Oral Fluids testing for confirming the involvement of drugs in suspected impaired driving investigations

Dräger® Drug Test 5000 (DDT5000) and the Alere® DDS2 Mobile Test System (DDS2)

Clinical needs identical to the needs in opiate treatment programs and medically assisted therapy programs and treatment of substance abuse.

Oral Fluids sampling is noninvasive, which eliminates the need for a collection facility, witnessing of sample procurement with gender sensitivity and is not affected by subject manipulation.

Oral Fluids can be collected at the time of the traffic stop at the roadside.

The device collects approximately 1 mL of Oral Fluid and stores it in a tube containing 3mL of a stabilizing buffer solution.

Savings on cost of transport time, officer time, phlebotomist costs and processing.

Savings on reduction in the number of witnesses required for eventual testimony ($350.00/hour).

Test for cannabinoids, cocaine, amphetamines/methamphetamine, benzodiazepines, opiates, and methadone (DDT5000 only) based on lateral flow immuno-chromatographic technology similar to the screening used in office settings and OTP and MAT testing

Samples are sent for subsequent confirmation testing in place of blood and urine which, would have subsequently reduced concentrations for drugs that are rapidly metabolized.

Sensitivity (the ability to detect drug when actually present) is approximately 60% for some drugs and as high as 100% for some drugs.

False positive rates were less than 1% on the DDT5000, and less than 4% on the DDS2.

The best use of Oral Fluid testing is as a corroborative test for drug ingestion in situations where a trained police officer has made observations of cognitive and psychomotor impairment in a suspected impaired driver involved with a traffic incident with the risk to others, injury or property damage likely to result in charges leading to prosecution.

Relevant terms

Condition Defined as True Positive: A positive finding in the field test confirmed positive by the confirmatory test.

True Negative: A negative finding in the field test confirmed negative by the confirmatory test.
False Negative: A positive finding from the confirmatory test not predicted by the field test.

False Positive: A positive finding from the field test not confirmed by the confirmatory test.

Sensitivity: Proportion of subjects who subsequently test positive in a confirmatory test whose positive status was correctly predicted by the field test.

Specificity: Proportion of subjects who subsequently test negative in a confirmatory test whose negative status was correctly predicted by the field test.

Accuracy: Overall proportion of subjects whose drug status as determined by a subsequent confirmatory test was correctly predicted by the field test.

Positive Predictive Value (PPV): Proportion of subjects whose field test correctly predicted they would test positive in the confirmatory test.

Negative Predictive Value (NPV): Proportion of subjects whose field test correctly predicted they would test negative in the confirmatory test.