

THE IMPLEMENTATION OF THE BECKMAN COULTER BIOMEK FX ROBOTICS WORKSTATION INTO THE OKLAHOMA STATE CODIS LABORATORY

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Oklahoma State legislative changes will lead to a drastic increase in offender database samples in our state. Without any additional personnel, and with bottlenecks within our current procedures, the CODIS laboratory has purchased a Beckman Coulter Biomek FX Robotics Workstation in an attempt to accommodate this increase in sample collection. The Biomek FX has been programmed to perform extraction via Promega's DNA IQ system, amplification setup, as well as capillary electrophoresis setup. With the integration of a 96 head pipetting tool, as well as a span 8 tool, the methods are more versatile and efficient than our current methods for the Beckman Coulter Biomek 3000. Time spent on the robotics workstation has decreased from approximately 157 minutes per plate to approximately 52 minutes per plate. The incorporation of the Cytomat hotel with the Biomek FX also allows for multiplate methods to be run, eliminating the need to reset the deck with consumables for each plate. Ultimately, we anticipate that the implementation of the Biomek FX and its associated methods will increase throughput by at least threefold without hiring any additional personnel.