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摘要：建立液相色谱-串联质谱(LC-MS/MS)测定各种植物油中儿茶素的方法。植物油经水或甲醇液-液萃取，采用Zorbax SB C18柱，以乙腈-0.1%甲酸为流动相进行梯度洗脱，用多反应监测扫描方式对表没食子儿茶素、儿茶素、表儿茶素、表没食子儿茶素没食子酸酯和没食子儿茶素没食子酸酯等6种儿茶素类茶多酚进行检测。方法的最低检出限均为5-20pg，平均回收率为79.6-99.9%，精密度为0.97%-5.35%。用所建立的方法测定市售植物油中儿茶素类茶多酚的含量。

关键词：植物油,液相色谱,儿茶素

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### Determination of 6 catechins in vegetable oils by liquid chromatography-tandem mass spectrometry

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Abstract: A method was developed for the determination of 6 catechins in vegetable oils by liquid chromatography-tandem mass spectrometry(LC-MS/MS). After liquid-liquid extraction using methanol and water, the vegetable oils were chromatographed on a Zorbax SB C18 column with a gradient system of acetonitrile and 0.1% formic acid as mobile phase, then detected using a MS/MS system with electrospray ionization (ESI) in multi-reaction monitoring (MRM) mode. The detection limits of epigallo-catechin, catechin, epicatechin, epigallocatechin gallate, gallic catechin gallate and epicatechin gallate ranged from 5pg to 20pg. The recoveries ranged from 79.6% to 99.9%, and the precisions (measured as relative standard deviations) were 0.97%-5.35%. The method has been successfully applied in the determination of catechins in the vegetable oils.

Key words: Vegetable oils, Liquid chromatography-tandem mass spectrometry, Catechins

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