

**AUTOMATED TARGET COMPOUND CHARACTERIZATION AND  
QUANTITATION USING A 3200 Q TRAP™ HYBRID QUADRUPOLE - LINEAR ION  
TRAP MASS SPECTROMETER**

Frank Rooney, Ph.D.

*Applied Biosystems, Melbourne, Australia, 3179*

The ultimate goal of analytical mass spectrometry research in food testing and pesticide environmental research is to identify and quantify target compounds that are relevant to a given study as fast and as accurately as possible. The direct combination of triple quadrupole and ion trapping capabilities in the 3200 Q TRAP™ hybrid quadrupole - linear ion trap system presents new opportunities for the automated identification and quantitation of target compounds. In this hybrid instrument, the unique specificity and sensitivity of precursor ion (PI), neutral loss (NL) and multiple reaction monitoring (MRM) scans can be automatically combined with high sensitivity ion trap MS/MS scans on an LC time scale. This affords novel automated workflows in the characterization and quantitation of target compounds as it relates to food testing laboratories that wish to comply to European guidelines.