

Summary of the Evaluation of DrugWipe 5 S by Barry Logan and his group

In spring of 2019, the DrugWipe 5 S in combination with the WipeAlyser was tested in the laboratory of Barry Logan and his team near Philadelphia. Logan is Sr. Vice President of Forensic Science Initiatives and the Chief of Forensic Toxicology at NMS Labs. He is known as one of the most renowned experts in toxicology worldwide.

Performance

The tests were performed with pooled saliva, which was partially spiked with the target drugs at the cutoff concentration and 50 % above and below that. All reported results were evaluated using the WipeAlyser. Specificity was found to be 100 % in all cases. Sensitivity was found to be 100 % for all drugs except for opiates, which was 80 %. The authors pointed out that all opiates results at 50 % above the cutoff (more specifically 15 ng/mL) were positive.

In another experiment, different drugs were combined at high and low concentrations. This resulted in a full score for DrugWipe and WipeAlyser: 100 % sensitivity and 100 % specificity for all drugs.

Crossreactivity

An evaluation of cross reactivities to commonly encountered drugs and metabolites resulted in varying sensitivities towards drug metabolites. No cross reactivity could be observed for consumables, like caffeine or nicotine as well as for common medications, like pseudoephedrine, cannabidiol, tramadol and others.

Interferents

Different common interferents have been evaluated. Two false negatives for opiates were found, when tests were conducted immediately after chewing spearmint gum. Two false positives for opiates and two for amphetamines were detected after chewing tobacco. The authors noted that interferences can be widely prevented by waiting ten minutes after intake of any consumables before conducting the test.

Conclusion

The authors come to a **very positive conclusion**: besides the good analytical performance, the straightforward testing procedure and the advantages of the low sampling volume were pointed out.