文章摘要

王志杰, 冷凯良, 孙伟红, 刘艳萍, 翟毓秀, 谭志军, 郭萌萌, 王瑜. 水产品中氯霉素、甲砜霉素和氟甲砜霉素残留量高效液相色谱-串联质谱内标测定方法的研究. 渔业科学进展, 2009, 30(2): 115-119

水产品中氯霉素、甲砜霉素和氟甲砜霉素残留量高效液相色谱-串联质谱内标测定方法的研究

Determination of chloramphenicol, thiamphenicol and florfenicol residues in aquatic products by HPLC-MS with internal standard method

投稿时间： 2008-03-27 最后修改时间： 2008-06-14

DOI：

中文关键词： 高效液相色谱-串联质谱 内标法 氯霉素 甲砜霉素 氟甲砜霉素 残留

英文关键词： High performance liquid chromatography tandem mass spectrometry Internal standard method Chloramphenicol Thiamphenicol Florfenicol Residues

基金项目：农业部行业专项（Nyhyzx07 046）和国家863计划项目（2008AA100805）共同资助

作者	单位
王志杰	1 中国水产科学研究院黄海水产研究所，青岛 266071
冷凯良	1 中国水产科学研究院黄海水产研究所，青岛 266071
孙伟红	1 中国水产科学研究院黄海水产研究所，青岛 266071
刘艳萍	2 上海海洋大学，201306
翟毓秀	1 中国水产科学研究院黄海水产研究所，青岛 266071
谭志军	1 中国水产科学研究院黄海水产研究所，青岛 266071
郭萌萌	1 中国水产科学研究院黄海水产研究所，青岛 266071
王瑜	2 上海海洋大学，201306

中文摘要：

建立了水产品中3种氯霉素类抗生素残留的高效液相色谱 串联质谱(HPLC-MS/MS)测定法。以氘代氯霉素(d5-CAP)为内标，样品在碱性条件下用乙酸乙酯提取，提取液氮气吹干，正己烷液液分配脱脂后，采用配有ESI源的LC MS/MS选择反应监测(SRM)负离子模式测定，可同时对水产品中的氯霉素、甲砜霉素和氟甲砜霉素进行定性和定量测定。方法简化了样品前处理过程，省去固相萃取步骤，具有操作简便、有机试剂消耗量少、测定周期短和定量更准确等优点。方法的检出限：氯霉素为0.01 μg/kg，甲砜霉素和氟甲砜霉素为0.03 μg/kg。

英文摘要：

The method for the determination of three chloramphenicols including chloramphenicol (CAP), thiamphenicol (TAP) and florfenicol (FF) in aquatic products was developed by high performance liquid chromatography tandem mass spectrometry (HPLC-MS/MS). Deuterium (d5-CAP) was used as internal standard instead of CAP, and was added to the sample before extraction with ethyl acetate. The sample was extracted with ethyl acetate to transfer CAP, TAP and FF into the organic phase. The extract liquid which consequently dried by blowing with nitrogen was dissolved with water and defatted with hexane. The mass

into the organic phase. The extract liquid which consequently dried by blowing with nitrogen was dissolved with water and defatted with hexane. The mass spectrometer was operated in the negative ion mode using select reaction monitoring for qualitative and quantitative analysis of these compounds at the same time. The preliminary treatment was predigested, and no solid phase extraction (SPE) procedure was adopted. The advantages of the method are simple operation, less organic chemicals consumed, and shorter operation time. The limit of detection (LOD) for CAP was 0.01 μg/kg and 0.03 μg/kg for TAP and FF.

查看全文 查看/发表评论 下载PDF阅读器

关闭

主管单位：中华人民共和国农业部 主办单位：中国水产科学研究院黄海水产研究所 中国水产学会

地址：青岛市南京路106号,黄海水产研究所《渔业科学进展》编辑部 邮编：266071

电话：0532-85833580 E-mail: yykxjz@ysfri.ac.cn

技术支持北京勤云科技发展有限公司