

## **AUTOMATED PUNCHING USING THE HAMILTON EASYPUNCH WITH WHATMAN™ FTA™ CARDS FOR EFFICIENT AND ACCURATE PROCESSING OF FORENSIC DATABASE SAMPLES**

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In response to increasing sample numbers, Human Identification (HID) laboratories require streamlined workflows in order to enable greater efficiency when performing STR based DNA profiling.

The introduction of direct PCR amplification in combination with Whatman™ FTA card based reference samples has removed the requirement for DNA extraction, quantification and normalization, producing a workflow which is more time and cost effective.

To further improve laboratory workflows, initial sample preparation also requires optimization. To meet this challenge, Hamilton Robotics and GE Healthcare have developed an automated system which integrates sample card punching and liquid dispensing into one instrument.

This presentation will discuss a study conducted to provide a comprehensive look at the ability of the system to pick, punch and prepare the FTA card based DNA samples prior to PCR for forensic HID databasing, whilst detailing the robustness, quality and yield of returned STR profiles.

Features of the instrument include powerful imaging software and anti-static systems which not only identify optimum sampling areas but also precise punching, placement and tracking of 1.2 mm discs, taken from the FTA sample cards, into 96 well plates. Dust removal and the ability to take cleaning punches also minimize the risk of cross contamination between samples. ☞