

FAST ANALYSIS BY AMBIENT MASS SPECTROMETRY COUPLED DIRECTLY TO MICROEXTRACTION

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The determination of trace residues and contaminants in complicated matrix often requires extensive sample preparation prior to instrumental analysis. Usually, sample preparation is the bottleneck in a whole analytical procedure, and minimized preparation steps are highly desired to reduce both time and sources of error. On the other hand, most analytical methods rely on the separation by liquid chromatography (LC) or gas chromatography (GC), which make the entire method complicated and time-consuming. Ambient mass spectrometry (AMS), in which the ionization takes place in open air under ambient conditions, is frequently used for the rapid determination or screening of analytes without the need of chromatography separation in some cases. In this presentation, we report our research to combine effective microextraction with AMS for high throughput analysis of targeted compounds in complex samples, including rapid screening for synthetic antidiabetic drug adulteration in herbal dietary supplements, rapid analysis of multiple phytohormones in fruit juice, fast analysis of triazine herbicides in environmental samples and four Sudan dyes in food samples.

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