

AN INNOVATIVE APPROACH TO EFFICIENTLY PROCESSING KNOWN DNA STANDARDS

Sarah Jones

Kansas City Police Department, Crime Laboratory – DNA Section, Kansas City, MO 64131

The Kansas City Police Crime Laboratory is rethinking the way we process our known DNA standards. Using monies from the FY 2008 Forensic DNA Unit Efficiency Grant, we have validated a new extraction procedure which is significantly faster than our previous method. Through the use of Zygem Corporation's ForensicGEM extraction kits, we have validated the extraction in such a way that the extraction of each sample takes less than 30 minutes. Additionally, we have eliminated the quantitation step which allows us to extract, amplify and develop a profile in one working day. To further our efficiency, we have validated the automation of the extraction and amplification steps using our Biomek 3000. This allows us to process 88 samples at a time. The final step in our process is validating the use of the expert system Genemapper IDX to analyze the standards, saving at least 30 minutes of analysis time per sample. Ultimately we plan to process all known DNA standards in a similar fashion to a convicted offender lab which will allow us to spend more time processing unknown casework samples.