

蔬菜有机磷农药残留检测试剂包检测条件的优化

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关键词: 蔬菜 农药残留 乙酰胆碱酯酶 检测

摘要: 以商品化的乙酰胆碱酯酶试剂包为研究对象, 比较了不同用量乙酰胆碱酯酶、底物和显色剂下的抑制率, 并在此基础上进行了正交试验。在保证一定检测精度的前提下确定了酶用量为推荐用量的3/4, 底物用量为推荐用量的3/4, 显色剂用量为推荐用量的1/2, 降低了检测成本。通过F检验证明, 调整后配方和原配方之间无显著性差异。在此条件下, 氧乐果、敌百虫和敌敌畏的检测限大约分别为0.37 mg/L、0.09 mg/L和0.035 mg/L, 与原配方一致。

The optimization of determination for organophosphate pesticide residues in vegetables was studied. In the promise of higher sensitivity, a new low cost reagent components, whose dosage of acetylcholinesterase (AChE), substrate and chromogenic reagent were 3/4, 3/4 and 1/2 that of original components respectively, thus saved cost of reagent. The result was achieved through contrastive test. F-test proved that there was no significant difference between adjusted components and original components. The lower limit of determination of adjusted components to three pesticides is omethoate 0.37 mg/L, trichlorphon 0.09 mg/L, dichlorvos 0.035 mg/L, which is consistent with those of national standard rapid determination method.

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