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High Sensitive Determination Method of Chlorogenic acid and Epicatechin from Crataegi Fructus by Reversed-Phase HPLC Pulsed Amperometric Detection

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Until now, HPLC-UV method generally has beenused for the analysis of chlorogenic acid and epicatechin in Crataegi fructus. It has low sensitivity and was not suitable to microanalyze the Chinese medicinal preparations. To resolve this problem, we developed a reversed-phase high-perfomance liquid chromatography pulsed amperometric detection (RP- HPLC-PAD) method. The method showed high sensitivity and selectivity without any pretreatment for chlorogenic acid and epicatechin in Crataegi fructus. The column used was Hypersil Gold C_{18} (150 x 2.1 mm, 3 μm). We used 9% ACN in 10mM phosphate buffer (pH 2.4) as a mobile phase and 100 mM sodium hydroxide as a post-column reagent. The detector used was pulsed amperometric detector. The column temperature was 32℃ and injection volume was 10 μL. The limits of detection (LOD) for chlorogenic acid and epicatechin were 0.3 ng/μL and 0.5 ng/μL, respectively.