

## 高效液相色谱-串联质谱法测定食品中20种氨基甲酸酯类农药残留

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## Determination of 20 carbamate pesticide residues in food by high performance liquid chromatography-tandem mass spectrometry

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摘要

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**摘要** 建立了食品中20种氨基甲酸酯类农药残留量的高效液相色谱-串联质谱联用(HPLC-MS/MS)测定与确证方法。20种氨基甲酸酯类农药在0.005~0.1 mg/kg范围内线性良好,相关系数为0.991 7~0.999 6;在0.005~0.025 mg/kg范围内,20种目标物的回收率为51.25%~125.0%,相对标准偏差为1.4%~19.8%。该方法准确、灵敏、快速,可满足国际上对食品中这20种氨基甲酸酯类农药残留量的检测要求。

**关键词:** 高效液相色谱-串联质谱法 残留分析 氨基甲酸酯类农药 食品

**Abstract:** A new method of determination and conformation for 20 carbamate pesticide residues in food by high performance liquid chromatography-tandem mass spectrometry (HPLC-MS/MS) was developed. The residual carbamate pesticides in food were extracted with acetonitrile, cleaned up with C18 solid phase extraction column or Carbamate extraction column, and the targets were detected and confirmed by HPLC-MS/MS using external standard. The recoveries of the 20 carbamate pesticides in spiked levels (from 0.005 to 0.025 mg/kg) ranged from 51.25% to 125.0% with the relative standard deviations (RSDs) from 1.4% to 19.8%; the concentration range of linearity was 0.005~0.1 mg/kg; the correlation coefficients were 0.991 7~0.999 6. The method is fast, easy, sensitive and also demonstrates that this method can meet the requirements for the simultaneous determination of 20 carbamate pesticide residues in food.

**Keywords:** high performance liquid chromatography-tandem mass spectrometry (HPLC-MS/MS) residues of carbamate pesticides food

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