

高效液相色谱-串联质谱法测定鸡肉组织中癸氧喹酯残留

陈瑞清^{1,2}, 俞道进¹, 陈锋², 黄一帆^{1*}

1. 福建农林大学动物科学学院, 福建 福州 350002; 2. 福建省农产品质量安全检验检测中心, 福建 福州 350003

Determination of decoquinatate in chicken meat by high performance liquid chromatography-tandem mass spectrometry

CHEN Ruiqing^{1,2}, YU Daojin¹, CHEN Feng², HUANG Yifan^{1*}

1. College of Animal Science, Fujian Agriculture and Forestry University, Fuzhou 350002, China; 2. Fujian Inspection and Testing Centre for Agricultural Product Quality and Safety, Fuzhou 350003, China

摘要	参考文献	相关文章
----	------	------

Download: PDF (168KB) [HTML](#) 1KB Export: BibTeX or EndNote (RIS) Supporting Info

摘要 建立了测定鸡肉组织中癸氧喹酯(DEC)残留的高效液相色谱-串联质谱(HPLC-MS/MS)方法。样品经乙腈提取,正己烷脱脂,固相萃取(SPE)小柱净化;采用0.1%甲酸乙腈溶液-0.1%甲酸水溶液(78:22, v/v)为流动相,电喷雾正离子电离(ESI+)模式,多反应监测(MRM)检测模式,以内标法进行定量。结果表明: DEC在1~200 µg/L范围内呈良好的线性关系,相关系数(r²)大于0.99; 1、10、100 µg/kg 3个添加水平的回收率为78.2%~107.4%,日内、日间相对标准偏差(RSD)均小于15%,方法检出限为0.25 µg/kg,定量限为0.5 µg/kg。该方法简便、灵敏、精确,可用于鸡肉组织中DEC药物残留的确认检测。

关键词: 高效液相色谱-串联质谱; 癸氧喹酯 残留 鸡肉

Abstract: A high performance liquid chromatography-tandem mass spectrometry (HPLC-MS/MS) method was developed for the determination of decoquinatate (DEC) residue in chicken meat. The sample was extracted with acetonitrile, cleaned-up with hexane, and purified with solid phase extraction (SPE) cartridge. The mobile phase was acetonitrile (containing 0.1% formic acid) and water (containing 0.1% formic acid). The analyte was identified by positive electrospray ionization (ESI+) mode and multiple reaction monitoring (MRM) mode. The results showed as follows: The calibration curve showed good linearity within the concentrations of 1~200 µg/L with the correlation coefficient (r²) > 0.99. At the spiked levels of 1, 10 and 100 µg/kg, the recoveries of DEC were 78.2%~107.4%. The relative standard deviations (RSDs) of intra- and inter-days were both less than 15%. The limit of detection of DEC was 0.25 µg/kg and the limit of quantification was 0.5 µg/kg. The method is simple, sensitive and accurate in the determination of DEC residue, which can meet the requirements of the domestic and international legislations.

Keywords: high performance liquid chromatography-tandem mass spectrometry (HPLC-MS/MS) decoquinatate residue chicken meat

Received 2010-07-01; published 2010-10-28

Fund:

无

Corresponding Authors: 黄一帆, 教授, 主要研究方向为天然药物研究与应用. E-mail: zjhyfang@163.com. 基金项目: 福建省科技重点项目(No. 2008Y0002). Email: chenruiqing@ivdc.gov.cn

引用本文:

陈瑞清^{1,2}, 俞道进¹, 陈锋², 黄一帆^{1*}. 高效液相色谱-串联质谱法测定鸡肉组织中癸氧喹酯残留[J] 色谱, 2010, V28(10): 997-1000

CHEN Ruiqing, YU Daojin, CHEN Feng, HUANG Yifan. Determination of decoquinatate in chicken meat by high performance liquid chromatography-tandem mass spectrometry[J] Chinese Journal of Chromatography, 2010, V28(10): 997-1000

链接本文:

<http://www.chrom-china.com/CN/10.3724/SP.J.1123.2010.00997> 或 <http://www.chrom-china.com/CN/Y2010/V28/I10/997>

Service

- ▶ [把本文推荐给朋友](#)
- ▶ [加入我的书架](#)
- ▶ [加入引用管理器](#)
- ▶ [Email Alert](#)
- ▶ [RSS](#)

作者相关文章

- ▶ [陈瑞清](#)
- ▶ [俞道进](#)
- ▶ [陈锋](#)
- ▶ [黄一帆](#)