

ADVANCES IN GAS CHROMATOGRAPHY – MASS SPECTROMETRIC TECHNIQUES FOR FOOD AND ENVIRONMENTAL RESIDUE ANALYSIS

Upton, J.¹

¹Agilent Technologies

For many years the absolute detection limit of analytical instrumentation was the key driver for food and environmental residue analysis. Recently, systems have focused more on true analytical sensitivity and in particular maintaining high sensitivity within more complex sample types. Mass spectrometric detection for chromatography needs to be highly selective for targeted analysis and highly generic for non-targeted, or unknown, analysis. The presentation outlines three approaches to complex sample residue analysis; namely GC-MS for nominal mass non-target screening, GC-MS/MS for highly selective target analysis, and GC-QTOF for the ultimate in both target and non-target analysis.

For each system, practical example types will be shown.