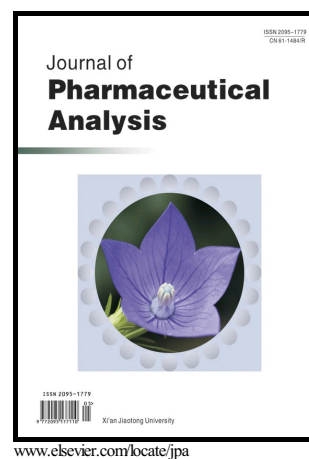


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# Identification of the botanical Chinese unifloral honeys by free amino acid profiles and chemometric methods

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## Abstract

The amino acid contents of five floral sources Chinese honeys (jujube, rape, chaste, acacia, lungan) were measured using reversed phase high performance liquid chromatography (RP-HPLC). The results showed that proline was the main amino acid in most of the analyzed samples. Phenylalanine was present at highest content in chaste honey samples, and the total amino acid contents of chaste honeys were also significantly higher than those of other honey samples. Based on the amino acid contents, honey samples were classified using chemometric methods (cluster analysis (CA), principal component analysis (PCA), and discriminant analysis (DA)). According to the CA results chaste honeys could be separated from other honeys, while the remaining samples were correctly grouped together when the chaste honey data were excluded. By using DA, the overall correct classification rates reached 100%. All of these results revealed that amino acid contents could potentially be used as indicators to identify the botanical origin of unifloral honeys.

## Key words:

honey; free amino acid; chemometrics; RP-HPLC.

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