Shimadzu Solutions for Pesticide Analysis

Pesticides are used around the world to achieve stable crop production. They are used not only at the site of production, but, in these days of extensive distribution and post-harvest, for ensuring that the foodstuffs reach the consumers in a safe state. However, a negative image of pesticides due to repeated incidents and accidents related to them. As the types of chemicals and their actual states of use differ from country to country, there are no universal sets of standards for the pesticide residues in foods. The important reason for the development of chromatography systems in the laboratory for pesticide analysis is to control the quality of food products and ensure the safety of consumers. The GC-2010 Plus Series capillary GC instruments provide excellent reproducibility and can use an FPD or other high-sensitivity detector to achieve highly reliable and highly accurate analysis. The HPLC and UPLC product ranges from Prominence to Nexera4U provide superb reproducibility and extremely low carryover permits accurate analysis of pesticide components that readily adhere to the instrument. The rapid performance of the mass spectrometer is ideal for multicomponent simultaneous analysis and fast analysis. The Shimadzu LC-MS/MS high-speed performance is indispensable*. The GCMS-QP2010 series single quadrupole GC-MS and the GCMS-QP2010 triple quadrupole GC-MS/MS not only provide excellent high-speed performance, but also achieve improved sensitivity at the high speed of the high-mass fragmentation used in the patented AASP technology that minimizes the reduction in sensitivity with high-speed scanning. Thanks to this excellent high-speed performance, it is possible to carry out quantitative analysis of trace components by SRM (MRM), and simultaneously carry out qualitative scan analysis. To obtain more reliable data. Also, by using the simultaneous analysis database with the scan data, semi-quantitative analysis of untargeted components is possible**. Screening for untargeted components this way enables rapid response to unexpected incidents, which is useful in terms of risk management.

Applications
General
C180-E059B Analysis Guidebook Food Product Analyses
C219-E007A Shimadzu Food Safety Management Data Book
LC-MS/MS
ASMS2012 Poster
* W957-575 Multiclass pesticides analysis in challenging vegetable matrices using fast 5 sec MRM with 15 sec polarity switching W957-574 Exploring the application of a universal method for pesticide screening in foods using a high data acquisition speed MS/MS
GC-MS/MS
Application Data Sheet
No.71 Simultaneous Analysis of Residual Pesticides in Foods via the QUENCHER Method Using GC-MS/MS
**“No.64, 65, 72 Scan/WLM Analysis of Residual Pesticides in Foods Using GC-MS/MS (1) (2) (3)

More than 100 application notes of pesticides analysis by LC, GC, LC-MS/MS, and GC-MS/MS are available at:
http://search1.shimadzu.co.jp/search?site=EM0AJRZ6&design=2&group=1