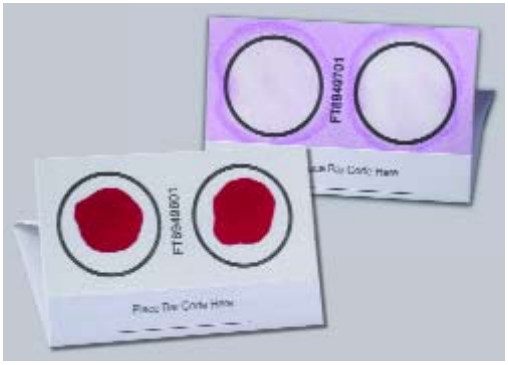
Whatman™ FTA™ DNA archiving

When collecting blood and buccal samples for DNA analysis, Whatman FTA Cards offer the most reliable choice for long-term sample storage. Results from ongoing studies continue to show blood and buccal samples applied to FTA Cards—which employ patented Whatman FTA technology—remain stable for years at room temperature. Blood samples have been successfully analyzed after 14 yr; buccal samples are stable for 5 yr and counting. Whether you are analyzing DNA immediately or after a decade, FTA Cards are excellent for genetic identification.



Features and benefits

- **Long-term stability:** Blood samples are stable up to 14 yr; buccal samples are stable up to 5 yr and counting.
- **Safe archiving and shipping:** Samples can be stored at room temperature, eliminating the need for costly refrigeration, and can be shipped by regular mail.
- **Rapid purification:** DNA is purified with two mild buffers—no expensive kits are needed.
- **Fast, easy collection:** Blood and buccal samples are immediately stabilized when applied to card, making field collection convenient.

Applications

- **STR analysis**
- **Genetic identification**
- **Animal breeding studies**

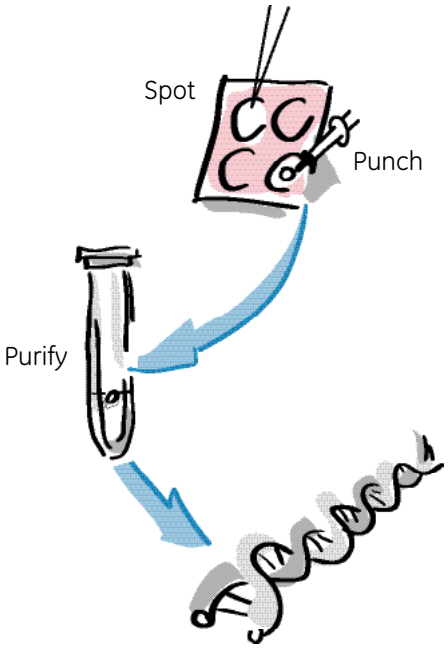
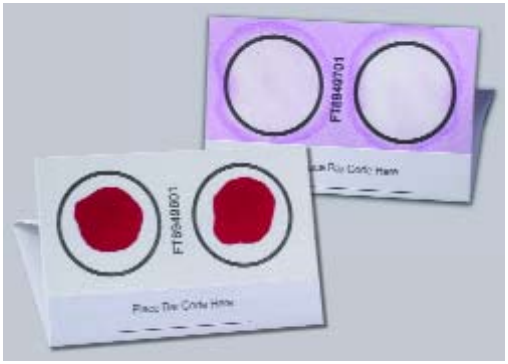


Fig 1. Three easy steps to pure DNA.

Testing procedure

- **Outside lab:** Sections from both the blood and buccal samples were mailed to an outside lab that specializes in genetic identification testing.
- **Standard punch processing:** Punches (1.2 mm diameter for both blood and buccal samples) were manually taken from the sample-sections and were washed according to standard protocols.
- **Amplification:** Processed punches from each sample were amplified using ABI AmpflSTR™ Profiler™ and Cofiler™ Systems. The reaction volume was 10 µl and the cycle number was reduced to 24 for all reactions.
- **Detection:** A 10 µl sample preparation (1 µl amplified sample, 0.5 µl GS ROX 500, 8.5 µl de-ionized formamide) was detected using an ABI 3100 Genetic Analyzer. The default injection parameters were modified for the following: 3kV injection voltage and 5 s injection time for buccal samples; 15 s for blood samples.
- **Analysis:** GeneScan™ Analysis version 3.7.1 was used to analyze the raw data. Genotyper™ version 3.7 was used to assign the allele calls.



The STR profiles obtained from the 14 yr blood and 5 yr buccal samples demonstrate that FTA both protects the DNA during storage and provides a rapid, effective purification method.

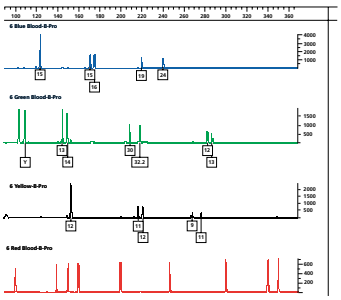


Fig 2. STR analysis of 14 yr old blood stains on FTA using the ABI Profiler amplification system. The top profile (blue, fam dye) represents loci D3S1358, vWA and FGA. The next profile (green, joe dye) represents the amelogenin "X/Y" gene, D8S1179, D21S11 and D18S51. The next profile (yellow, ned dye) represents D5S818, D13S317 and D7S820. The bottom profile is the red, rox dye which serves as an internal standard.

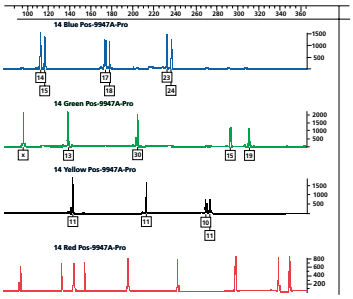


Fig 3. STR analysis of 5 yr old buccal samples on FTA using the ABI Profiler amplification system. The markers are the same as those described in Fig 1.

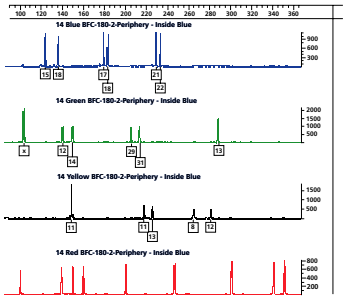


Fig 4. STR analysis of positive control DNA (9947A) supplied with the ABI Profiler amplification system. The markers are the same as those described in Fig 1.

Ordering information

Catalog number	Description	Qty/pack
WB120205	FTA Classic Card (non-indicating)	100
WB120206	FTA Classic Card (indicating)	100
WB120055	FTA Mini Card (non-indicating)	100
WB120056	FTA Mini Card (indicating)	100
WB120210	FTA Micro Card (non-indicating)	100
WB120211	FTA Micro Card (indicating)	100

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