

A simple method for monitoring residues of fluoroquinolones in muscle and fish by LC-MS/MS

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Quinolones are antibacterial agents widely used in both veterinary and human medicine, as well as in aquaculture production. The majority of quinolones in clinical use belong to the subset of fluoroquinolones, which have a fluoro group attached the central ring system. They effectively treat diseases as pulmonary, urinary and digestive infections.

The use of antibacterial agents in animal production can however result in residues in edible tissues. This can cause health concerns as allergic reactions and bacterial resistance for the consumers. The European Commission has established regulations for the use of various antibacterial agents to ensure human safety. Several of the quinolones and fluoroquinolones have got a maximum residue level (MRL) for muscle and fish.

A simple and rapid method for monitoring seven different fluoroquinolones in muscle and fish is developed. The samples are analyzed by High Pressure Liquid Chromatography coupled to Mass Spectrometry (HPLC-MS/MS). The method is validated according to the EU regulation 2002/657/EC.