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Algorithm for rapid identification of flavonoids classes (Article)

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Abstract

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Bioactive compounds are one of the natural products used especially for medicinal, pharmaceutical and food application. Increasing research performed on the extraction, isolation and identification of bioactive compounds, however non to date has explored on the identification of flavonoids classes. Therefore, this study was focused on the development of algorithm for rapid identification of flavonoids classes which are flavanone, flavone and flavonol and also their derivatives. Fourier Transform Infrared (FTIR) spectroscopy coupled with multivariate statistical data analysis, which is Principal Component Analysis (PCA) was utilized. The results exhibited that few significant wavenumber range provides the identification and characterization of the flavonoids classes based on PCA algorithm. The study concluded that FTIR coupled with PCA analysis can be used as a molecular fingerprint for rapid identification of flavonoids. © All Rights Reserved.

Author keywords

Fingerprint algorithm Flavonoids Fourier transform infrared spectroscopy Principal component analysis

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