

食品安全检测专栏

洋葱中重金属分布的ICP-MS分析

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摘要 采用电感耦合等离子体质谱法测定洋葱中重金属的分布, 用硝酸-过氧化氢作消解液, 微波消解法处理样品, ICP-MS 法测定洋葱皮和肉中砷、铅、汞3种重金属元素的含量。测定结果的相对标准偏差RSD< 5.1%, 加标回收率为91.1%~104.9%, 检出限为0.007 2~0.087 ng•g⁻¹。该方法具有操作简便, 快速, 灵敏度高, 准确度好和多种元素同时测定等优点。

关键词 [电感耦合等离子体-质谱](#) [洋葱](#) [重金属](#)

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Determination of Heavy Metals in Onion Skin and Pulp by ICP-MS

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Abstract Heavy metals in onion skin and pulp were studied by ICP-MS. The samples were digested by microwave assistedly with nitric acid-hydrogen peroxide. The contents of As, Pb and Hg in onion skin and pulp were measured by ICP-MS. The RSD is less than 5.10% and the recoveries are in the range of 91.1%-104.9%. The determination of limits are 0.007 2-0.087 ng•g⁻¹. This method is fast, stable and accurate. It is suitable for determination of some heavy metals in onion skin and pulp.

Key words [ICP-MS](#) [onion](#) [heavy](#) [metal](#)

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