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### **K46 Utility of Oral Fluid in Driving Under the Influence of Drugs (DUID) Investigations**

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After attending this presentation, attendees will better understand the potential role of oral fluid testing for investigations into DUID. Attendees will learn that drugs as well as alcohol are responsible for, or at least a factor in, traffic accidents.

This presentation will impact the forensic science community by emphasizing the advantages and viability of testing oral fluid in DUID situations.

Currently, blood or urine is collected for toxicological analysis in suspected cases of DUID; these take time to obtain from a driver, allowing drugs to dissipate from the body. Specimens collected proximate to the traffic stop have a higher probability of containing recently ingested substances which may be potentially impairing. Oral fluid has significant advantages over currently used biological samples, specifically fast, easy collection at the roadside or at a detention facility; rapid collection allows drugs currently circulating in the body to be preserved for analysis. Technological improvements have promoted the use of oral fluid analysis for various applications, including DUID. Additionally, collection devices have been improved, laboratory procedures have become routine, and drug test panels have been expanded.

Over the last decade, numerous roadside surveys in the United States and Canada have established the validity and viability of oral fluid collection for the determination of DUID; drug prevalence rates of 14%-16% have been reported, with marijuana accounting for approximately half of the positive results. An overview of various survey results, drug prevalence rates in drivers, as well as field studies involving both roadside tests and confirmatory specimen analysis will be presented.

Because more and more field studies involving oral fluid are being performed, guidelines for the implementation of data-collection projects have been developed by a subcommittee of the Joint American Academy of Forensic Sciences/Society of Forensic Toxicology (AAFS/SOFT) Drugs and Driving committee. The guidelines are intended for the use of researchers planning to collect information on drug intake from stopped drivers. Focal points of field studies include ways to identify drivers under the influence of drugs in a more efficient and effective manner and to deter drug intake prior to driving by demonstrating reliable drug detection.

In a separate consensus meeting of experts recruited from survey respondents and members of the National Safety Council Alcohol, Drugs and Impairment Division, previously recommended drug concentrations for blood and urine analysis were updated to include oral fluid as a sample matrix.<sup>1</sup> Both of these initiatives will be discussed in the presentation.

#### **Reference:**

1. Logan et al. Recommendations for toxicological investigation of drug-impaired driving and motor vehicle fatalities. *Journal of Analytical Toxicology* 37(8): 552 -558.

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#### **Oral Fluid, Drugged Driving, Roadside Testing**