



## Rapid Detection of Drug-abuse by Mass Spectrometry

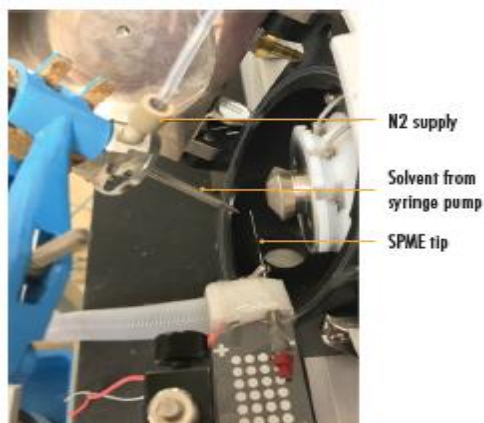
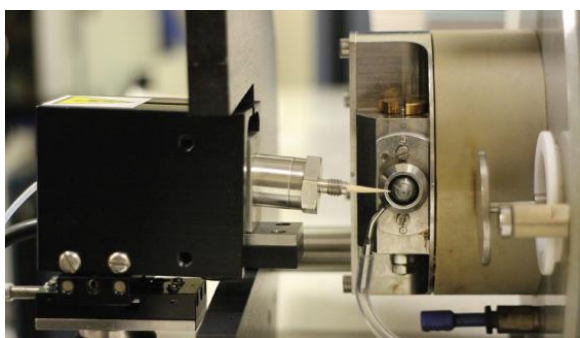
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Drug  
Analysis

Conventional drug analysis typically involves preliminary screening, followed by confirmatory analysis. However, the preliminary screening has the problem of producing false positive or false negative results, while the confirmatory analysis is time-consuming and laborious.

To solve these problems, two techniques have been developed, i.e., wooden-tip electrospray ionization mass spectrometry (WT-ESI-MS) and solid phase microextraction coupled with electrospray ionization mass spectrometry (SPEM-ESI-MS), for rapid and reliable detection of drugs-of-abuse.

WT-ESI-MS allowed detection of common drugs-of-abuse in urine and oral fluid with analysis of one sample within minutes, while SPME-ESI-MS allowed detection of drugs-of-abuse in urine and oral fluid with higher sensitivity within reasonable time.



### Representative Publications:

1. Ng, T.T., So, P.K., Hu, B., Yao, Z.P.\* Rapid detection and quantitation of drugs-of-abuse by wooden-tip electrospray ionization mass spectrometry. *J. Food Drug Anal.* 2019, 27, 428-438.
2. So, P.K., Ng, T.T., Wang, H.X., Hu, B., Yao, Z.P.\* Rapid detection and quantitation of ketamine and norketamine in urine and oral fluid by wooden-tip electrospray ionization mass spectrometry. *Analyst*, 2013, 138, 2239-2243.



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