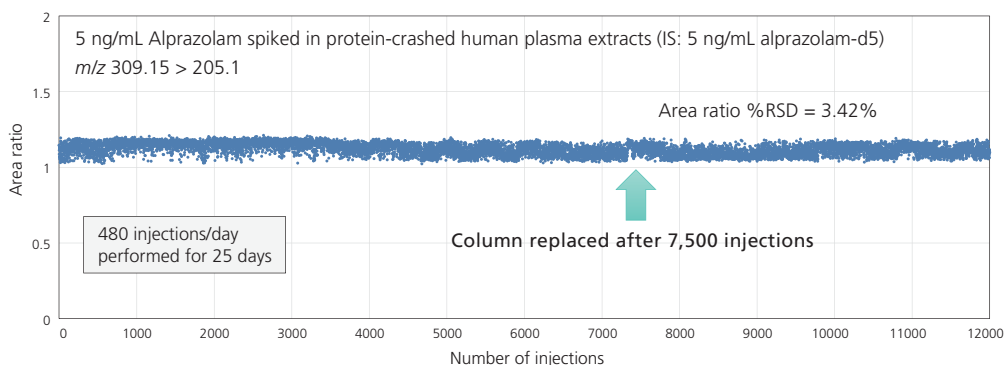


153 regulated pesticides spiked into *Codonopsis pilosula* at 10 parts per billion

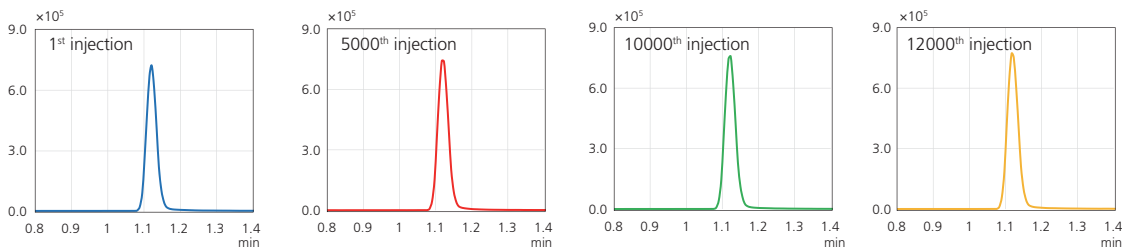
■ Robust Ion Source and Sample Introduction System

Shimadzu's MS interface includes a high-sensitivity heated ESI source, heated capillary sample introduction, and proprietary ion transfer optics. These design features combine to produce robust MS performance.

12,000 plasma samples were injected over 25 days (over 480 samples per day). Picogram levels of alprazolam were analyzed with an RSD of 3.42%.



LCMS-8045 Instrument Stability Test



MRM Chromatograms of Alprazolam



Shimadzu Corporation

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