

Single-laboratory validation of an LC-MS/MS method for determining florfenicol (FF) and florfenicol amine (FFA) residues in chicken feathers and application to a residue-depletion study

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© 2016 Informa UK Limited, trading as Taylor & Francis Group. A suitable analytical method is required to study the behaviour of florfenicol (FF) and its metabolite florfenicol amine (FFA) in broiler's feathers. An LC-MS/MS method was developed, assessed and intra-laboratory-validated for FF and FFA analyses. We chose chloramphenicol-d5 as an internal standard, acetone as a solvent for the extraction of the analytes and dichloromethane for the clean-up. Through LC-MS/MS analysis, we established a detection limit of 20 µg kg⁻¹, as well as calculated quantification limits of 24.4 and 24.5 µg kg⁻¹ for FF and FFA, respectively. Validation parameters such as linearity, recovery and precision were calculated following Commission Decision 2002/657/EC. For linearity, all standard curves showed a standard coefficient greater than 0.99. Recoveries ranged from 99% to 102% for all studied concentrations. The results show that this analytical method is precise and reliable. For the depletion study,