

METHOD FOR THE QUANTITATIVE DETERMINATION OF IVERMECTIN IN MEAT AND LIVER BY HPLC AND PRE-COLUMN DERIVATIZATION

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Ivermectin belongs to the family of the avermectins, which possess a macromolecular lactone structure and may be prepared as natural products from *Streptomyces avermitilis*. Ivermectin, consisting of a mixture of at least 80% 22,23-dihydroivermectin H₂B_{1a} and 20% 22,23-dihydroivermectin H₂B_{1b}, has a broad spectrum of activity in the therapy and prophylaxis dealing with endo- and ectoparasites. It is therefore widely used in veterinary practice and animal husbandry.

This method allows to quantitate ivermectin in samples of meat and liver of pork and cattle down to a level of detectability of 1 ppb. The sample is extracted with acetonitrile, and further clean-up is achieved by solid-phase extraction on a C₈ cartridge. Ivermectin is then converted to a fluorescent derivative at room temperature in about one minute and separated on a LiChrospher reversed-phase column. The derivative of ivermectin is highly specifically detected and quantitated by fluorescence detection (excitation: 365 nm, emission: 465 nm). The recovery lies in the range of 62-75%.

Literature

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