

**FTA[®] TECHNOLOGY, UNIQUE FORMATS FOR THE COLLECTION, SHIPMENT,
ARCHIVING AND PROCESSING OF BIOLOGICAL SAMPLES**

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FTA[®] technology enables the room temperature archiving of DNA from a wide array of biological samples such as blood, buccal scraps, cultured cells, tissue, plant material, plasmids, and microorganisms. DNA analysis on the archived sample can be performed days, months or even years later. Current stability studies have shown that samples stored on FTA[®] in excess of 10 years yield consistent reproducible results. The purification of the DNA sample is safe and rapid, with the inhibitors of the PCR process easily removed by a simple wash procedure. The purified DNA remains tightly bound with the paper matrix. PCR amplification can be performed by the incorporation of a 1.2-mm FTA[®] punch into the reaction tube. In addition, simplified procedures have been developed for the efficient recovery of double stranded DNA from samples stored on all forms of FTA[®] matrices. The eluted DNA has been used to generate DNA profiles with the CODIS core STR loci. More recently, we have focused on the utilization of FTA[®] technology for the collection, archiving and analysis of DNA from buccal and hair root cells. Specific FTA[®] formats have been developed that allow for the efficient collection of these samples outside the normal laboratory environment. Samples stored on FTA[®] are no longer considered biohazard due to pathogen killing by the reagents within the matrix. These same reagents also prevent the subsequent growth of contaminants such as bacteria, molds and fungi. We will demonstrate the utility of this approach for downstream processes such as a multiplex PCR using all the conventional systems available for human identification.