



论文摘要

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沉淀-吸附法制备高纯酯型儿茶素

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摘要: 用 $ZnCl_2$ 作沉淀剂, 当溶液pH值为5.6-6.5时, 将茶叶浸提液中的儿茶素以金属盐的形式沉淀, 沉淀物经洗涤后, 用质量分数为40%的硫酸溶解, 然后将溶液直接加入聚酰胺树脂柱上, 先用蒸馏水将 Zn^{2+} , Na^+ 等无机离子除去, 再用乙醇将茶多酚洗脱, 洗脱液经浓缩、干燥, 得到纯度高于99%的高纯酯型儿茶素, 提取率达10.2%, 其中EGCG, GCG, ECG含量分别为64%, 16%和19%, 金属离子含量小于 $1 \times 10^{-3}\%$, 未检出咖啡因。

关键字: 沉淀-吸附法; 儿茶素; 聚酰胺树脂; 提取

Preparation of highly pure ester catechines by precipitation-adsorption method

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Abstract: Catechines in tea were precipitated in the form of metallic salts with $ZnCl_2$ as precipitant at pH 5.6-6.5. Then, the catech in is dissolved by 40% sulfuric acid solution (mass fraction) after being washed by water, and through the polyamide column. The inorganic ions such as Zn^{2+} , Na^+ were removed by distilled water, catechines were washed with 95% alcohol, after being condensed and dried, highly pure ester catechines were obtained. The effective ingredient of the ester catechines reached 99% with 10.2% extraction rate. The contents of EGCG, GCG, ECG are 64%, 16% and 19%, respectively. The content of metal ions in catechin was less than 10-3% and caffeine was not detected.

Key words: precipitation-adsorption method; ester catechines; polyamide; preparation

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