B91   A Novel Concept for the Complete Automation of Established Spin Column Based Extraction Processes: QIAcube

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After attending this presentation, attendees will have learned about utilization of a spin column automation system that may help further standardizing and replacing conventional manual processes for nucleic acid extraction.

This presentation will impact the forensic community by presenting comparative data generated by using a novel device for the automation of spin column based DNA evidence handling.

Spin-column based kits have been widely established for the extraction of nucleic acid evidence. These prefabricated formats relieved forensic scientist from preparing reagents themselves, improved quality control of materials and helped to minimized process variation. Laboratory processes could be standardized by spin columns, resulting in improved accuracy and run-to-run consistency.

However, no automated solutions are available that would enable walk-away processing of spin columns. For the first time, an innovative robotic concept is introduced to the field of molecular forensics that facilitates complete automation of spin columns. The QIAcube platform is a novel system that provides fully automated purification of genomic DNA from two to twelve samples per run. The systems allows forensic scientist to instantly translate their established spin-column based processes into a completely automated workflow.

Standardized processing and elimination of handling errors are key factors for forensic sample preparation to ensure reliable results. Automated nucleic acid extraction offers many advantages compared to manual extraction methods: minimal hands-on time, further reduction of operator-dependent variation, and maximal safety in handling of samples.

Data will be presented on the automated extraction of DNA from reference and case work samples using the QIAcube.

Spin Column Automation, Nucleic Acid Extraction, QIAcube