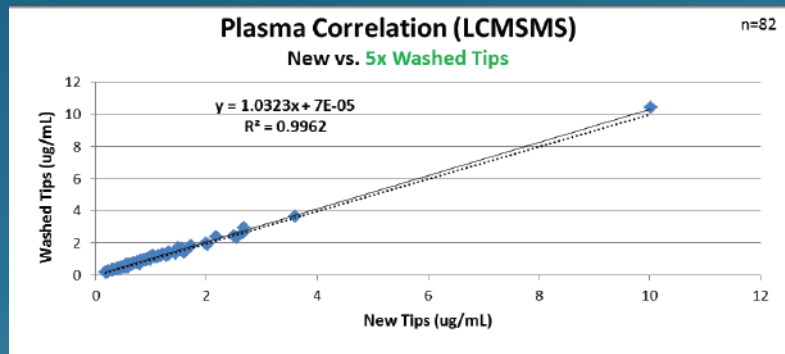
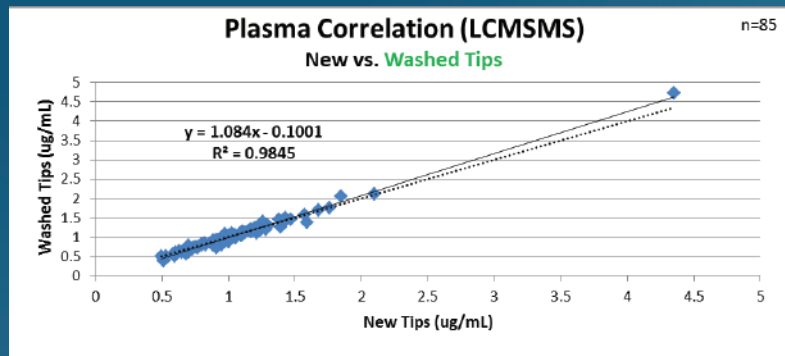
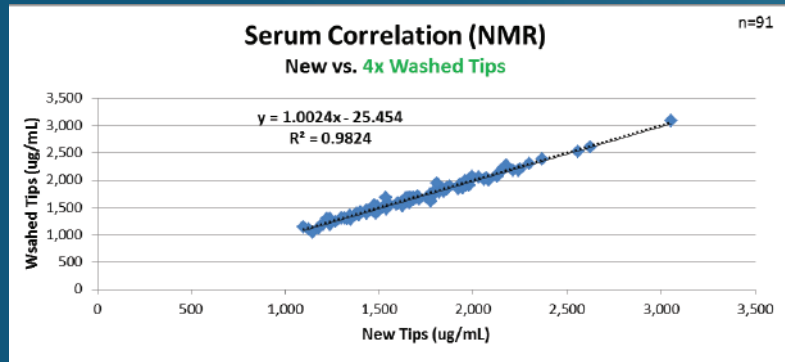
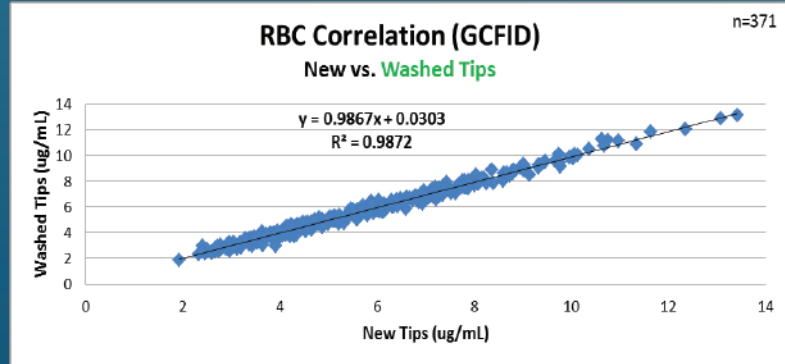


Evaluation Studies for Washed Tips

RED BLOOD CELLS, PLASMA, SERUM

The graphs on this page demonstrate the results from comparison studies between new tips vs. washed tips for three different sample types: serum, plasma, and red blood cells(RBC). The contaminated tips were washed and sanitized by TipNovus™ for reuse to transfer specimens for analysis by GCFID, NMR or LCMSMS. For all studies the same sample set was pipetted and analyzed to compare results from new tips to those from washed tips.



Validation studies were performed to demonstrate the performance of TipNovus™ for reusing the consumable liquid handling tips, used for whole blood transfer, for DNA extraction and SNP genotyping. A comparison of SNP genotype results and a carryover evaluation were done to confirm that the TipNovus™ is acceptable for use.



A total of 4 x 96 deep well plates of whole blood (95 whole blood samples and 1 negative control per plate) were transferred for each of the new vs. washed tips. The washed tip racks were rearranged during the sample transfer to verify the results. There was no discordance between the new tips and the washed tips.

In order to perform the genotype carryover test for the new tips vs. washed tips, a total of 4 -96 deep well plates of nuclease free water were transferred using brand new tips followed by a total 4-96 deep well plates of nuclease free water were transferred using the 4 racks of washed tips from the previous genotype comparison study explained above. All plates went through DNA extraction and SNP Genotyping. For the carryover/contamination evaluation, the rate of contamination for plates transferred with washed tips did not exceed the rate for the plates transferred with brand new tips.

A validation study was performed for comparison of volume dispensing accuracy between the new tips vs. the washed tips by a gravimetric volume verification test. The gravimetric volume verification results are shown for 0-20 time wash and reuse cycles of the plastic pipette tips. The accuracy and precision of the washed tips maintained under 1% CV for the 100 µl transfer, and 2% CV for the 1 ml transfer. Deionized water was used for this study.

Volume Verification %CV, 100 µl



Volume Verification %CV, 1 mL

