Evaluation of a new matrix-free laser desorption/ionization method through statistic studies: comparison of the DIAMS (desorption/ionization on self-assembled monolayer surface) method with the MALDI and TGFA-LDI techniques

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Résumé en anglais	This work demonstrates that the desorption/ionization on self-assembled monolayer surface (DIAMS) mass spectrometry, a recent matrix-free laser desorption/ionization (LDI) method based on an organic target plate, is as statistically repeatable and reproducible as matrix assisted laser desorption ionization (MALDI) and thin gold film-assisted laser desorption/ionization (TGFA-LDI) mass spectrometries. On lipophilic DIAMS of target plates with a mixture of glycerides, repeatability/reproducibility has been estimated at 15 and 30% and the relative detection limit has been evaluated at 0.3 and 3 pmol, with and without NaI respectively. Salicylic acid and its d6-isomer analysis confirm the applicability of the DIAMS method in the detection of compounds of low molecular weight.
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