Praveen K. Sharma, J Food Process Technol 2012, 3:10
http://dx.doi.org/10.4172/2157-7110.S1.007

OMICS Group Conferences
Accelerating Scientific Discovery

International Conference and Exhibition on
Food Processing & Technology

November 22-24, 2012 Hyderabad International Convention Centre, India

A powerful tool for simultaneous screening, identification, quantitation and confirmation of residues for food safety evaluation

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The potential of LCMS/MS technique has been widely used for Quantitation of numerous contaminants in a variety of food commodities. The multiple reaction monitoring (MRM) capability of the triple quadrupole instrument provides the sensitivity to quantify low level of multiple analytes in a single run. Even though MRM detection is having high throughput, sensitivity and selectivity due to interfering matrix signals there is always a risk associated with the false positive findings. Hence the need to carry out reanalysis for further confirmation which requires more confirmative analytical workflows including full scan MS/MS data, library searching etc. The hybrid triple Quadrupole Linear ion trap instruments (QTRAP®) enable workflows that can combine unique triple quadrupole scan functions with high sensitivity ion trap scan functions. QTRAP® system provides a novel workflow using the Information dependant Acquisition experiments to generate data for simultaneous quantitation and confirmation data from a sample analysis. This can easily help in the identification, quantitation and confirmation using library search of the analyte thus providing a solution for avoiding the false positives. This presentation will give an overview of the unique information dependant acquisition workflow for multiresidue analysis using library search with specific examples related to false positive findings.

Biography

Praveen K. Sharma received his Ph.D, degree from University of Delhi and Postgraduate diploma in Intellectual Property Rights from ILI, New Delhi. He has published more than 11 research papers in peer-reviewed journals in the area of identification of secondary metabolites and their biological efficacies. He currently working as Application scientist for AB SCIEX India and is responsible for Applied Markets and Clinical Research support activities in India.