

## 论文

### 济南市售肉制品中喹诺酮类兽药残留调查

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#### 摘要:

**目的** 了解山东省济南市售肉制品中喹诺酮类(氧氟沙星、环丙沙星、恩诺沙星)兽药残留现状, 为确保食品安全提供相关信息。**方法** 随机选取济南市5个行政区内的10个采样区域, 应用高效液相色谱法对270份样品中的兽药残留情况进行检测, 依据《动物性食品中兽药最高残留限量》进行评价。**结果** 检测的270份样品中, 喹诺酮类兽药检出率和超标率分别为28.15%和24.44%, 检出范围为21.61~15 134.75  $\mu\text{g}/\text{kg}$ ; 猪肾、猪肝中喹诺酮类兽药超标率分别为43.33%和27.50%, 均高于猪肉的13.33% ( $P<0.05$ ); 鸡胗中喹诺酮类兽药超标率为35.29%, 均高于鸡肝的28.13%和鸡肉的9.76% ( $P<0.05$ ); 牛肉中喹诺酮类兽药超标率为27.50%, 羊肉中未检出; 喹诺酮类兽药在超市与农贸市场中的超标率分别为27.34%和21.83%, 两者差异无统计学意义 ( $P>0.05$ ); 非品牌肉制品中喹诺酮类兽药超标率为24.82%, 与品牌肉制品的24.06%比较, 差异无统计学意义 ( $P>0.05$ )。**结论** 济南市售肉制品中有不同程度的喹诺酮类兽药残留。

**关键词:** 喹诺酮类 兽药残留 肉制品 市场调查

## Residues of quinolones in meat products sold in Ji'nan city

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#### Abstract:

**Objective** To detect the residues of quinolones(ofloxacin,ciprofloxacin,enrofloxacin) in meat products commercially available in Ji'nan,Shandong province and to provide relevant information to ensure food safety.**Methods** A total of 270 samples were collected randomly from 10 areas in 5 administrative districts of Ji'nan city and quinolones residues in the samples were analyzed with high performance liquid chromatography (HPLC).The measurement Results were assessed according to Maximum Residue Levels(MRLs) of Veterinary Drugs in Animal Foods.**Results** For the 270 samples,the quinolones detection rate was 28.15% and the exceeding standard rate was 24.44%,with a concentration range from 21.61 to 15 134.75  $\mu\text{g}/\text{kg}$ .The exceeding standard rates of quinolones for pig kidneys and livers were 43.33% and 27.50%,which were higher than that for pork(13.33%)( $P<0.05$ ).The exceeding standard rate for chicken gizzards was 35.29%,which was higher than that for liver(28.13%) and chicken meat(9.76%) ( $P<0.05$ ).The exceeding standard rate in beef was 27.50% and no residue was detected in mutton.The exceeding standard rates for samples from supermarkets and farmer's markets were 27.34% and 21.83%,without significant difference( $P>0.05$ ).The exceeding standard rate for non-brand meat was 24.82% and 24.06% for brand meat,without significant difference( $P>0.05$ ).**Conclusion** There are different levels of quinolones residues in meat products sold in Ji'nan city.

**Keywords:** quinolones residue of veterinary drug meat product market survey

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