Matrix-free laser desorption ionization mass spectrometry as a functional tool for the analysis and differentiation of complex phenolic mixtures in propolis: a new approach to quality control

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Résumé en anglais	Matrix-free laser desorption ionization (LDI) is a rapid and versatile technique for the ionization of small, UV-light-absorbing molecules. Indeed, many natural products such as polyphenols exhibit inherent LDI properties, potentially facilitating their detection from highly complex samples such as crude extracts. With this in mind, the present work thoroughly evaluated the potential of LDI as an analytical tool for the chemical profiling and differentiation of propolis samples obtained from different global regions. Propolis is a complex bee product containing, among others, significant amounts of phenolic constituents that may show LDI effects. The present work will demonstrate that LDI not only provides reproducible and highly specific fingerprint spectra for each of the tested samples, it further allows their clear differentiation by principal compound analysis (PCA). Contrary to classical analytical approaches such as LC- or GC-MS, LDI does not require time-consuming sample preparation and method optimization procedures. Thus, the technique represents a most interesting analytical tool and potent supplement to classic LC-MS for quality control of herbal pharmaceuticals and dietary supplements. Present results clearly support this approach and further suggest the use of LDI as a versatile tool for the automated analysis of large sample batches on an industrial scale.
URL de la notice	http://okina.univ-angers.fr/publications/ua17351 [13]

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