

有机质谱学

液相色谱-串联质谱同时测定牛奶中10种蛋白同化激素的残留

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摘要

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Simultaneous Determination of 10 Anabolic Steroids Contaminations in Milk by Liquid Chromatography-Tandem Mass Spectrometry

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Abstract A liquid chromatographic/tandem mass spectrometric (LC/MS/MS) multiresidue method for the simultaneous determination of 10 anabolic steroids (ASs) in whole milk were developed. Milk samples were extracted with methanol and the samples were then subjected to a clean-up procedure using liquid-liquid extraction (LLE) methods. The samples were analysed by LC/MS/MS. The limits of detection (LOD) of LC/MS/MS method used for testing the 10 ASs in whole milk ranged from 0.06 to 0.22 $\mu\text{g}\cdot\text{L}^{-1}$, and the limits of quantification (LOQ) were from 0.12 to 0.54 $\mu\text{g}\cdot\text{L}^{-1}$. Experiments on spiked samples of whole milk showed that at addition levels of 1.0, 2.0, 10 $\mu\text{g}\cdot\text{L}^{-1}$ the average recoveries of the ASs were 24% to 86%, 25% to 91%, 31% to 71%, with relative standard deviations (RSDs) ranged from 12% to 37%, 5% to 20%, 10% to 16%, respectively.

Key words [simultaneous](#) [determination](#) [anabolic](#) [steroids](#) [liquid](#) [chromatography](#) [tandem](#) [mass](#) [spectrometry](#)

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