

Determination of Catechins in Tea Drinks by High Performance Liquid Chromatography

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ABSTRACT

A method was developed for the determination catechins in tea drinks by high performance liquid chromatography (HPLC) with photodiode array detector (PAD). Samples were diluted with 0.1% phosphoric acid solution appropriately, eluted in stepwise with 0.1% formic acid (prepared with deionized water) and acetonitrile at flow rate 1 mL/min through an Agilent Eclipse Plus C₁₈ column (4.6 mm i.d. × 25 cm, 5 μm) and detected at 280 nm wavelength. Eight kinds of catechins and caffeine in tea drinks were well separated. The amounts of catechins detected from 22 samples were in the range of 24-96 mg/mL. Except for 4 samples, the amounts of catechins detected in the rest 18 samples were all coincided with the labeling regulation.

Key words: tea drink, catechin, caffeine, HPLC

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