

TipNovusMini Validation: Toxicology & Forensic

Residual Sample Carryover Study

To determine if the TipNovusMini could be useful in a clinical or forensic toxicology laboratory to help cut down on tip waste.

TIPNOVUS mini



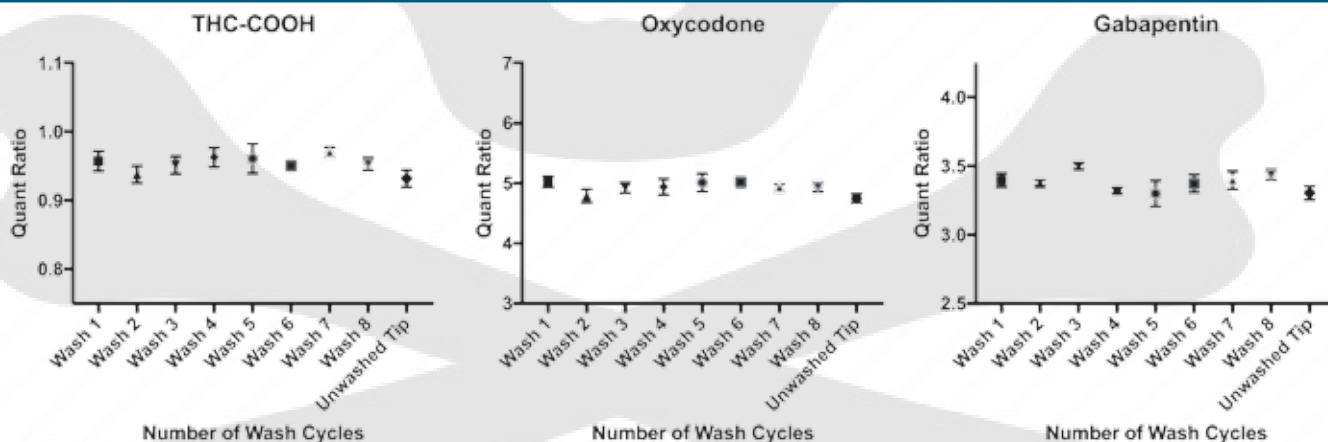
Procedure - Manual & Automation Pipette Tips

Precision and carryover of washed tips versus unwashed tips were assessed to determine if the TipNovusMini could be used in the Forensic Toxicology and Trace Laboratory. Tips were used to process 50 microliters (50 ul) of urine that was fortified with high concentrations (10 ug/mL) of analytes that might be present in forensic and clinical specimens, including opiates (hydrocodone, hydromorphone, norhydrocodone, noroxycodone, oxycodone, oxymorphone), benzodiazepines (nordiazepam, oxazepam, temazepam) and cannabinoids (THC-COOH), and other analytes (amphetamine, gabapentin, tramadol)..

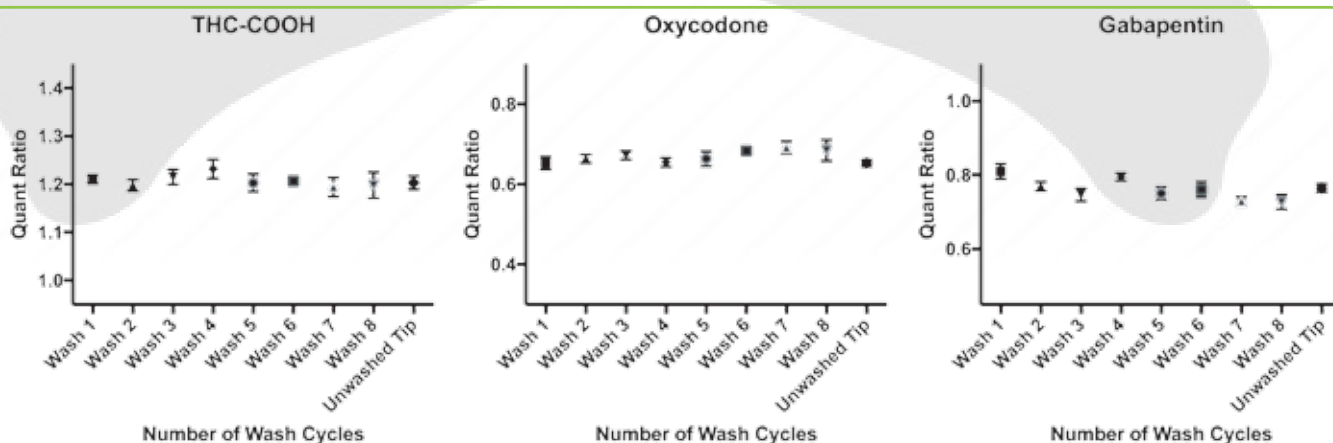
Tips were used in an automated platform (Hamilton Microlab® NIMBUS) and also in a manual format. Specimens were processed with dilute and shoot methodology, followed by injection and analysis via liquid chromatography tandem mass-spectrometry (LC-MS/MS) using a Shimadzu 8040 system. Statistical analyses for each analyte, consisting of One Way ANOVA with Tukey's Multiple Comparisons Test, were performed in GraphPad Prism®.



AUTOMATION TIPS



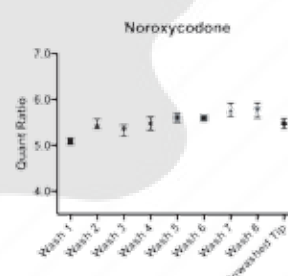
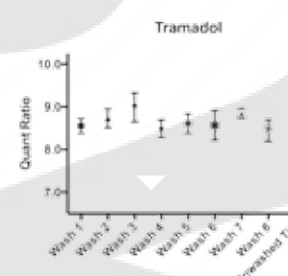
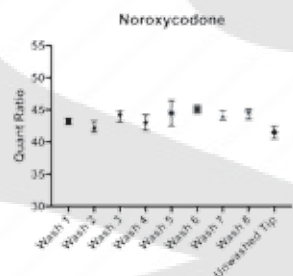
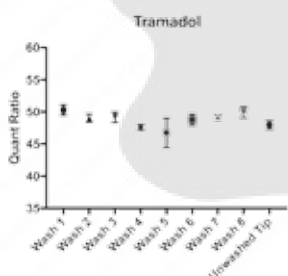
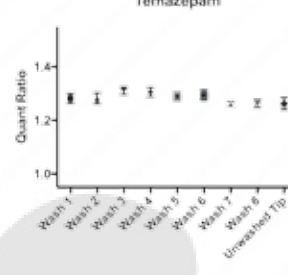
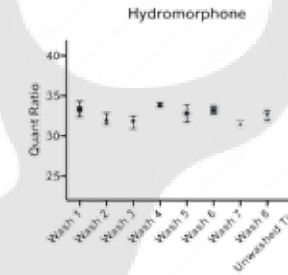
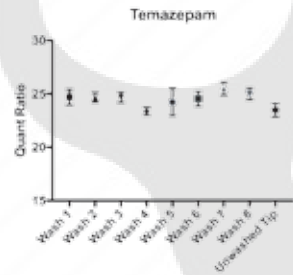
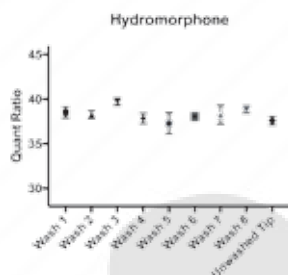
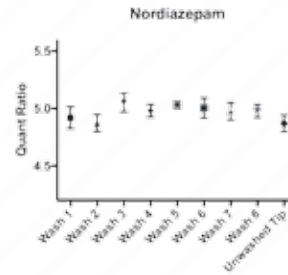
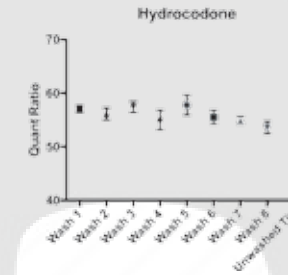
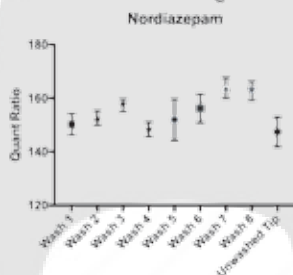
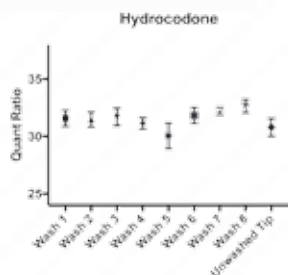
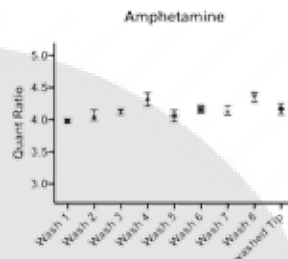
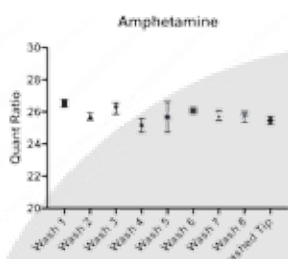
MANUAL TIPS



TipNovusMini Toxicology Validation Conclusions

No significant differences ($p < 0.05$) were detected in results obtained with washed tips versus unwashed tips ($N=6$), demonstrating similar values and precisions for both types of tips. There were no data trends indicating carryover of any of the classes of analytes. The TipNovusMini demonstrated potential utility in reducing lab waste and cost, without degrading performance.

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GRENOVA WORKFLOW

Wash/Sterilize/Dry Tips

Store in Sterile Environment



Reuse and Save Money