Detectability of abused Drugs in Oral Fluid Samples
Corresponding to Analytical Results in the Respective Blood Samples
taken at Roadside Concerning Traffic Offences

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Abstract:
Recent studies have shown that there is a growing interest in the use of oral fluid as matrix for drug testing, especially from the police point of view. At present, the Institute of Legal Medicine Homburg/Saar, Germany, is co-operating with the German traffic police of the Saarland state and the Institute of Forensic Toxicology Frankfurt, Germany, in order to study how the detectability of abused drugs in saliva samples corresponds to analytical results in the respective serum samples. For this purpose, police officers will collect approx. 200 oral fluid samples from drivers during night controls, which are suspected to be influenced by drugs, and who have to undergo venipuncture. The oral fluid testing is done with a prototype version of the Draeger DrugTest, including collector, cartridges and reader. By using this system, not only an immediate screening result at the roadside is provided but also a confirmatory analysis due to withholding approx. 200 µl of the oral fluid in the collector. The analyses of plasma and oral fluid samples are performed in blind modus: the serum samples will be analysed in Homburg/Saar and the oral fluid samples in Frankfurt/Main, respectively, analysis will be performed by solid-phase extraction, derivatization and GC-MS. The study was started recently and the results will be compared and evaluated with regard to all common drugs of abuse.