

Extraction and Determination of Oxytetracycline Hydrochloride and Oxolinic Acid in Fish Feed by Derivative Spectrophotometry of First Order

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In this work is proposed the extraction and determination of oxytetracycline (OTC) and oxolinic acid (OA) in fish feed by first-derivative spectrophotometry. The extractions are carried out by parallel modality, where OTC is extracted in the presence of OA in a sample, and in another is extracted OA in the presence of OTC, and the sequential modality, where OTC is extracted first and then followed by OA in a single feed sample. A phosphate buffer, pH 7.0, was selected for OTC extraction and acetonitrile for OA extraction. These solvents were used in both extraction modalities. The extraction percentages obtained by parallel mode are better than those obtained by sequential extraction. In both cases, the limits of extraction were 25 mg kg⁻¹ for OTC and 10 mg kg⁻¹ for OA. However, it is proposed to work with the parallel extraction for its efficiency, accuracy, precision, and less time requirement. © 2011 Springer Science+Business Media, LLC.