



Desorption/ionization on self-assembled monolayer surfaces (DIAMS): a new matrix-free laser desorption/ionization promising for the analysis of vegetal extracts

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Résumé en anglais	<p>Rapid analysis of small molecular weight compounds is one of the most widespread applications of mass spectrometry. The high throughput analyses of vegetal extracts are relatively difficult to perform in MALDI mass spectrometry, since preparation of the sample involves the co-crystallization of the matrix with the analyte. Moreover irradiation of the matrix ion produces many low-m/z vs high-intensity ions preventing the detection of low molecular weight molecules such as secondary metabolites. Our work aims at developing a matrix free alternative to MALDI analysis by the means of an original desorption/ionization on self-assembled monolayers surfaces (DIAMS) technique. We have focused our attention on a monolayer constituted by a 2,2'-bithiophene 5-substituted by an alkylthio linked to the gold surface [1]. With the example of salicylate derivatives, we show that the DIAMS method is suitable to the detection and quantification of the low molecular weight compounds. Indeed, the technique is as statistically repeatable and reproducible as other mass spectrometries [2]. This DIAMS method could be suitable to the qualitative and quantitative studies of polar and apolar vegetal extracts without any preliminary chromatographic resolution.</p>
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- [3] [http://okina.univ-angers.fr/publications?f\[author\]=259](http://okina.univ-angers.fr/publications?f[author]=259)
- [4] <http://okina.univ-angers.fr/olivier.aleveque/publications>
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