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Ambient pressure mass spectrometry of fingerprints

Ambient pressure mass spectrometry of latent fingerprints provides a potential route to the secure, high throughput and non-invasive detection of, amongst other things, drugs of abuse. We have shown that it is possible to detect both the drugs of abuse as well as the excreted metabolites in the fingerprints using ambient mass spectrometry. A recent press release on this work reported in the Analyst received a large amount of media interest around the world. We report here on the preliminary study employing MALDI, SIMS, DESI and paper spray backed up by GC-MS of oral fluids. The study shows that ambient mass spectrometry can detect cocaine, benziylecgonine (BZE) and methylecgonine (EME) in the fingerprints of drug users. The results provide exciting opportunities for the use of fingerprints a new sampling medium for secure, non-invasive drug detection. The mass spectrometry techniques used offer a high level of selectivity and consume only a small area of a single fingerprint, allowing repeat and high throughput analyses of a single sample

Biography

Roger P Webb completed his PhD from Salford University and performed Postdoctoral studies at the Naval Postgraduate School in Monterey, Ca, USA. He is now the Director of the Surrey Ion Beam Centre, the National Centre for Ion Beam Applications in the UK. He has published more than 250 papers in reputed journals and has served on editorial boards of a number of journals and is a member of the scientific program committees of a number of international conferences.

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