

TANDEM MS -THE APPLICATION OF INFORMING POWER TO TRACE RESIDUE ANALYSIS.

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Recent changes in maximum residue limits (MRLS) for agricultural chemicals – including pesticides, feed additives and veterinary products in foodstuffs for export to both Japan and the EU have accelerated the use of tandem MS techniques in GCMS and LCMS for both routine quantitation and confirmation.

EU guidelines¹ now specify a certain no of “points of identification” that that need to be used for confirmation . At the required detection levels levels, fullscan or SIM data may not meet these requirements thus necessitating the use of tandem MS.

Japanese residue methods² also emphasize the need for both GCMSMS and LCMSMS.

This presentation will discuss the advantages of tandem MS in relation to its informing power ie the specificity and selectivity it can give as well as the sensitivity in dirty matrices.

Differences between MSMS using ion trap and triple quadrupole MS will be discussed.

¹ Commission Decision of 2 August 2002- Council Directive 96/21EC concerning the performance of Analytical Methods and the interpretation of results 2002/757/EC

² Analytical Methods for Residual Compositional Substances of Agricultural Chemicals, Feed additives and Veterinary Drugs in Foods(Syoku-An No 0124001- final draft May 2006)