

MAXWELL® FSC INSTRUMENT: THE ADVANCEMENT OF PERSONAL AUTOMATION

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DNA extraction is an integral part of casework sample processing workflow. This study describes the development of the Maxwell® FSC (forensic sample concentrator) instrument for extraction of high purity DNA from a variety of casework samples using the DNA IQ chemistry. The extracted DNA will be compatible with downstream applications such as quantification and STR analysis.

The Maxwell® FSC instrument is controlled by a graphical user interface running on a touchscreen tablet PC, it has an improved user experience, sample tracking and reporting capabilities relative to the currently available Maxwell® 16 instruments. A bar code reader will be included with the instrument while Promega's Quantus™ Fluorometer can be used as an optional accessory for quantitation of samples using a fluorescent intercalating dye-based chemistry. Data is presented to show comparable performance of the DNA IQ chemistry processed on the Maxwell® FSC to other Maxwell® 16 instruments based on yield using buccal swabs and whole blood as samples.

Key Words: DNA IQ, casework, sample tracking,