A21 Internal Validation of Robotic Liquid Handler for Real-Time PCR Set-Up

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After attending this presentation, attendees will gain an understanding of an internal validation study for a robotic liquid handler, and have seen sample data.

This presentation will impact the forensic science comunity by providing an example of an internal validation of a liquid handler robot.

In an effort to reduce backlogs and increase throughput, the Austin Police Department (APD) DNA Unit has implemented the use of automation in many steps of analysis. The newest automation for the ADP DNA Unit was a robotic liquid handler designed for real time PCR (rtPCR) plate set up. An internal validation was performed to ensure the reliability and precision of the robot when used for rtPCR set up of samples to be quantified utilizing a commercially avalibly quantification kit. This validation study included evaluation of precision, contamination, comparison to manual methods, and mock casework. Standards prepared by the robot resulted in an average Ct standard deviation of 0.196 and average slopes of -3.26, showed no signs of contamination, and were shown to perform similar to validated manual methods.

Validation, Automation, qPCR

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