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### **Quanitsal™ Collection Process**

- Observation period no food or beverage for 10 minutes
- · Check the expiration date
- Instruct the subject to move their tongue back and forth to promote salivation

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### **Quanitsal<sup>TM</sup> Collection Process**

- Place collection device under tongue, close mouth
  - Tilt head down to promote collection
  - <u>Different</u> than the roadside screening collection process
- Remove once the indicator has turned BLUE or 10 minutes has passed



**Quanitsal™ Collection Process** 

- Place the swab/collector in the transport tube containing the buffer solution
  - Do not stand the tube on any surface
- Ensure the tube is capped firmly loud snap triple check!
- · Put tube back in plastic bag and send to lab

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### Oral Fluid Drug Testing – New & Novel?

- Generally accepted in the relevant scientific community
- Analytical techniques are the same ones currently used to test for drugs in blood and urine
- Drug testing in oral fluid used in various sectors including federal workplace drug testing, pain management, impaired driving



### **NYSP FIC OF Drug Screen**

- LC-MS/MS screening method for 31 drugs and metabolites
  - Liquid/liquid extraction technique
  - Targeted screen
  - Does not differentiate THC isomers



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#### **NYSP FIC OF Confirmations**

- LC-MS/MS confirmation method for Δ-9-THC and Δ-8-THC
  - Not reporting  $\Delta\text{-8-THC}$  in OF until blood method updated to match
- LC-MS/MS for other 30 drugs and metabolites

Limited to only the Quantisal<sup>TM</sup> collection device Only drug testing, not testing for alcohol



**NYSP FIC Oral Fluid Testing Protocol** 

- Screen and confirmation(s) performed on independent samplings
- · Different extraction techniques
- Different target MRMs monitored
- · Different LC columns
- Matched deuterated internal standards for all compounds in all methods

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# **NYSP FIC Oral Fluid Testing Protocol**

ANSI/ASB Standard 036, Standard Practices for Method Validation in Forensic Toxicology, 2019

 Validation provides objective evidence that a method is fit for numose.

ANSI/ASB Standard 054, Standard for a Quality Control Program in Forensic Toxicology Laboratories, 2021

Demonstrates a method's continued fitness, ensures the validity of test results



# **NYSP FIC Oral Fluid Testing Protocol**

ANSI/ASB Standard 017, Standard Practices for Measurement Traceability in Forensic Toxicology, 2018

· Traceability provides confidence and reliability in test results

ANSI/ASB Standard 098, Standard for Mass Spectral Data Acceptance in Forensic Toxicology, 2023

 Sets minimum criteria for acceptance of data for various types of mass spectral techniques

ANSI/ASB Standard 113, Standard for Identification Criteria in Forensic Toxicology, 2023

Establish a points structure to ensure sufficient discrimination and selectivity in reported toxicology results

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# Stop DWI Symposium Oct 19, 2023 Evidential Oral Fluid Testing

#### **Scope of Testing**

Recommendations for Toxicological Investigation of Drug-Impaired Driving and Motor Vehicle Fatalities, *Journal of Analytical Toxicology* 

· Purpose:

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- ensure a comprehensive and consistent approach to impaired driving investigations
- collect more uniform data on the prevalence of drugs in the driving population
- First published in 2007, updates in 2013, 2017, 2021
- · Screening and confirmation cut-offs for blood, urine, and oral fluid



#### **Scope of Testing**

Recommendations for Toxicological Investigation of Drug-Impaired Driving and Motor Vehicle Fatalities, *Journal of Analytical Toxicology* 

- Tier 1 drugs
  - Included in all DUID testing
  - Represent the most frequently encountered drugs in DUID casework
  - Can be tested by commonly available instrumentation in crime labs
- Tier 2 drugs

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- · Limited or regional prevalence, less frequently encountered
- May require more advanced instrumentation not widely available
- · Basis for development of a minimum standard



Tier 1 Drugs - Oral Fluid

- Cannabis
  - Δ-9-THC
- · CNS Depressants
  - alprazolam, clonazepam, 7-amino-clonazepam, diazepam, nordiazepam, lorazepam, oxazepam, temazepam
  - · carisoprodol, meprobamate
  - zolpidem



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Tier 1 Drugs - Oral Fluid

- CNS Stimulants
- · methamphetamine, amphetamine, MDMA, MDA
- · cocaine, benzoylecgonine, cocaethylene
- Narcotic Analgesics
  - codeine, 6-acetylmorphine, morphine, hydrocodone, hydromorphone, oxycodone, oxymorphone, methadone, fentanyl, tramadol, buprenorphine
- · NYSP FIC adds PCP



**Interpretation of Oral Fluid Results** 

- · Qualitative result positive or not detected
- Positive result is consistent with recent drug exposure
- Onset of detection depends on route of administration
  - Smoked, snorted, chewed immediate; IV very quick
  - Swallowed intact (pill) delayed until equilibrates with blood



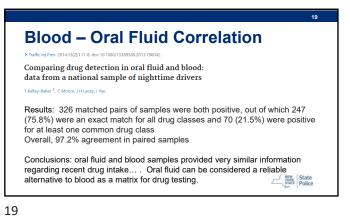
- Why not quantitating drugs in Oral Fluid?
  - Blood concentrations ≠ Oral Fluid concentrations
  - Exact amount of OF collected variable (Quantisal™ 1mL ± 10%)
  - Exact amount of buffer variable (Quantisal<sup>™</sup> target 3 mL)
  - Drugs taken by insufflation, inhalation, sublingual coat the oral cavity
  - Drugs have different partition ratios between blood and oral fluid

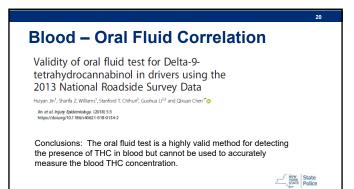


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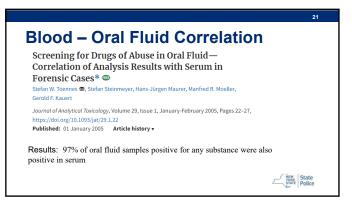
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NYSP Evidential Oral Fluid **Pilot Program**  Goals - Allow stakeholders to become familiar with - Identify any additional training needs or potential hurdles to broader implementation Collect data NEW YORK STATE Police

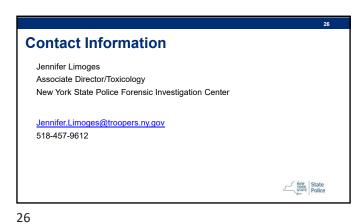
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**NYSP Evidential Oral Fluid Pilot Program** · Collect blood AND oral fluid from same subject during the pilot Focused on misdemeanor DWAI-drug investigations Collection limited to DREs and other select Members (Future implementation will be different) NEW State Police **Future Implementation...** · Oral fluid testing in misdemeanor DWAI-drug cases Recommend collecting BOTH blood and oral fluid in FMVA/SPI investigations Collect oral fluid as soon as possible in the process Testing be available to all law enforcement agencies that submit to the SP Lab Eliminate urine in DWAI-drug investigations NEW YORK STATE Police

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