Expanded Applications for DNA Captured on Paper Devices

David Carlson, Pamela Hansen, Rakhi Goel, Robert Blakesley and Mindy Goldsborough
Life Technologies, Inc. Research and Development, 9800 Medical Center Drive, Rockville Maryland 20849

FTA™ paper has been proven to be a simple and effective device for the collection and processing of blood samples for use in human identity. Recently, we have begun to expand our identity-related application work with FTA™.

In crime scene evaluation, for example, samples that are of non-blood origin can also provide highly relevant information. Our results will show that FTA™ paper was successfully used to collect bacterial samples from surfaces by a simple swipe method and that the captured bacterial DNA could be analyzed by PCR after processing of the FTA™ paper. In addition to PCR data on bacterial samples, we will show that unknown bacterial samples on FTA™ paper can be identified by sequencing of the DNA on the paper using methods such as the PE-ABI MicroSeq kit. Data will also be presented showing that bacterial genomic "fingerprints" can be obtained from bacteria collected on FTA™ paper and analyzed using AFLP (Amplified Restriction Fragment Polymorphism.)

In addition to bacterial samples being able to be analyzed from FTA™ paper, we will present data on PCR analysis of plant and insect material on FTA™.