

RAPID PROCESSING OF CASEWORK AND REFERENCE DNA SAMPLES USING STANDARD PROTOCOLS

Stefan Kutrakov

Promega Corporation

The need to reduce processing time for forensic DNA samples has grown in the last few years and laboratories are under increased pressure to improve efficiencies, minimise backlogs and reduce costs. Established DNA laboratories have invested heavily in laboratory equipment and staff training and rather than re-invest in expensive rapid DNA technologies, a more feasible approach to increase both laboratory efficiency and capacity in such laboratories might be to adopt rapid-cycling protocols and, for database samples, direct amplification.

In this article, we demonstrate the use of the PowerPlex® ESX 17 Fast System to rapidly process casework and reference DNA samples in an operational forensic DNA laboratory using only the manufacturer's recommended protocols, with no further optimisation, and with existing, standard, laboratory equipment.

Reference samples, including FTA® cards, OmniSwab™ buccal scrapes and cotton swab buccal scrapes, were processed from start to finish in 2 hours 30 minutes. Casework samples were amplified in 55 minutes.