

采用高效液相色谱-串联质谱技术,多重反应监测模式对岩茶水库岭肉桂样品中的原花青素组分进行定性和定量分析。采用Waters SunFire-C₁₈柱(150 mm×2.1 mm×5 μm),流动相为乙腈和0.1%甲酸水溶液,流速0.25 mL/min,柱温25℃,进样量3 μL。结果表明,岩茶水库岭肉桂样品中的原花青素主要有儿茶素、表儿茶素、表儿茶素没食子酸酯和原花青素B₂,其回归方程和相关系数分别为: $y_1=642.48x-63.693$, $r=0.9995$; $y_2=550.45x+10.386$, $r=0.9996$; $y_3=2261.5x-1320.0$, $r=0.9995$ 和 $y_4=4598.5x-4079.0$, $r=0.9995$;其线性范围为5.00~150.00 mg/L。方法的加标回收率为93.9%~108.0%,变异系数小于7.53%,最低检出限为0.0055~0.0132 μg/g。

The procyanidins in the rock tea shuikuling rougui were identified and determined by liquid chromatography-tandem mass spectrometry(HPLC-ESI-MS/MS) technique with the multiple-reaction monitoring mode. The catechins, epicatechin, epicatechin gallate and procyanidins B₂ were separated and identified successfully by Waters SunFire-C₁₈ column (150 mm×2.1 mm×5 μm), with 0.1% formic acid solution and acetonitrile as the mobile phase in gradient elution, flow velocity was 0.25 mL/min, column temperature was 25℃, and sample volume was 3 μL. The linear regression equation and correlation coefficient of the catechins, epicatechin, epicatechin gallate and procyanidins B₂ are $y_1=642.48x-63.693$, $r=0.9995$; $y_2=550.45x+10.386$, $r=0.9996$; $y_3=2261.5x-1320.0$, $r=0.9995$ and $y_4=4598.5x-4079.0$, $r=0.9995$, respectively. The linear ranges are 5.00—150.00 mg/L, the recoveries are 93.9%—108.0%, the coefficients of variation are less than 7.53% and the limit of detection are 0.0055—0.0132 μg/g.

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岩茶水库岭肉桂中原花青素的高效液相色谱-串联质谱法分析

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Analysis of Procyanidins in Rock Tea Shuikuling Rougui by Liquid Chromatography-Tandem Mass Spectrometry

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