

KRISTINA ALBIN, LUTZ HARTIG, SCARLETT BISELLI, Eurofins Wiertz-Eggert-Jörissen Contaminants GmbH | Neuländer Kamp 1, D-21079 Hamburg, Germany:

Development of a multi-class method using a simple extraction procedure and high-performance liquid chromatography tandem mass spectrometry for the determination of about 90 veterinary drug residues in meat

A multi-class, multi-analyte method for the simultaneous determination of about 90 veterinary drug residues (benzimidazoles, quinolones, nitromidazoles, β -lactams, macrolides, triphenylmethan dyes, sulphonamides, tetracyclines) in meat has been developed. This includes an easy sample preparation based on liquid extraction with EDTA-McIlvain buffer and acetonitrile followed by a phase separation and evaporation of the supernatant. The resulting extracts were diluted in HPLC-eluent and analysed by liquid chromatography coupled to ESI-MS/MS. The method has been validated in chicken muscle in the range of the individual maximum residue limits (MRLs) for each analyte. The recoveries of the analysed drugs at fortified levels (2.5-80 $\mu\text{g}/\text{kg}$) ranged from 60-100 % for the majority of the compounds considering signal suppression and enhancement. The limit of determination (LOD) ranged from 0.7-20 $\mu\text{g}/\text{kg}$, the limit of quantification (LOQ) ranged from 2.0-60 $\mu\text{g}/\text{kg}$; for most of the analytes by far lower than half of their MRLs.

Poster Session: large-scale multi-residue method

Contact details:

Eurofins / WEJ-Contaminants GmbH, Neuländer Kamp 1, D-21079 Hamburg, Germany,
Email: lutzhartig@eurofins.de / scarlettbiselli@eurofins.de