

Metody analizy flawonoidów w materiale roślinnym

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Methods of flavonoids' analysis in plant material

Summary

Flavonoids form a group of secondary metabolites ubiquitous in the plant kingdom. These compounds are synthesized in plant tissues on the phenylalanine lyase pathway and may be divided into several groups, differing in their skeleton: flavones, flavonols, isoflavons, flavanons, flavan-3-ols (catechins), anthocyanidins, aurons, and chalcones. All these compounds occurring in plant tissues may be hydroxylated, methylated or sulphated and are substituted with different groups such as sugars or acyls. More than 6000 compounds differing in their chemical and biological properties belong to this group. Fast and precise methods of identification and quantitative analysis of all these plant constituents are necessary because of their important biological functions and different applications of plant products. Instrumental analytical methods used in this purpose are described in the paper. Special concern is directed to particularly useful hyphenated chromatographic techniques such as HPLC/MS, HPLC/NMR, GC/MS, and CE/MS.

Key words:

flavonoids, glycoconjugates, instrumental methods, gas chromatography, liquid chromatography, mass spectrometry

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