

研究简报

高效液相色谱-串联质谱法测定水果中乙氧基喹啉残留

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摘要 建立了高效液相色谱-串联质谱法测定苹果和梨中乙氧基喹啉抗氧化剂残留的方法。正己烷提取碱性样品溶液中的分析残留物, 一步萃取, 简单快捷。利用C₁₈色谱柱进行分析, 流动相中加入适量的甲酸和乙酸铵优化色谱峰形, 串联质谱选择m/z 218.1母离子和 m/z 147.9和m/z 175.9两个子离子进行定性和定量分析。该方法检测下限可以达到5 μg•kg⁻¹, 线性范围为20~200 μg•L⁻¹, 3个添加水平回收率为86.6%~91.7%, 相对标准偏差(RSD)为4.8%~5.3%。

关键词 [高效液相色谱-串联质谱](#) [乙氧基喹啉](#) [水果](#)

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Determination of Ethoxyquin Residues in Fruits by HPLC-MS/MS

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Abstract A method for analysis of trace ethoxyquin residues in apple and pear was developed by high performance liquid chromatography-tandem mass spectrometry (HPLC-MS/MS). The ethoxyquin residues in alkali sample solution were partitioned into hexane, and C₁₈ reverse phase column was applied as the analytical column. Appropriate formic acid and ammonium acetate were added into mobile phase to optimize the shape of chromatographic peak. One parent ion of m/z 218.1 and two daughter ions of m/z 147.9 and m/z 175.9 were selected as quantitative and qualitative ions. Limit of detection (LOD) is 5 μg•kg⁻¹, and the linear range is 20~200 μg•L⁻¹. The recoveries in three spiked level are in the range of 86.6%-91.7%, with relative standard deviation (RSD) of 4.8%-5.3%.

Key words [HPLC-MS/MS](#) [ethoxyquin](#) [fruit](#)

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