

November 8, 2017 (14:45-15:30)



VENDOR SEMINAR:

Polar Pesticides and Veterinary Drugs for Routine Labs: New LC-MS/MS Methodologies presented by SCIEX customers

A robust Analysis of Glyphosate and other polar pesticides in food and feed - a challenge no more

Vim Broer, Manager, Science and Development, NofaLab, Netherlands

The direct analyses of Glyphosate and other polar pesticides like Glufosinate, Fosetyl, Erheohon, chlorate and their metabolites with LCMS is well described in the EURL QUPPE-method. But the chromatographic separation is not robust and a lot of maintenance is required. For Glyphosate, AMPA and Glufosinate a known robust method is to derivative these compounds with FMOC.

This method, however, is laborious and still needs a separate method for the other pesticides. At Nofalab a robust method is developed on a SCIEX 6500+ with a Shimadzu UHPLC. Basically the chromatographic separation is done on a polyvinyl alcohol with quarternary ammonium groups' column at a pH of 9. This ionographic condition puts the glyphosate in the ideal configuration allowing a stable separation while the other anions are still well separated. In this presentation an overview of the method is shown as long term stability, robustness and validation results.

The developed method meets the Santé requirements regarding the Reproducibility (<20%) and recovery (80-110%). The LOD of the method is below 0.01 mg/kg.

Fast, high-throughput food safety testing in meat production QC

Kirsten Kirkeby, Quality Assurance Supervisor, Danish Crown, Denmark

The Danish Crown Group is a global processing company and among the largest in its field. It is the world's largest pork exporter and Europe's largest pork processor and meat processing company. Danish Crown is committed to ensuring that consumers and customers have confidence in its products.

It is therefore imperative that the raw materials comply with a number of quality requirements, one of which is the testing for veterinary drug residues. The decision was made in 2014 to implement a state-of-the-art LC/MS-MS method as part of our self-monitoring program for these compounds. The Danish Crown Laboratory was, at that time, mainly involved in microbiological testing, so there was a very steep learning curve with a high profile.

A complete Sciex solution based upon a 4500 triple quad was chosen because it included method set-up, training and ongoing support. During 2015, Danish Crown worked together with Sciex to implement and optimize a method based on that from the ANSES reference laboratory in Fougères, France and from the Danish authorities. The final method was developed for the screening for 33 different antibiotics in one single run. For the first time in Europe, a new risk-based surveillance program, developed by the Danish Agricultural and Food Council in corporation with the Danish authorities was implemented at the same time.