

研究论文

气相色谱-负化学离子源质谱法检测食品中苯醚甲环唑的残留量

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摘要 摘要: 建立了一种用于各种食品中苯醚甲环唑残留量的气相色谱-负化学离子源质谱 (GC-MS/NCI) 检测方法。用乙酸乙酯对各类样品中苯醚甲环唑进行提取, 固相萃取 (SPE) 净化后由 GC-MS/NCI-SIM 技术进行测定。方法准确度和精密度高, 在 0.01、0.04、0.10 mg/kg 三个添加水平下平均回收率处于 70~120% 之间, RSD ≤ 9.5%。方法在 0.02~1.00 mg/L 范围内有良好的线性关系, 且灵敏度高, 最低检测限达到 0.0005 mg/kg; 选择性好, 抗干扰能力强, 能消除复杂基质带来的干扰, 适合各种食品中苯醚甲环唑残留量的确证分析。关键词: 苯醚甲环唑; 气相色谱-质谱联用; 负化学离子源; 固相萃取

关键词 [苯醚甲环唑](#) [气相色谱-质谱联用](#) [负化学离子源](#) [固相萃取](#)

分类号

Determination of Difenoconazole Residue in foods by Gas Chromatography-Negative Chemical ionization Mass Spectrometry

Abstract

Abstract: A confirmatory method is presented for the determination of difenoconazole residue in all kinds of foods by solid phase extraction-gas chromatography-negative chemical ionization mass spectrometry (SPE-GC-MS/NCI). Difenoconazole residue was extracted from different samples with ethyl acetate, such as Perilla leaf, Carrot, Spinach powder, Rice, yellow bean, Jasimine flower tea, Oolong tea, strawberry, soy sauce, bee honey, beef, chicken and eel, etc. And extract was cleaned-up by active carbon SPE column connected to alumina neutral SPE column or Florisil SPE column only. Analytical screening was determined by the technique of gas chromatography-negative chemical ionization mass spectrometry-selected ion monitoring. The method is reliable and stable that the recoveries of difenoconazole in different samples were in the range from 70% to 120% at three spiked level, 0.01 mg/kg, 0.04 mg/kg and 0.10 mg/kg, and the CVs were below 9.5%. The linearity of method is good from 0.02 to 1.00 mg/L, and LOD= 0.0005 or 0.0010 mg/kg for different type samples. The method is selective well with no interference and is suitable for confirmatory of difenoconazole residue in all kinds of foods. Key words: difenoconazole; gas chromatography- mass spectrometry; negative chemical ionization; solid phase extraction

Key words [difenoconazole](#) [gas chromatography- mass spectrometry](#) [negative chemical ionization](#) [solid phase extraction](#)

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