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论文

受体分析结合酶联免疫检测牛乳中的头孢噻呋残留

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摘要:

利用源于肺炎链球菌的青霉素结合蛋白PBP 2x对β-内酰胺类抗生素具有高度亲和力的性质, 提出了一种受体分析结合酶联免疫快速检测牛乳中头孢噻呋残留的新方法. 在样品中残留的β-内酰胺类抗生素只有头孢噻呋的前题下, 该法可作为定量筛选方法. 对牛乳中头孢噻呋的检测极限可达到欧盟规定最大残留量的1/5, 并且不需要烦琐的样品预处理. 给出了头孢噻呋残留检测的标准曲线, 可用于快速定量分析.

关键词: 牛乳 头孢噻呋 受体分析 酶联免疫分析

Determination of Ceftiofur Residues in Milk by Receptor-based Microplate with Elisa Assay

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Abstract:

The penicillin-binding protein PBP 2x from Streptococcus pneumoniae was utilized to develop a novel microplate assay for the determination of ceftiofur with intact β-lactam structure in milk. The assay was developed as screening test with the option for a quantitative assay for ceftiofur residues. Ceftiofur could be detected at levels corresponding to 1/5 EU maximum residue limit(MRL) in milk without lengthy and elaborate sample pre-treatment. Matrix calibration curves are presented, which show that quantitative analyses are possible.

Keywords: Milk Ceftiofur Receptor binding assay Enzyme-linked immunosorbnent assay

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