

DEVELOPMENTAL VALIDATION OF THE POWERPLEX® 18D SYSTEM, A RAPID STR MULTIPLEX FOR ANALYSIS OF SINGLE-SOURCE SAMPLES

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System validation is an important requirement for any laboratory. However, validation of STR multiplex systems for human identification warrants especially thorough examination and high performance. A new STR multiplex, the PowerPlex® 18D System, has been developed for direct amplification of buccal and blood samples from unprocessed FTA® paper. Validation of the system was performed according to SWGDAM guidelines on developmental validation with contributions from several laboratories. The presented results include sensitivity, concordance, and stutter data as well as performance with inhibitors and increased FTA® paper amounts. The PowerPlex® 18D system was fully concordant with other NDIS-approved systems, and performance was strong with sensitivity, inhibitor, and increased FTA® challenges. Given these results, PowerPlex® 18D System can confidently be used for forensic and human identification testing.